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The health risks associated with the use of illicit drugs and the abuse of alcohol include physical and mental impairment, emotional and psychological deterioration, fine and gross motor degeneration, and death.

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The University of the District of Columbia Counseling Services provide confidential counseling and referral services to students with problems related to drug use and alcohol abuse. The University also provides information about substance abuse and treatment programs available to UDC students.

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Pursuant to the provisions of the District of Columbia Smoking Restrictions Act of 1979, as amended, D.C. Code, §6-011, et seq. (the "Act"), smoking shall be prohibited in all University facilities, including all portions of buildings and structures owned or leased by the University.

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Academic Calendar **Calendar Year 2003-06**	**Blue = Spring** **Red = Summer** **Black = Fall**	**Blue = Spring** **Red = Summer** **Black = Fall**	**Blue = Spring** **Red = Summer** **Black = Fall**	**Blue = Spring** **Red = Summer** **Black = Fall**
	Spring Semester	***Spring Semester***	***Spring Semester***	***Spring Semester***
	Academic Year 2002-03	***Academic Year 2003-04***	***Academic Year 2004-05***	***Academic Year 2005-06***
Continuing Student Registration	**November 12-15, 2002**	**November 12-14, 2003**	**November 16-19, 2004**	**November 15-18, 2005**
Tuition Installment Plan Enrollment Period: Continuing Students	**December 9, 2002**	**December 8, 2003**	**December 13, 2004**	**December 12, 2005**
Last day for payment for Continuing Student Registration (Classes will be dropped by the Close of Business)	**January 6, 2003**	**December 15, 2003**	**December 14, 2004**	**December 19, 2005**
Professional Development Day	**TBA**	**TBA**	**TBA**	**TBA**
New & Transfer Student Orientation		**January 3, 2004**	**January 4, 2005**	**January 3, 2006**
New, Readmit and Transfer Student Advising and Registration	**January 3 & 6, 2003**	**January 5-7, 2004**	**January 5-7, 2005**	**January 4-6, 2006**
Special/Transfer Student Registration	**January 6, 2003**	**January 7, 2004**	**January 7, 2005**	**January 6, 2006**
Late Registration	**January 7-8, 2003**	**January 8-9, 2004**	**January 10-11, 2005**	**January 9-10, 2006**
Classes Begin	**January 9, 2003**	**January 10, 2004**	**January 12, 2005**	**January 11, 2006**
Add/Drop	**January 13-14, 2003**	**January 12-15, 2004**	**January 13-14, 2005**	**January 12-13, 2006**
Withdrawal Deadline for 100% Refund (Tuition only)	**January 15, 2003**	**January 16, 2004**	**January 18, 2005**	**January 17, 2006**
Martin Luther King, Jr. Holiday Observance (University Closed)	**January 20, 2003**	**January 19, 2004**	**January 17, 2005**	**January 16, 2006**
Classes Resume	**January 21, 2003**	**January 20, 2004**	**January 18, 2005**	**January 17, 2006**
Inauguration Day (University Closed)	**N/A**	**N/A**	**January 20, 2005**	**N/A**
Classes Resume	**N/A**	**N/A**	**January 21, 2005**	**N/A**
Last Day to Apply for Spring 2002/3/4 Degree	**January 22, 2003**	**January 21, 2004**	**January 26, 2005**	**January 25, 2006**
Presidents Day Observed (University Closed)	**February 17, 2003**	**February 16, 2004**	**February 21, 2005**	**February 20, 2006**
Classes Resume	**February 18, 2003**	**February 17, 2004**	**February 22, 2005**	**February 21, 2006**
Mid-term Week (Instructors will inform students of their progress)	**Feb 24 - Mar 1, 2003**	**Feb 23-28, 2004**	**Feb 28 - Mar 5, 2005**	**Feb 27 - Mar 4, 2005**
Ash Wednesday	**March 5, 2003**	**February 25, 2004**	**February 9, 2005**	**March 1, 2006**
Spring Break (Classes Suspended)	**March 10-15, 2003**	**March 8-13, 2004**	**March 14-19, 2005**	**March 13-18, 2006**
Last Day to Submit Graduate Clearance Forms to the Office of the Registrar	**March 13, 2003**	**March 11, 2004**	**March 17, 2005**	**March 16, 2006**
Classes Resume	**March 17, 2003**	**March 15, 2004**	**March 21, 2005**	**March 20, 2006**

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Last Day to Withdraw from Classes Without Academic Penalty	**March 21, 2003**	**March 19, 2004**	**March 24, 2005**	**March 23, 2006**
Admissions Application Deadline for Summer Semester 2003/4/5/6	**April 1, 2003**	**April 1, 2004**	**April 1, 2005**	**April 1, 2006**
Deadline for Graduating Seniors to Clear Incomplete Grades for Fall 2001/2/3 (Due in the Office of the Registrar)	**April 4, 2003**	**April 2, 2004**	**April 8, 2005**	**April 7, 2006**
Deadline for Graduating Seniors to Clear Any Financial Obligations	**April 11, 2003**	**April 9, 2004**	**April 15, 2005**	**April 14, 2006**
Passover (Begins at Sunset)	**April 16, 2003**	**April 5, 2004**	**April 23, 2005**	**April 12, 2006**
Final Examination for Graduating Seniors	**April 14-19, 2003**	**April 12-17, 2004**	**April 18-23, 2005**	**April 17-22, 2006**
Easter	**April 20, 2003**	**April 11, 2004**	**March 27, 2005**	**April 16, 2006**
College Day & University Open House for Prospective Students for Fall Semester	**April 16, 2003**	**April 14, 2004**	**April 20, 2005**	**April 19, 2006**
CLR James Honors Convocation	**April 17, 2003**	**April 22, 2004**	**April 21, 2005**	**April 20, 2006**
Final Grades for Graduation Seniors Due in the Office of the Registrar	**April 22, 2003**	**April 20, 2004**	**April 26, 2005**	**April 25, 2006**
Continuing Student Registration for Fall 2003/4/5/6	**April 24-25, 2003**	**April 22-23, 2004**	**April 28-29, 2005**	**April 27-28, 2006**
Last Day to Submit Graduation Clearance Form for Graduate Students to the Office of the Registrar	**April 25, 2003**	**April 23, 2004**	**April 29, 2005**	**April 28, 2006**
Deadline for Removing Incomplete Grades For Fall 2003/4/5/6 (Due in the Office of the Registrar)	**April 25, 2003**	**April 23, 2004**	**April 29, 2005**	**April 28, 2006**
Last Day of Classes	**April 29, 2003**	**April 27, 2004**	**May 2, 2005**	**May 1, 2006**
Fall 2003/4/5/6 Admission Application Deadline for International Students	**May 1, 2003**	**May 1, 2004**	**May 2, 2005**	**May 1, 2006**
Common Exams (English)	**April 30, 2003**	**April 28, 2004**	**May 3, 2005**	**May 2, 2006**
Common Exams (Math)	**May 1, 2003**	**April 29, 2004**	**May 4, 2005**	**May 3, 2006**
Final Exams	**May 2-8, 2003**	**Apr 30 - May 6, 2004**	**May 5-6 & 9-11, 2005**	**May 4-5 & 8-10, 2006**
Commencement	**May 10, 2003**	**May 8, 2004**	**May 14, 2005**	**May 13, 2006**
Last Day for Grade Report Submission in the Office of the Registrar	**May 12, 2003**	**May 10, 2004**	**May 14, 2005**	**May 12, 2006**
Spring Semester Ends	**May 13, 2003**	**May 11, 2004**	**May 13, 2005**	**May 13, 2006**

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	Summer Session	***Summer Session***	***Summer Session***	***Summer Session***
Registration: New, Continuing and Readmit	**May 22, 2003**	**May 20, 2004**	**May 19, 2005**	**May 18, 2006**
Special Transfer Student	**May 22, 2003**	**May 20, 2004**	**May 19, 2005**	**May 18, 2006**
Memorial Day Observance (University Closed)	**May 26, 2003**	**May 31, 2004**	**May 30, 2005**	**May 29, 2006**
FIRST FOUR WEEK TERM	**May 27-June 25, 2003**	**May 25-June 23, 2004**	**May 24-June 22, 2005**	**May 23-June 21, 2006**
Classes Begin	**May 27, 2003**	**May 25, 2004**	**May 24, 2005**	**May 23, 2006**
Late Registration/Add/Drop	**May 27-28, 2003**	**May 25-26, 2004**	**May 24-25, 2005**	**May 23-24, 2006**
Withdraw Deadline for 100% Refund (Tuition Only)	**May 30, 2003**	**May 28, 2004**	**May 27, 2005**	**May 26, 2006**
Last Day to Apply for Summer Degree	**June 5, 2003**	**June 3, 2004**	**June 2, 2005**	**June 1, 2006**
Last Day to Withdraw from Classes (First Four Week Term)	**June 6, 2003**	**June 4, 2004**	**June 3, 2005**	**June 2, 2006**
Admissions Application Deadline for Fall Semester 2003/4/5/6.	**June 15, 2003**	**June 15, 2004**	**June 15, 2005**	**June 15, 2006**
Last Day of Classes (First Four Week Term)	**June 23, 2003**	**June 21, 2004**	**June 20, 2005**	**June 19, 2006**
One Day Registration (Second Four Week Term)	**June 23, 2003**	**June 21, 2004**	**June 20, 2005**	**June 19, 2006**
Final Examinations (First Four Week Term)	**Last Class**	**Last Class**	**Last Class**	**Last Class**
SECOND FOUR WEEK TERM	**Jun 24-Jul 23, 2003**	**Jun 22-Jul 21, 2004**	**Jun 21-Jul 20, 2005**	**Jun 20-Jul 19, 2006**
Classes Begin	**June 24, 2003**	**June 22, 2004**	**June 21, 2005**	**June 20, 2006**
Late Registration/Add/Drop	**June 24-25, 2003**	**June 22-23, 2004**	**June 21-22, 2005**	**June 20-21, 2006**
All Grade Reports Due (First Four Week Term)	**June 25, 2003**	**June 23, 2004**	**June 22, 2005**	**June 21, 2006**
Withdraw Deadline for 100% Refund (Tuition Only)	**June 26, 2003**	**June 24, 2004**	**June 23, 2005**	**June 22, 2006**
Independence Day (University Closed)	**July 4, 2003**	**July 4, 2004**	**July 4, 2005**	**July 4, 2006**
Classes Resume	**July 5, 2003**	**July 6, 2004**	**July 5, 2005**	**July 5, 2006**
Last Day to Withdraw from Classes (Second Four Week Term)	**July 8, 2003**	**July 6, 2004**	**July 5, 2005**	**July 5, 2006**
Last Day of Classes (Second Four Week Term)	**July 21, 2003**	**July 19, 2004**	**July 18, 2005**	**July 17, 2006**
Final Examinations (Second Four Week Term)	**Last Class**	**Last Class**	**Last Class**	**Last Class**
All Grade Reports Due (Second Four Week Term)	**July 23, 2003**	**July 21, 2004**	**July 20, 2005**	**July 19, 2006**

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EIGHT WEEK TERM	**May 27-July 23, 2003**	**May 25-July 21, 2004**	**May 24-July 20, 2005**	**May 23-July 19, 2006**
Classes Begin	**May 27, 2003**	**May 25, 2004**	**May 24, 2005**	**May 23, 2006**
Late Registration/Add/Drop	**May 27-28, 2003**	**May 25-26, 2004**	**May 24-25, 2005**	**May 23-24, 2006**
Withdraw Deadline for 100% Refund (Tuition Only)	**June 2, 2003**	**June 1, 2004**	**May 31, 2005**	**May 30, 2006**
Independence Day (University Closed)	**July 4, 2003**	**July 4, 2004**	**July 4, 2005**	**July 4, 2006**
Classes Resume	**July 5, 2003**	**July 5, 2004**	**July 5, 2005**	**July 5, 2006**
Last Day to Withdraw from Classes (Eight Week Term)	**July 7, 2003**	**July 5, 2004**	**July 5, 2005**	**July 3, 2006**
Last Day to Apply for Summer Degree	**July 7, 2003**	**July 5, 2004**	**July 5, 2005**	**July 3, 2006**
Last Day for Summer Term Graduating Student to Clear Incompletes	**July 8, 2003**	**July 6, 2004**	**July 5, 2005**	**July 5, 2006**
Last Day of Classes (Eight Week Term)	**July 21, 2003**	**July 19, 2004**	**July 18, 2005**	**July 17, 2006**
Final Examinations (Eight Week Term)	**Last Class**	**Last Class**	**Last Class**	**Last Class**
All Grade Reports Due (Second Four Week Term)	**July 23, 2003**	**July 21, 2004**	**July 20, 2005**	**July 19, 2006**
	Fall Semester	***Fall Semester***	***Fall Semester***	***Fall Semester***
Last day for payment for Continuing Student Registration (Classes will be dropped by the Close of Business)	**August 1, 2003**	**July 30, 2004**	**July 29, 2005**	**July 28, 2006**
Professional Development Day	**TBA**	**TBA**	**TBA**	**TBA**
New & Transfer Student Orientation		**August 17, 2004**	**August 16, 2005**	**August 18, 2006**
New, Readmit, Special and Transfer Student Advising and Registration	**August 18-20, 2003**	**August 18-20, 2004**	**August 17-19, 2005**	**August 21-23, 2006**
Late Registration	**August 21-22, 2003**	**August 23-24, 2004**	**August 22-23, 2005**	**August 24-25, 2006**
Classes Begin	**August 25, 2003**	**August 25, 2004**	**August 24, 2005**	**August 28, 2006**
Add/Drop	**August 27-28, 2003**	**August 27 & 30, 2004**	**August 26 & 29, 2005**	**August 30-31, 2006**
Withdrawal Deadline for 100% Refund (Tuition only)	**September 2, 2003**	**August 31, 2004**	**August 30, 2005**	**September 5, 2006**
Labor Day Observed (University Closed)	**September 1, 2003**	**September 6, 2004**	**September 5, 2005**	**September 4, 2006**
Classes Resume	**September 2, 2003**	**September 7, 2004**	**September 6, 2005**	**September 5, 2006**
Last Day to Apply for Fall 2003/4/5/6 Degree	**September 5, 2003**	**September 3, 2004**	**September 9, 2005**	**September 8, 2006**
Spring 2004/5/6/7 Admission Application Deadline for **International**	**September 15, 2003**	**September 20, 2004**	**September 19, 2005**	**September 18, 2006**
University Convocation	**September 23, 2003**	**September 28, 2004**	**September 27, 2005**	**September 26, 2006**

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Yom Kippur (Begins at Sunset)	**October 5, 2003**	**September 24, 2004**	**October 12, 2005**	**October 1, 2006**
Graduate Writing Proficiency Exam	**October 11, 2003**	**October 9, 2004**	**October 8, 2005**	**October 14, 2006**
Columbus Day Observance (University Closed)	**October 13, 2003**	**October 11, 2004**	**October 10, 2005**	**October 9, 2006**
Classes Resume	**October 14, 2003**	**October 12, 2004**	**October 11, 2005**	**October 10, 2006**
Mid-term Week (Instructors will inform students of their progress)	**October 14-18, 2003**	**October 12-16, 2004**	**October 11-15, 2005**	**October 17-21, 2006**
Last Day to Withdraw from Classes Without Academic Penalty	**October 24, 2003**	**October 22, 2004**	**October 21, 2005**	**October 27, 2006**
Ramadan (1st Day)	**October 27, 2003**	**October 16, 2004**	**October 5, 2005**	**September 24, 2006**
Admissions Application Deadline for Spring Semester 2003/4/5/6	**November 1, 2003**	**November 1, 2004**	**November 1, 2005**	**November 1, 2006**
Veterans Day Observance (University Closed)	**November 11, 2003**	**November 11, 2004**	**November 11, 2005**	**November 11, 2006**
Classes Resume	**November 12, 2003**	**November 12, 2004**	**November 12, 2005**	**November 13, 2006**
Continuing Students Registration for Spring 2003/4/5/6	**November 12-14, 2003**	**November 16-19, 2004**	**November 15-18, 2005**	**November 14-17, 2006**
University's Open House For Prospective Students for Spring Semester	**November 19, 2003**	**November 17, 2004**	**November 16, 2005**	**November 15, 2006**
Thanksgiving Day Observance (University Closed)	**November 27-29,2003**	**November 25-27,2004**	**November 24-26,2005**	**November 23-25,2006**
Classes Resume	**December 1, 2003**	**November 29, 2004**	**November 28, 2005**	**November 27, 2006**
Deadline for Removing Incomplete Grades For Spring and Summer 2003/4/5/6 (Due in the Office of the Registrar)	**December 4, 2003**	**December 2, 2004**	**December 1, 2005**	**December 7, 2006**
Last Day of Classes	**December 6, 2003**	**December 4, 2004**	**December 3, 2005**	**December 9, 2006**
Common Exams (English)	**December 9, 2003**	**December 7, 2004**	**December 6, 2005**	**December 11, 2006**
Common Exams (Math)	**December 10, 2003**	**December 8, 2004**	**December 7, 2005**	**December 12, 2006**
Final Exams	**December 11-17, 2003**	**December 9-15, 2004**	**December 8-14, 2005**	**December 13-19, 2006**
Last Day for Grade Report Submission in the Office of the Registrar	**December 19, 2003**	**December 17, 2004**	**December 19, 2005**	**December 21, 2006**
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History of the University of the District of Columbia

The University of the District of Columbia is, at once, very old and very new. The seeds of higher education for the District were planted in 1851 when Myrtilla Miner founded a "school for colored girls". In 1879, Miner Normal School became a part of the public school system. Similarly, Washington Normal School, established in 1873 as a school for white girls, was renamed Wilson Normal School in 1913. In 1929, by an act of Congress, both schools became four-year teachers colleges, Miner Teachers College and Wilson Teachers College, and the only institutions of public higher education in the city. Years later, after the long awaited Supreme Court desegregation decision, the two colleges united in 1955 to form the District of Columbia Teachers College.

However, for many residents who did not wish to become teachers or who were both black and poor, the opportunity for advanced technical training or study for a liberal arts degree was an unattainable goal. Years of persistent lobbying for comprehensive public higher education by District residents and others caused President John F. Kennedy, in 1963, to appoint a commission to study the District's needs. It was no surprise that the Chase Commission found a definite and compelling need for public higher education in the District of Columbia. There was a demand for instruction that was affordable, and there was an overwhelming desire for learning that would enable residents to participate fully in the unique life of the city.

The Commission's report stimulated congressional action. Under the leadership of Senator Wayne Morse and Congressman Ancher Nelson, the Public Education Act (Public Law 89-791) was enacted in 1966. Two schools were established: Federal City College, whose Board of Higher Education was appointed by the Mayor of the District of Columbia, and Washington Technical Institute, whose Board of Vocational Education was appointed by the President of the United States. The mission of both institutions was to serve the needs of the community by directing the resources and knowledge gained through education toward the solution to urban problems.

As a sign of hope for the future, both schools proudly opened their doors in 1968. There were so many applications for admission to Federal City College that students were selected by lottery. Federal City College and the Washington Technical Institute achieved land-grant status in 1968, more than 100 years after the first Morrill Land-Grant College Act was passed by Congress. Rapidly, the two schools grew in academic stature. Washington Technical Institute received accreditation in 1971; Federal City College in 1974.

Although the schools were in their infancy, thoughts turned to a comprehensive university structure. In 1969, the District of Columbia Teachers College, the city's oldest teacher training institution, was placed under the jurisdiction of the Board of Higher Education. In 1974, the Board established a joint administrative support system and placed the District of Columbia Teachers College and Federal City College under a single president.

After Congress granted limited home rule to the District of Columbia, the mandate for consolidation of the three schools was authorized by D.C. Law 1-36 in 1975. A new Board of Trustees took office in May 1976, consisting of 11 members appointed by the Mayor, three appointed from the student communities, and three appointed by the alumni associations. From that moment, the monumental task of shaping a new University of the District of Columbia began.

The Board of Trustees, acting to effect the consolidation, assigned Presidents Wendell P. Russell of Federal City College and Cleveland L. Dennard of Washington Technical Institute to work jointly in identifying, developing, and implementing tasks required to complete the effort. Beginning in February 1977, 22 task forces were formed to develop recommendations for Board action.

On August 1, 1977, the Board of Trustees publicly announced the consolidation of the District of Columbia Teachers College, the Federal City College, and the Washington Technical Institute into the University of the District of Columbia under a single management system. On the same day, the Board appointed Lisle Carleton Carter, Jr., the first president of the University.

In 1977, under the direction of President Carter, academic components began planning for consolidation of academic programs. These efforts culminated in the establishment of five programmatic colleges -- Business and Public Management; Education and Human Ecology; Liberal and Fine Arts; Life Sciences; Physical Science, Engineering and Technology -- University College, Continuing Education, and several academic

units which comprised the University of the District of Columbia.

In 1994 and 1999 new academic consolidations took effect. The University currently offers over 75 undergraduate and graduate academic degree programs through the following college and schools: the **College of Arts and Sciences**, with its Division of Arts and Education, Division of Science and Mathematics, and Division of Urban Affairs, Social, and Behavioral Sciences; the **School of Business and Public Administration**; the **School of Engineering and Applied Sciences**; and the **UDC David A. Clarke School of Law**. Additionally, the University's public service arm, the **Division of Community Outreach and Extension Services** (COES), offers a variety of practical, nonacademic educational programs and training to the citizens of the District.

MISSION

The University of the District of Columbia is an urban land-grant institution of higher education with an open admissions policy. It is a comprehensive public institution offering quality, affordable postsecondary education to District of Columbia residents at the certificate, associate's, baccalaureate, and graduate levels. These programs will prepare students for immediate entry into the workforce, for the next level of education, for specialized employment opportunities, and for lifelong learning.

UNIVERSITY GOALS

1. **Student Access:** To ensure the legislative entitlement of the residents of the District of Columbia to comprehensive public post-secondary education;
2. **Student Choice:** To offer a broad variety of programs within its available resources to provide reasonable choices for post-secondary education to the residents of the District of Columbia that will lead to meaningful employment opportunities;
3. **Student Achievement:** To set high standards for student achievement and to provide quality instruction and support services to enable students to meet those standards;
4. **Land-Grant Functions:** To be innovative in carrying out the traditional land-grant functions of teaching, research, and public service to solve urban community problems and to improve the overall quality of urban living in the District of Columbia;
5. **Institutional Quality:** To ensure institutional excellence in management and leadership, academic programs, support services, instruction, research, and public service;
6. **Institutional Growth and Development:** To be responsive to new and emerging job market demands in the Washington, D.C. Metropolitan Area, and
7. **Advancement of Knowledge:** To advance knowledge at the local, national, and international levels through various innovative strategies in teaching, research, and public service as America's only public, urban land-grant institution.

LOCATION

The main campus of the University of the District of Columbia is located at Connecticut and Van Ness Streets in northwest Washington. Some UDC programs are offered at Reagan National Airport and at other off-campus sites. All University buildings are easily reached by public transportation.

The University's location in the Nation's Capital offers students access to cultural, intellectual, and political activities unequaled anywhere in the United States. The three branches of the federal government, the Library of Congress, the Smithsonian Institution, the numerous galleries, museums, halls for the performing arts, and other facilities of the Nation's Capital provide a rich setting for educational endeavors. The Washington metropolitan area features numerous parks and woodlands, and beaches and mountains are within easy commuting distance of the District. Bicycle paths, hiking and bridle paths and historical sites are found throughout the area.

Washington, D.C. offers students a rich sociocultural setting reflecting the diverse ethnic makeup of the city. Museums, radio stations, entertainment events, and community activities oriented to the multicultural community abound. Opportunities for students to participate in the life of the community are enhanced by the University's commitment to involvement in the life and needs of the city.

ACCREDITATION

The University of the District of Columbia is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Accreditation. In 1995 the University received a 10-year unconditional reaffirmation of its accreditation from the Commission on Higher Education of the Middle States Association of Colleges and Schools.

SPECIALIZED ACCREDITING BODIES

- Accreditation Board for Engineering and Technology (ABET)
  111 Market Place, Suite 1050
  Baltimore, MD 21202
  (410) 347-7700
- American Board of Funeral Service Education
  13 Gurnet Road, #316
  P. O. Box 1305
  Brunswick, ME 04011
- American Chemical Society
  Committee on Professional Training
  1155 Sixteenth Street, N.W.
  Washington, DC 20036
- American Speech/Language/Hearing Association
  10801 Rockville Pike
  Rockville, MD 20852
  (301) 897-5700
- Association of Collegiate Business Schools and Programs (ACBSP)
  7007 College Boulevard, Suite 420
  Overland Park, Kansas 66211
- Council on Social Work Education
  1600 Duke Street
  Alexandria, VA 22314-3421
  (703) 683-8080
- National Association of State Directors of Teacher Education and Certification (NASDTEC)
  3600 Whitman Avenue, North, Suite 105
  Seattle, WA 98103
  (206) 547-0437
- National League for Nursing Accrediting Commission
  61 Broadway, 33rd Floor
  New York, NY 10006
  (212) 363-5555

MEMBERSHIPS

INSTITUTIONAL

- American Association of State Colleges and Universities (AASCU)
- American Council on Education (ACE)
- Association for Institutional Research
- Association of Governing Boards of Universities and Colleges (AGB)
- College and University Personnel Association (CUPA)
- Consortium of Universities of the Washington Metropolitan Area
- Middle States Association of Colleges and Schools, Inc.
- National Association for Equal Opportunity in Higher Education (NAFEO)
- National Association of State Universities and Land-Grant Colleges (NASULGC)
- National Association of Student Financial Aid Administrators (NASFAA)
- The Greater Washington Board of Trade

SPECIALIZED

- American Assembly of Collegiate Schools of Business
- American Association of Colleges for Teacher Education
- American Association of Colleges of Nursing
- American Association for Higher Education
- ASHA Educational Standards Board
- Association of Collegiate Business Schools and Programs
- Association of Collegiate Schools of Architecture
- Council of Communication Sciences and Disorders
- Council of Graduate Programs
- Council of Graduate Schools
- Engineering Accreditation Commission
- Joint Review Committee for Respiratory Therapy Education
- Joint Review Committee on Educational Radiologic Technology
- Mid-Atlantic Consortium of Social Work Directors
- National Institutes of Water Resources
- Society for College and University Planning (SCUP)
- Technology Accreditation Commission

ACADEMIC AFFAIRS
OFFICE OF ADMISSION

UNDERGRADUATE ADMISSIONS APPLICATION PROCEDURES

LaVerne Hill-Flanagan, M.A., Director
Building 39, Room A-14
Phone: 202-274-6110

WHEN TO APPLY

The Office of Admission is responsible for the timely and orderly processing of admission/re-admission applications for new, transfer, and returning students. Specifically, the Office disseminates appropriate admission-related materials to potential applicants; accepts and processes applications for new, transfer, and returning students; creates applicant folders for all new students; evaluates transcripts and certifies advanced standing for eligible students; responds to related questions; retrieves and distributes mail and other documents that affect the status of applications; interfaces with academic departments to evaluate academic transcripts; and communicates with individuals regarding the status of their applications, documents, and other pertinent information.

Most new students are admitted to the University of the District of Columbia for the fall and spring semesters, although some students may apply for admission during the summer term (See academic calendar for the exact dates). Secondary school students may apply for admission to the University any time following the completion of their junior year of high school.

Application forms and procedures, University rules and regulations, and additional information describing programs offered by the University can be obtained by writing or visiting the Office of Admission, 4200 Connecticut Avenue, N.W., Washington, D.C. 20008, Building 39, Room A-12. The telephone number is (202) 274-6333.

REQUIREMENTS FOR ADMISSION

Applicants who have graduated from an approved secondary school or who hold a valid General Education Development (GED) certificate are eligible for admission to the University.

To assure maximum academic success in University courses, it is recommended that the prospective student complete the following high school subjects: four years of English, two years of foreign language, two years of social science, two years of laboratory science, and two years of mathematics, including algebra and geometry. The absence of proficiency in basic subjects may require enrollment in pre-college developmental courses.

APPLICATION PROCEDURE FOR ADMISSION

The University of the District of Columbia maintains an open admissions policy. Students who have graduated, or will soon graduate, from an approved secondary school or who possess a valid General Education Development (GED) certificate and who have not previously enrolled in any postsecondary institution apply as freshmen. Students who have been enrolled previously in another postsecondary institution apply as transfer applicants. Students who are not pursuing a degree at the University or who have received a degree from another accredited institution may apply as special students. Applicants who complete the application process by the deadline will receive written notification of their admission status from the Office of Admission.

The application form for admission, non-refundable application fee, and all official transcripts must be submitted by the application deadline for the semester in which the applicant wishes to enroll.

FRESHMAN APPLICANTS

A freshman applicant must submit the application for admission, the non-refundable application fee of $20 (money order or certified check only), and an official transcript of all high school coursework and grades. The transcript must be mailed directly to the Office of Admission by the applicant's secondary school. The application is not complete until all documents are received.

The student will be informed regarding the status of the application within 15 days after all documents have been received. A freshman applicant may be eligible for admission prior to actual graduation from a Washington, D.C. high school on a provisional basis. Such provisional status will be updated by the Office of Admission upon receipt of the student's complete and official high school transcript.

TRANSFER APPLICANTS

Transfer applicants must submit the Application for Admission, the non-refundable $20 application fee, and official copies of academic transcripts from all previously attended postsecondary institutions. These transcripts must be sent directly to the Office of Admission by the previous college or university. Transfer students who have earned fewer than 30 hours of transferrable college credits also must submit official copies of high school transcripts. Transfer credits are evaluated by the Office of Admission. Credits earned from an accredited institution with a grade of "C" or better (see section on Credit and Grading for additional information) are accepted as transfer credit by the University. At the time of application, transfer students must list all institutions previously attended. Failure to do so may result in the denial of transfer credit.

Transfer applicants applying for financial aid must also submit a financial aid transcript to the UDC Financial Aid Office from each former postsecondary institution.

INTERNATIONAL STUDENTS

An international student applies to the University of the District of Columbia by submitting the completed application form with the non-refundable $20 application fee, supporting educational documents, and an Affidavit of Financial Support. International students are considered for admission to the University only during the Fall and Spring semesters. Applications for the Fall Semester are due in the Office of Admission by May 1; applications for the Spring Semester are due by September 15. All supporting documentation is due no later than 45 days after the admission deadline. Residents of the United States, including foreign citizens with immigrant (resident) visas, foreign citizens with G-4 visas, and undocumented aliens, are not considered international students and should apply as regular freshmen or transfer students.

Foreign students with non-immigrant visas are admitted as international students. International applicants **must** pursue a degree and are not eligible for special student status.

The admission status of students who have not attended another postsecondary institution is based on School-leaving Certificates or external national examinations used in the particular country as a terminal secondary certificate. Students who have attended a postsecondary institution must submit detailed reports of courses taken and grades received to one of the following Foreign Education Credential Services for evaluation and submission of results to the University:

American Association of Collegiate Registrars and Admissions Officers (AACRAO)
Office of International Education Services
One Dupont Circle, NW, Suite #520
Washington, DC 20036-1135
(202) 296-3359
E-mail: oies@aacrao.org
www.aacrao.org

World Education Services (WES)
P.O. Box 57206
Washington, DC 20037-7206
(202) 331-2925
E-mail: dc@wes.org
www.wes.org

Center for Education Documentation, Inc.
P.O. Box 326
Boston, MA 02130-0003
(617) 522-4738
E-mail: info@cedevaluation.com
www.cedevaluations.com

Students who do not hold a School-leaving Certificate of a level equivalent to a high school diploma in the United States must take the GED examination or graduate from an accredited high school in the United States.

International students whose native language is one other than English must take the Test of English as a Foreign Language (TOEFL) www.TOEFL.org. This requirement will be waived upon the submission of an official college transcript evidencing the successful completion of two college-level English courses at an accredited American college or university.

SPECIAL UNDERGRADUATE STUDENTS

A person presently enrolled and pursuing a degree at another accredited undergraduate postsecondary institution who wishes to attend UDC for one term must be admitted as a special student. A special student applies by submitting the Application for Undergraduate Admission and paying the non-refundable application fee of $20 by the deadline for the term for which he or she is seeking admission. The UDC Office of Admission must receive a letter of good academic standing by the application deadline. The letter must be sent by the institution where the applicant is currently enrolled. The Office of

Admission will not accept a letter of permission to attend UDC in lieu of a letter of good academic standing.

READMISSION

Students who do not register for classes for two consecutive semesters (excluding summer sessions) and students who are suspended for academic reasons will be required to apply for readmission to the University. Applications for readmission, along with a non-refundable readmission fee of $10, must be received in the Office of Admission by the application deadline for the term for which the student is seeking admission. The Office of Admission will review applications, consider prior academic records, and grant readmission in accordance with the policies and procedures of the University.

EVALUATING AND RECORDING TRANSFER CREDIT

All transfer credit is evaluated by the Office of Admission. The academic department of the student's major assesses undergraduate transfer credit that counts toward a major. Transfer credit will be awarded only at the time of admission for course work in which the applicant received a grade of "C" or higher, or a "B" or better for graduate students. The transfer student's grade point average will reflect courses taken at UDC only. Transfer credit may also be awarded for such formal coursework completed in the armed services, government agencies, and private corporations as identified and evaluated by the Office of Educational Credit of the American Council on Education. The University of the District of Columbia also awards credit for successful completion of general and subject examinations of the College Level Examination Program (CLEP).

CERTIFICATE APPLICANT

The admission requirements for an applicant seeking admission to a certificate program are:

- A high school transcript, GED Certificate, or one official transcript from each postsecondary institution attended as appropriate; and

- a 100-word essay indicating the reason you chose your particular program.

GRADUATE ADMISSION APPLICATION PROCEDURES

DEGREE APPLICANTS

Admission packet requirements:

1. Obtain an application from and return to the Office of Admission, University of the District of Columbia, 4200 Connecticut Avenue, N.W., Washington, DC 20008. Complete and return the application with a $20 non-refundable application fee (money order or certified check). Former graduate students may apply for readmission by completing and returning an application with a non-refundable application fee of $10.

2. Submit transcript(s) for **all** undergraduate and graduate studies. To speed up the process, applicants are encouraged to submit their official transcript(s) (i.e., a transcript bearing the seal of an authorized University official) in sealed envelopes issued by the University Registrar, along with their application and other supporting materials. International students with degrees awarded outside the United States must submit detailed reports of courses taken and grades received to one of the Foreign Education Credential Services listed on page 5.

3. Degree seeking applicants need to have appropriate test results sent. Test scores, whether entrance tests or TOEFL (Test of English as a Foreign Language), are to be mailed directly to the University by the Educational Testing Service (ETS). Applicants are required to take the appropriate standardized test specified by the appropriate program of study. The following standardized tests are required: MBA - Graduate Management Admission Test (GMAT); MPA - Graduate Management Admissions Test (GMAT) or Miller's Analogy Test (MAT); other degree programs - Graduate Record Examination (GRE).
4. Meet any additional departmental requirements, such as a specific grade point average in former academic work, interview, or prescribed examinations.

Admission will be based on the applicant's general preparation for advanced study and specific training in the field of concentration. No action will be taken on an application until all required documents are on file in the Office of Admission.

DEGREE APPLICANT

A degree applicant is one who is seeking admission to a specific graduate degree program. The requirements for admission are:

- One official transcript from each collegiate institution attended;
- two letters of recommendation;
- entrance test score(s); and
- a 100-word essay indicating the reason you chose your particular program.

NON-DEGREE APPLICANT (UNLIMITED ENROLLMENT)

A non-degree applicant is one who is seeking admission to the University to take graduate courses but who is not currently seeking a degree from a graduate program of study. Admission will be based on the applicant's preparation for advanced study and specific training in a selected field of concentration. Applicants who hold a F-1 or J-1 visa are not eligible to apply for non-degree status. However, students who have graduated from the University within the past academic year and who have filed a degree application and are awaiting acceptance to a graduate degree program may be accepted upon completion of a non-degree application. Non-degree applicants are required to submit proof of completion of undergraduate degree. Inquiries should be directed to the Office of Admission.

READMISSION APPLICANT

A former graduate student seeking readmission to a degree, non-degree, or certificate program must submit an admission application, one official transcript from each postsecondary institution attended since last enrolled at the University, and pay a $10 non-refundable readmission fee.

GRADUATE TRANSFER CREDIT

Up to nine (9) semester hours earned at another institution may be applied to a master's degree. For transfer credit, individual courses : (1) must have been completed with a grade of "B" or better; (2) must have been completed within five years of the beginning of the semester for which the student is admitted to a degree program, and (3) must not have been a part of a program for which a degree has been awarded.

CLOSING DATES FOR GRADUATE ADMISSION

Applicants for graduate admission must have all documents on file no later than June 15 for the Fall Semester, November 1 for the Spring Semester, and April 1 for the Summer Session.

Application forms, admission procedures, University rules and regulations, and additional information describing programs offered by the University can be obtained from the University's web site at www.udc.edu or by writing to or visiting the Office of Admission, 4200 Connecticut Avenue, N.W., Washington, D.C. 20008, Building 39, Room A-14. The telephone number is (202) 274-6110.

Applicants who complete the application process by the deadline will receive written notification of application status.

Failure to adhere to the deadline may delay acceptance until the following semester.

DOCUMENT RETENTION

All documents submitted in support of applications become a part of the permanent records of the University and are not returnable. Documents submitted by applicants who do not enroll for course work will be purged after one academic year.

ENROLLMENT IN UNDERGRADUATE COURSES

A graduate student enrolled at the University may enroll in undergraduate courses to satisfy special needs or requirements. However, credits earned in undergraduate courses do not apply toward a graduate degree. Additionally, regardless of the level of the course, graduate students are required to pay graduate fees.

INTERNATIONAL GRADUATE STUDENT ADMISSION PROCEDURES

The University is approved by the Immigration and Naturalization Service, U.S. Department of Justice, to accept international students. All international students who are not on an immigrant or a refugee visa are considered non-residents for tuition purposes and must pay non-resident tuition.

Selection of international applicants for graduate studies is based on the applicant's undergraduate record, results of the appropriate standardized test, and letters

of recommendation. Individual departments may require pre-admission examinations before granting admission. Applicants should check the requirements of the department in which they wish to study.

Applicants who hold a F-1 or J-1 visa are not eligible to apply for non-degree status. Applications, required test scores, affidavits of support, and other supportive documents must be received by the Office of Admission no later than May 1 for Fall Semester admission and September 15 for Spring Semester admission. **Applications are not considered for summer terms.** All documents become the property of the University and are not returnable. Therefore, students are advised not to submit original certificates but to submit certified documents.

In addition to the required documents listed under "Graduate Admission Application Procedures," international applicants must provide evidence of English language proficiency. English proficiency can be demonstrated by the applicant by any one of the following criteria:

A minimum score of 550 on the Test of English as a Foreign Language (TOEFL); degree earned in an accredited American college or university; or one year completed in academic good standing in an accredited American postsecondary institution.

WRITING PROFICIENCY EXAMINATION REQUIREMENTS

Writing proficiency must be demonstrated for continuance in a graduate program beyond the first semester. The student may satisfy the writing proficiency requirement by scoring above a cut-off value set by the college on the verbal section of the required standardized test, by successfully completing the Writing Proficiency Examination, or by enrolling in the Graduate Writing Seminar (ENGL 290) during the first semester in the program. Credit for this course will not be counted as part of the credit-hour requirement for completion of a graduate program. The fee for the standardized test is $40.00.

MEDICAL EXAMINATION REQUIREMENTS

All new students are required to provide the University with evidence of a current medical examination. The University Health Services will provide, by appointment and on a first-come-first-served basis, a limited number of health examinations at no cost to the student. All students under the age of 26 are required to show proof of having immunization for tetanus, diphtheria, measles, mumps, rubella (MMR), including the MMR booster shot. For students under the age of 19, proof of polio immunization is required before class registration (D.C. Law 3-20). These immunizations may be obtained in the health unit free of charge. The University Health Services is located on the Van Ness Campus, Building 44, Room A-33. The hours of operation are 8:30 a.m. to 8:00 p.m., Monday through Thursday, and Friday, 8:30 a.m. to 7:00 p.m. Call (202) 274-5030 for an appointment.

DISTRICT OF COLUMBIA RESIDENCY

The Board of Trustees of the University of the District of Columbia hereby gives notice that at its meeting held June 16, 1998, the Board took final rulemaking action to amend Section 722 of the University Rules (8DCMR) as follows. The Notice of Proposed Rulemaking was published in the D.C. Register on May 8, 1998, at 45 DCR 2864. This amendment will be effective upon publication of this notice in the D.C. Register.

722 Preferential Tuition for District of Columbia Residents as amended Title

723 8DCMR, Chapter 7, 722, as follows:

722.2 Any applicant for the preferential tuition established under Section (722) shall be presumed to be a bona fide resident of the District of Columbia if the Applicant has been, for the year prior to the date of the application for preferential tuition:

(a) Domiciled in the District of Columbia and either paid District of Columbia income taxes or received public assistance from a District of Columbia government agency; or
(b) Claimed as a dependent on District of Columbia resident tax returns filed by a parent or spouse of the applicant domiciled in the District of Columbia; or
(c) Graduated from a D.C. Public High School within the year before enrollment and was classified as a resident of the District of Columbia by the D.C. Public Schools.

722.3 Any applicant for the preferential tuition established under this Section (722) who is not presumed to be a bona fide resident of the

District of Columbia by the District of Columbia shall be required to establish by a preponderance of the evidence to the President or his or her designee that the applicant:

(a) Was a bona fide resident of the District of Columbia for one year prior to the applicant's request for preferential tuition; and
(b) Remains a bona fide resident of the District of Columbia.

For purposes of this subsection, a "preponderance" of the evidence is the degree of relevant evidence, considering all of the available information, sufficient to find that the claim of residency is more probably true than untrue.

722.4 In determining whether an applicant for preferential tuition under this section is in fact a bona fide resident of the District of Columbia, the following factors shall be taken into consideration:

(a) Whether the applicant has lived in the District of Columbia, as evidenced by lease or mortgage agreements;
(b) Where the applicant's driver's license, if any, was issued;
(c) Where the applicant's motor vehicle, if any, is registered;
(d) Where the applicant is registered to vote;
(e) What address the applicant has used over the past several years for purposes of filing federal income tax returns, if any;
(f) Any other factors deemed appropriate by the President.

722.5 A matriculating student who is classified as a non-resident and whose domicile has changed may request reclassification as a bona fide resident. However, residence in the District of Columbia primarily to attend college does not establish domicile and eligibility for the preferential tuition described in this section.

Students who are *bona fide* residents of the District of Columbia are entitled to reduced tuition at the University. No student shall be eligible for classification as a resident unless he or she is domiciled in the District of Columbia (the "District") and has resided in the District continuously for not less than one (1) year immediately preceding the first day of classes of the term for which classification is sought.

A student shall not be considered to be domiciled in the District unless he or she is in continuous physical residence in the District and intends to make the District his or her permanent home, while in attendance at the University and indefinitely thereafter, and has no intent to be domiciled elsewhere.

RESIDENCY CLASSIFICATION

For purposes of classification as a resident student at the time of enrollment, if any of the following apply, the applicant shall be deemed a resident student:

He or she is living with, and has lived with for at least the preceding year, a spouse, parent, or legal guardian who is a *bona fide* resident of the District of Columbia; or

1. He or she is a legal adult (18 years of age or older) who is and has been a *bona fide* resident of the District of Columbia for at least one year; or

2. He or she (or spouse, parent or legal guardian) is an active duty member of the U.S. Armed Forces, Selective Reserve, National Guard; or

3. He or she has been in continuous physical residence in the District of Columbia for the past 12 months, and intends to make the District of Columbia his/her permanent home not only while in attendance at the University, but indefinitely thereafter, and has no intent to be domiciled elsewhere.

RESIDENCY FACTORS

The University will consider a number of factors when determining whether a student or applicant is eligible for resident student status. The following facts and circumstances, although not necessarily conclusive, shall have probative value in support of a claim for classification as a District resident. The existence of at least three (3) of these factors with respect to a student shall create a presumption of residency:

(a) Continuous presence in the District during periods when not enrolled as a student;
(b) Reliance upon District sources for financial support;
(c) Domicile in the District of the student's family, guardian, or other relatives or

persons legally responsible for the student;
(d) Former domicile in the District and maintenance of significant connections to the District while absent;
(e) Ownership of a home in the District;
(f) Admission to a licensed practicing profession in the District;
(g) Long term military commitment in the District;
(h) Acceptance of an offer of permanent employment in the District.

Other factors in addition to the factors listed above indicating an intent by a student to make the District his or her domicile shall be considered by the University in classifying a student.

The following circumstances standing alone shall **not** constitute sufficient evidence of domicile to effect classification of a student as a resident unless they exist in conjunction with one (1) or more of the requirements listed below:

(a) Voting or registration for voting;
(b) Employment in any position normally filled by a student;
(c) The lease of living quarters;
(d) A statement of intention to acquire a domicile in the District;
(e) Domicile in the District of the student's spouse;
(f) Automobile registration or driver's license; or
(g) Other public records, such as birth or marriage records.

Individuals who are currently serving in the military on active duty, active reserve, or in the National Guard and who are stationed within the metropolitan Washington, D. C. area are eligible to enroll at the University at resident tuition rates, provided they have earned a high school diploma or equivalent. Dependents of these persons currently serving in one of the above categories are also entitled to the same benefits.

CHANGE OF RESIDENCY

A student who moves from the District and establishes residency elsewhere loses status as a resident student at the end of the semester or term during which the student changes residency. Students are required to report all changes in residency to the Office of the Registrar.

APPEAL OF ADVERSE RESIDENCY CLASSIFICATION

A new student may appeal classification as a non-resident student by filing a written appeal with the Office of Admission. Continuing students who have applied for and been denied status as resident students or who have been reclassified as non-resident students may file a written appeal with the Office of the Registrar.

A student may appeal his or her classification as a non-resident student in accordance with the following provisions. Within seven (7) days of notification of the adverse classification, the student shall file an appeal with the Registrar. The Registrar shall issue a decision, which shall include the reasons for the decision, not later than fifteen (15) days after receipt of the appeal, excluding University holidays. A student may appeal an adverse decision by the Registrar to the Vice President for Academic Affairs. The appeal shall be filed with the Vice President for Academic Affairs within seven (7) days after notification of the Registrar's decision. The Vice President for Academic Affairs shall issue a decision on the appeal within thirty (30) days after receipt of the appeal. A student may appeal an adverse decision by the Vice President for Academic Affairs to the President. The appeal shall be filed with the President within seven (7) days after notification of the decision of the Vice President for Academic Affairs. The President shall issue a decision within thirty (30) days after receipt of the appeal. The decision of the President shall be the final administrative decision of the University. During the pendency of the appeal process, the student shall be assessed the non-resident tuition rate.

If, pursuant to the appeal process set forth in this section, the student is determined to be a resident student, the official making that determination shall direct that a refund be issued to the student. In order to be considered a resident, a student must have resided in the District of Columbia continuously for at least one year immediately preceding the first day of classes for the semester or term for which resident classification is claimed. Further, resident students must maintain their status as residents of the District of Columbia in order to retain resident student status.

FALSIFICATION OF RESIDENCY

The burden of proof of residency is on the student. Submitting false documentation of residency or failure to inform the University of a change of residency that

would render the student ineligible for resident student status is grounds for dismissal from the University and may result in the withholding of a degree. In addition, the student will be required to make financial restitution to the University for the difference between resident and non-resident tuition.

TUITION AND FEES

Undergraduate tuition for residents of the District of Columbia is $75 per semester hour of credit. Undergraduate tuition for non-residents, including international students is $185 per credit hour.

Graduate tuition for residents is $198 per semester hour of credit. Graduate tuition for non-residents, including international students, is $329 per semester hour of credit.

TUITION RATES AND FEES MAY BE INCREASED OR MODIFIED BY THE BOARD OF TRUSTEES WITHOUT PRIOR INDIVIDUAL NOTIFICATION TO STUDENTS OR APPLICANTS.

METHOD OF PAYMENT

All charges for tuition and fees must be paid in full at the time of registration for classes. Payment may be made by certified check, money order, cash, credit card, or personal check. Students with prior financial aid commitments may be eligible for deferred payments on current term only.

The University will defer a student's tuition and/or fees upon receipt of an authorizing letter or agreement from a sponsoring agency or organization.

TUITION INSTALLMENT PLAN

(a) Pay at registration one-third of the tuition due, plus applicable fees; and

(b) pay within 60 days after registration the remaining balance of the tuition due.

Anyone can get on this plan with any amount.
A student approved for the Tuition Installment Plan shall be required to pay at least one-third of the tuition due and all applicable fees due at the time of registration. In addition, the student shall execute a promissory note for the balance of the tuition and shall pay the balance owed within 60 days of the date on which the student is registered.

Application for participation in the Tuition Installment Plan shall be submitted to the Student Accounts Department at least four weeks prior to the first day of registration. The Student Accounts Department, or its designee, shall approve the application and promissory note. **The University does not provide the tuition installment plan for the summer semester**.

Failure by a student to pay the entire amount of the installment when due shall result in the following actions:

(a) The student shall be immediately and automatically removed from all classes;

(b) The student's name shall be placed on the "barred" list, and the student shall be barred from registering;

(c) The University shall withhold the release of grades or credits and deny to the student permission to register for subsequent sessions and all other student privileges; and

(d) The student shall forfeit all rights to participate in the Tuition Installment Plan in any future semester, even if the student's name is subsequently removed from the "barred" list.

A student's name shall be removed from the "barred" list upon the submission to the University's registrar of a validated receipt from the University cashier acknowledging payment of all outstanding indebtedness.

Installment payments shall be subject to the refund policy of the University.

AUDITING

Tuition for auditors (students enrolled in courses on a non-credit basis) is the same as tuition for regular students.

FEES

The following schedule identifies various fees for services provided to students which are:

A separate laboratory fee of $35.00 shall be charged for each laboratory course.

Activity Fee $15.00

(per semester, including summer)
Application Fee $20.00
(paid once upon initial application)
Tuition Management System (TMS)
Enrollment Fee $30.00
Athletic Fee $75.00
(per semester, including summer)
Change of Course Fee $5.00
(add/drop - each course)
Credit by Special Examination $5.00
(per credit hour +
associated tuition charges)
Duplicate I.D. Card Fee $5.00
Graduate Writing Proficiency Exam $40.00
Graduation Fee $30.00
Health Services Fee $15.00
(per semester, including summer)
Late Application for Tuition
Installment Plan $15.00
Late Registration Fee $25.00
Readmission Application Fee $10.00
Returned Check Fee $20.00
Student Health Insurance * $175.00
Technology Fee $30.00
Transcript (First One) . . . . . FREE
Each Transcript After First One $5.00
Withdrawal Fee (per course) $2.00
(*Student health insurance rates are subject to change.)

The ***Activity Fee*** of $15 is charged to each student every academic term, including summer. The Activity Fee is used by the Undergraduate and Graduate Student Government associations for providing services to students, organizing social and cultural activities, and publishing the student newspaper and publications.

The ***Athletic Fee*** of $75 is charged to each student every academic term, including summer. The Athletic Fee helps to defray the costs of intercollegiate athletic activities. Admission to all UDC athletic events and other activities is open to UDC students upon presentation of the valid student identification card.

Tuition Management System Enrollment Fee is charged to each student that applies for the University's tuition installment plan.

The ***$5 Change of Course Fee*** is charged for each add/drop transaction during the late registration period at the beginning of each academic term. For example, if following the student's initial registration, the student elects to add another course which conflicts with a course on the schedule, adds the new course and drops or changes sections on the other course, the student's account will be charged $5 for each course that is added to the schedule or dropped from the schedule, in addition to the increase in tuition charges, if any.

Comprehensive Laboratory Fee of $35 is charged whenever a student registers for a class with a laboratory. It is charged once each semester for each laboratory class. Laboratory classes and fees are indicated in the official class schedule.

The ***Credit by Special Examination Fee*** is charged to any student seeking examinations in lieu of enrollment in specific courses. Once the student receives permission to be examined, a fee of $5 per course credit hour, plus the tuition, is charged. The examination cannot be administered prior to payment of the fee and tuition.

The ***Duplicate I.D. Card Fee*** of $5 is charged when a replacement I.D. card is requested. The initial I.D. card is issued without charge when a new student registers at the University.

The ***Graduation Fee*** of $30 is assessed when the student files the Application for Graduation in the final semester of study. This fee covers expenses associated with commencement activities.

The ***Health Services Fee*** of $15 is charged each student every academic term, including summer. The Health Services Fee helps to defray the cost of the University Health Services.

The ***Late Registration Fee*** of $25 is added to the student's charges for tuition and fees whenever a registration takes place after the prescribed registration dates.

The ***Returned Check Fee*** of $20 is assessed to the student upon return of a check unpaid by the bank. This fee covers the expense of processing the check.

Student Health Insurance is required of all students. Students who are unable to show proof of coverage from other sources must purchase a policy through the University. Student health insurance rates are subject to change.

The ***Technology Fee*** of $30 is charged to each student every academic term, including summer. The technology fee is used to subsidize the cost of maintaining technology at the University.

The ***Transcript Fee*** is charged for the issuance of a copy of the student academic record. The first transcript requested is free. A fee of $5 is charged for each additional transcript.

The ***Withdrawal Fee*** of $2 per course is assessed on all students who withdraw from the University.

SENIOR CITIZENS

Tuition and fees normally required for students admitted to the University will be waived for qualifying senior citizens (D.C. residents 65 years of age or older), except in cases where the applicant matriculates in a degree program. Matriculating senior citizens shall pay one-half the amount established for students within their category unless otherwise deferred or waived by specific Board of Trustees authority. Qualifying senior citizens should contact the UDC Institute of Gerontology at (202) 274-6616 for additional information.

REFUND POLICY

Students who withdraw during the regular academic year from one or more classes, resulting in a reduction of the tuition charged, and students withdrawing from the University are entitled to a refund of tuition according to the following schedule:

Withdrawal during Week 1 . . . . . 100%
Withdrawal during Week 2 . . . . . 80%
Withdrawal during Week 3 . . . . . 60%
Withdrawal during Week 4 . . . . . 40%
Withdrawal during Week 5 . . . . . 20%
Withdrawal after Week 5 . . . . . NONE

All applications for refunds based on withdrawal from the University must be made in the Student Accounts Office.

REMITTED TUITION

The University will provide full remitted tuition to all full-time permanent employees, their spouses, and dependent children who wish to enroll in courses at the University. However, such individuals are subject to University regulations, including admission, registration, and academic standing, and must pay all fees previously listed.

OFFICE OF FINANCIAL AID

James Lockwood, Director
Building 39, Room 101
Phone: (202) 274-5060

The Office of Financial Aid disseminates information on financial aid resources to potential and current students in a variety of venues; responds to financial aid inquiries; counsels and advises applicants on financial aid matters, and awards funds to eligible students in accordance with federal, state, and District regulations.

ALL STUDENTS ARE STRONGLY ENCOURAGED TO APPLY FOR FINANCIAL AID.

WHAT IS FINANCIAL AID?

Financial aid is any fiscal resource which reduces or eliminates the cost of attending the University. The resources are grants, loans, scholarships or employment. A grant is a financial award which does not have to be repaid. A loan is a financial award which must be repaid upon graduation or after a student has stopped attending the University on at least a half-time basis. Employment is a financial award which requires a student to work in order to receive funds.

IS THERE A FINANCIAL AID PACKAGE FOR YOU?

Financial aid awards may consist of one or more types of aid programs based on your overall eligibility status.

If your award includes two or more forms of financial aid, you have been awarded a "financial aid package" to meet your educational expenses. The amount of aid in your "package" will depend on the total funds available and the amount of your need. Early application for financial aid increases the likelihood that a student will receive the maximum aid for which he or she is eligible.

GENERAL INFORMATION

The University of the District of Columbia's Financial Aid Program provides assistance in the form of grants, loans, scholarships, and part-time employment. Need-based financial aid awards are made to students who demonstrate that their economic resources are insufficient to meet the cost of attending the University. Priority to receive need-based financial assistance is given to those applicants with the greatest financial need. Awards are made on a "first-come, first-served" basis. All awards are made subject to the availability of student aid funds in the Office of Financial Aid.

Financial aid awards must be used first to cover educational costs incurred during the period stated in the student's financial aid award letter. Only then may remaining funds be used to cover past indebtedness to the University.

ELIGIBILITY FOR AID

All applicants who wish to receive consideration for financial aid (except the Pell Grant Program) must be enrolled at least a half-time (i.e., six credit hours)and must be degree-seeking regular students. Applicants must be United States citizens, permanent residents of the United States, or eligible non-citizens. Non-U.S. citizens may be required to submit documentation of their status.

All financial aid applicants must meet satisfactory academic progress standards. Undergraduate applicants must demonstrate measurable academic progress toward attaining a degree with both a semester and cumulative grade point averages of 2.0 or better. Graduate students must maintain at least a 3.0 cumulative grade point average. Students enrolled in six to eight credit hours must pass at least six credit hours. Those enrolled in nine or more credit hours must pass at least nine credits. A copy of the University's Financial Aid Academic Policy is available in the Financial Aid Office.

The University will not be able to approve financial aid awards for new and readmitted students until they have been admitted as regular students. Admission to the University of the District of Columbia does not guarantee eligibility for financial aid.

HOW TO APPLY FOR FINANCIAL AID

If you applied for federal student aid during the previous school year, you will probably receive a Free Renewal Application for Federal Aid in the mail (Renewal FAFSA). If you did not apply for Federal Student Aid for the previous school year or you did not receive a Renewal FAFSA, you may submit a FAFSA:

1. Through the internet by using FAFSA on the web at www.fafsa.ed.gov.
2. By using FAFSA express software (call 1-800-801-0576 for information).
3. By having your school or the Equal Opportunity Center submit your application electronically (call 202-822-5180 for an appointment).
4. By mailing a paper FAFSA.

If you place the University's school code **(007015)** on your application, then a copy of your student aid report will be forwarded to the University's Financial Aid Office.

FEDERAL PELL GRANT

This program provides eligible undergraduate students accepted for enrollment at the University a grant that currently ranges from $200 to $4,000 per academic year. Awards are adjusted according to a student's enrollment level. The student must be a U.S. citizen or residing in the United States for other than a temporary purpose, enrolled in an eligible course of study, and in good academic standing. While a Federal Pell Grant will be awarded through the University, both initial eligibility and the amount of the grant are determined by the U.S. Department of Education.

D.C. LEVERAGING EDUCATION ASSISTANCE PARTNERSHIP PROGRAM GRANT (LEAP)

Eligible students who are residents of the District of Columbia may receive up to $1,500 per academic year. Applicants must first apply for a Pell Grant. Once a Pell Grant is on file in the University's Financial Aid Office, the student may complete a LEAP application. Undergraduates are eligible to participate in this program. For further information, contact the:

State Education Office
441 4th Street, NW
Washington, D.C. 20001
(202) 727-2824

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (FSEOG)

The Federal Supplemental Educational Opportunity Grant (FSEOG) is available to undergraduate students with exceptional financial need who require assistance in meeting the costs of attending the University. Financial assistance is available for students enrolled for at least six credit hours and in good academic standing. The grants average about $1000 per academic year.

INSTITUTIONAL GRANT (IG)

The Institutional Grant Program provides assistance to students in meeting the educational costs of attending the University. To be eligible, an applicant must demonstrate need, be enrolled for at least 6 credit hours in an academic degree program, and be in good academic standing.

FEDERAL FAMILY EDUCATION LOAN PROGRAM

Under this program, various lenders offer loans, through the University to eligible students and, in some cases, eligible parents. Students may qualify for "subsidized" loans (need-based) or "unsubsidized" loans (non-need based) depending on their status and eligibility. Parents with good credit may be eligible to borrow for a dependent student who is enrolled at least half-time and is in good academic standing. The current subsidized loan limits are $2,625 for first year students; $3,500 for second year students; $5,500 for third and fourth year students, and $8,500 for graduate students. The limits for "unsubsidized" loans are $4,000 for first and second year students, $5,000 for third and fourth year students, and $10,000 for graduate students. Parents may borrow up to the cost of attendance minus any estimated financial aid that a student is eligible to receive. Loans should be used only as a last alternative in meeting the educational costs of attending the University.

FEDERAL PERKINS LOAN PROGRAM

The Federal Perkins Loan Program provides funds for students who demonstrate financial need, are enrolled at least half-time, and are in good academic standing. The maximum amount awarded per year is $3,000 for each year of undergraduate study. A total of $15,000 is available for undergraduate study. Up to $5,000 is available for each year of graduate study. The maximum combined amount for undergraduate and graduate study combined is $30,000. The repayment period begins nine months after completion of the degree or when the student is no longer enrolled at least on a half-time basis.

SHORT-TERM LOANS (KAPPA REVOLVING LOAN)

Short-term loans are available to students in need of assistance to continue in school. In order to be eligible for the loan, a student must be enrolled at least half-time, have a source of income to repay the loan, and meet other requirements. The short-term loan amount ranges from $50 to $250, depending on the student's need. The loan must be repaid within 90 days.

TESTING AND ASSESSMENT

The Office of Enrollment Management is responsible for developing and implementing basic skills assessment and administering professional examinations. The Office generates databases which may identify students' academic strengths and weaknesses and determine instructional needs and prescriptions of courses and programs which provide them with optimal opportunities for growth and development.

The Office of Enrollment Management oversees the administration of national tests to UDC students and others in the community. A listing of these examinations follows:

- Graduate Management Admission Test (GMAT)
- Test of English as a Foreign Language (TOEFL)
- Graduate Record Examination (GRE)
- PRAXIS- formerly the National Teachers Examination (NTE)
- Law School Admissions Test (LSAT)

For information, contact: Office of Enrollment Management at (202) 274-5210.

ACADEMIC ADVISING

All students have access to faculty and staff members designated as academic advisors in selecting courses and planning career options. Students who have declared a major will be advised by department faculty members, and should meet with faculty advisors during the semester to develop an approved program of study. Students who have not declared a major, and entering freshmen will be advised by staff and faculty. The

academic advisor initiates referrals on behalf of students to appropriate service offices within the University community. Please contact the College of Arts and Sciences, at (202) 274-5194, School of Business and Public Administration at (202) 274-7000, the School of Engineering and Applied Sciences at (202) 274-7000, or the Office of the Director of Student Retention at (202) 274-5402.

OFFICE OF THE REGISTRAR

LaHugh Bankston, M.Ed., Registrar
Building 39, Room A09
Phone (202) 274-6200

The Office of the Registrar at the University of the District of Columbia provides timely and courteous service to University students, the University community, and outside agencies. The Office is responsible for consistently implementing District, Federal, and University policies and procedures, adhering to the American Association of Collegiate Registrars and Admissions Officers (AACRAO) guidelines, maintaining institutional credibility through the proper maintenance of student biographic and academic records, and certifying students for graduation. Services provided by the Registrar's Office include registration and scheduling adjustments, transcript maintenance and appropriate distribution, enrollment and veteran's certification, residency audit, student records management, and dissemination and maintenance of all student demographic data and directories.

REGISTRATION

Registration information and other relevant class announcements are published in the Schedule of Classes printed for each semester or term. Incoming freshmen and transfer students may obtain a Schedule of Classes from the Office of the Registrar. Students who have not declared a major may secure registration information from the Office of Enrollment Management and University Statistics. Students who have declared a major will receive registration information from their respective academic departments. Only students who are officially enrolled may attend classes and receive academic credit for instruction.

STUDENT IDENTIFICATION CARDS

New students are issued an identification card at the time of their initial registration. This ID card is required for access to all University services and must be presented on request to security personnel in University buildings. The ID card is revalidated during each registration period (with proof of paid tuition) and is acceptable only if it bears a valid stamp for the current academic term. Replacement ID cards are available upon payment of the requisite $5 fee and proof of registration for the current academic term.

FULL-TIME STATUS DEFINED

A full-time student must be enrolled in at least 12 credit hours of study. A student enrolled for fewer than 12 credit hours is classified as a part-time student. (Summer session undergraduate students are full-time when they are enrolled in nine credit hours for the eight-week session or six credit hours during the four-week session.)

COURSE LOAD LIMITATIONS

The maximum course load is 18 credit hours. With the approval of the dean of the college in which the student is enrolled, a student in good academic standing may take a maximum of 21 credit hours in a semester. Students on academic probation have course load limitations until reinstated to good academic standing (see Academic Standing Policy, pp. 20-22).

In applying the course load limitations, the University counts audited courses as a part of the student's course load. However, for regulations that require full-time status, audited courses are not counted as part of the course load.

AUDITING

Students who wish to audit a course must have approval from the appropriate instructor or department chairperson. A grade assigned by the instructor for a student auditing a course is "AU".

CLASSIFICATION OF STUDENTS

A student who has been admitted to the University in pursuit of an associate or baccalaureate degree is classified for the purposes of academic rank according to the number of credit hours completed.

Freshman . . . . . fewer than 30 credit hours

Sophomore	at least 30 but fewer than 60 credit hours
Junior	at least 60 but fewer than 90 credit hours
Senior	90 or more credit hours

CONSORTIUM OF UNIVERSITIES

The University of the District of Columbia is a member of the Consortium of Universities of the Washington Metropolitan Area. Other affiliates are: The American University, The Catholic University of America, Gallaudet University, Georgetown University, George Mason University, The George Washington University, Howard University, University of Maryland (College Park Campus), Marymount University of Virginia, Southeastern University, and Trinity College.

The Consortium was formed to facilitate coordination of resources among its affiliates. Students enrolled in UDC may be eligible to take courses at any of the member institutions.

To be eligible for participation in the Consortium, a student must:

1. Be currently enrolled in a degree-granting program at UDC;
2. Receive approval from the major department and the dean;
3. Be in good academic standing with a cumulative GPA of 2.00; and
4. Be in good financial standing with the University of the District of Columbia.

Courses taken through the Consortium must be required for the degree and not offered in the given semester at UDC. Students are limited to six (6) credit hours per semester through the Consortium. However, graduate students who have previously been granted nine (9) transfer credits from non-Consortium arrangements may enroll and receive resident credit in only one of the Consortium institutions. Eligible students in associate degree programs should have completed 30 credit hours, students in bachelor's degree programs should have completed 60 credit hours, and graduate students should have completed 50 percent of their program in residence.

Registration forms and instructions are available from the Office of the Registrar. The student must pay UDC tuition and fees for the current semester before becoming eligible to attend institutions in the Consortium. Official registration in the University of the District of Columbia is a prerequisite for the Consortium registration.

CHANGE OF PERSONAL INFORMATION

All changes in personal information must be reported to the Office of the Registrar. Change of name, social security number, or birth date must be accompanied by an acceptable document verifying the correct information at the time the request is made. Forms for reporting changes are available in the Office of the Registrar.

CHANGE OF PROGRAM OF STUDY - ADD/DROP

A student who finds it necessary to change a program of study must secure a Request Drop form from the office of the dean of the college or the advisor in the department in which the student is enrolled. A course may be added during the period designated for add/drop. The student consults the academic advisor for approval and computer entry of course adjustment. A fee of $5 is charged for each course added to the schedule or dropped from the schedule after the regular registration period and before the close of late registration.

Students officially dropping credit hours during the designated period of add/drop are entitled to receive a refund when such a change results in reduction of tuition charged. Changes made after the designated period of add/drop may not qualify for full refund (see refund policy).

DECLARATION AND CHANGE OF MAJOR

Students wishing to declare or change a major course of study must obtain the approval of the new major department and the release of the former department. Such official approvals must be filed with the Office of the Registrar. Students should be aware that the time required to secure a degree may be lengthened as the result of a change of major and should make such changes only after consultation with an academic advisor. Students are subject to the major program requirements which are in effect at the time the change of major is effected.

WITHDRAWAL FROM A COURSE

Students may officially withdraw from a class without penalty prior to the date posted in the current academic calendar. When such a withdrawal is processed officially and filed with the Office of the Registrar, a grade of "W" will be entered on he student's transcript. If the student stops attending class, or fails to file the Request Drop form on time, a failing grade may be given. All students who withdraw must pay a withdrawal fee of $2 per course.

WITHDRAWAL FROM THE UNIVERSITY

A student may withdraw from the University (all classes in which they are enrolled) up to and including the last day of classes prior to the beginning of the final examination period. Students who withdraw from the University after the published deadline for withdrawal from classes must obtain the signature of the chairperson of the department in which they are majoring and the dean of the appropriate college or school. Students who are enrolled and have not declared a major and who wish to withdraw from all classes must obtain the approval of the Dean of the College of Arts and Sciences. The approval must be obtained on the UDC-SRS-529 form, Withdrawal/Leave of Absence Form. A student who withdraws from the University will be required to apply for re-admission. All students must pay a withdrawal fee of $2 per course.

CONCURRENT ENROLLMENT POLICY

Students enrolled at the University of the District of Columbia who wish to take courses in other colleges and universities for transfer credit to the University of the District of Columbia must receive prior approval, in writing, from the department chair and dean of the college. This written authorization must be submitted to the UDC registrar. Credit will be denied if prior approval is not officially documented.

TRANSCRIPT OF GRADES

The official or unofficial University of the District of Columbia student academic record is known as a transcript. All course work in which the student has enrolled is recorded on the student's transcript. Copies of the transcript are requested from the Office of the Registrar. There is no charge for the first transcript requested. There is a charge of $5 for each transcript requested after the first one. Official copies are sent directly to institutions and individuals upon the written request of the student. The University complies with Public Law 93-380, Family Education Rights and Privacy Act of 1975.

CREDIT AND GRADING
THE SEMESTER CREDIT HOUR

The semester credit hour is officially designated as the University's unit of academic credit. A semester credit hour requires the completion of one 50-minute period of lecture or two laboratory hours a week for one semester (15 weeks).

UNDERGRADUATE GRADING SYSTEMS

The following grades will be used to designate levels of achievement and will appear on official transcripts:

A Excellent . . . . . 4 quality points per semester hour of credit
B Above Average . . . . . 3 quality points per semester hour of credit
C Satisfactory . . . . . 2 quality points per semester hour of credit
D Below Average . . . . . 1 quality point per semester hour of credit
F Failure . . . . . 0 quality points per semester hour of credit

GRADUATE GRADING SYSTEM

Graduate students are graded under the following system:

A Excellent . . . . . 4 quality points per semester hour of credit
B Above Average . . . . . 3 quality points per semester hours of credit
C Satisfactory . . . . . 2 quality points per semester hour of credit
F Failure . . . . . 0 quality points per semester hour of credit

GRADE POINT AVERAGE

The grade point average (GPA) is the measure of general scholastic achievement upon which honors, awards, probationary regulations, and graduation are based. For the purposes of graduation and honors, only college-level courses are counted in the GPA and total credits earned. A grade point average of at least 2.0 is required for graduation for undergraduate students and a 3.0 for graduate students.

To compute the GPA, the credit value of each course is multiplied by the quality points of the grade earned in the course. The sum of the products thus obtained is divided by the total number of credits for which the student was enrolled during the semester. In like manner, the cumulative GPA is determined by dividing the sum of all quality points earned by the sum of all quality hours attempted. When a course is repeated, only the higher grade earned is considered in computing the cumulative GPA. Other grades received will remain on the transcript in parentheses.

Example:
In a given semester a student receives the following grades:

English	3 credit hours A	quality points =12
Math	3 credit hours C	quality points = 6
History	3 credit hours B	quality points = 9
Biology	4 credit hours A	quality points =16
French	4 credit hours C	quality points = 8
	17=Total credit hours attempted	Total quality=51 points

51 quality points divided by 17 credit hours = 3.00

Other grades which may appear on the transcript but which are not considered in computing the GPA are:

CR Credit

NC No Credit
The symbols CR and NC are available for use in those courses designated by the academic department. The CR symbol will count toward the hours completed.

AU Audit
The AU symbol will be used when a student audits a course. A student may register to audit a course during the period of registration and late registration only. The symbol AU will be preprinted on the class roster for the appropriate students.

W Withdrawal
The symbol "W" will designate official withdrawals. A student may officially withdraw from a course or the University up to five weeks prior to the beginning of the scheduled final examination period. A student who fails to withdraw in the required manner will receive the grade of F (failure). A student may withdraw from the University at any point up to the last day of classes during the semester enrolled. A student who withdraws from the University will not be considered as an enrolled student for the purpose of readmission during the semester of withdrawal. A student who does not enroll in the next consecutive semester must reapply for admission.

I Incomplete
The symbol "I" will be used if the student has not completed required course assignments and is passing the course at the end of the term. A student has one term (exclusive of summer) to complete the required work. If not completed in the next consecutive term, the grade will become an F.

X In Progress
The symbol "X" is used for thesis preparation or directed study. This grade is applicable only for graduate study.

ACADEMIC STANDING POLICY

The success of a student depends upon both the creativity and effectiveness of the institution of higher education and the academic performance of the student. Academic standing, therefore, must be defined in terms of the performance of both the University and the student. The failure of either one of the parties to meet its responsibilities can result in lower levels of institutional performance and student achievement. The institution reaffirms its open admissions policy for students who seek to pursue undergraduate study and confirms its responsibility to recognize the level of performance of each student. Therefore, the University will make every effort to identify the needs of each student and clarify the responsibilities of each unit in the University to aid the student in fulfilling educational goals. It is the responsibility of the student to use the services offered through the University and his or her own initiative to succeed.

ACADEMIC STANDARDS

The University requires each candidate for an associate or baccalaureate degree to have earned a minimum cumulative grade point average of 2.0 or better. Additionally, a student must complete all University-wide requirements and all requirements of the degree program elected. Any enrolled student whose cumulative GPA is less than 2.00 is placed on academic probation.

A freshman student enrolled in the University must achieve a cumulative GPA of 2.00 or a term GPA of better than 2.00 by the end of the third term of enrollment (summer terms included). A student who earns less than a 2.00 cumulative GPA after three terms must achieve a GPA of better than 2.00 each subsequent term of enrollment. A freshman student enrolled three terms, including summer, who has a cumulative GPA of less than 2.00 and who fails to achieve a term GPA of better than 2.00 will be subject to suspension from the University. Until a student in the University achieves a 2.00 cumulative GPA, the student must abide by the course load restrictions placed by the University upon the freshman student with academic deficiencies, as follows:

1. If the GPA is below 1.6 after the first semester of enrollment, the student is limited to a course load of nine credit hours during the next semester of enrollment.

2. If the GPA is 1.6 to 2.0 after the first semester of enrollment, the student is limited to a course load of 12 credit hours during the second semester of enrollment.

3. If the cumulative GPA is below 1.8 after the second semester of enrollment, the student is limited to a course load of nine credit hours during the next semester of enrollment.

4. If the cumulative GPA is 1.8 to 2.0 after the second semester of enrollment, the student is limited to a course load of 12 credit hours during the next semester of enrollment.

After three semesters, or the completion of 30 credit hours, whichever comes first, a student enrolled in the University will be governed by the following policies:

1. The student must maintain a cumulative GPA of 2.00. In the absence of a 2.00 cumulative GPA, the student must achieve a semester GPA of 2.10 or better each term of enrollment until a cumulative GPA of 2.00 is achieved. Failure to meet this standard will result in the suspension of the student for one semester.

2. A student who has a cumulative GPA of less than 2.0 is limited to a course load of nine credit hours. The dean may grant permission for a course load of 10 credit hours.

A transfer student admitted as a probationary student must achieve a term GPA of 2.0 during the first term of enrollment. Thereafter, the student is subject to the academic policies applicable to:

(a) Freshman students, as described above, if the student has completed fewer than 30 credit hours, or
(b) All other students, as described above, if the student has completed 30 or more credit hours

PROBATION AND SUSPENSION

When a student's cumulative grade point average falls below 2.00, the student is placed on academic probation. Notification will be sent from the Office of the Registrar informing the student that the grade point average is below the acceptable level. During the next term of enrollment, if the student fails to achieve a term grade point average of 2.10, the student is subject to suspension. Academic probation and academic suspension will be entered on the official permanent record of the student. A student who has completed 30 credit hours with a cumulative GPA of less than 2.00 will be restricted to a nine semester hour course load (10 credit hours with the Dean's approval). A student enrolled in the University with fewer than 30 credit hours will be subject to the conditions and regulations placed by the University upon freshman students, as described above.

DISMISSAL

If a student's cumulative GPA is below 2.00 and the student fails to successfully complete at least 50% of the hours attempted and fails to achieve a term GPA of 2.10 or better each term of enrollment following second academic suspension, the student will be dismissed from the University. All courses for which the student was enrolled after add/drop are considered in determining 50% of the hours attempted. Reinstatement for such students will not be considered in less than two calendar years from the date of dismissal.

GRADUATE ACADEMIC PROBATION

Graduate students are required to maintain a 3.0 cumulative grade point average (CGPA) each semester and meet all requirements of the degree program elected to remain in good academic standing. When the CGPA falls below the required 3.0, a student will be placed on probation. A student on probation is limited to six (6) semester hours during the regular semester and three (3) semester hours during the summer term. The academic dean will send notices to all students on probation to inform them that: a) they are required to reduce their course load while on probation; and b) they will be suspended unless they achieve a 3.0 CGPA by the end of the first semester of probationary status.

GRADUATE ACADEMIC SUSPENSION

Graduate students on academic probation will be suspended for one semester if they fail to raise their cumulative grade point average (CGPA) to the acceptable 3.0 requirement at the end of the probationary period.

The academic dean will notify all graduate students of their suspension after grades from the previous semester have been posted and grade point averages have been determined. If a student is subject to suspension and has registered for course work, the registration will be canceled.

DEAN'S LIST

A Dean's List of all undergraduate students who have a cumulative grade point average of 3.00 and a term GPA of 3.30 or higher is certified by the Vice President for Academic Affairs at the end of each term.
In order to qualify for the Dean's List, a student must have registered for a minimum of 12 credit hours with earned grades of A, B, C, D, AU, or CR. Students receiving the symbols of F, I, W, or NCR for any course will be ineligible for Dean's List consideration for that semester.

HONOR GROUPS AT THE UNIVERSITY OF THE DISTRICT OF COLUMBIA

1. Beta Beta Beta Biology Honor Society
2. Beta Kappa Chi National Scientific Honor Society (Physical Science, Engineering, and Life Sciences)
3. Delta Mu Delta National Honor Society in Business Administration
4. Eta Kappa Nu Electrical Engineering Honor Society
5. H.O.P.E. - Honors Organization for the Promotion of Excellence
6. Kappa Beta Delta (2 Year) Business Tech and Computer Accounting Tech
7. Phi Beta Lambda, Psi Eta Chapter (Business and Public Management)
8. Psi Chi Honor (Undergraduate Psychology)
9. Chi Sigma Iota (Graduate Psychology)
10. Phi Sigma Pi National Honor Society (General)
11. Sigma Tau Delta National English Honor Society
12. Tau Alpha Pi Technology Honor Society (Physical Science, Engineering and Technology)
13. Tau Beta Pi (UDC Engineering Honor Society)

FINAL EXAMINATIONS

Final examinations are held during the last week of the term; all students are required to take the examinations according to the examination schedule issued by the Vice President for Academic Affairs.

CREDIT BY EXAMINATION

Students may receive credit for course work upon successful completion of a departmental examination and approval of the appropriate dean. Students seeking credit by examination must be currently enrolled in a degree program and be in good academic standing. Credit by examination may be sought only for courses in which the student has never enrolled, and the examination may be taken only once per course. Students may not be registered for the maximum number of hours for the term in which credit by examination is requested. Students must receive prior permission from the chairperson of the department offering the course. A fee of $5 per credit hour and any additional tuition must be paid prior to the administration of the examination. Upon successful completion of the examination, the credit must be approved by the department chairperson and the dean. Credit earned by examination will appear on the students' transcripts as "CR" and will not be included in computing the grade point average.

CLASS ATTENDANCE POLICY

The University expects all students to attend classes on a regular basis. If a student finds it necessary to be absent from class because of illness or other personal reasons, the reason for the absence should be reported to the instructor. This is for the instructor's information and in no way excuses the absence, nor does it relieve the student of the responsibility for assignments covered during the period of absence. Extenuating

circumstances which may force a student to be absent should be reported to the departmental office and to the instructor. The instructor will determine the amount of assistance a student will need to complete the course requirements.

ACADEMIC INTEGRITY

Students enrolling at the University of the District of Columbia assume the obligation to maintain standards of academic integrity. Violation of academic obligations include: unethical practices and acts of academic dishonesty, such as cheating, plagiarism, falsification, and the facilitation of such acts.

Cheating includes the actual giving or receiving of any unauthorized aid or assistance or the actual giving or receiving of any unfair advantage on any form of academic work. Plagiarism is the use of another's ideas or words, or both, as if they were one's own. However, ideas or direct quotations from others are acceptable with appropriate citation of source.

Students are subject to dismissal from a degree program for unethical practices and acts of academic dishonesty. It should also be stated that a plea of ignorance of the policy will not be accepted. The following actions are prescribed whenever a violation of academic integrity is noted:

- The instructor will provide to the chairperson a written report with documentation of the academic offense.
- The chairperson will present the facts to the departmental Academic Affairs Committee.
- The departmental Academic Affairs Committee will review the report, meet with all parties concerned, and make a formal recommendation to the department chair for transmittal to the academic dean.

If it is determined that a student has violated the Academic Integrity Policy, the academic dean may suspend the student from the University.

GRADUATION REQUIREMENTS

ASSOCIATE AND BACCALAUREATE DEGREES

Note: For the purposes of graduation and honors, only college-level courses are counted in the GPA and total credits earned; that is, courses numbered 100 and above.

Residency: The University confers the associate degree upon those students who complete the last 15 semester credit hours of study and the baccalaureate degree upon students who complete the last 30 semester credit hours of study in residence at the University of the District of Columbia. Additionally, the student must complete the University-wide requirements, as well as degree program requirements, and attain a minimum cumulative grade point average of 2.00.

Specific University-wide requirements for all two- year and four-year programs are as follows:

Requirements	**2 Yr Degree**	**4 Yr Degree**
Foreign Language	0 credit hours	6 credit hours
Philosophy	0 credit hours	3 credit hours
Fine Arts**	0 credit hours	3 credit hours
English Comp	6 credit hours	6 credit hours
Lit & Adv Writ	0 credit hours	6 credit hours
Social Science ***	3 credit hours ,	6 credit hours
Math , ,	6 credit hours	6 credit hours
Natural Science , , ,	3 credit hours	6 credit hours
Physical Ed		
Personal & Comm Health		
Speech		
Natural Science	0 credit hours	4 credit hours

** Select from music, drama, art, dance

*** Select from psychology, sociology, economics, history, social welfare, geography, political science, urban studies.

, Students enrolled in two-year technology programs may substitute one 3 (three) credit hour course in philosophy for the three credit hours of required social science.

, , Only mathematics courses numbered MATH 100 and above.

, , , Lab courses only.

The following baccalaureate programs are exempt from the foreign language requirement: Civil Engineering, Computer Science, Construction Management, Electrical Engineering, Mechanical Engineering, Printing Management, and Nursing. University-wide requirements currently are under review by the faculty and are subject to change.

***Undergraduate Requirement*:** Once admitted and registered as a student at the University of the District of Columbia, it is expected that the student will be enrolled every semester until the student has completed the degree objective. Any student who is not continuously enrolled, exclusive of the summer term, is subject to the graduation requirements in effect at the time of re-enrollment.

***Associate Degree*:** To earn an associate degree, a minimum of 60 credit hours of college-level courses is required, including specific courses identified in the departmental program of study and the applicable University-wide requirements.

***Baccalaureate Degree*:** The baccalaureate degree programs require a minimum of 120 credit hours, including specific courses identified in the departmental program of study and the applicable University-wide requirements. Many departmental programs of study require more than the minimum hours designated above. Students should consult this catalog and their advisors when determining graduation eligibility.

****Honors*:** To graduate with honors, a student must have received 60 percent of the credits earned for graduation at the University of the District of Columbia. The honors system for the undergraduate is:

3.8 or above	In all hours attempted	suma cum laude
3.60	In all hours attempted	magna cum laude
3.30	In all hours attempted	cum laude

APPLICATION FOR GRADUATION

A student who anticipates completing all requirements for the associate or baccalaureate degree during a specific term should complete an Application for Graduation by the published deadline for the semester in which the student expects to graduate. Prior to submitting the application, the student must meet with his/her academic advisor. Associate degree majors who have earned less than thirty-six (36) semester hours and baccalaureate majors who have earned less than ninety-six (96) semester hours are not eligible to apply.

Degree applications may be obtained from the Office of the Registrar during the registration period. A graduation fee of $30 is payable upon filing the Application for Graduation. In the event that the student does not complete graduation requirements in the term applied for: (1) a new application must be submitted, but the previously paid fee shall be applied to the new application; and (2) an application for readmission must be submitted.

GRANTING DEGREES AND COMMENCEMENT

Degrees are granted at the close of each semester. The annual commencement convocation is held at the end of the spring semester. Recipients of degrees for the preceding summer and fall terms are invited to participate in the commencement exercises. Only students who have met all requirements for graduation will be permitted to participate in commencement exercises.

STUDENT AFFAIRS

Bobby Austin, Ph.D.
Interim Vice President for Student Affairs
Building 39, Room 301-I
Phone (202) 274-5210

The Office of the Vice President for Student Affairs has oversight over athletic, including intercollegiate and intramural programs and activities; student life and services, including student clubs and organizations, counseling, health services, student employment, and alumni relations.

OFFICE OF INTERCOLLEGIATE ATHLETICS

Michael McLeese, M.A., Director
Building 47, Room A01
Phone (202) 274-5024

The athletics and intramural programs at the University of the District of Columbia promote physical health, impart ideals of hygiene, and develop skills essential to the well-being of students, faculty, staff, administration, and the community. These programs foster feelings of loyalty and sportsmanlike competition. They also develop leadership, citizenship, a sense of joy, and responsibility. The University of the District of Columbia athletics and intramural programs continue to strengthen personal values such as physical fitness, moral fortitude, intellectual prowess, emotional stability, and social conscience.

The University of the District of Columbia athletics and intramural programs also function as integral parts of the total educational experience at the University. The structure and scope of the programs reflect the needs and interests of students and the opportunities offered by their unique location in the Washington, D.C. community. The University draws from a high school population with a rich heritage of athletic participation

and notable achievements. The University is committed to providing a program of intercollegiate athletics which satisfies student needs while students pursue the primary goal of earning the associate, baccalaureate, and/or master's degree. Operating from the premise that all should have a chance to participate, and coupled with the fact that student fees provide the major portion of financial support, the University provides programs broad enough in scope to encourage the fullest possible participation in a variety of team and individual sports by all members of the student body.

The University of the District of Columbia participates as a member of the National Collegiate Athletic Association Division II-Independent. There exist eight varsity sports consisting of men's and women's basketball, tennis, cross-country, women's volleyball, and men's soccer.

Traditional intramural programs have increased to include a variety of recreational opportunities for faculty, staff, and other campus personnel. These programs and sports activities are:

Fall: Softball, tennis, touch football, soccer

Winter: Basketball, free-throw, table tennis, volleyball, water polo, handball, swimming, weight lifting, and racquetball

Spring: Softball, horseshoes, tennis

Intramurals are voluntary and competitive sports for all participants who want to improve and test their skills in athletic events. Students also benefit from healthful and invigorating physical exercises. Intramural activities are designed to maintain social and physical fitness.

STUDENT LIFE AND SERVICES

Madhuker Ohal, Ph.D., Senior Director
Building 38, Room A-10
Phone (202) 274-5336

The Office of Student Life and Services supports the academic programs of the University by providing leadership, direction, and coordination for programs and services that enhance students' personal growth, development, and learning experiences both in and out of class. Services include student life and activities, student support, testing, counseling, and services to students with disabilities.

An exciting and dynamic array of student life services and programs are offered through the Office of Student Life and Services. The Office provides a full range of programs that complement the formal instructional program of the University.

Student Life and Services programs and services are designed to enhance extra- and co-curricular experiences and opportunities for students through their participation in student self-governance, social and intellectual forums, and multicultural exchanges and by offering opportunities for physical, cultural, and scholastic assessment and development.

STUDENT LIFE AND ACTIVITIES

The Student Life Unit, through its interactions with various student organizations, provides students with extracurricular activities, advisement, programming, and developmental services and opportunities. These services use educational, cultural, social, and recreational activities as tools to complement and reinforce the academic side of university life.

Campus-wide activities, including concerts, lectures, films, art exhibits, fraternities and sororities, homecoming week, student leadership development programs, and workshops provide abundant opportunities for students to enhance their social skills and develop abilities in planning, management, and decision-making.

The Student Activities Unit coordinates the clubs and organizations that are a vital part of the University community. Students may seek membership in any of approximately 74 clubs and organizations representing diverse interests and concerns. Some clubs and organizations reflect the local or national social climate, while others represent the multi-ethnic composition of the student body. Still others relate to academic disciplines or scholarship. Membership requirements vary with each club or organization.

STUDENT SUPPORT SERVICES PROGRAMS

The Office of Student Support Services provides a variety of academic and social support services to increase the retention and graduation rates of first generation college students, eligible low-income students who are United States citizens or permanent residents, enrolled in undergraduate degree programs.

These services are provided on the Van Ness Campus.

The Student Support Services Program is a federally funded project. First-generation college students and individuals with low incomes or physical disabilities are eligible to receive academic services. All program participants must be U.S. citizens or permanent residents.

Students enrolled in the program receive academic support and counseling services to assist them in adjusting to the demands of collegiate life. Program services include individual and small group tutorials, academic and personal enrichment workshops, and academic and career counseling.

Students desiring information should contact the Student Support Services Program on (202) 274-6241 or 274-6247.

NEW STUDENT ORIENTATION

The Office of Vice President for Student Affairs coordinates new student orientation for students entering the University for the first time. University faculty and staff introduce new students to the resources available at the University that enable students to experience success. Further, students receive information regarding their matriculation and other related University processes and regulations. The orientation process is extended through the Freshman Orientation course offered by the College of Arts and Sciences.

STUDENT SELF-GOVERNANCE

The Undergraduate (USGA) and Graduate Student Government (GSGA) Associations are elected and appointed students who represent the interests of their peers at the University. Student participation in governance of the University is achieved through the associations' involvement with various University councils and committees. The USGA and GSGA representatives are elected by the undergraduate and graduate students, respectively. Each year, the undergraduate and graduate students also elect the Student Representative, who is a voting member to the University's Board of Trustees.

The Undergraduate and Graduate Student Government Associations offer opportunities for students to exercise leadership skills in affairs related to student life and development. They provide forums for the exchange of ideas, skills, information, and other resources of the University and the public and private sectors.

Students are encouraged to participate in the student government associations.

COUNSELING SERVICES

Academic, career, and personal counseling services are coordinated by the Office of Student Life and Services. In conjunction with the academic units of the University, the counselor acts as a catalyst for guiding students through a collegiate experience that fosters their personal and educational goals. The activities and services provide student assistance in adjusting personally and socially to the University environment; enhancing the development of effective coping skills to deal with any anxiety and stress related to their family, employment, peers, or class work; selecting appropriate courses of study; analyzing their interests, aptitudes, values, and desired life style as they relate to career choice; and developing strategies for their job search effort upon graduation.

In keeping with accepted professional practice, all counseling is confidential. Information related to personal contacts is not released to administrators, faculty, staff, spouse, or outside agencies without proper authorization from the consenting parties. For additional information call, (202) 274-5336.

THE OFFICE OF TRIO AND COLLEGE PREPARATORY PROGRAMS

Sandra M. Carter, M.Ed., Director
Building 39, Rooms 101-104
Phone (202) 274-5032

The Office of TRIO and College Preparatory Programs is dedicated to fulfilling the University mandate to interface with public, private, and parochial schools by developing and implementing enrichment programs for postsecondary education. Our goals include:

1. Providing programs and services for college and pre-college students that facilitate entry into college and assist with retention of students.
2. Providing postsecondary educational choices for careers that match students' ability levels and enable students to reach their potential.
3. Increasing the knowledge, preparation, motivation, interest, and awareness of educational and career alternatives in engineering, science, and technology, as well as expanding and enriching the pre-college curriculum in mathematics and science.

4. Providing a liaison with primary and secondary schools by maintaining contact with school administrators for the purpose of program design, program development, and student and faculty recruitment.

Currently, five programs compose the Office of TRIO and College Preparatory Programs.

TRIO PROGRAMS

Educational Talent Search, ***Upward Bound***, and ***Student Support Services*** are the three TRIO programs at UDC. All TRIO programs are federally funded by the Department of Education and must be renewed at the end of each respective grant cycle. Services are provided to eligible students who are United States citizens or permanent residents.

Educational Talent Search Program (ETSP) - serves DC public school low-income and first generation students in grades 7-12 and high school or college dropouts looking to re-enter the educational mainstream. The Talent Search program offers academic and career counseling, tutorials, self-esteem, goal setting, financial aid, and college preparation workshops. ETSP has a maximum enrollment of 1200.

Student Support Services (SSS) - assists low-income and first-generation students in staying in college until they earn the baccalaureate degree. Participants may include disabled college students. All students receive tutoring, counseling, remedial instruction, and social support services to increase graduation and retention rates.

Upward Bound: Project POWER (UB) - serves DC public school low-income and first generation students in grades 9-12 from target areas in Wards 6 and 8. The Upward Bound program offers academic instruction in English, mathematics, and science during the academic year and summer components. The program also provides SAT, career, financial aid, and college readiness workshops, as well as culturally enriching field trips. UB has a maximum enrollment of 50 students during the academic year and 40 students during the summer.

Concurrent Enrollment/HI/SCIP Program - serves academically accelerated high school students from public, private, or parochial schools who place at the college level in English or mathematics on the UDC placement test. Students enrolled in freshman level courses can earn transferrable college credits while completing or supplementing their high school courses.

Project CAMPS^2 (Computer Applications in Mathematics, Problem Solving, and Science) - serves sixth through eighth grade students with an aptitude for mathematics, science, and engineering. This is a summer camp program geared to increasing computer, mathematics, sciences, and problem solving skills.

Federal College Work-Study (FCWS) and Student Employment Program (SEP)
To encourage academic scholarship and to help defray some of the costs of higher education, federal and University-supported student work programs are available to students. Some are based on need, while others are available regardless of need. The Federal College Work-Study Program and Student Employment Program are available to eligible undergraduate, graduate, part-time, and full-time students. For additional information, call (202) 274-5060 for FCWS or (202) 274-5210 for SEP.

HEALTH INSURANCE

All University of the District of Columbia students are required to have health insurance coverage. Students must show proof of personal health insurance coverage or purchase the University's student accident and illness plan at the time of registration. The non-refundable insurance fee, which is subject to change on an annual basis, is collected one time per academic year during Fall, Spring, or Summer registration.

While the health insurance information contained at this printing of the catalog is current, the premium rate is subject to revision at any time. For additional information, call (202) 274-5350.

HEALTH SERVICES

The staff of the University Health Services includes a physician, chief nurse, registered nurses, and support staff. Together, they help to maintain and promote a state of optimum physical and emotional health among students and staff. The mandatory Health Services fee is $15.00 per semester. The University Health Services provides routine health appraisals, physical examinations, immunizations, preventive health procedures, routine and emergency medical care, health education, occupational health monitoring, diagnostic procedures, and counseling.

All new students are required to have a physical examination record on file prior to registration. By appointment, on a first-come-first-served basis, the Health Services unit will provide a limited number of

health examinations. All students under the age of 26 are required to show proof of having immunizations against measles, mumps, rubella (MMR), including MMR booster shot, tetanus, and diphtheria. Students under the age of 19 are also required to show proof of immunization against polio. These immunizations may be obtained in the health unit free of charge. The University Health Services is located at the Van Ness Campus, 4200 Connecticut Avenue, N.W., Buidling 44, Room A-33. The hours are 8:30 a.m. to 8:00 p.m., Monday through Friday. Call (202) 274-5030 for an appointment.

SERVICES FOR STUDENTS WITH DISABILITIES OFFICE

Students with disabilities attending this University are integrated as completely as possible into the University community. UDC does not offer a specialized curriculum for persons with disabilities nor does it assume the role of a rehabilitation center. The University does share responsibility **with the student** for adapting campus facilities and programs to assist with individual needs. Students with disabilities at UDC have access to tools and resources that will enable them to manage day-to-day life in college. Self-advocacy and assertiveness will help the student gain the most from the UDC experience. A willingness to function in an environment requiring adaptability and change is also vitally important. The keys to success for persons with disabilities at UDC include:

- The ability and openness to realize personal strengths and limitations.
- The desire and aptitude to take responsibility for managing daily routines, as well as academic and personal success.
- The maturity to utilize resources and services and to communicate with the **SSD** office about your needs and/or concerns.
- The patience to spend the extra time necessary to study effectively.

SERVICES FOR STUDENTS WITH LIMITATIONS

After reviewing appropriate and comprehensive diagnostic materials that **verify** a student's disability, the **Services for Students with Disabilities** Office offers the following services to students with limitations:

a. Recruitment, matching, and/or referral of note takers and/or interpreters, if appropriate.

b. Assistance with requests for parking arrangements and special permits (for physical limitations).

c. With appropriate verification of disability, facilitation of test administration, as well as proctoring service in collaboration with the UDC faculty.

d. Provision of adaptive and or assistive devices, where appropriate (and with proper documentation and verification of need).

A policy statement describing procedures for verification of disability and the provision of appropriate auxiliary aids and services, reasonable accommodations, and academic adjustments is available in the Services for Students with Disabilities Office.

Services to Students with Disabilities Office
Bldg. 38, Level A (Room A-11)
(202) 274-6152
TTY (202) 274- 5579

MILITARY SCIENCE (ROTC)

Students interested in enrolling in an ROTC program should contact the appropriate staff person listed below.

ARMY ROTC Howard University
Douglass Hall (Basement)
2401 6th Street, N.W.
Washington, D.C. 20059
CONTACT: Enrollment Officer
(202) 806-6784

AIR FORCE ROTC Howard University
Douglass Hall (Basement)
2401 6th Street, N.W.
Washington, D.C. 20059
CONTACT: Ms. V.R. Mahatney
(202) 806-6788

SERVICEMEMBERS OPPORTUNITY COLLEGE PROGRAM (SOC)

Through the Servicemembers Opportunity College Program, military personnel may pursue an educational

goal and receive maximum credit for educational experience obtained in the armed forces.

Applicants who are graduates of approved high schools or those who hold the high school equivalency (GED) certificate are eligible for admission to SOC programs of study, provided they meet certain criteria. For applicants to be admitted to degree programs in upper divisions of the University, they must complete the prerequisites prescribed by the major programs of that department.

RESIDENCY REQUIREMENT FOR SERVICEMEMBERS OPPORTUNITY COLLEGE

Students who enter the university through the Servicemembers Opportunity College must complete a total of 30 credit hours and 15 credit hours in residence for the baccalaureate and associate degrees, respectively. The requirements for other University programs -- that the last 30 credit hours for the baccalaureate degree and the last 15 credit hours for the associate degree must be completed at the University of the District of Columbia -- does not apply to SOC students.

UNIVERSITY COMPLIANCE

University policies and practices comply with all Federal Civil Rights and District of Columbia Human Rights Laws.

SEXUAL HARASSMENT AND RACIAL HARASSMENT POLICY STATEMENT

Sexual harassment in any way of University of the District of Columbia faculty, students, staff, and applicants for employment or admission to the University is prohibited. The University provides work sites, classrooms, and other facilities free of sexual harassment. The University examines impartially all complaints of sexual harassment and attempts to resolve them as promptly as possible.

FILING A COMPLAINT

Persons who believe they have been discriminated against (including sexual harassment) may file a complaint by contacting the EEO/AA Coordinator located in the Office of Human Resources in Building 38, Suite 301-14; telephone: (202) 274-5452.

EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION

The University of the District of Columbia actively subscribes to a policy of equal opportunity in education and employment and will not discriminate against any person in recruitment, examination, training, promotion, retention, discipline , or any other aspect of employment and education administration because of race, color, religion, national origin, sex, age, martial status, personal appearance, sexual orientation, familial status, family responsibilities, matriculation, political affiliation, disability, source of income, or place of residence or business. Vietnam Era veterans and disabled veterans are covered by this policy.

UNIVERSITY BOOKSTORE

The University Bookstore, located on the Van Ness Campus, is open from 9:00 a.m. to 7:00 p.m., Mondays and Wednesdays, and from 9:00 a.m. to 5:00 p.m. on Tuesdays, Thursdays, and Fridays during regular semesters. During the first two weeks of each semester, the bookstore is open until 8:00 p.m., Monday through Thursday; 9:00 a.m. to 5:00 p.m. on Friday; and 9:00 a.m. to 2:00 p.m. on Saturday. In addition to textbooks, the bookstore provides other books, supplies, and materials of interest to students. The address of the bookstore is:

Van Ness Campus
Building 38, Level A
4200 Connecticut Avenue, N.W.
Telephone: (202) 274-5110

DIVISION OF LEARNING RESOURCES

Albert J. Casciero, M.A., Dean
Building 41, Room 201D
(202) 274-6370

The University maintains library and media facilities as one of its major academic support services. The collections consist of more than 500,000 books and more than 700,000 items, including microforms and media materials. Over 520 periodicals are received. The collection is housed in modern facilities with reading rooms, open stacks, and individual study carrels. The Division is a member of the Washington Research Library Consortium. The Consortium libraries provide students, faculty, and staff the opportunity to borrow materials from libraries of six Consortium universities. Interlibrary loan arrangements are maintained with libraries throughout the United States.

Students and faculty have access to several services including reference assistance, use of multimedia and computer laboratories, computers for the visually impaired, individual study rooms, a 125-seat auditorium equipped with video display and sound amplification, and local as well as remote access to ALADIN, our online public access catalog, which also provides a gateway to the World Wide Web. LRD online services can be reached at www.wrlc.org/~lrdudc. The effective use of the University's resources is encouraged through the provision of bibliographic instruction and special classes. The Division of Learning Resources regularly conducts orientation sessions. A reserve collection is maintained for required reading. Also, reader printers for microforms and self-service copiers are available. The hours for using the University's Learning Resources Division facilities are posted in convenient locations on the campus. A valid University I.D. is required for students to borrow materials. "Access," a publication describing the services offered by the Learning Resources Division, is available.

OFFICE OF INTERNATIONAL AFFAIRS

The Office of International Affairs directs the operation of existing international programs and the development of new international programs that the University establishes; manages study and travel abroad programs; directs student and faculty exchanges, and provides support for international students. This office has responsibility for University degree programs in Computer Science and in Management conducted at the Modern Academy in Maadi, Cairo, Egypt.

OFFICE OF SPONSORED PROGRAMS

The Office of Sponsored Programs (OSP) is responsible for the identification and solicitation of grants and contracts that are beneficial to and withing the scope of the university's mission. OSP guides and assists the University community in the identification of funding resources, and provides technical assistance to faculty in the grantsmanship process.

CENTER FOR APPLIED RESEARCH AND URBAN POLICY

The Center for Applied Research and Urban Policy (CARUP) conducts research on problems that affect the social, economic, physical, and biological health of urban areas, with a special focus on the District of Columbia. It provides technical assistance to urban managers and policy-makers. The mission of CARUP is to serve as a bridge between the basic research of the academic community and the practical needs of District residents and institutions.

The activities of the Center include:

- Research on issues relevant to the Center's mission, funded by foundations, corporations, public agencies, and the University;
- Technical assistance to clients such as government agencies, school systems, community organizations, Advisory Neighborhood Commissions (ANCs), and nonprofit organizations;
- Training of faculty and students in proposal writing and research techniques;
- Dissemination of the results of the Center's work for educational and informational purposes.

COLLEGE OF ARTS AND SCIENCES

Rachel M. Petty, Ph.D., Dean
Building 41, Suite 405-01
(202) 274-5194

The College of Arts and Sciences offers a variety of programs in a cultural and academic environment in which its students and faculty may thrive as scholars, teachers, leaders, and activists. The College strives to create and maintain a stimulating academic and social environment for the diverse populations it serves. This environment is characterized by cooperation and communication among all constituencies in order to enhance quality and productivity in the delivery of services to students.

The primary mission of the College is to produce well-educated, autonomous, competent, and resourceful graduates who are well prepared to live and work in the multiethnic, global, and technological society of the 21st century. To accomplish this mission, the College provides opportunities for students to: 1) acquire a mastery of basic competencies and skills; 2) acquire the fundamentals of a general education; 3) concentrate in several fields in the humanities, fine arts, natural sciences, social sciences, and education, and 4) obtain sound preparation for professional and graduate study.

The College is organized into three divisions -- the **Division of Arts and Education**, the **Division of Science and Mathematics**, and the **Division of Urban**

Affairs and Behavioral and Social Sciences, and nine degree-granting departments. Units in the Division of Arts and Education are: Departments of Education, English, Languages and Communication Disorders, and Mass Media, Visual and Performing Arts. The units in the Division of Science and Mathematics consist of the Departments and Behavioral and Social Sciences are the Department of Urban Affairs, Social Sciences, and Social Work, and the Department of Psychology and Counseling. The College offers seven (7) Master's degree programs, twenty (20) Bachelor of Science, Bachelor of Arts, and Bachelor of Music degee programs; three (3) Associate in Arts and Associate in Applied Science degree programs, and four (4) certificate programs. The College also offers a non-degree program in English as a Second Language and provides a plethora of programs and services to senior citizens through its Institute of Gerontology.

The College and its academic departments provide instructional support services in many laboratory settings. These laboratories offer individual and small group tutorials, workshops, seminars, and/or computer-assisted instruction to enhance the overall academic preparation of students.

Students enrolled in the College of Arts and Sciences are not limited to the several curricula offered by the College of Arts and Sciences. They may take courses offered in the School of Business and Public Administration and the School of Engineering and Applied Sciences which, with the approval of the department chairperson, may be included in the degree program or taken without credit toward a degree. In order to graduate, students are required to complete a total of at least 120 credit hours of college level courses, with a cumulative grade point average of at least 2.0.

The faculty and staff of the College of Arts and Sciences work collectively in the pursuit of educational excellence for UDC's students. They represent a cross-section of talents and expertise and are dedicated and committed to providing a quality University experience for those who matriculate at UDC.

DIVISION OF ARTS AND EDUCATION

DEPARTMENT OF EDUCATION

Rosemary Bolig, Ph.D., Chairperson
Building 38, Room 109
(202) 274-7404

Full-time Faculty
Professors V.L. Clark, S.O. Hall, V.H. Howard, W. L. Johnson, J. L. Slack
Associate Professors R. Bolig, J.A. Fox, P. Myers, D. Peters, E. Redfern-Moore, M. Shifferraw, B.A. Stockard

The Department of Education, one of the nine academic departments in the College of Arts and Sciences, administers both pre-service and in-service professional education programs for the University of the District of Columbia. In keeping with the mission of the University of the District of Columbia, the Department's programs and activities are designed to respond to the University 's responsibilities as an urban land-grant institution. To this end, the Department of Education (a) seeks to prepare certified teachers and other professionals who desire leadership roles in diverse human service settings, and (b) provides an adequate foundation for advanced study for students to continue their educational preparation.

The mission of the Department of Education is expressed in the theme: *Renewing the Legacy of Excellence.* The Department embraces the idea that excellence is demonstrated by adhering to the beliefs and principles exposed in its conceptual framework and summarized in its vision - *to prepare excellent educational professionals who possess the knowledge, skills, and dispositions needed to transform schools for the 21st Century to ensure that all children learn.*

In addition to a variety of curricular offerings that range from child development through gerontological education (*see* Institute of Gerontology in this section), the Department of Education provides for systematic admission procedures into its teacher education and related certification programs; engages in collaborative efforts with the District of Columbia Public Schools and other local agencies; provides on-site practical experiences in its Child Development Center; prepares students to be competitively involved in research, education, and service delivery for urban elders; and provides training, consultation, and technical assistance to community agencies and organizations.

The degrees offered at the undergraduate level are: Associate in Arts in Child Development; Bachelor of Arts in Early Childhood Education; Bachelor of Arts in Elementary Education; Bachelor of Arts in Special Education; and Bachelor of Science in Health Education. At the graduate level, the Department of Education offers a Master of Arts degree in Early Childhood Education and a Master of Arts degree in Special Education. In addition, the Department of Education offers certification courses for teachers in the areas of business, foreign languages, art, music, mathematics, science, social studies, health and physical education, English, special education, and adult education. Through the baccalaureate programs in nursing, sociology, social work, and health education, individuals who desire advanced skills and knowledge without committing to a degree program may receive a Certificate in Gerontology.

The Department of Education has infused technological tools throughout the curriculum, especially in the methodology courses, in an effort to prepare students to teach in the technologically-driven society of the 21st century.

The Department holds membership in the American Association of Colleges for Teacher Education (AACTE), and most of its teacher education programs are accredited by the National Association of State Directors for Teacher Education and Certification (NASDTEC). The Department is also seeking accreditation from the National Council for Certification of Teacher Education (NCATE).

The institutional pass rate, required by Higher Education (HEA) - Title II, for teacher candidate completers from the Department of Education was 95% for 2000-2001.

INSTITUTE OF GERONTOLOGY

The Institute of Gerontology was established with two goals in mind: to introduce interdisciplinary courses in gerontology into the University curriculum and to create a community resource for improving the lives of the urban elderly. In keeping with the goals of the University, special efforts by the Institute are directed toward identifying the problems of African-American and other minority aged and training professionals to work with them. The academic program of the Institute is directed towards providing the expertise essential for employment opportunities for university-trained workers in services for the aged. The Institute offers a Certificate in Gerontology for majors in health education, nursing, sociology, and social work. A general certificate in Gerontology is offered for all other majors.

UDC ACADEMY FOR LIFETIME LEARNING

The UDC Academy for Lifetime Learning (UDC-ALL) is a collective of intellectually curious older D.C. residents of diverse ethnic, educational, and economic backgrounds who believe that age is not a barrier to learning. Sponsored by the University of the District of Columbia through its Institute of Gerontology, UDC-ALL is self-governing and member-run. It offers a variety of short-term cultural, social, and educational experiences for mature learners in the form of formal presentations, lunchtime seminars, and hands-on interactive workshops, in a non-threatening, learning-friendly environment.

EARLY CHILDHOOD LEADERSHIP INSTITUTE

The Early Childhood Leadership Institute was established to address the District of Columbia's need to create a comprehensive system of professional development for personnel in Head Start, child care, pre-school, and before- and after-school settings. This system is designed to enhance the quality of child care services in the District of Columbia. The Institute serves to provide a child care development registry for the District of Columbia; an early childhood education trainer certification system; a Director's Credentialing Program; a transition program from the Child Development Associate (CDA) to an Associate in Arts Degree in Child Development; and conducts workshops and conferences in early care and education.

ADMISSION TO TEACHER EDUCATION PROGRAMS

Students who wish to major in a teacher education program must apply for admission to the Teacher Education program. Transfer students with 45 or more credit hours of college-level work should apply during the first semester of enrollment in the University. Others must apply during the second semester of the sophomore year and not later than the first semester of the junior year.

Application forms and related information are available in the Department's office, as well as in each academic department offering a teacher education program. A student must meet the following criteria to be accepted into a teacher education program:

- Complete a minimum of 45 credit hours of college-level work (including English

Composition I and II and two courses in college-level mathematics with a grade of "C" or better);

- Must have a cumulative grade point average of 2.5 or better;
- Take and pass Voice and Articulation (SPCH 116) or Public Speaking (SPCH 115) with a grade of "C" or better;
- Submit two letters of recommendation that must be completed by persons who have direct knowledge of the candidate's potential to become an effective teacher;
- Earn a qualifying score on the Praxis I: Academic Skills Assessments in Reading, Writing, and Mathematics;
- Complete a voluntary or paid experience working with children in an organized program; and
- Have an interview with the Admissions Committee of the Teacher Education Council. Interview dates for the Fall Semester: 3rd Thursday in September and November. Dates for the Spring Semester: 3rd Thursday in February and April.

Students who do not meet all of the above criteria may be granted provisional acceptance upon recommendation by the Department Chair.

Final acceptance into the Teacher Education Program will be made by the Admissions Committee of the Teacher Education Council and the Chair of the Department.

FIELD SERVICES, STUDENT TEACHING, AND TEACHER CERTIFICATION

The Coordinator of Field Services, Student Teaching, and Teacher Certification arranges all field services activities and teacher certification courses and programs offered by the Department. The coordinator serves as a liaison between educational agencies in surrounding jurisdictions and the Department to provide a wide range of field experiences for prospective teachers, as well as staff development courses for in-service teachers.

In cooperation with the District of Columbia Public Schools, the Field Services Coordinator:

- Arranges field practicum activities;
- Determines student eligibility for field service placements;
- Processes student applications for field services and student teaching; and
- Coordinates the offering of appropriate teacher certification courses as determined by the District of Columbia Public School's Office of Academic Credentialing and Standards; and
- Oversees validation of students' certification requirements.

Applications for student teaching ("Observation and Student Teaching" course) are secured from and submitted to the Field Services Coordinator**.** Closing dates for submission of applications for student teaching are the third Friday in March and the third Friday in September for the Fall and Spring semesters, respectively. Applications may be made at any time prior to the closing dates.

Student teaching is a full-day experience that requires students to be available from 8:00 A.M. until 3:30 P.M., Monday through Friday, for the entire semester. Adjustments to this schedule may be made by the administrators of the school to which the student is assigned.

Failure to complete satisfactorily the requirements for student teaching with a grade of "B" or better after two attempts may result in a student not being allowed to complete this requirement at the University.

Transfer students who wish to student teach must meet the Department's requirements for admission to student teaching, including a minimum of eighteen semester hours of professional education courses in residence.

Requirements for admission to student teaching are:

- Full admission into a teacher education program at least three semesters prior to student teaching;
- Completion of all courses in the student's academic program;
- A cumulative grade point average of at least 2.5;
- A grade point average of 2.5 or better in the major teaching field;

- C Approval from the Chair of the Department or a designee;
- C
- C Evidence of good health, including TB test;
- C Police clearance; and
- C Signed verification of eligibility by faculty advisor.

Students who wish to enroll in courses for purposes of certification only must meet with a faculty advisor in their discipline to determine the appropriate course(s) that satisfy the competencies identified in the licensing and certification requirements for the District of Columbia or other jurisdictions.

Students may enroll in no more than three (3) semester hours concurrently with the course, Observation and Student Teaching. Approval for additional hours may be granted by the Chair of the Department in consultation with the Coordinator of Field Services, Student Teaching, and Teacher Certification.

TEACHER EDUCATION COUNCIL

The Teacher Education Council is the body within the Department of Education that is responsible for the coordination of all of the University's teacher education programs. The Council serves as the coordinating body that:

- Assures consistency, uniformity, and quality of the teacher education programs;
- Determines and establishes policies and procedures in teacher education on such academic matters as student admissions, retention, exit, follow-up, program monitoring and evaluation, and development of new programs;
- Assumes responsibility for stimulating innovations for improved practices and new departures in programs in education; and
- Serves to facilitate communication among the various departments of the University in matters affecting programs in the preparation of teachers.

The Council consists of at least one representative from each area of the University that offers a teacher education program. Other members include: the Coordinator of the Office of Field Services, Student Teaching, and Teacher Certification; graduate and undergraduate student representatives; teachers from public, parochial, and/or private schools; lay citizens; public school administrators; representatives from the District of Columbia Public Schools' Office of Academic Credentialing and Standards; alumni representative(s); the Dean of the College of Arts and Sciences (*ex officio*); and a representative from the District of Columbia Public Schools' Office of Field Services and Practicum. The Chair of the Department of Education or his/her designee serves as chairperson of the Council.

The Teacher Education Council meets the fourth Friday of each month during the academic year (beginning in September). The Council's standing committees are Student Admissions, Retention, and Exit; Program Evaluation and Follow-up; and In-service and Resource Linkage.

THE UNIVERSITY OF THE DISTRICT OF COLUMBIA CHILD DEVELOPMENT CENTER

The UDC Child Development Center is a model program that utilizes current and appropriate theories and practices for the educational development of young children, ages 2 years 9 months through 4 years 8 months. The Center provides a rich learning environment for young children and serves as a practicum site for pre-service teachers in early childhood education and child development.
Students enrolled in both undergraduate and graduate programs in Child Development and Early Childhood Education may complete practicum experiences and/or student teaching at the Center. In addition, students majoring in other disciplines use the Center as a means of integrating classroom theory with practical learning experiences.

The Center operates from 7:00 a.m. to 6:00 p.m. Extended evening care is available until 9:00 p.m. for students enrolled in evening classes. The Center is located at 4200 Connecticut Avenue, N.W. (Building 39, A Level). For further information, call the Center at (202) 274-5213.

EDUCATION CERTIFICATION COURSES

The Department of Education works cooperatively with state licensing and certification agencies to ensure that courses offered in the area of professional education satisfy the competencies needed for teacher certification. Areas of certification for which the

Department of Education provides professional education courses include: Early Childhood Education, Elementary Education, Secondary Education, Special Education, and Adult Education.

GRADUATE CERTIFICATE IN ADULT EDUCATION

The Graduate Certificate Program in Adult Education provides a comprehensive, theoretical, and practical perspective and understanding of the field of adult education. The program addresses the current social, political, and cultural issues that educators and practitioners of education face.

A total of 21 hours is required to complete the Certificate Program in Adult Education. Additionally, program completers must earn a qualifying score on Praxis I: Academic Skills Assessments (Reading, Writing and Mathematics), and apply for certification from the State Office of Licensing and Credentialing, District of Columbia Public Schools, 825 North Capitol Street, NW, Washington, DC 20002. Telephone: (202) 442-5377.

Core Courses: 18 credit hours

ADED	504	Introduction to Adult Education	3
ADED	514	Adult Learner	3
ADED	525	Techniques of Teaching Adults	3
SPED	589	Teaching Adults with Learning Disabilities	3
ADED	537	Communication Skills in Adult Education	3
SPLP	695	Theory and Practice of English Language Training	3

Elective Courses: 3 credit hours

ADED	544	Counseling Adult Learners	3
ADED	524	Program Planning and Curriculum Development	3
RDNG	516	Teaching Reading to Adult Learners	3
ADED	596	Internship in Adult Education	3
ADED	534	Administration of Adult Education Programs	3

The program is designed to be completed in one year; however, participants may opt to complete the program in two years.

CERTIFICATION IN GERONTOLOGY

The general Certificate Program in Gerontology is a multi-disciplinary approach to the study of aging. The program is geared to those persons who work in the senior service network and who desire opportunities for professional development and personal enrichment; to those persons who are second or third careerists who are desirous of developing a new knowledge base without committing to a full four-year program of study; or to those persons who are simply interested in understanding their own or a loved one's aging process.

The general certificate program, consisting of 21 semester hours, has been devised in consultation with the District of Columbia Office on Aging. The required and elective courses for the program are as follows:

Requirements: 15 credit hours

SOWL	506	Introduction to Aging and Special Problems of the Black Elderly	3
SOCY	395	Introduction to the Sociology of Aging	3
PSVC	346	Adult Development and Aging	3
SOWL	275	Ecology of Health, Illness and Aging	3
SOWL	398	Internship Independent Study	3

Suggested Electives: 6 credit hours

SOWL	477	Working with the Elderly	3
SOWL	276	Introduction to the Economics of Aging	3
LSST	385	Leisure Services for the Older Citizen	3
SOCY	244	The Family	3
FDNU	374	Geriatric Nutrition	3
NURS	454	Gerontological Nursing	3
NURS	456	Grief and Loss	3

Undergraduate Certificate Programs in gerontology are also offered in conjunction with the Bachelor of Arts or the Bachelor of Science degree in nursing, sociology/ anthropology, social work, and health education.

The Graduate Certificate Program requires the successful completion of the following core courses:

GRNT	537	Concepts and Issues in Gerontology	3
GRNT	505	Sociology of Aging	3
GRNT	506	Economics of Aging	3
GRNT	504	Psychology of Aging	3
ADED	586	Internship in Adult Education-Gerontology	3
CNSL	595	Independent Research Study	
CNSL	555	Counseling the Elderly	3

DEGREE OFFERINGS IN THE DEPARTMENT OF EDUCATION

The degree programs offered by the Department of Education are: Associate in Arts in Child Development; Bachelor of Arts in Early Childhood Education; Bachelor of Arts in Elementary Education; Bachelor of Science in Health Education; Bachelor of Arts in Special Education; Master of Arts in Early Childhood Education; and Master of Arts in Special Education. Descriptions of and specific requirements for these programs follow.

CHILD DEVELOPMENT PROGRAM

The Associate in Arts degree in Child Development provides a comprehensive background in developmental theory, emphasizing the practical application of theory to developmentally appropriate environments for children. The program includes development from the physiological, psychological, cognitive, and sociological perspectives for children from birth through adolescence, with emphasis on the early and middle childhood years.

The curriculum is designed to meet the needs of adults working in various early childhood settings, including both public and private day care homes, child development centers, kindergartens, Head Start, and pre-school and school-age care programs. The program complements the competency requirements for the Child Development Associate (CDA) credential and the standards set by the National Association for the Education of Young Children (NAEYC).

Students must complete practicum and field experiences which are a part of many of the courses in the curriculum. The UDC Child Development Center serves as the practicum and field experience site for students in the program. Before- and after-school programs in the District of Columbia Public Schools and Recreation Department also serve as sites, particularly for students who elect the school-age care concentration.

ASSOCIATE IN ARTS IN CHILD DEVELOPMENT

Total Credit Hours of College-Level Courses Required for Graduation: 60

University-Wide Requirements: 22 credit hours

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	101	College Mathematics I	3
MATH	102	College Mathematics II	3
GEOG	105	World Cultural Geography	3
SPCH	116	Voice and Articulation **OR**	
SPCH	115	Public Speaking	3
BIOL	101	Biological Science I	3
BIOL	103	Biological Science I Laboratory	1

Core Courses: 12 credit hours

ECED	104	History and Philosophy of Early Childhood Education	3
ECED	105	Principles of Child Development	3
ECED	205	Advanced Child Development	3
SPED	204	Introduction to Education of Exceptional Children	3

Option I: Infant/Pre-School: 21 credit hours [Birth to Age 5]

ECED	206	Infant Education	3
ECED	208	Emergent Literacy	3
ECED	224	Planning and Administration Early Childhood Programs	3
ECED	245	Child in the Family	3
ECED	230	Practicum I - Early Childhood	3
ECED	304	Play Activities and Materials	3
ECED	326	Practicum II - Early Childhood	3

Suggested Electives: 5 credit hours

SPLP	312	Language Acquisition	3
FDNU	318	Child Health and Nutrition	3
RDNG	305	Children's Literature	3
BSOA	104	Introduction to Business	3

Option II: School-Age Care: 21 credit hours

PEDU	174	Techniques & Skills in Dual and Team Sports	3
ARTS	271	Creative Crafts	3
ECED	207	Understanding Self and Relationships	3
ECED	225	Administration and Supervision of School-Age Care Programs	3
ECED	230	Practicum I - Early Childhood	3
ECED	304	Play Activities and Materials	3
ECED	326	Practicum II - Early Childhood	3

Suggested Electives: 5 credit hours

RDNG	305	Children's Literature	3
FDNU	318	Child Health and Nutrition	3
HLTH	424	Sex Education	3
BSOA	104	Introduction to Business	3

Comments: Students must earn a grade of "C" or better in all required courses in their major.

EARLY CHILDHOOD EDUCATION PROGRAM

The Bachelor of Arts degree in Early Childhood Education focuses on comprehensive care and education of children (birth through 8 years) and professional interaction with their families. This education forms the academic framework which guides the developmentally appropriate practices in early childhood settings. Emphasis is placed on responding to the developmental and cultural uniqueness of each child, as students in the program learn to design, implement, and evaluate learning environments and curricular activities. Each student completes student teaching experience in pre-primary and primary settings.

The program is designed to prepare students for careers in teaching in early childhood education settings. It enables them to fulfill teacher certification and other requirements in early childhood fields and provides the opportunity to advance on the career ladder of professional early childhood education.

Students must complete practicum and field experiences which are a part of many of the courses in the curriculum. The University's Child Development Center and the District of Columbia Public Schools serve as the practicum and field experience sites for students in the program.

The minimum number of credits required for graduation in Early Childhood Education is 126 credit hours of college-level courses. However, upon completion of additional courses, students may qualify for an endorsement in Early Childhood/Special Education.

BACHELOR OF ARTS IN EARLY CHILDHOOD EDUCATION

Total Credit Hours of College-Level Courses Required for Graduation: 126

University-Wide Requirements: 48 credit hours

ENGL 111	English Composition I	3
ENGL 112	English Composition II	3
ENGL 211	Literature and Adv. Writing I	3
ENGL 212	Literature and Adv. Writing II	3
MATH 101	College Mathematics I	3
MATH 102	College Mathematics II	3
BIOL 101	Biological Science I	3
BIOL 103	Biological Science Laboratory	1
HIST 101	U.S. History I	3
HIST 102	U.S. History II	3
SPAN	Electives (1 Year)	6
SPCH 116	Voice and Articulation **or**	
SPCH 115	Public Speaking	3
Fine Arts Elective		3
Philosophy Elective		3
Natural Science Elective		3
Natural Science Lab Elective		1
Physical Education Elective		1

Core Courses 12 credit hours

ECED 104	History and Philosophy of Early Childhood Education	3
ECED 105	Principles of Child Development	3
EDFN 222	Children and Youth in Urban Schools	3
SPED 204	Introduction to Education of Exceptional Children	3

Professional Studies/Academic Specialization: 39 credit hours

ECED 230	Practicum I-Early Childhood	3
EDPY 300	Educational Psychology	3
ECED 301	Methods and Materials for Teaching Math, Science, and Technology in Early Childhood Education	3
ECED 302	Methods and Materials for Teaching Language Arts and Social Studies in Early Childhood Education	3
RDNG 314	Methods and Materials for Teaching Reading in Elementary Schools	3
ECED 326	Practicum II - Early Childhood	3
PEDU 394	Methods and Materials for Teaching Health, Physical Education, and Safety in Elementary Schools	3
ELED 428	Classroom Management	3
EDFN 461	Methods and Materials for Teaching Creative Arts	3
ECED 406	Observation and Student Teaching in Early Childhood Education	12

Other Required Courses: 21 credit hours

GEOG 105	World Cultural Geography	3
HIST 279	History of the District of Columbia	3
ECED 304	Play Activities and Materials	3
RDNG 305	Children's Literature	3
ECED 314	Teacher, Child, School, and Community Interaction	3
FDNU 318	Child Health and Nutrition	3
MATH 393	Theory and Application of Math	3

Suggested Electives: 6 credit hours

EDPY 215	Special Topics: Technology for Teachers	3

SPED	337	Understanding Exceptional Children and Youth	3
RDNG	406	Techniques/Procedures for Corrective and Remedial Reading	3

Comments: Students must earn a grade of "C" or better in all required education courses, except Observation and Student Teaching, which requires a grade of "B" or better.

ELEMENTARY EDUCATION PROGRAM

The Bachelor of Arts degree in Elementary Education prepares students to teach children in grades Kindergarten through six. The program is designed to provide courses and field-based learning experiences which enable students to develop the skills and competencies required to effectively meet the educational needs of children in a multi-ethnic urban environment.

The program emphasizes multi-faceted curriculum approaches designed to help students function in a school environment which provides behaviorally-oriented learning experiences, as well as standards-based curriculum designs. Additionally, elementary education majors are exposed to opportunities to understand and become empowered to actively participate in innovative and creative approaches to teaching and curriculum reforms.

The scope of the program is also intended to prepare students for advanced study and education-related careers in educational technology, computer-assisted instruction, and research. Culminating with student teaching in lower and upper elementary school grades, this reflective process is organized sequentially as outlined below. The minimum number of credits required to graduate with a Bachelor of Arts degree in Elementary Education is 126 semester hours.

BACHELOR OF ARTS IN ELEMENTARY EDUCATION

Total Credit Hours of College-Level Courses Required for Graduation: 126

University-Wide Requirements: 48 credit hours

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	English Literature and Advanced Writing I	3
ENGL	212	English Literature and Advanced Writing II	3
MATH	101	College Mathematics I	3
MATH	102	College Mathematics II	3
BIOL	101	Biological Science I	3
BIOL	103	Biological Science Laboratory	1
HIST	101	U.S. History I	3
HIST	102	U.S. History II	3
SPAN		Electives (one year)	6
SPCH	116	Voice and Articulation **or**	
SPCH	115	Public Speaking	3
Fine Arts Elective			3
Philosophy Elective			3
Natural Science Elective			3
Natural Science Lab Elective			1
Physical Education Elective			1

Core Courses: 12 credit hours

SPED	204	Introduction to Education of Exceptional Children	3
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3

Professional Studies/Academic Specialization: 45 credit hours

EDPY	300	Educational Psychology	3
ELED	304	Methods and Materials for Teaching Language Arts in Elementary Schools	3
ELED	305	Methods and Materials for Teaching Social Studies in Elementary Schools	3
ELED	307	Methods and Materials for Teaching Science in Elementary Schools	3
RDNG	314	Methods and Materials for Teaching Reading in Elementary Schools	3
ELED	330	Practicum I -Elementary Education	3
PEDU	394	Methods and Materials for Teaching Health, Physical Education and Safety in Elementary Schools	3
ELED	428	Classroom Management in Elementary Schools	3
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Adv. Writing I	3
ENGL	212	Literature and Adv. Writing II	3
MATH	101	General College Mathematics I	3
MATH	102	General College Mathematics II.	3
BIOL	101	Biological Science I	3
BIOL	103	Biological Science I Laboratory	1
HIST	101	United States History I	3

HIST	102	United States History II	3
SPAN		Electives (One Year)	6
ELED	430	Practicum II- Elementary Education	3
ELED	434	Observation and Student Teaching in Elementary Schools	12
EDFN	461	Methods and Materials for Teaching Creative Arts in Elementary Schools	3

Other Required Courses: 18 credit hours

GEOG	105	World Cultural Geography	3
HIST	279	History of the District of Columbia	3
ECED	314	Teacher/Child/School/ Community Interactions	3
RDNG	305	Children's Literature	3
RDNG	406	Techniques/Procedures for Corrective and Remedial Reading	3
MATH	393	Theory and Application of Mathematics	3

Suggested Electives: 3 credit hours

EDPY	215	Special Topics: Technology for Teachers	3
FDNU	318	Child Health and Nutrition	3
SPED	411	Developing and Implementing IEP	3

Comments: Students must earn a grade of "C" or better in all required education courses, except Observation and Student Teaching, which requires a grade of "B" or better.

HEALTH EDUCATION PROGRAM

The Health Education Program offers a Bachelor of Science degree in Health Education, as well as courses in physical education, health education, and public health. In addition, courses related to health and physical fitness may be taken by the general University student population to satisfy electives and university-wide requirements.

Health education offerings are designed to prepare professional service personnel for employment opportunities as administrators in both the public and private sectors. Graduates of the program may pursue careers as health and physical education teachers, public health administrators and educators, athletic coaches and directors, physical fitness trainers, wellness center directors, and recreation specialists and program directors.

Additional credits are offered and required for certification to teach health and physical education in the District of Columbia Public Schools. The Health Education Program requires students to maintain a cumulative grade point average of 2.5 in major courses for graduation

BACHELOR OF SCIENCE IN HEALTH EDUCATION

Total Credit Hours of College-Level Courses Required for Graduation: 125-134

University-Wide Requirements: 48 credit hours

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	101	General College Mathematics I.	3
MATH	102	General College Mathematics II	3
BIOL	101	Biological Science I	3
BIOL	103	Biological Science I Lab	1
BIOL	111	Fundamentals of Anatomy and Physiology I	3
BIOL	113	Fundamentals of Anatomy and Physiology I Lab	1
SPCH	116	Voice and Articulation **or**	
SPCH	115	Public Speaking	3
Foreign Language Electives* (1 year)			6
Fine Arts Elective			3
Philosophy Elective			3
Social Sciences Electives**			
Physical Education Elective			1

*Spanish is the required foreign language for the Health and Physical Education Option.

**History of the District of Columbia and Principles of Psychology are the required social sciences for the Health and Physical Education Option.

Core Courses for Option I and II: 35 credit hours

BIOL	112	Fundamentals of Anatomy and Physiology II	3
BIOL	114	Fundamentals of Anatomy and Physiology II Lab	1
NFSC	103	Introduction to Nutrition	3
NFSC	103	Introduction to Nutrition Lab	1
HLTH	105	Personal and Community Health	3
HLTH	204	Prevention, First Aid and Emergency Medical Services	3
HLTH	424	Sex Education	3
HLTH	405	Health and Safety of Community Populations	3

HLTH	426	Drug Use and Abuse	3
PEDU	465	Measurement and Statistical Analysis in Health, Physical Education, and Leisure Studies	3
PEDU	104	Introduction to the History and Philosophy of Health, Physical Education and Leisure Studies	3
PEDU	494	Senior Project in Health, Physical Education and Leisure Studies	3
PEDU		Skills electives*	3

*Health and Physical Education Option must take Intermediate Swimming.

Academic Specialization 1: Public Health Option: 42 credit hours

Students selecting the Public Health Option shall take the following courses:

HLTH	321	Organization and Administration of School Health and Community Health Programs	3
HLTH	390	Health Practicum	2
HLTH	404	Mental Health	3
HLTH	406	Consumer Health	3
HLTH	417	Internship	4
HLTH	493	Seminar: Health Issues	3
APCT	104	Introduction to Applications of Computers	2
APCT	105	Introduction to Applications of Computers Lab	1
BIOL	241	General Microbiology I	3
BIOL	240	General Microbiology I Lab	1
BIOL	245	Clinical Microbiology	3
BIOL	244	Clinical Microbiology Lab	1
HLTH	214	Survey of Public Health	3
HLTH	314	Public Health Planning and Program Development	3
Business elective			3
General Electives			4

Academic Specialization: Health and Physical Education Option: 51 credit hours

EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
		or	
EDPY	244	Human Development and Behavior	3
ECED	205	Principles of Child Development	3
EDPY	300	Educational Psychology	3
RDNG	314	Methods and Materials for Teaching Reading in Elementary Schools	
		or	
RDNG	315	Methods and Materials for Teaching Reading in Secondary Schools	3
PEDU	284	Mechanical and Kinesiological Analysis of Human Motion	3
PEDU	357	Athletic Coaching and Officiating	3
PEDU	389	Physiology of Exercise	3
PEDU	390	Introduction to Adaptive Physical Education	3
PEDU	394	Methods and Materials of Teaching Health, Physical Education and Safety in Elementary Schools	3
PEDU	396	Methods and Materials of Teaching Health, Physical Education and Safety In Secondary Schools	3
PEDU	407	Organization and Admin. of Physical Education and Leisure Studies	3
PEDU	174	Technique and Skills in Dual and Team Sports	3
ELED	434	Observation and Student Teaching in Elementary Schools	6
EDFN	471	Observation and Student Teaching in Secondary Schools	6

BACHELOR OF ARTS IN SPECIAL EDUCATION PROGRAM

The Bachelor of Arts degree in Special Education is designed to meet the non-categorical teacher certification requirements for the District of Columbia and other school jurisdictions. Upon completion of the program, students will be prepared for careers as teachers in public and private schools or as special educators who provide direct services to children and youth with special needs.

The program of study is designed to provide courses and learning experiences that enable students to develop teaching skills and competencies required to assess the academic, social, and behavioral needs of exceptional children and youth within a multi-ethnic urban school setting; to acquire and apply teaching methods, learning strategies, and instructional interventions that are based on sound research and best practices; to effectively manage a performance-based, behaviorally-oriented learning environment in grades K-12; and to prepare students for advanced graduate study.

Students must complete practicum and field experiences which are a part of many of the courses in the curriculum. These experiences allow for

progressive application of the educational principles and practices required to meet the objectives of the program.

BACHELOR OF ARTS IN SPECIAL EDUCATION

Total Credit Hours of College-Level Courses Required for Graduation: **126**

University-Wide Requirements: 48 credits

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	101	General College Math I	3
MATH	102	General College Math II	3
BIOL	101	Biological Science I	3
BIOL	103	Biological Science I Lab	1
HIST	101	United States History I	3
PSYC	210	Principles of Psychology	3
SPAN		Electives (1 Year)	6
SPCH	116	Voice and Articulation	
		or	
SPCH	115	Public Speaking	3
Fine Arts Elective			3
Philosophy Elective			3
Natural Science Elective			3
Natural Science Lab Elective			1
Physical Education Elective			1

Core Courses: 12 credit hours

EDPY	244	Human Development and Behavior	3
SPED	204	Introduction to Education of Exceptional Children	3
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban School	3

Professional Studies/Academic Specialization Courses: 45 semester hours

SPED	214	Field Experience in Special Education I	3
SPED	314	Field Experience in Special Education II	3
EDPY	300	Educational Psychology	3
SPED	305	Intro. to Legal Issues in Special Education	3
SPED	306	Behavior Management in the Classroom	3
RDNG	314	Methods and Materials for Teaching Reading in Elementary	3
		or	
RDNG	315	Methods and Materials for Teaching Reading in Secondary Schools	3
SPED	435	Methods I: Teaching, Math, Science and Technology for Special Populations	3
SPED	436	Methods II: Teaching Language Arts and Social Studies for Special Populations	3
SPED	485	Assessment of Exceptional Children	3
SPED	454	Vocational Aspects of Disabilities	3
SPED	411	Development of Individualized Educational Programs -IEPs	3
SPED	474	Observation and Student Teaching In Special Education - Elementary	6
SPED	475	Observation and Student Teaching In Special Education - Secondary	6

Other Required Courses (18 Semester Hours)*

GEOG	105	World Cultural Geography	3
HIST	279	History of the District of Columbia	3
SPLP	312	Language Acquisition	3
RDNG	406	Tech/Corrective Remedial Reading	3
PEDU	390	Introduction to Adaptive Physical Education	3
MATH	393	Theory and Application of Math	3

Suggested Electives: 3 semester hours

EDPY215		Special Topics: Technology for Teachers	3
FDNU	318	Child Health and Nutrition	3
RDNG	305	Children's Literature	3

Comments: Students must earn a grade of "C" or better in all required education courses, except Observation and Student Teaching, which requires a grade of "B" or better.

GRADUATE PROGRAMS IN DEPARTMENT OF EDUCATION

Admissions Requirements

Students must apply for admissions into the graduate program through the Department of Education and be admitted to graduate candidacy before taking more than 9 semester hours. Students may be admitted on a provisional basis as non-degree seeking. To be admitted into the program, students must meet all admissions requirements of the University of the District of Columbia. In addition, students must meet the following Department of Education requirements to be fully admitted into the Master of Arts Degree

Program in Early Childhood Education or the Master of Arts Degree Program in Special Education:

- Show proof of a baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.8;
- Earn a qualifying score on Praxis I (Student must submit an original copy of Praxis scores to Graduate Coordinator in the Department of Education);
- Earn a qualifying score on the Graduate Writing Proficiency Examination which must be taken during the first semester of enrollment;
- Satisfy all undergraduate prerequisite courses, where applicable, that have been determined by the Department of Education's Graduate Admissions Committee.
- Demonstrate basic computer literacy skills;
- Be interviewed by the Department of Education's Graduate Admissions Committee. The interview will include a brief reflective writing activity.

Students who do not have an undergraduate degree in Early Childhood, Elementary Education, Special Education, or a related academic discipline may be required to complete additional courses in the undergraduate curriculum of the Department of Education. These courses must be satisfactorily completed before being admitted into the graduate program.

Transfer Credit: Students may transfer no more than 9 credit hours of graduate credit earned from an accredited institution. Transfer courses will be evaluated and accepted toward the degree, however, on the basis of their applicability to the requirements of the program.

Graduate Writing Proficiency Examination: The Graduate Writing Proficiency Examination is required of all graduate students. Students must take and pass the writing proficiency examination in the first semester of enrollment. Students must register to take the examination, which is administered only once each semester.

Written Comprehensive Examination: Students are required to pass a written comprehensive examination, which is taken during the final semester of the student's academic degree program. The dates for the Examination are as follows:

Fall Semester
Orientation - 2nd Friday in September
Examination - 2nd Friday in October
Retake (If applicable) - 3rd Friday in November

Spring Semester
Orientation - 2nd Friday in February
Examination - 2nd Friday in March
Retake (If applicable) - 3rd Friday in April

Students who fail to earn a passing score on the Written Comprehensive Examination after two attempts will be dismissed from the graduate program.

Thesis: (Optional) The submission of an acceptable thesis in lieu of six additional credit hours of course work may be approved by the student's academic advisor.

MASTER OF ARTS DEGREE IN EARLY CHILDHOOD EDUCATION

The Master of Arts degree in Early Childhood Education is designed to offer professional preparation in early childhood education for careers as master teachers or as early childhood specialists in the private and public sectors. The program leading to the Master's degree presupposes that the student has met the requirements for teacher certification or plans to take the necessary additional courses concurrently that will lead to certification prior to graduation. The advisor, in consultation with the Chair of the Department of Education, will plan a program of study, which includes specific courses that will enable the student to become certified upon completion of the program of study. In order to meet requirements for certification and the Master's degree concurrently, the student should be prepared for a longer period of study.

Curriculum Requirements
The completion of a minimum of 36 credit hours is required for the Master of Arts degree in Early Childhood Education. Students who have less than one year of teaching experience in early childhood education or who did not complete student teaching in an undergraduate program will be required to enroll in the Department's undergraduate course, ECED 406 Observation and Student Teaching in Early Childhood Education.

Core Courses: 12 credit hours

ECED	505	Child Development Theories in Early Childhood Education	3
ECED	580	Managing the Early Childhood Environment	3
EDFN	684	Introduction to Educational Research	3

Academic Specialization: 21 credit hours

ECED	504	Curriculum and Methods for Teaching Language Development in Early Childhood Education	3
ECED	506	Curriculum and Methods for Teaching Math, Science, and Technology in Early Childhood Education	3
ECED	508	Curriculum and Methods for Teaching Creative Arts in Early Childhood Education	3
ECED	510	Curriculum and Methods for Teaching Social Studies, Health, Physical Education and Safety in Early Childhood Education	3
ECED	515	Impact of Home, School, and Community Interaction on Early Childhood Education	3
SPED	505	Curriculum Methods for Diagnostic and Prescriptive Teaching	3
ECED	606	Administration in Early Childhood Education	3

Research Courses - for Thesis Option Only (6 credit hours)

Students electing the thesis option are required to enroll in Thesis and Statistics course:

ECED	696	Thesis	(3-6)
MATH	599	Basic Statistical Methods	3

Suggested Electives (Non-Thesis Option-6 credit hours)

SPED	504	Foundations of Special Education	3
SPED	537	Psychology of Exceptional Children	3
ECED	599	Special Topics: Technology for Teachers	3
ECED	607	Internship in Early Childhood Education	3
PSYC	552	Advanced Statistics and Research Design	3

Comment: Students must maintain a cumulative grade point average of 3.0 or better throughout their program of study.

MASTER OF ARTS DEGREE IN SPECIAL EDUCATION

The Master of Arts degree in Special Education is designed to offer advanced graduate training and professional preparation for careers as master teachers in public or private schools and other educational institutions. The goals of the Master's program are oriented toward students acquiring advanced knowledge and professional competencies in the areas of psycho-social, socio-cultural, and psycho-educational development, and behavior management or special populations of children and youth.

The program is structured to emphasize interrelated course work in the following areas of learning: instruction and teaching methods, educational research and design, diagnostic testing and applied instructional interventions, and educational programming and behavior management in the classroom setting. It is primarily directed toward individuals who hold teaching certification and have had teaching experience in special education or related disciplines. Upon satisfactory completion of the program, students are prepared to fulfill a variety of roles related to teaching and instructional practices in schools and institutions serving special populations of children and youth.

Curriculum Requirements

The completion of a minimum of 39 semester hours is required for the Master of Arts degree in Special Education. Students who have less than one year of teaching experience in special education are required to complete 6 hours of internship.

Students who are seeking specialization in one of two categorical areas – Serious Emotional Disturbance or Specific Learning Disabilities - or who wish to study Special Education and Early Childhood Education will be required to take additional courses.

Core Courses: 12 credit hours

SPED 504	Foundations of Special Education	3
SPED 557	Behavioral and Classroom Management	3
EDFN 684	Introduction to Educational Research	3
MATH 599	Basic Statistical Methods	3

Academic Specialization: 21 credit hours
Non Categorical K-12

SPED 505 Curriculum Methods for Diagnostic and Adaptive Teaching 3
SPLP 509 Language Development and Remediation 3
SPED 515 Development, Implementation, Monitoring IEP's 3
SPED 537 Psychology of Exceptional Children and Youth 3
SPED 554 Socio-cultural and Vocational Aspects of Disabilities 3
SPED 585 Assessment of Exceptional Children 3
SPED 588 Current Trends and Legal Issues in Special Education 3

Practicum/Internship: 6 credit hours**

SPED 597 Internship in Special Education I 3
SPED 598 Internship in Special Education II 3

**Required of students who have less than one year of teaching experience in special education.

Research Courses - for Thesis Option Only: 6 credit hours

Students electing the thesis option are required to enroll in the Thesis course:

SPED 696 Thesis . . . . . (3-6)

Suggested Electives: 6 credit hours

SPED 590 Research Seminar in Special Education 3
SPED 589 Special Topics: Technology for Teachers 3
SPLP 695 Seminar in Bilingualism 3
SPLP 698 Sign Language 3
PSYC 537 Life Span Development 3
PSYC 535 Tests and Measurements 3
ADED 589 Teaching Adults with Learning Disabilities 3

Certification in Serious Emotional Disturbance: 15 credit hours

SPED 591 Psychological and Behavior Characteristics of the Serious Emotionally Disturbed 3
SPED 592 Behavior Management for Children and Youth with Serious Emotional Disturbance 3
SPED 593 Educational Programming and Implementation for the Serious Emotionally Disturbed 3
SPED 597 Internship in Special Education I . . 3
SPED 598 Internship in Special Education II . . . 3

Certification in Specific Learning Disabilities: 15 credit hours

SPED 594 Psychological and Behavioral Characteristics of Children and Youth with Specific Learning Disabilities . . 3
SPED 595 Diagnostic Techniques and Intervention for Children and Youth with Specific Learning Disabilities 3
SPED 596 Educational Programming and Curriculum Modification in Basic Skills Instruction for the Specific Learning Disabled 3
SPED 597 Internship in Special Education I . . . 3
SPED 598 Internship in Special Education II . . 3

Students must maintain a cumulative grade point average of 3.0 or better throughout their program of study.

COURSE DESCRIPTIONS

ECED 104 History and Philosophy of Early Childhood Education (3)

Traces the theoretical, social, and political roots of early childhood education. Discusses the impetus for the development of nursery schools, Head Start, special education programs, multicultural education, and child care. Highlights policy issues affecting young children and their families.

ECED 105 Principles of Child Development (3)

Presents human development through the life span, with special emphasis on cognitive, language, physical, social and emotional development, both typical and atypical from birth through age 8. Thirty hours of clinical observation is required.

ECED 205 Advanced Child Development (3)

Examines the principles of development with emphasis on school age and adolescence. Stresses positive physical, cognitive, social and emotional development, along with building self-esteem. Prereq.: ECED 104, 105 and ECED 245.

ECED 206 Infant Education (3)

Focuses on developmental characteristics of infants from the prenatal period through two years of age. Focuses on guidance of infants and toddlers within family and group care settings, development in the

context of the family, program, and society. Requires participation with infants. Prereq.: ECED 104 and 105.

ECED 207 Understanding Self and Relationships (3)
Explores dynamic socialization processes involving children, adolescents, peers, parents, and society. Discusses sources of developmental and individual differences in identity formation and attainment, as well as theory and research related to social and emotional development of children and adolescents.

ECED 224 Planning and Administration of Early Childhood Programs (3)
Discusses guidelines to achieve quality programming for early childhood programs. Focuses on effective interpersonal communication skills in program management; principles of management and operation; and designing and scheduling appropriate space and activities. Prereq.: ECED 104 and 105.

ECED 225 Administration and Supervision of School Age Care Programs (3)
Focuses on administration, financial, and program management and the foundations of quality school age programming. Focuses on planning a safe, healthy environment for before- and after-school care and strategies for effective program management. Prereq.: ECED 104 and 105.

ECED 230 Practicum I (3)
Provides directed observation and participation with preschool and kindergarten children. Focuses on instruments, skills, and assessment strategies of young children. Provides experience in team assessments. Requires lecture and 30-hour practicum. Prereq.: ECED 104 and 105.

ECED 208 Emergent Literacy (3)
Explores how language and literacy develop in young children. Students will identify literacy activities for young children that are appropriate to their age and development. Emphasis on creating an environment that encourages concepts and language development that make literacy practices practical.

ECED 245 The Child in the Family (3)
Considers the influence of family interaction in the management of children and personality development and the impact of parental practices on child rearing. Examines current issues with appropriate multicultural examples, including child care and nontraditional parenting situations. Prereq.: ECED 104 and 105.

ECED 301 Methods and Materials for Teaching Mathematics, Science, and Technology in Early Childhood Education (3)
Emphasizes activities and materials for teaching mathematics and science. Uses competency-based approach to define goals, concepts, and skills. Develops curriculum based on the stages of early childhood development and how learning can be evaluated. Emphasizes planning for teaching, classroom management, use of instructional resources, and related technology. Practicum required. Prereq.:Admission to the Teacher Education Program.

ECED 302 Methods and Materials for Teaching Language Arts and Social Studies in Early Childhood Education (3)
Emphasizes language and literacy skills, geography, culture, and heritage through speaking, listening, reading, and writing. Introduces students to strategies to promote pro-social behavior, social awareness, and interpersonal skills. Emphasizes planning for teaching; evaluative devices; classroom management; use of instructional resources; and related technology. Practicum required. Prereq.: Admission to the Teacher Education Program.

ECED 304 Play Activities and Materials (3)
Examines the principles of evaluation and selection of play activities and materials for pre-school and kindergarten children. Explores the design of learning environments and play strategies appropriate for individuals and groups and for appropriate developmental levels. Prereq.: ECED 104 and ECED 105.

ECED 314 Teacher, Child, School and Community Interaction (3)
Concentrates on giving students an insight into parental involvement with the child, the school, and the multicultural community. Provides opportunities for students to have first-hand experiences with community organizations and government agencies concerned with the welfare of young children. Prereq.: ECED 104, 105; EDFN 222.

ECED 326 Practicum II (3)
Provides direct observation and participation with preschool and kindergarten children. Focuses on management strategies and program activities for early childhood education. Allows opportunities for students to gain experience in assisting the classroom teacher. Requires lecture and 30-hour practicum. Prereq.: ECED 104, 105; ECED 230.

ECED 406 Observation and Student Teaching in Early Childhood Education (VC)
Focuses on observation and practical experiences in pre-kindergarten and kindergarten settings. Evaluates students' proficiency of theoretical concepts, content, and teaching strategies. Requires weekly professional development seminar. Prereq.: Clearance by major advisor and Coordinator of Field Services, Student Teaching, and Teacher Certification.

ECED 408 The Young Child in a Multicultural Society (3)
Concentrates on enhancing students' appreciation of and respect for other cultures. Employs modules of the study of cultures such as those of African, Asian, Spanish-speaking, and Native American traditions and values. Emphasizes strategies for utilizing these materials in the early childhood setting. Prereq.: EDPY 300.

ECED 409 Workshop, Seminar, Institute (3)
Presents topics/problems related to issues in education. Designed for special groups that wish to explore current topics and issues relevant to the field of education.

EDFN 220 Foundations of Education (3)
Presents historical, philosophical, psychological, and social foundations of education in America. Focuses on constitutional and statutory provisions for public school education. Emphasizes the role of teaching and learning in a multicultural environment.

EDFN 222 Children and Youth in Urban Schools (3)
Provides an overall perception and understanding of the school as an integral part of society in an urban environment. Emphasizes the role of the teacher in promoting and understanding multicultural awareness. Explores other major contemporary issues/concerns encountered by urban educators.

EDFN 405 Classroom Management (Secondary) (3)
Provides instruction in the various techniques for effective management of a 7-12 classroom. Emphasis is on creating positive learning environments and developing effective classroom instructional practices.

EDFN 434 Methods of Teaching Business Subjects in Secondary Schools (3)
Focuses on current instructional strategies used to facilitate learning business in secondary schools. Emphasizes planning for teaching; effective utilization of instructional resources; and related technology for teaching specific content to the learner. Prereq.: Junior standing and permission of Department Chairperson.

EDFN 445 Methods of Teaching Art (PreK-12) (3)
Focuses on current instructional strategies used to facilitate learning art at the Pre-K-12 levels. Emphasis is on planning for teaching; effective utilization of instructional resources; evaluative devices; classroom management; and related technology for teaching specific content to the learner. Prereq.: Junior standing and permission of Department Chairperson.

EDFN 446 Methods of Teaching Science in the Secondary Schools (3)
Focuses on current instructional strategies used to facilitate learning science in secondary schools. Emphasizes planning for teaching; effective utilization of instructional resources; evaluative devices; classroom management; and related techniques for teaching specific content to the learner. Prereq.: Junior standing and permission of Department Chairperson.

EDFN 449 Methods of Teaching English in the Secondary Schools (3)
Focuses on current instructional strategies used to facilitate learning English in secondary schools. Emphasizes planning for teaching; effective utilization of instructional resources; evaluative devices; classroom management; and related techniques for teaching specific content to the learner. Prereq.: Junior standing and permission of Department Chairperson.

EDFN 450 Methods of Teaching Foreign Languages (Pre-K -12) (3)
Focuses on current instructional strategies used to facilitate learning foreign languages at the pre-K-12 levels. Emphasis is on planning for teaching; effective utilization of instructional resources; evaluative devices; classroom management; and related techniques for teaching specific content to the learner. Prereq.: Junior standing and permission of Department Chairperson.

EDFN 452 Methods of Teaching Social Studies in the Secondary Schools (3)
Focuses on current instructional strategies used to facilitate learning social studies in secondary schools. Emphasizes planning for teaching; effective utilization of instructional resources; evaluative devices; classroom management; and related technology for teaching specific content to the learner. Prereq.: Junior standing and permission of Department Chairperson.

EDFN 454 Methods of Teaching Mathematics in Secondary Schools (3)
Focuses on current instructional strategies used to facilitate learning mathematics in secondary schools. Emphasizes planning for teaching; effective utilization of instructional resources; evaluative devices; classroom management; and related technology for teaching specific content to the learner. Prereq.: Junior standing and permission of department chairperson.

EDFN 458 Music for the Specialist (Pre-K-12) (3)
Studies music objectives, concepts, curricular plans, and materials; the development of techniques and strategies for the instruction of students, Pre-K-12; effective utilization of instructional resources; classroom management and related technology. Practicum is required. Prereq.: Junior standing in music and music education for vocal and instrumental majors.

EDFN 461 Methods of Teaching Creative Arts in Elementary Schools (3)
Focuses on methods, materials, and procedures to be used at the early childhood and elementary levels for teaching creative arts (art, music, drama, movement, literature, storytelling). Emphasizes lesson planning, classroom management, assessment, and use of technology in teaching. Prereq.: Junior standing.

EDFN 470 Observation and Student Teaching in SecondarySchools (VC)
(*For Music Majors Only)*
Provides opportunities for students to teach one-half day for one semester or one whole day for one-half semester in a junior or senior high school. Requires weekly professional development seminar. Prereq.: Clearance by major advisor and Coordinator of Field Services, Student Teaching, and Teacher Certification.

EDFN 471 Observation and Student Teaching in Secondary Schools (VC)
Focuses on observation and full-time practical experiences in junior or senior high settings under the guidance of a certified teacher and college supervisor. Evaluates students' proficiency of theoretical concepts, content, and teaching strategies. Requires weekly professional development seminar. Prereq.: Clearance by major advisor and Coordinator of Field Services, Student Teaching, and Teacher Certification.

EDFN 495 Independent Study (3)
Allows students an opportunity to pursue any topic germane to the Department on an individual basis. Allows students to study subject matter of special interest under faculty supervision and counsel. Prereq.: Permission of Department Chairperson.

EDPY 215 Special Topics: Technology for Teachers (3)
Incorporates technology tools and resources to locate Internet resources, collect data, develop lesson plans, create support materials, publications, multimedia presentations, and begin a web site.

EDPY 244 Human Development and Behavior (3)
Presents a study of the intellectual, physical, emotional, and social growth processes over the life span. Emphasizes theories of growth, development, and learning.

EDPY 300 Educational Psychology (3)
Examines current theory and practice in the teaching/ learning process. Explores implications of theories for teaching/learning activities. Discusses methods of assessing student learning, performance assessments, and standardized tests. Prereq.: EDFN 220 and EDFN 222.

EDPY 475 Measurement and Evaluation of Teaching and Learning (3)
Provides techniques of measurement and evaluation of achievement, adjustment, and intelligence. Studies informal teacher-made tests and standardized tests. Develops criteria for the selection of instruments of evaluation. Includes elementary statistics to enable the student to analyze and interpret the results of testing.

ELED 330 Practicum I (3)
Provides directed observation of and participation with primary children. Focuses on one-to-one tutoring, developing mini-lessons, providing individualized instruction, monitoring small groups, and related teaching activities. Lecture and 30-hour practicum are required. Prereq.: EDFN 220 and EDFN 222.

ELED 304 Methods and Materials of Teaching Language Arts in Elementary Schools (3)

Provides pre-service teachers with the theoretical background and instructional strategies for teaching the language arts. Includes topics such as aural-oral communication, listening, speaking, reading, literature, written composition, handwriting, and spelling. Emphasizes planning; classroom management; use of instructional resources, and related technology. Requires practicum. Prereq.: Admission to Teacher Education Program.

ELED 305 Methods and Materials of Teaching Social Studies in Elementary Schools (3)

Focuses on traditional and innovative ways to teach the elementary school social studies curriculum. Emphasis is on analyzing and practicing research-based pedagogy and the relationship between social science and social studies. Additionally, it explores the resources and materials needed to effectively guide children to the achievement of social studies goals and objectives and the planning, management, and technological tools required. Requires practicum. Prereq.: Admission to Teacher Education Program.

ELED 306 Methods and Materials of Teaching Mathematics in Elementary School (3)

Examines the objectives, content, methods, and instructional materials of mathematics and mathematics instruction for the elementary grades. Emphasizes the nature of mathematics, consumer mathematics, metric education, and diagnostic and prescriptive techniques of teaching mathematics. Emphasizes planning; classroom management; use of instructional resources, and related technology. Requires practicum. Prereq.: Admission to Teacher Education Program.

ELED 307 Methods and Materials of Teaching Science in Elementary Schools (3)

Examines the objectives, content, methods, and instructional materials of science and science instruction in the elementary grades. Emphasizes the processes and techniques of science and how teachers can help pupils use such processes in problem-solving situations. Emphasizes planning; classroom management; use of instructional resources, and related technology. Requires practicum. Prereq.: Admission to Teacher Education Program.

ELED 428 Classroom Management (Elementary) (3)

Provides instruction in the various techniques for effective management of a K-6 classroom. Emphasis is on creating positive learning environments and developing effective classroom instructional practices.

ELED 430 Practicum II (3)

Provides directed observation of and participation with intermediate children. Focuses on one-to-one tutoring, developing mini-lessons, providing individualized instruction, monitoring small groups, and related teaching activities. Requires lecture and 30-hour practicum. Prereq.: ELED 330

ELED 434 Observation and Student Teaching in the Elementary School (VC)

Focuses on observation and full-time practical experiences in an elementary school setting under the guidance of a certified teacher and a college supervisor. Requires weekly professional development seminar. Prereq.: Clearance by major advisor and Coordinator of Field Services, Student Teaching and Teacher Certification.

ELED 435 Observation and Student Teaching in Elementary Schools (VC)

(For Music Majors Only)

Provides opportunities for students to teach one-half day for one semester or one whole day for one-half semester in an elementary school. Prereq.: Clearance by major advisor and Coordinator of Field Services, Student Teaching, and Teacher Certification.

RDNG 305 Children's Literature (3)

Enables pre-service teachers to develop the ability to select, present, and interpret literature appropriate to the ages and developmental stages of learners. Emphasizes the selection of books for children and the work of illustrators. A literature-based reading approach is used.

RDNG 314 Methods and Materials of Teaching Reading in Elementary Schools (3)

Focuses on historical aspects of reading instruction in America and the analysis and evaluation of contemporary methods and state-of-the-art reading instruction. Emphasizes planning; classroom management; use of instructional resources, and related technology. Requires practicum. Prereq.: Admission to Teacher Education Program.

RDNG 315 Methods and Materials of Teaching Reading in the Secondary Schools (3)
Focuses on the nature of the reading process, cognitive skills, developing vocabulary, comprehension and interpretation skills, and recommended content area reading practices for grades 7-12. Emphasizes planning; classroom management; use of instructional resources, and related technology. Requires practicum. Prereq.: Admission to Teacher Education Program.

RDNG 406 Techniques and Procedures for Corrective and Remedial Reading (3)
Enables students to understand the causes of reading disability and their impact upon reading performance. Emphasis is on the application of theory in developing competence in the use of procedures and materials for the diagnostic prescriptive teaching of reading. Requires practicum. Prereq.: RDNG 314 or RDNG 315.

RDNG 419 Methods and Materials of Teaching Reading in Content Areas (3)
Focuses on providing pre-service teachers with assistance in recognizing, diagnosing, and solving basic problems and questions relative to reading in their respective subject fields. Emphasizes the development of technical vocabulary and comprehension skills through a practicum approach. Requires practicum. Prereq.: RDNG 314 or RDNG 315.

SPED 204 Introduction to Education of Exceptional Children (3)
Studies the characteristics of exceptionality and their effect on how students learn. An overview of each area of exceptionality is included, as well as historical development, basic concepts, current issues and programs, and future trends in special education. Emphasizes critical issues related to schools, family and society, existing attitudinal barriers, and current methods of support (Formerly Survey of Exceptional Children).

SPED 214 Field Experiences in Special Education I (3)
Provides opportunities for students to observe and assist with school or institutional curricula and extra-curricular program activities in special education at elementary level. Requires lecture and 30-hour practicum.

SPED 305 Introduction to Legal Issues in Special Education (3)
Provides a study of national, state, and local laws, policies, and procedures affecting the education of exceptional children. Reviews rights of parents and children in the educational placement process. Prereq.: SPED 204 AND EDPY 244

SPED 306 Behavior Management in the Classroom (3)
Studies the behavior management techniques, which include explanation and implementation of rewards, behavior modification, performance contracting, life-space interviewing, expectancy communication, and surface management for changing child behavior in the classroom. Prereq.: SPED 204 AND EDPY 244.

SPED 314 Field Experience in Special Education II
Provides opportunities for students to observe and assist with school or institution curricula and extra-curricula program activities in special education at the middle or secondary level. Requires lecture and 30-hour practicum.

SPED 335 Special Topics (VC)
Provides an opportunity for students to study a specific area of interest as related to exceptional children and youth. Emphasis on contemporary issues in special education. Course topics may be offered by other departments in the University.

SPED 337 Understanding Exceptional Children and Youth (3)
Focuses on the psychological manifestations of disabling conditions and how children, youth, and adults with disabilities react to societal norms. Prereq.: SPED 204.

SPED 411 Development of Individualized Educational Programs - IEPs (3)
Focuses on the development of Individualized Educational Programs (IEPs) for children and youth with special educational and behavioral needs. Emphasis also on how to implement and monitor IEPs. Prereq: SPED 204; EDPY 300.

SPED 435 Methods I: Teaching Math, Science, and Technology for Special Population (3)
Focuses on current instructional strategies used to facilitate teaching in a special education environment. Emphasizes planning for teaching; effective utilization of instructional resources; evaluative devices;

classroom management; and related technology. Includes lecture and practicum. Prereq: Admission to Teacher Education Program.

SPED 436 Methods II: Teaching Language Arts and Social Sciences for Special Populations (3)
Focuses on current instructional strategies used to facilitate learning language arts, social studies, and creative arts in special education environments. Emphasizes planning for teaching, effective utilization of instructional resources, evaluative devices; classroom management; and related technology. Includes lecture and practicum. Prereq.: Admission to Teacher Education Program.

SPED 454 Vocational Aspects of Disabilities (3)
Focuses on transition from school to work for persons with disabilities. Discusses career awareness, exploration, and preparation concepts. Discusses pre-vocational, vocational, and work activities with emphasis on the relationship between disabilities and employment opportunities. Prereq.: SPED 306.

SPED 474 Observation and Student Teaching in Special Education (Elementary Schools) (VC)
Focuses on observation and full-time practical experiences in an elementary school setting under the guidance of a certified teacher and a University supervisor. Requires weekly professional development seminar. Prereq.: Clearance by major advisor and Coordinator of Field Services, Student Teaching, and Teacher Certification.

SPED 475 Observation and Student Teaching in Special Education (Secondary Schools) (VC)
Focuses on observation and full-time practical experiences in a secondary school setting under the guidance of a certified teacher and a University supervisor. Requires weekly professional development seminar. Prereq.: Clearance by major advisor and Office of Field Services, Student Teaching, and Teacher Certification.

SPED 485 Assessment of Exceptional Children (3)
Provides demonstrated competence in the development, selection, administration, and interpretation of formal and informal assessment techniques. Prereq.: SPED 204; EDPY 244.

LBRM 104 Introduction to Media, Computerized Media Methods and Techniques (3)
Introduces media to pre-service teachers. Covers educational media and various utilization techniques.

HLTH 105 Personal and Community Health (3)
Is concerned primarily with sound health knowledge, attitudes and behavior as they apply to the individual. Content covers the spectrum of health problems of concern to the individual from childhood through the senior years with special attention given to the urban environment.

HLTH 204 Prevention, First Aid & Emergency Medical Service (3)
Includes emphasis on accident prevention and proper injury management in the general and sport environment. Students will receive Red Cross Certification in CPR and First Aid upon completion of course requirements.

HLTH 214 Survey of Public Health (3)
Presents a comprehensive overview of the public health field, including the history and philosophy of public health. The primary intent is to provide information, insight and perspective on a wide range of public health concerns impacting urban and rural populations, as well as children, adults, and the senior citizen. Prereq.: PEDU 104.

HLTH 224 Survey of School Health Programs (3)
Is designed to deal with the aspects of school health: health environment, health services, and health education. The relationships of the school health programs and the general education program are emphasized.

HLTH 314 Public Health Planning and Program Development (3)
Is designed to develop basic knowledge and technical skills required to identify and assess the magnitude of health problems and issues involved in developing, implementing, operating, managing, and evaluating programs for all ages of citizens from the young to the elderly. Prereq.: HLTH 214.

HLTH 324 Organization and Administration of School and Community Health Programs (3)
Is for the student whose health career emphasis is focused on employment opportunities as a public health

administrator or one who organizes health systems. Prereq.: HLTH 224.

HLTH 390 Practicum/Health Education (2)
Affords students the opportunity to participate and assist in a variety of public health settings, including programs aimed at all ages including senior populations. Prereq.: HLTH 105, HLTH 214.

HLTH 404 Mental Health (3)
Provides thorough analysis of the definitions, scope, and extent of mental health. It also covers changing concepts in philosophy, treatment care services, training and therapy. Special attention is given to the urban environment and problems of all ages including the older citizen. Prereq.: HLTH 105.

HLTH 405 Health and Safety of Community Populations (3)
Examines policies, practices, and procedures involved in the organization, administration, and supervision of comprehensive health and safety education programs in the community. Special emphasis will be given to understanding communicable diseases with respect to signs/symptoms, incidence, epidemiology, control and prevention. All ages from childhood through senior populations will be explored.

HLTH 406 Consumer Health (3)
Provides a comprehensive analysis of products and services needing consumer evaluation. The course examines those health products and services which can be fraudulent to the consumer, including all ages from youth through senior citizens.

HLTH 417 Internship (4)
Provides the opportunity for observation and work in a variety of health and recreational settings under professional supervision. Students are required to prepare periodic reports, a final work product, and attend biweekly seminars. Prereq.: Senior Health Education majors.

HLTH 424 Sex Education (3)
Is designed to provide further insight into the physical, psychosocial, and religious factors associated with contemporary attitudes, perceptions, beliefs, myths, and human behavior relative to heterosexual relationships. Special emphases will focus on personal responsibilities, causation and prevention of pregnancy, and the social epidemiology of venereal diseases.

HLTH 426 Drug Use and Abuse (3)
Provides an interdisciplinary analysis of contemporary drug issues and problems. The course will examine physiological, psychological, social, philosophical, historical, legal, and health aspects of drug use and abuse. Special attention will be focused on planning and organizing current curricula materials for the teaching of drug education in the schools.

HLTH 493 Seminar: Health Issues (3)
Provides students with a forum to openly discuss community health issues and problems in an academic setting. Topics will be aimed at all population ages from youngsters to senior adults. Current topics will be selected, prepared, and presented by the students with instructor approval. Prereq.: Health Education majors.

PEDU 104 Introduction to the History and Philosophy of Physical Education, Health Education, and Leisure Studies (3)
Examines the fields of health, physical education, and leisure studies in terms of historical development, philosophical foundations, professional standards, roles, and ethics. Discussion focuses on the disciplines' value and contributions to various community populations, including K-12 and senior citizens.

PEDU 111 Tennis I: Beginning (1)
Is designed to provide instruction in the fundamental strokes, rules, regulations, scoring, etiquette, and strategy of tennis for both singles and doubles. The students will be expected to play points, games, and sets.

PEDU 112 Tennis II: Intermediate (1)
Continues and reviews Tennis I, with special emphasis on strategy for singles and doubles.

PEDU 118 Weight Management and Conditioning (1)
Is designed to improve cardiovascular and muscular fitness through progressive exercise. Emphasis is placed on dynamic health, dietary analysis, and caloric intake adjustment.

PEDU 119 Golf (1)
Emphasizes skills, techniques, regulations, rules, and strategy. Practical experience on public golf course is provided.

PEDU 121 Swimming and Beginning Water Safety (1)
Offers opportunities for non-swimmers to develop basic strokes and to alleviate psychological problems centered around aquatic activities. Red Cross certification possible with instructor approval.

PEDU 122 Swimming: Intermediate (1)
Continues beginning swimming and safety skills. Red Cross certification possible with instructor approval.

PEDU 143 Yoga (1)
Deals with broad yoga concepts, with special emphasis on how one can personally apply these teachings to bring about desired changes in one's life.

PEDU 165 Weight Training and Conditioning (1)
Covers overall body development through progressive weight resistance and running programs. Individual fitness profiles developed.

PEDU 174 Techniques and Skills in Dual and Team Sports (3)
Includes skill development and teaching strategies of a selected number of dual and team sports including tennis, badminton, track and field, soccer, basketball, touch/flag football, softball, and volleyball.

PEDU 178 Techniques and Skills in Jogging and Conditioning (1)
Is designed to expose students to proper jogging, running and power walking techniques. Emphasis on proper equipment, conditioning techniques and safety concerns. Course will accommodate all fitness levels.

PEDU 179 Handball-Racquetball (1)
Covers basic skills and techniques of handball and racquetball; strategy, rules, and rules interpretation; singles and double play.

PEDU 284 Mechanical and Kinesiological Analysis of Human Motion (3)
Covers the meaning and significance of muscular movements, the relationship of kinesthetics to growth and development, and application of principles of mechanics and physics to human motion. Prereq.: BIOL 222.

PEDU 357 Athletic Coaching and Officiating (3)
Includes basic coaching principles with special emphasis and opportunity for practical application of the rules and regulations governing sports activities, along with the mechanics of officiating.

PEDU 389 Physiology of Exercise (3)
Covers experimentation and analysis of bodily functions while under the stress of exercise and understanding of classroom activity and its effect on systematic changes. Prereq.: PEDU 284 and BIOL 112.

PEDU 390 Introduction to Adaptive Physical Education (3)
Is an overview of preventive and adaptive physical education as it relates to the broader program. Students will be expected to have some knowledge of physiology, anatomy, and kinesiology. Students will receive field experiences. Prereq.: PEDU 389.

PEDU 394 Methods and Materials of Teaching Health, Physical Education and Safety in Elementary Schools (3)
Provides lecture and discussion in curriculum methodology and development of instructional objectives. Emphasis will be placed on teaching aids/materials, program safety, teaching strategies and movement education for early childhood and the elementary school child. Twenty-hour practicum required. Prereq.: HLTH 105, PEDU-skill elective.

PEDU 396 Methods and Materials of Teaching Health, Physical Education and Safety in Secondary Schools (3)
Provides lecture and discussion in curriculum methodology and development of instructional objectives. Emphasis will be placed on teaching aids/materials, program safety, teaching strategies specific to secondary school health and physical education Twenty-hour practicum required. Prereq.: HLTH 105, PEDU - skills electives, junior status.

PEDU 407 Organization and Administration of Physical Education and Leisure Services (3)
Is designed to present the organization and administration structures of physical education and leisure services programs at various educational and agency levels. The course will cover administration areas including personnel, budget funding, concepts and styles, facilities, equipment, programs and leadership. The course will also acquaint students with the manner in which all aspects of the physical education and recreation professions function to

produce adequate and well organized programs. Prereq.: PEDU 104, HLTH 105.

PEDU 465 Measurement and Statistical Analysis in Health, Physical Education and Leisure Studies (3)
Examines measurement techniques and statistical analysis in the fields of health, physical education and leisure studies. Special attention is given to test construction and the importance of statistical analysis in determining human services. Prereq.: Junior health education major.

PEDU 494 Senior Project in Health, Physical Education and Leisure Studies (3)
Will equip the student in basic research techniques. Each student will successfully complete a comprehensive research project utilizing recognized research methodology. Students will present and defend projects with peers and the instructor.

GRADUATE COURSE DESCRIPTIONS

ECED 504 Curriculum and Methods for Teaching Language Development in Early Childhood Education (3)
Focuses on language development and the application of language development theories in designing the language arts curriculum in early childhood education. Prereq: ECED 505.

ECED 505 Child Development Theories in Early Childhood Education (3)
Focuses on current research of child development from birth through age eight. Emphasizes intellectual, emotional, psychological, sociological, and moral development and the implications of these for designing develop-mentally appropriate programs for children of diverse populations. Explores role of play as a vehicle for learning and development.

ECED 506 Curriculum and Methods for Teaching Mathematics, Science, and Technology in Early Childhood Education (3)
Provides an examination of current research and the application of new practices, techniques, and equipment for teaching mathematics and science to children with various learning styles. Prereq: ECED 505.

ECED 508 Curriculum and Methods for Teaching Creative Arts in Early Childhood Education (3)
Presents examination and application of current research for designing learning experiences in art, music, drama, movement, literature, and storytelling to children emphasizing cultural diversity. Prereq: ECED 505.

ECED 510 Curriculum and Methods for Teaching Social Studies, Health, Physical Education, and Safety in Early Childhood Education (3)
Presents examination and application of current research for designing learning activities and experiences in social studies, physical education, health, and safety. Prereq: ECED 505.

ECED 515 Impact of Home, School, and Community on Early Childhood (3)
Provides an opportunity for students to plan and execute activities which involve parents, school, and the multicultural community. Involves students in hands-on experiences with community organizations and governmental agencies concerned with the welfare of children on the early childhood level. Prereq: ECED 505.

ECED 517 Assessing the Development of the Young Child (3)
Studies current research relevant to the assessment of children and the use of formal and informal assessments for evaluating the development of children. Requires practicum. Prereq.: ECED 505.

ECED 580 Managing the Early Childhood Environment (3)
Focuses on the role of the early childhood teacher in classroom management based on research findings, theories, and strategies appropriate for young children. Requires field experiences. Prereq.: ECED 505, SPED 505.

ECED 590 Practicum Experiences in Early Childhood Education (3)
Provides students with the opportunity to work with children in an early childhood setting for one semester under the supervision of a master teacher. Prereq.: By permission of major faculty advisor.

ECED 594 Current Problems - Issues in Early Childhood Education (3)
Examines current research and practices relevant to the education of young children locally, nationally, and internationally. Prereq.: ECED 505.

ECED 599 Workshops, Seminars, and Institutes (3)
Provides opportunities for graduate students to engage in educational exchanges, such as workshops, seminars, or institutes, developed around specific topics in early childhood education. Requires permission of the Department Chair.

ECED 606 Administration in Early Childhood Education (3)
Studies the functions of administrators and styles of leadership appropriate for persons involved in administering programs for young children in various settings. Requires field experiences. Prereq.: Completion of all core courses and ECED 506, ECED 508, ECED 510, ECED 515.

ECED 607 Internship in Early Childhood Education (3)
Provides supervised field experiences in the administration of educational programs for young children in a D.C. Public School, Day Care Center, UDC Child Development Center, or in a selected public or private setting appropriate to students' career goals. Prereq.: Completion of all core and specialization courses and permission of major advisor or Department Chair .

ECED 695 Independent Study in Early Childhood Education (3)
Allows students to choose, study, and develop an early childhood education related topic under the supervision of a faculty member. Requires a seminar paper. By permission of major faculty advisor.

ECED 696 Thesis (3-6)
Allows students an opportunity to design a study, review related literature, collect data, analyze and interpret research findings, draw conclusions, and make recommendations. Prereq.: Completion of all core and specialization courses.

EDFN 684 Introduction to Educational Research (3)
Provides an introduction to the fundamental methods and procedures for conducting educational research. Includes intensive reading, analysis, and interpretation of research; application to teaching fields; writing of abstracts, research reports, and seminar papers.

GRNT 504 Psychology of Aging (3)
Explores general and developmental psychology from young adulthood to old age; the interrelationship of biological, individual and social changes; and the aging process as it affects sensation and perception, thinking, intelligence, problem-solving ability, cognition, learning, and psychomotor functions.

GRNT 505 Sociology of Aging (3)
Reviews the history of social gerontology in the United States. Compares the roles, status, and security of aging and aged persons in pre- and post-industrial societies. Analyzes past, present, and projected characteristics of the aged in several societies.

GRNT 506 Economics of Aging (3)
Focuses on economic programs for the elderly, the impact of advanced computer technologies, occupation change, retraining for second and third careers, age discrimination, and income in retirement. Analyzes public policies, laws, and programs relating to the economic status of the elderly.

GRNT 537 Concepts and Issues in Gerontology (3)
Presents an overview of the major theories, concepts and issues in the field of social gerontology. Of primary concern is the analysis of research data on aging from a multidisciplinary perspective. Requires
site visits to aging service organizations, agencies, and facilities.

GRNT 596 Internship in Adult Education-Gerontology Section (3)
Provides an in-depth study and experience in some aspect of professional development in adult education and gerontology. Gives assignments planned around the individual student's need to broaden competency in the field of aging.

ADSP 507 Concepts and Strategies in School Supervision (3)
Prepares individuals for supervisory roles for the everyday problems related to school supervision by relating theory and practices.

RDNG 502 Reading in the Secondary Schools (3)
Provide students with competencies and techniques essential to the development of a reading program in the secondary schools. Theories and specialized

teaching strategies for improving the instructional program are explored.

RDNG 505 Advanced Children's Literature (3)
Provides the reading specialist with basic competencies and techniques essential to analyzing and using literature as a vital component of the total reading program. Explores different genres of literature and the development of philosophy governing the selection, use, and evaluation of material.

RDNG 514 Trends and Practices in the Teaching of Reading in Elementary Schools (3)
Emphasizes theories, trends, and current practices in the field of reading at the elementary school level. Emphasis on theories and principles in reading as they relate to the overall developmental reading process.

RDNG 516 Teaching Reading to the Adult Learner (3)
Focuses on providing theoretical and practical experience in identification of the specific needs of the adult learner, exploration and development of materials, and strategies for meeting the needs of adults at varying functional reading levels.

SPED 504 Foundations of Special Education (3)
Surveys of the background and contemporary role of special education in both public and private sectors. Studies the characteristics of exceptionality and their effect on how students learn. Emphasis on inclusive education, learning disabilities, family involvement, gifted and talented, and related services for students with special needs. Emphasis on the intellectual, social, and emotional characteristics of special needs population. Six-hour practicum required.

SPED 505 Diagnostic and Prescriptive Teaching (3)
Explores the methods of using diagnostic material in logical ways to prepare individual educational programs for meeting the needs of children with learning problems.

SPED 535 Methods and Materials for Teaching Exceptional Children (3)
Focuses on current instructional strategies used to facilitate learning by exceptional children. Emphasis planning for teaching effective utilization of instructional resources; evaluative devices; classroom management; and related technology for teaching specific content to the special needs learner. Practicum required.

SPED 537 Psychology of Exceptional Children (3)
Emphasizes the intellectual, social, and emotional characteristics of handicapped and gifted children.

SPED 554 Vocational Aspects of Disabilities (3)
Focuses on transition from school to work for persons with special needs. Discusses career awareness, exploration, and preparation concepts. Emphasis on pre-vocational, vocational and work activities as related to the relationship between disabilities and employment opportunities. Practicum required.

SPED 557 Behavior and Classroom Management (3)
Focuses on the behavior and instructional components of effective classroom management. Students gain skills in assessing behavior problems, planning, implementing, and evaluating interventions and strategies used for students with special needs from diverse backgrounds.

SPED 585 Assessment of Exceptional Children (3)
Discusses the principles and methods of psycho-educational testing and assessment. Requires demonstrated competence in the development, selection, administration, and interpretation of formal and informal tests and assessment instruments.

SPED 588 Current Trends and Legal Issues in Special Education (3)
Provides an in-depth examination and analysis of national, state, and local laws and policies that affect the education of exceptional children and youth. Student rights, records, and due-process issues are studied. Discussions focus on the historical and current legislation.

SPED 589 Special Topics in Special Education (VC)
Provides an opportunity for students to study a specific area of interest as related to exceptional children and youth. Emphasis on contemporary issues in special education.

SPED 525 Teaching Adults with Learning Disabilities (3)
Introduces students to appropriate strategies and techniques needed to teach adults with learning disabilities. Emphasis on helping adult learners choose, apply, and generalize previously learned information to new challenges in daily living, employment, training,

and/or education. Identification of appropriate goals, working to meet goals; organization of thoughts and ideas; integration of information; and problem solving are central themes throughout the course.

SPED 590 Research Seminar in Special Education (3)
Provides an in-depth review of basic research design used in special education. Required of students who opt to write a thesis. Students are provided individualized assistance and guidance toward the completion of their research.

SPED 591 Psychological and Behavior Characteristics of the Serious Emotionally Disturbed (3)
Examines the nature and needs of individual with serious emotional disturbance. In-depth discussion of psychiatric diagnostic categories, psycho-social development, etiology, behavioral interventions, and educational services.

SPED 592 Behavior Management for Children and Youth with Serious Emotional Disturbance (3)
Focuses on current behavior management techniques and instructional interventions that are used to teach and modify the behavior of individuals with serious emotional disturbance. Students gain knowledge and practical skills in behavioral assessments that can be used to develop and manage student behavior in varied school situations.

SPED 593 Educational Programming and Implementation for the Seriously Emotionally Disturbed (3)
Involves theory and practice in planning and implementing educational programming for children and youth with learning disabilities. Emphasizes techniques for modifying curriculum and materials for individualized programming in basic academic and functional skills.

SPED 594 Psychological and Behavioral Characteristics of Children and Youth with Special Learning Disabilities (3)
Discusses the psychological, social, behavioral, and cognitive development and characteristics of individuals with learning disabilities. In-depth examination of neurological and developmental aspects of specific learning disabilities and includes discussion of etiological theories, educational services, and policy issues.

SPED 595 Diagnostic Techniques and Intervention for Children and Youth with Specific Learning Disabilities (3)
Focuses on current diagnostic techniques and instructional interventions that are used to identify and teach individuals with learning disabilities. Students gain knowledge and practical skills in administering and interpreting formal testing instruments and curriculum-based assessments to develop appropriate instructional interventions for individuals with specific learning disabilities.

SPED 596 Educational Programming and Curriculum Modification in Basic Skills Instruction for the Specific Learning Disabled (3)
Involves theory and practice in planning and implementing educational programming for children and youth with learning disabilities. Emphasizes techniques for modifying curriculum and materials for individualized programming in basic academic and functional skills.

SPED 597 Internship in Special Education I (3)
Provides a supervised teaching experience for students to apply academic work and teaching methods in educational settings appropriate to their professional interests. Students will complete a minimum of 250 clock hours in a noncategorical setting or a setting with children with serious emotional disturbance or specific learning disabilities.

SPED 598 Internship in Special Education II (3)
Provides a supervised teaching experience for students to apply academic work and teaching methods in educational settings appropriate to their professional interests. Students will complete a minimum of 250 clock hours in a noncategorical setting or a setting with children with serious emotional disturbance or specific learning disabilities.

SPED 695 Independent Research Study (VC)
Provides an opportunity for the student who has selected an area of specialization to engage in additional directed reading, discussion, and research. Prepreq.: Consent of professor and approval of Department Chairperson.

SPED 679 Internship in Special Education (3)
An on-site practicum experience under the supervision of a practicum coordinator. Provides opportunities for

participants to observe and assist with school curricula and extracurricular program activities in special education. Requires practicum and lecture.

SPED 696 Thesis (3)
Provides an opportunity for students to design a research study that includes literature review, data collection, analysis and interpretation of research findings, drawing conclusions, and making recommendations. Required of students who opt to write a thesis.

ADED 504 Introduction to Adult Education (3)
Affords opportunities for students to identify, examine, understand, and evaluate the historical, sociological, psychological, and philosophical foundations of adult and continuing education. Examines different theories and concepts of adult learning, and the role of selected agencies active in the field. Examines psychological principles and theories that influence educational processes.

ADED 514 Adult Learner (3)
Reviews in depth the current research and literature pertaining to the contemporary lifestyles, personal characteristics, and problems of the adult learner. Addresses various learning theories and the impact of stages of adult development on the learners. Examines effective communication skills with adult learners.

ADED 524 Program Planning and Curriculum Development (3)
Examines theories and practices of developing and implementing adult education programs. Includes development of curricula and materials specifically geared toward adult programs. Prereq.: ADED 525.

ADED 525 Techniques of Teaching Adults (3)
Presents a survey of techniques and procedures used to facilitate learning with adult populations. Specific methods, materials, research, and use of technology to enhance instruction are explored. Emphasis on use of individualized and small group instructions. This course also addresses managing adult classes and developing effective communication skills in reaching and teaching adults. Prereq.: ADED 504, 514.

ADED 537 Special Topics in Adult Education (VC)
Provides an opportunity for students to study a specific area of interest as related to adult education. Emphasis on contemporary issues in adult education. Example:

***Communication Skills in Adult Education* (3)**
Designed to develop the students' communications skills with adults. Gives students an understanding of the adult learner and the methodology for organizing and presenting materials and information that are appropriate in addressing adults. Course covers information gathering, speech outlining, small group discussion, informative speaking, and persuasive speaking.

ADSP 600 Higher Education: Historical, Sociological, and Philosophical (3)
Presents an in-depth analysis of the evolution and development of American higher education, including its historical, sociological, and philosophical bases.

ADSP 602 Administration of Higher Education (3)
Examines the organization and structure of post-secondary institutions, including administrative roles of the president, vice president, and other administrative officers. Focuses on the boards of trustees and legislative agencies in governance and policy formulation which guide administrative behavior and decision-making.

ADSP 604 Higher Education and the Courts (3)
Examines the legal aspects of higher education; the role of the courts in the conduct of higher education, and the impact of court decisions on educational policy.

ADSP 605 Finance and Economics of Higher Education (3)
Focuses on the benefit analysis and economic returns of higher education. Examines resource acquisition and allocation and the economic policies of local, state, and federal governments.

DEPARTMENT OF ENGLISH

Patricia D. Maida, Ph.D., Chairperson
Building 41, Room 413-04
(202) 274-5137

Full-time Faculty
Professors C. Barquist, P. Bhatt, C. Lund, P. Maida, L.D. Moore, N.A. Sahibzada, A. Taylor, E.A. Williams, C. Wright
Associate Professors H. Krauthamer, E. Shiro
Assistant Professors A. Davis, K. Freeman, K. Holum, R. Rivera
Instructor G. Irvin

The Department of English offers the Bachelor of Arts and the Master of Arts degrees. For all University students, the Department provides a sequenced program (ENGL 111, 112, 211 and 212) to develop reading, writing, and research proficiency. The English laboratory offers tutor- and computer-assisted support. In addition, the program affords students the opportunity to read and analyze literary works to develop their general knowledge and their appreciation of the aesthetic and social dimensions of literature.

ENGLISH PROGRAM

The Bachelor of Arts in English broadens and deepens students' understanding of language and literature and develops skills in analysis, research, and writing. To meet these objectives, the Department offers a variety of courses in language and in literature (arranged by area, period, genre, movement, or special topic).

Career opportunities for English majors vary and are outlined in a booklet available in the departmental office. The English major prepares students for teaching (at the secondary level) and has long been regarded as appropriate baccalaureate preparation for careers in law, medicine, business, and government.

Students interested in becoming English majors should contact the English Department in order to be assigned an adviser. Thereafter, students are required to meet with advisers each semester before registration and to have the appropriate adviser's signature on the registration form. Students become majors upon completion of ENGL 213 with a grade of "B" or higher.

BACHELOR OF ARTS IN ENGLISH

Total Credit Hours of College-Level Courses Required for Graduation: 120, 121

English 120 hrs.
English Teacher Education (Secondary) 121 hrs.

Core Required Courses for Both Options:

ENGL	213	Introduction to Critical Writing	3
ENGL	314	Structure of English	3
ENGL	315	History of the English Language	3
ENGL	316	Advanced Grammar	3
ENGL	330	British Literature I	3
ENGL	331	British Literature II	3
ENGL	351	American Literature I	3
ENGL	352	American Literature II	3
ENGL	354	African-American Literature	3
ENGL	439	Shakespeare	3

(Required of students entering after June 1999)

ENGL	467	Principles of Literary Criticism I	3
ENGL	468	Principles of Literary Criticism II	6

(Students entering after June 1999 will take either 467 or 468.)

ENGL		Electives in English *(Minimum 9 credit hours at 300- or 400-level)*	12
Total			**45**

Highly Recommended Courses:

*HIST	101	United States History I (To 1865)	3
*HIST	102	United States History II (Since 1865)	3
*PHIL	105	Introduction to Logic	3

*Satisfies University-wide Requirements

Teacher Education (Secondary)
In addition to courses in the major, the following courses are required for students seeking teacher certification in English. Students must have their assigned English Department adviser's permission to enter the program and must meet regularly with their adviser, who plans with them and monitors their program of study. The program in English Education is accredited by the National Association of State Directors of Teacher Education and Certification.

SPED	204	Introduction to Education of Exceptional Children	3
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3
EDPY	300	Educational Psychology	3
RDNG	315	Teaching of Reading in Secondary Schools	3
EDFN	449	Methods of Teaching English in Secondary School	3
EDFN	471	Observation and Student Teaching in the Secondary Schools	VC

Note: Students must earn a grade of "C" or better in all required education courses, except Observation and

Student Teaching, which requires a grade of "B" or higher.

Additional Comments or Requirements:
Prospective majors are expected to earn grades of "B" or higher in composition and literature courses ENGL 111-212 and should declare a major in English before taking ENGL 213. The Department encourages English majors to maintain a grade point average of at least 3.0; the required minimum grade point average is 2.5. A minimum grade of "B" is required in ENGL 213, and the course may be repeated only once. A minimum grade of "C" is required in other English courses. A course may be retaken only once. On the recommendation of an English adviser, a student may be required to take additional courses. Entry into the Teacher Education Program requires permission of and written recommendation from the assigned adviser. English ENGL 212 is a prerequisite for all non-English majors who take advanced English courses.

Sequencing: Students must have passed ENGL 213, Introduction to Critical Writing, with a grade of "B" or higher before taking 300- or 400-level literature courses, but they may take 200-level writing courses and 300-level language courses concurrently with 213. At least some literature courses at the 300-400 level are to be taken before Principles of Literary Criticism I, ENGL 467, preferably ENGL 330 and ENGL 331.

GRADUATE PROGRAM IN ENGLISH

The Master of Arts degree in English Composition and Rhetoric reflects the relatively recent research that has shifted the view of writing from product to process. Writing is seen less as a demonstration of knowledge already acquired and more as a means of thinking and learning. Such inquiry requires a multidisciplinary approach, drawing on other disciplines such as psychology, linguistics, anthropology, and literature. The program's objectives are as follows: to acquaint students with the most recent theory and practice of teaching writing through a process approach; to provide an intellectual setting to stimulate students to analyze their own writing processes; to combine academic work with practical experience in a classroom or business setting; and to prepare students to conduct research in composition.

The program trains new teachers, provides opportunities for experienced teachers to continue their professional development, and prepares graduates for employment as writing specialists in government service and the private sector. Although individuals can tailor their programs to specific interests, requirements of a minimum of 36 credit hours include a majority of courses in writing theory and pedagogy, several courses in a related field, a writing workshop, an internship, and a thesis.

MASTER OF ARTS IN ENGLISH COMPOSITION AND RHETORIC

Total Credit Hours of College-Level Courses Required for Graduation: 36

Admission Requirements:
The English Department requires the following for admission to the program:

1. **Grade Point Average:** 3.0 in junior and senior years (students applying with a baccalaureate degree); 3.0 in graduate study (students applying with an M.A. degree).

2. **Letters of Reference:** Three letters of reference from persons familiar with the student's work.

3. **Writing Sample:** A sample of approximately 1000 words on a topic to be determined by the English Department.

Graduate Writing Proficiency Examination: Completion of the Graduate Writing Proficiency Exam at or above the level set by the University is required of all graduate students. Students must take the writing proficiency examination in the first semester of enrollment. Students must register to take the examination, which is administered only once each semester.

Comprehensive Examination: None Required

Thesis or Research Project: Required

Required Courses for M.A. in English Composition and Rhetoric

ENGL	520	Writing Workshop	3
ENGL	530	Internship	3
ENGL	540	Research Project or Thesis	6

A minimum of five courses is required from among the following:

ENGL	500	Interdisciplinary Research Methods	3
ENGL	501	The Composing Process	3

ENGL	505	Writing Assessment	3
ENGL	506	Reading/Writing Connections	3
ENGL	507	Teaching the Basic Writer	3
ENGL	510	Writing Across the Curriculum	3
ENGL	514	Teaching Business and Professional Writing	3
ENGL	570	Classical Rhetoric	3
ENGL	571	Contemporary Rhetoric	3

In addition to the above requirements, a minimum of three courses will be selected from the literature courses (course descriptions ENGL 572 through ENGL 578) or in a related field, such as linguistics.

COURSE DESCRIPTIONS

ENGL 014 Reading Improvement (3)
Develops, improves, and strengthens reading skills and comprehension. Integrates listening, speaking, thinking, and writing skills in recognition of their interrelationship. Laboratory attendance required.

ENGL 015 English Fundamentals (3)
Helps students improve in written expression. Focuses on grammatical correctness, sentence clarity, and paragraph effectiveness.

ENGL 111 English Composition I (3)
Focuses on expository writing. Includes selected readings and extensive practice in writing essays (e.g., analysis, comparison and contrast, cause and effect). Also reviews grammar and introduces the student to library resources. Prereq.: Placement in ENGL 111 or successful completion of ENGL 015.

ENGL 112 English Composition II (3)
Focuses on analysis and argumentation. Culminates in the writing of a research paper. Prereq.: ENGL 111.

ENGL 113 Technical Writing (3)
Introduces students to the general concepts of technical writing, idea development, and physical layout in different career fields. Also emphasizes proofreading and editing. Prereq.: ENGL 112.

ENGL 211 Literature and Advanced Writing I (3)
An introduction to literature emphasizing critical thinking, writing, and research as a means of deepening the student's understanding of fiction. Prereq.: ENGL 112.

ENGL 212 Literature and Advanced Writing II (3)
An introduction to literature emphasizing critical thinking, writing, and research as a means of deepening the student's understanding of poetry and drama. Prereq.: ENGL 211.

ENGL 213 Introduction to Critical Writing (3)
Enables the student to write about literature through the study of four genres. Introduces critical terms, approaches, and methods. Prereq.: ENGL 212.

ENGL 215 Creative Writing (3)
Introduces creative writing, including the short story, poetry, drama, and novel. Prereq.: ENGL 112.

ENGL 216 Words in Context (3)
Develops, through reading and writing, awareness of how differences in language use, form, and setting affect meaning; Assesses how context determines meaning of a passage. Prereq.: ENGL 112.

ENGL 219 Advanced Writing (3)
Focuses on advanced structural, rhetorical, and stylistic techniques in writing. Also emphasizes reading of selected texts. Prereq.: ENGL 112.

ENGL 290 Topics in Literature (3)
Offers in-depth, seminar-style exploration of literary topics which vary to accommodate faculty and student interest in language and literature. Prereq.: ENGL 112.

ENGL 314 Structure of English (3)
Analyzes the phonological, morphological, syntactic, and semantic structures of English using modern linguistic techniques. Emphasizes linguistic approaches to the study of grammar. Prereq.: ENGL 212.

ENGL 315 History of the English Language (3)
Analyzes the history and structure of Old, Middle, and Modern English, including dialects of Modern English. Emphasizes historical and cultural factors influencing linguistic development. Prereq.: ENGL 212.

ENGL 316 Advanced Grammar (3)
Presents the history of grammatical study and surveys modern grammar and current usage. Covers descriptive English grammar. Prereq.: ENGL 212.

ENGL 330 British Literature I (3)
Examines the main literary works and movements from *Beowulf* through the neo-classical period. Concentrates

on the historical development of forms and modes and analyzes works by major authors.

ENGL 331 British Literature II (3)
Examines the main literary works and movements from the Romantic to the modern period. Concentrates on the historical development of forms and modes; focuses on major authors, individually and in historical context. Prereq.: ENGL 330.

ENGL 351 American Literature I (3)
Surveys American literature from the seventeenth to the nineteenth century. Concentrates on major American writers.

ENGL 352 American Literature II (3)
Surveys American literature from the nineteenth century to the present. Emphasizes the major American writers of the modern period. Prereq.: ENGL 351.

ENGL 354 African-American Literature (3)
Surveys African-American literature from the eighteenth century to the present.

ENGL 356 African Literature (3)
Surveys the national literatures (in English and in English translation) of Africa. Examines prose models from classical Egypt to the post-independence period writers.

ENGL 358 Caribbean Literature (3)
Studies major works of poetry, fiction, and drama from the English, French, and Spanish Caribbean, by Cesaire, Guillen, Walcott, Brathwaite, Naipaul, Lamming, Carpentier, Roumain, and others. Focuses on the theme of Caribbean identity.

ENGL 359 Special Topics in Caribbean Literature (3)
Focuses on some facet of Caribbean literature for a semester; for example, the Caribbean novel, the works of a single author, or major intellectual movement.

ENGL 437 Victorian Writers (3)
Studies poetry and non-fictional prose from 1832 to the twentieth century. Emphasizes major Victorian poets and essayists.

ENGL 438 English Novel (3)
Studies the development of the novel from its beginning to the twentieth century. Emphasizes representative novels from Defoe to the present.

ENGL 439 Shakespeare (3)
Studies selected plays (histories, comedies, and tragedies) and sonnets. Introduces conventions of the Elizabethan theater, relevant social history, and Shakespeare scholarship.

ENGL 454 American Novel (3)
Surveys the American novel. Focuses on major novelists from Brown to Faulkner.

ENGL 455 African-American Fiction (3)
Emphasizes critical analysis of major novels and selected short stories. Focuses on African-American writers since 1940.

ENGL 456 African-American Poetry (3)
Studies poetry by African-American writers. Examines early poetry in America; also emphasizes major poets.

ENGL 467 Principles of Literary Criticism I (3)
Analyzes literary and critical theory from the ancient Greeks to the eighteenth century.

ENGL 468 Principles of Literary Criticism II (3)
Studies modern theories of literary criticism. Focuses on various approaches to the evaluation and critical analysis of literature by applying theory to selected literary texts.

ENGL 470 Topics in Literature (3)
Offers in-depth seminar-style exploration of topics, which vary to accommodate faculty and student interest in language and literature. Prereq.: ENGL 213.

ENGL 495 Independent Study (3)
Provides for in-depth study or project with the guidance of an instructor. Approval of the Department chair is required. Prereq.: Junior standing, 2.8 cumulative GPA.

GRADUATE COURSE DESCRIPTIONS

ENGL 500 Interdisciplinary Research Methods (3)
Investigates approaches to research and analysis of writing. Provides a variety of techniques, skills, and knowledge of writing.

ENGL 501 The Composing Process (3)
Examines major research and theory of the last 25 years in composition studies.

ENGL 505 Writing Assessment (3)
Examines major large-scale writing assessment efforts. Considers classroom responses to student writing.

ENGL 506 Reading–Writing Connections (3)
Studies connections between reading and writing from the dual perspectives of research and classroom application.

ENGL 507 Teaching the Basic Writer (3)
Analyzes the definition and historical development of programs for developmental writers.

ENGL 510 Writing Across The Curriculum (3)
Examines research underlying the concept of writing across the curriculum and considers sample programs.

ENGL 514 Teaching Business and Professional Writing (3)
Examines writing techniques applicable to all fields of professional writing. Emphasizes methods for training professionals to write competently in their respective fields.

ENGL 520 Writing Workshop (3)
Provides opportunities for students to develop their own writing in a variety of genres. Required course.

ENGL 530 Internship (3)
Provides students with experience in a classroom environment or another context for the teaching or assessment of writing. Required Course.

ENGL 540 Research/Thesis (6)
Students will elect to participate in a research project or to write a thesis; either will be approved and directed by a faculty adviser. Prereq.: Completion of all course work; approval of proposal by a faculty adviser. Required.

ENGL 570 Classical Rhetoric (3)
Studies Plato, Aristotle, and other major figures in classical rhetoric.

ENGL 571 Contemporary Rhetoric (3)
Studies Richards, Burke, Weaver, Bakhtin, and other figures in contemporary rhetoric.

ENGL 572 Proseminar: Studies in African Literature (3)
Studies special areas of African literature written in or translated into English. Specific topics vary according to the needs and interests of students and faculty.

ENGL 573 Proseminar: Studies in African-American Literature (3)
Studies special areas of African-American literature. Focuses on historical/cultural eras and specific writers.

ENGL 574 Proseminar: Studies in American Literature (3)
Accommodates varying student and faculty interest in Euro-American, African-American, and other ethnic literatures in the U.S.

ENGL 577 Proseminar: Studies in World Literature (3)
Studies selected areas of world literature; topics will be determined by student and faculty interest.

ENGL 578 Proseminar: Studies in Literary Themes (3)
Studies in depth a particular theme in literature; specific themes will be determined by student and faculty interest.

ENGL 595 Independent Study (3)
Focuses on a particular area of writing, language, or literature in an individually designed course supervised by faculty. Prereq.: Approval of plan of study by the English graduate faculty.

DEPARTMENT OF LANGUAGES AND COMMUNICATION DISORDERS

April Massey, Ph.D., Acting Chairperson
Building 41, Room 413-05
(202) 274-7405

Full-time Faculty
Professors A. El-Bashir, S.M. Jackson, M. Racine, E. N. Sims
Associate Professors R.A. Brown, M.A. Christophe, C. Grady, A. Massey, B.D. Minus, P. Randolph, M.D. Sola-Sole
Assistant Professors T. Davis, W.F. Garrett, M. Legall, E. Munoz, N. Ottey
Director, ESL Program F. Hailu
Clinical Staff D. Glears, L. Washington, M.E. Wiggins

The Department of Languages and Communication Disorders offers six programs: French, Spanish, English as a Second Language (ESL), Communication Arts, and graduate and undergraduate programs in Speech-Language Pathology. Four degree programs are offered: a Bachelor of Arts in both French and Spanish, and a Bachelor of Science and a Master of Science in Speech-

Language Pathology. The French and Spanish programs and the graduate program in Speech-Language Pathology have all met the requirements for accreditation by national associations. The teacher education options of the French and Spanish programs are accredited by the National Association of State Directors of Teacher Education and Certification; the Speech-Language Pathology Graduate program, designated a Center of Excellence by the University, is accredited by the American Speech-Language-Hearing Association (ASHA), the first program at an historically Black institution to be accredited by this Association.

Students enrolled in the Department receive special training and gain practical experience in the language and research laboratories and the UDC Speech and Hearing Clinic. The language laboratory provides instruction in listening comprehension and speaking skills for students enrolled in the ESL, French, and Spanish programs. This lab utilizes state-of-the-art computer technology and is designed to allow students to work independently or with an instructor. The research laboratory, funded by a National Institutes of Health grant, provides training for outstanding graduate students pursuing the Master's degree in Speech-Language Pathology. Students receive training in all phases of the research process, including the preparation of abstracts and manuscripts, presentation of papers at professional conferences, and proposal development.

Students enrolled in the Speech-Language Pathology programs complete their core practicum requirements in the UDC Speech and Hearing Clinic after completing the required course work. The Clinic provides comprehensive diagnostic and therapeutic services for speech, language, and hearing-impaired children and adults. An important goal of the Clinic is to improve the quality of services for minority populations, especially those in urban areas. All clinical services are available at no cost to persons in the Washington metropolitan area, including UDC faculty, staff, and students.

SPEECH-LANGUAGE PATHOLOGY PROGRAM

The Bachelor of Science program in Speech-Language Pathology at UDC is designed to be a comprehensive educational experience that prepares students to pursue graduate level training and ultimately certification in the discipline. Upon graduation, students will have:

1. Working knowledge of the processes of normal and abnormal communication;
2. Skill in applying linguistic theory to the understanding and treatment of communication disorders; and
3. Entry level competence in the understanding and use of clinical methods basic to assessment and treatment of communication disorders across age, gender, ethnicity, language, and culture.

Two programs of study are offered: Speech-Language Pathology with a non-clinical concentration; and Speech-Language Pathology with a clinical concentration. The programs differ by participation in the Clinical Practicum only.

The Master of Science in Speech-Language Pathology is designed to provide training for individuals who wish to become certified by the American Speech-Language-Hearing Association; provide clinical services in hospitals, clinics, or schools; and become knowledgeable in theoretical aspects of communication disorders. Emphasis is placed on communication behavior in relation to problems in urban populations.

BACHELOR OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 120

Contact the Department for recommended program of study.

Option I: Non-Clinical
Option II: Clinical

Required Courses for Options I and II: 39 credit hours

AUDL	225	Anatomy and Physiology of Hearing	3
AUDL	334	Audiology	3
AUDL	455	Speechreading and Auditory Training	3
SPLP	115	Introduction to Linguistic Analysis	3
SPLP	116	Introduction to Sociolinguistics	3
SPLP	224	Anatomy and Physiology of Speech	3
SPLP	312	Language Acquisition	3
SPLP	332	Speech-Language Pathology	3
SPLP	333	Functional Disorders	3
SPLP	334	Organic Disorders	3
SPLP	344	Observations	3
SPLP	434	Diagnostics	3
SPLP	435	Procedures and Methods	

		in Management of Communication Disorders	3

Additional Courses Required for Option II: 15 credit hours

SPLP	460	Clinical Practicum	3
SPLP	495	Independent Study	1-3

Additional Comments and Requirements

The minimum acceptable grade point average for speech-language pathology courses is 2.5, with a minimum grade of "B" in the practicum course (SPLP 460). Satisfactory completion of a minimum of 25 clock-hours of supervised clinical practicum is also required for the clinical option.

MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Admission Requirements

Applicants must have a B.S. or B.A. degree from an accredited institution and a minimum grade point average of 3.0. A degree in speech-language pathology is preferred, but not required. Students must submit three letters of recommendation, a letter of intent, and GRE general test scores with their applications for admission.

Graduate Writing Proficiency Examination: Completion of the Graduate Writing Proficiency Exam at or above the level set by the University is required of all graduate students. Students must take the writing proficiency examination in the first semester of enrollment. Students must register to take the examination, which is administered only once each semester.

Comprehensive Examination

Students must successfully complete a thesis or the comprehensive examination administered by the Department. Students electing to take the comprehensive examination must sit for the exam in their final semester of graduate study. They have two opportunities to take the exam. Two failures result in dismissal from the program.

Curriculum Requirements

The Master of Science in Speech-Language Pathology requires 51-54 credit hours (not including credit hours for prerequisite course work); 350 hours of supervised clinical practicum, 250 hours of which must be completed at the graduate level; a minimum of 12 credit hours of SPLP 560; and a minimum of two external practica in speech.

Prerequisite Courses: The following courses are required for students without an undergraduate degree in Speech-Language Pathology.

AUDL	225	Anatomy and Physiology of Hearing	3
SPLP	224	Anatomy and Physiology of Speech	3
SPLP	312	Language Acquisition	3
SPLP	434	Diagnostics	3
SPLP	507	Speech/Hearing Disorders and Related Disciplines	3

Required courses for the Master of Science in Speech-Language Pathology

SPLP	510	Survey of Linguistic Theory	3
SPLP	513	Sociolinguistics: Survey of Social Dialects	3
SPLP	520	Neuroanatomy of the Speech and Hearing Mechanism	3
SPLP	534	Stuttering	3
SPLP	535	Language Disorders	3
SPLP	536	Phonological Disorders	3
SPLP	560	Practicum in Speech (minimum of 4 semesters required)	12
SPLP	634	Aphasia	3
SPLP	635	Structural Abnormalities of the Speech Mechanism	3
SPLP	636	Neurophysiological Disorders of Speech and Swallowing	3
AUDL	520	Diagnostic Audiology	3
AUDL	552	Aural Rehabilitation	3
SLP	611	Physiologic and Acoustic Phonetics	3
SPLP	674	Research I	3
SPLP	695	Independent Study	1-3
SPLP	698	Elective	3
SPLP	699	Thesis	VC

FRENCH PROGRAM

The French program offers courses leading to the Bachelor of Arts degree in French. It also prepares students for teacher certification at the elementary and secondary levels. Students may also elect to minor in French. The French curriculum provides students the opportunity to develop those language skills that increase the marketability of knowledge gained in other disciplines. It is also designed to prepare students to use French language skills for careers in business, industry, international organizations, civil and foreign service, the arts, and in public service. Moreover, the French

program offers courses to enable students to fulfill their University requirements in foreign languages.

The academic program leading to a Bachelor of Arts in French aims at developing students' sensibilities to personal and cultural differences for better communication among people and for an improved quality of life. It seeks to strengthen students' analytic skills through study devoted to the language, culture, literature, and civilization of the various French-speaking people living in diverse regions of the world.

BACHELOR OF ARTS IN FRENCH

Total Credit Hours of College-Level Courses Required for Graduation: 120

Contact the Department for Recommended Course of Study.

Option I: French
Option II: French (Teacher Certification)

The beginning and intermediate courses listed below must be completed, or proficiency demonstrated, prior to enrollment in courses in the major.

FREM	101	Beginning French I	3
FREN	102	Beginning French II	3
FREN	201	Intermediate French I	3
FREN	202	Intermediate French II	3

Required Courses for All Options: 21 credit hours

FREN	301	Advanced French Grammar and Composition I	3
FREN	302	Advanced French Grammar and Composition II	3
FREN	351	French Civilization and Literature I	3
FREN	352	French Civilization and Literature II	3
FREN	374	Advanced French Conversation	3
FREN	381	Francophone Civilization and Literature I	3
FREN	382	Francophone Civilization and Literature II	3

Additional courses required for Option I: 15 credit hours

FREN	384	French Phonetics	3
FREN	484	Caribbean Literature in French	3
FREN	485	African Literature in French	3
		300- or 400-level French electives	6

Additional courses required for Option II: 15 credit hours

FREN	384	French Phonetics	3
FREN	484	Caribbean Literature in French	3
FREN	485	African Literature in French	3
FREN	480	Applied Linguistics--French	3

Select one course from:

FREN	430	French Literature of the Seventeenth Century	3
FREN	431	French Literature of the Eighteenth Century	3
FREN	432	French Literature of the Nineteenth Century	3
FREN	433	French Literature of the Twentieth Century	3

Additional Education Courses Required

EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3
SPED	204	Introduction to Education of Exceptional Children	3
EDPY	300	Educational Psychology	3
RDNG	315	Teaching Reading in Secondary Schools	3
EDFN	450	Methods of Teaching Foreign Language Pre-K-12	3
EDFN	471	Observation and Student Teaching in Elementary/Secondary Schools	VC

Additional Comments or Requirements

A grade point average of 2.5 is required for French majors. Students pursuing elementary education certification should take the following courses: EDFN 220, EDFN 222, EDPY 244, EDPY 300, SPED 204, RDNG 314, EDFN 465, ELED 434.

Students must earn a grade of C or better in all required education courses except student teaching, which requires a grade of B or better.

Foreign Language Placement Examination or consent of Department required for students enrolling in FREN 101, FREN 102, FREN 201, FREN 202, FREN 301.

SPANISH PROGRAM

The Spanish program offers courses leading to the Bachelor of Arts degree in Spanish. It also prepares students for teacher certification at the elementary and secondary levels. Students may also elect to minor in Spanish. The program's curriculum provides students the opportunity to develop those language skills that increase the marketability of knowledge gained in other disciplines. The Spanish program also prepares them to use their language skills for careers in public service, business, industry, international organizations, civil and foreign service, and the arts. Moreover, the Spanish program enables students to fulfill their university-wide requirements in foreign languages. The Spanish program promotes understanding of cultural differences for better communication among people and for an improved quality of life. It also strengthens students' analytical skills through study devoted to the language, culture, literature, and civilization of the various Hispanic peoples living in diverse regions of the world.

BACHELOR OF ARTS IN SPANISH

Total Credit Hours of College-Level Courses Required for Graduation: 120

Contact the Department for Recommended Course of Study.

Option I: Spanish
Option II: Spanish (Teacher Certification)

The beginning and intermediate courses listed below must be completed or proficiency otherwise demonstrated prior to enrollment in major courses.

SPAN	101	Beginning Spanish I	3
SPAN	102	Beginning Spanish II	3
SPAN	201	Intermediate Spanish I	3
SPAN	202	Intermediate Spanish II	3

Required Courses for Both Options: (36)

SPAN	301	Advanced Spanish Grammar and Composition I	3
SPAN	302	Advanced Spanish Grammar and Composition II	3
SPAN	341	Spanish Civilization and Literature I	3
SPAN	342	Spanish Civilization and Literature II	3
SPAN	351	Spanish-American Civilization and Literature I	3
SPAN	352	Spanish-American Civilization and Literature II	3
SPAN	374	Advanced Spanish Conversation	3
SPAN	384	Spanish Phonetics	3
SPAN	435	The Spanish-American Novel	3
SPAN	439	African Presence in Hispanic Civilization and Literature	3
SPAN	486	Literature of the Golden Age	
		or	
SPAN	487	Don Quixote	3
SPAN	489	Contemporary Latin American Culture	
SPAN		Two Courses in Advanced Language	6

Students pursuing Option II must complete:

SPAN	480	Applied Linguistics-Spanish	3

Additional Education Courses Required:

EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3
SPED	204	Introduction to Education of Exceptional Children	3
EDPY	300	Educational Psychology	3
RDNG	315	Teaching Reading in Secondary Schools	3
EDFN	450	Methods of Teaching Foreign Language Pre K-12	3
EDFN	471	Observation and Student Teaching in Elementary/Secondary Schools	VC

Additional Comments or Requirements

A grade point average of 2.5 is required for Spanish majors. Students pursuing elementary education certification should take the following courses: EDFN 220, EDFN 222, EDPY 244, EDPY 300, SPED 204, RDNG 314, EDFN 465, ELED 434.

Students must earn a grade of "C" or better in all required education courses, except student teaching which requires a grade of "B" or better.

Spanish Language Placement Examination required or consent of the Department for students enrolling in SPAN 101, SPAN 102, SPAN 201, SPAN 202, and SPAN 301.

ENGLISH AS A SECOND LANGUAGE (ESL)

The Department of Languages and Communication Disorders offers English courses for students whose native language is not English. The main goal of the ESL program is to prepare those students for academic life in a university setting. This intensive, academic program covers the areas of grammar, reading, writing, speaking, and listening. Placement in each of the levels is determined by examination. Students who progress more slowly will be requested to remain at the same level for an additional term. The ESL courses do not satisfy degree requirements.

COMMUNICATION ARTS

The Department of Languages and Communication Disorders houses the program area of Communication Arts. The courses offered under the Speech Arts Communication Program fulfill necessary instructional needs for various degree-granting programs throughout the University.

The major course required by most degree programs is Public Speaking. This course provides an overview of the theory of oral discourse, while offering training and practice in developing effective oral communication.

Through the Competitive Public Speaking course, the program area trains students interested in competing in speech tournaments or on competitive academic teams. Training in special events planning and speech tournament coordination and management is also taught in this course.

A sampling of course offerings in this area provides the student with an understanding of and an appreciation for the power of effective communication.

COURSE DESCRIPTIONS

ENSL 005 ESL Basic English I (3)
Introduces English structures to students with little knowledge of the language. Emphasizes correct oral and written production of basic English patterns. Taken concurrently with ESL Basic English II.

ENSL 006 ESL Basic English II (3)
Focuses on perfecting simple constructions and learning more advanced ones. Reinforces knowledge of the structures studied in Basic English I. Emphasizes basic English patterns, simple tenses, noun phrases, and common sentence structures.

ENSL 007 ESL Intermediate English I (3)
Surveys increasingly more advanced structures of English for those students who have achieved some fluency and control of the basic English structures. Emphasizes consistency of tense and sequence in more formal speaking and writing. Taken concurrently with ESL Intermediate English II.

ENSL 008 ESL Intermediate English II (3)
Focuses on the preparation of written English language corpus, with emphasis on the organization of paragraphs. Focuses on pronunciation at the level of the word, as well as intonation at the phrase level. Emphasizes increasing reading speed with commensurate comprehension is also emphasized.

ENSL 012 ESL Advanced English I (9)
Emphasizes advanced grammatical concepts and the integration of all structures in increasingly more complex written language. Expects verbal output to be more fluent and at a higher level than in previous courses. Introduces the reading of simple novels.

ENSL 013 ESL Advanced English II (6)
Serves as the culmination of all four skill areas (i.e., writing, reading, grammar, speaking). Refines the advanced reading and writing skills needed for regular academic subjects. As the link between the ESL Program and courses required for a degree, this level is required to exit the ESL Program.

SPCA 115 Public Speaking (3)
Investigates informative speaking, persuasion, group discussion, impromptu, manuscript, and extemporaneous formats; also includes basic speech writing and presentation of speeches.

SPCA 116 Voice and Articulation (3)
Designed to acquaint the student with the basic factors involved in the productions of sounds that create speech. The general aim is to help students develop a flexible vocal and articulatory mechanism that can be applied to conversation, sight and prepared readings, acting, radio/television, teaching and presentational skills. The students will be taught the concepts associated with career speech and hopefully develop their own individuality within the framework of career speech.

SPCA 211 Debate Techniques I (3)
Emphasizes the introduction of the principles of academic debate: (1) analysis, (2) research and evidence, (3) refutation and argumentation, (4)

organization, and (5) delivery. An application of the principles through student participation in affirmative and negative class debates on public issues. Prereq.: SPCA 221.

SPCA 212 Debate Techniques II (3)
Extends Debate I and studies the refinements and techniques in developing debate cases. Features class participation at nearby colleges and universities significant contemporary issues. Prereq.: SPCA 211.

SPCA 241-I Competitive Public Speaking I (3)
Serves as a training class to prepare students to compete in intercollegiate speaking competitions or to serve on the competitive academic teams such as the Honda Campus All-Star Challenge Team. The class also provides training and instruction in event coordination and planning. Prereq.: SPCA 115.

SPCA 241-II Competitive Public Speaking II (3)
Extends the training and instruction of Competitive Public Speaking I, so as to provide actual experience through competition in local and national tournaments. Actual experience is also provided through paid and non-paid internships in event coordination and planning. Prereq.: SPCA 241-I.

FREN 101 Beginning French I (3)
Presents the four basic language skills of comprehension, speaking, reading, and writing, as well as culture. Provides practice in conversation for students who have no previous knowledge of the language. Gives first level course of a two-semester required sequence. Requires attendance in Language Laboratory.

FREN 102 Beginning French II (3)
Expands the acquisition of the four basic language skills of comprehension, speaking, reading, and writing, as well as culture. Provides practice in conversation. Requires placement examination. Provides the second level course of a two-semester sequence. Language Laboratory attendance required. Prereq.: FREN 101 or equivalent.

FREN 114 French Diction for Voice Major (2)
Enables voice majors to acquire the pronunciation of French as applied to the performance of vocal literature in that language.

FREN 115 French Diction for Voice Majors II (2)
Enables voice majors to improve their pronunciation of French as applied to the performance of vocal literature in that language. Prereq.: FREN 114 or equivalent.

FREN 130 French Literature in Translation (3)
Examines selected works of French literature in translation.

FREN 200 Scientific French I (3)
Focuses on reading and translation of modern French texts dealing with natural and social sciences. Offers an intermediate level course specially designed for science students. Prereq.: FREN 102 or equivalent.

FREN 201 Intermediate French I (3)
Provides a more in-depth knowledge of the language and prepares students for advanced courses. Offers the first semester of the second-year course in French. Prereq.: FREN 102 or equivalent.

FREN 202 Intermediate French II (3)
Provides a more in-depth knowledge of the language and prepares students for advanced courses. Offers the second semester of the second year course in French. Prereq.: FREN 102, 201 or equivalent.

FREN 203 Scientific French II (3)
Focuses on more advanced reading and translation of modern French texts dealing with natural and social sciences. Offers an intermediate level course specially designed for science students. Prereq.: FREN 200, FREN 201 or equivalent.

FREN 207 Intermediate Grammar and Composition (3)
Provides more extensive study and review of grammatical patterns and practice in composition writing. Prereq.: FREN 201 or equivalent.

FREN 271 Intermediate French Conversation I (3)
Provides students with at least one year of French who wish to improve their fluency and grammatical accuracy in conversation. Prereq.: FREN 201 or equivalent.

FREN 272 Intermediate French Conversation II (3)
Provides students with three semesters of French an opportunity to improve their fluency and grammatical

accuracy in conversation. Prereq.: FREN 271 or equivalent.

FREN 301 Advanced French Grammar and Composition I (3)
Focuses on review of grammatical structure, with special emphasis on more complex construction and intensive practice in the writing of compositions. Prereq.: FREN 202 or equivalent.

FREN 302 Advanced French Grammar and Composition II (3)
Focuses on review of advanced grammatical structure, with special emphasis on more complex construction and intense practice in the writing of compositions. Prereq.: FREN 202 or equivalent.

FREN 331 French-English and English-French Translation I (3)
Aims at developing proficiency in the art and technique of translation. Affords students an opportunity to convey French thought patterns into English and vice versa. Prereq.: FREN 202 or equivalent.

FREN 332 French-English and English-French Translation II (3)
Aims at developing greater proficiency in the art and technique of translation. Affords students an opportunity to convey French thought patterns into English and vice versa. Prereq.: FREN 202 or equivalent.

FREN 351 French Civilization and Literature I (3)
Integrates the study of the civilization and the literature of France in a chronological approach. Offers the first of a two-semester survey course. Prereq.: FREN 202 or permission of Department Chair.

FREN 352 French Civilization and Literature II (3)
Integrates the study of the civilization and literature of France in a chronological approach. Offers the second of a two-semester survey course. Prereq.: FREN 351 or permission of Department Chair.

FREN 354 Contemporary French Culture (3)
Examines the social, historical, political, artistic, and scientific factors which characterize contemporary French culture and civilization. Prereq.: FREN 202 or equivalent.

FREN 355 Contemporary Francophone Culture (3)
Examines the social, historical, political, artistic, and other factors which characterize the various manifestations of contemporary Francophone culture. Prereq.: FREN 202 or equivalent.

FREN 361 French for Business I (3)
Provides study and practice in the techniques of French business correspondence. Discusses the vocabulary of economics, business, law, and finance. Prereq.: FREN 202 or permission of Department Chair.

FREN 362 French for Business II (3)
Provides study and practice in the techniques of French business correspondence. Discusses the vocabulary of economics, business, law, and finance. Prereq.: FREN 361 or permission of Department Chair.

FREN 374 Advanced French Conversation (3)
Focuses on intensive practice in conversation designed to develop fluency, increase the student's vocabulary, and enhance ability to discuss various selected topics. Prereq.: FREN 202 or equivalent.

FREN 381 Francophone Civilization and Literature I (3)
Integrates the civilization and the literature of the Francophone world. Offers the first of a two-semester survey course. Prereq.: FREN 202 or permission of Department.

FREN 382 Francophone Civilization and Literature II (3)
Integrates the civilization and the literature of the Francophone world. Offers the second of a two-semester survey course. Prereq.: FREN 202, FREN 381 or permission of Department Chair.

FREN 384 French Phonetics (3)
Focuses on the study of the phonological system of French and procedures for overcoming major arctic-ulatory and pronunciation problems for native speakers of English. Prereq.: FREN 202.

FREN 430 French Literature of the Seventeenth Century (3)
Focuses on the study of the classical era of French literature, drama, poetry, and prose. Prereq.: FREN 352 or permission of Department Chair.

FREN 431 French Literature of the Eighteenth Century (3)
Focuses on readings in the works of authors of the 18th century, such as Montesquieu, Diderot, Voltaire, Rousseau. Prereq.: FREN 352 or permission of Department Chair.

FREN 432 French Literature of the Nineteenth Century (3)
Examines authors, trends, and movements in nineteenth century France. Prereq.: FREN 352 or permission of Department Chair.

FREN 433 French Literature of the Twentieth Century (3)
Examines the important works in drama, poetry, novel, and essay. Includes lectures, reports, and discussions in French. Prereq.: FREN 352 or permission of Department Chair.

FREN 480 Applied Linguistics-French (3)
Introduces prospective teachers to the linguistic analysis of the French language. Presents linguistic concepts in phonology, morphology, syntax, semantics and usage, contrasting French with English. Prereq.: FREN 301 and 302 or permission of Department Chair.

FREN 484 Caribbean Literature in French (3)
Examines the themes and trends in the works of main writers from French Guiana, Guadeloupe, Haiti, and Martinique. Prereq.: FREN 382 or permission of Department.

FREN 485 African Literature in French (3)
Examines the themes and trends in the works of main writers from the French-speaking countries of Black Africa. Prereq.: FREN 382 or permission of Department Chair.

SPAN 101 Beginning Spanish I (3)
Presents the basic skills of comprehension, speaking, reading, writing, and knowledge of the culture of the Spanish-speaking world. Provides extensive practice through situational drills for students who have no previous knowledge of the language. Offers the first course of a two-semester sequence. Requires attendance in the Language Laboratory.

SPAN 102 Beginning Spanish II (3)
Provides further practice in the basic skills of listening, speaking, reading, writing, and cultural knowledge. Offers the second course within a two-semester sequence. Requires attendance in the Language Laboratory. Prereq.: SPAN 101 or equivalent.

SPAN 171 Basic Conversational Spanish I (3)
Presents a basic conversational course in Spanish. Offers the first course in a two-semester sequence. Requires attendance in the Language laboratory. May be used towards satisfying language requirements at UDC.

SPAN 172 Basic Conversational Spanish II (3)
Provides further practice in conversational patterns in Spanish. Requires attendance in the Language Laboratory. May be used towards satisfying the language requirement at UDC. Prereq.: SPAN 171 or equivalent.

SPAN 201 Intermediate Spanish I (3)
Offers a grammatical review of the language with expanded study of syntax. Discusses readings on culture and short compositions. Offers the first in a two-semester course sequence. Prereq.: SPAN 102 or equivalent.

SPAN 202 Intermediate Spanish II (3)
Continues an intermediate grammatical review with emphasis on cultural and literary readings for discussion and vocabulary development. Offers the second course in a two-semester sequence. Prereq.: SPAN 201 or equivalent.

SPAN 234 World of Hispanic Ideas Through Literature (3)
Presents a view of Hispanic society through readings in Hispanic culture. Includes topics such as family, education, politics, religion, and language. Prereq.: SPAN 201 or equivalent.

SPAN 254 African Elements in the Hispanic World (3)
Traces the role and development of Afro-Hispanic experience in Spain, the Caribbean, and South America. Prereq.: SPAN 201 or equivalent.

SPAN 274 Intermediate Spanish Conversation (3)
Develops fluency and grammatical accuracy in speaking. Prereq.: SPAN 201 or equivalent.

SPAN 275 Practical Spanish for Community Agencies (3)
Prepares students for "on the job" communication in Spanish. Gives special attention to students preparing

for work with schools, law enforcement, social services, medical, personnel, and other community agencies. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 301 Advanced Spanish Grammar and Composition I (3)
Reviews grammatical structure, with emphasis on more complex patterns and intensive practice in writing compositions. Offers the first of a two-semester course sequence. Prereq.: SPAN 202 or equivalent.

SPAN 302 Advanced Spanish Grammar and Composition II (3)
Focuses on more advanced topics in grammar. Requires compositions based upon selected topics. The second of a two-semester course. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 325 Multi-media Technology (3)
Foreign Language Teaching (3)
Deals with the presentation of technological advances involving audio-visual materials, and multi-purpose resources for classroom teachers to provide for diverse learning styles and experiences. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 341 Spanish Civilization and Literature I (3)
Traces the civilization and the literature of Spain from its beginnings to the Golden Age in a chronological presentation. Offers the first of a two-semester survey course. Prereq.: SPAN 202 or equivalent.

SPAN 342 Spanish Civilization and Literature II (3)
Surveys Spanish civilization and literature from the Golden Age to the 20th Century. Offers the second of a two-semester survey course. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 351 Spanish-American Civilization and Literature I (3)
Traces the civilization and the literature of Spanish America from its known origins through Independence. Offers the first of a two-semester survey course. Prereq.: SPAN 202 or equivalent.

SPAN 352 Spanish-American Civilization and Literature II (3)
Surveys the civilization and literature of Spanish America from Independence to contemporary times. Offers the second of a two-semester survey course. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 364 Business Spanish (3)
Presents a study of the terminology used in business in Spanish-speaking countries. Provides the opportunity for oral and written experience in conversational patterns reflecting appropriate cultural understanding. Requires writing letters, documents, bills, etc. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 374 Advanced Spanish Conversation (3)
Offers the opportunity to improve the student's proficiency in the use of the spoken language. Concentrates on dialogues, discussions, and situational responses. Prereq.: SPAN 202 or permission of Department Chair.

SPAN 375 Introduction to Translation (3)
Develops skills in translating to and from Spanish. Aims at enhancing the student's proficiency in the art and skill of translating thought patterns in Spanish or in English. Prereq.: SPAN 202 or equivalent.

SPAN 384 Spanish Phonetics (3)
Provides a descriptive study of the sound system of Spanish and techniques for acquiring near-native control. Presents procedures for teaching English to Spanish speakers. Prereq.: SPAN 202 or equivalent.

SPAN 416 Contemporary Spanish Literature (3)
Focuses on representative Spanish authors and their works after the Generation of '98. Prereq.: SPAN 301 or permission of the Department Chair.

SPAN 418 Romanticism in Spain (3)
Presents the Spanish version of Romanticism in literature and acquaints the student with the philosophy and sensitivity of romanticism in various aspects: ideas, aesthetic values, and attitudes. Prereq.: SPAN 352 or permission of Department Chair.

SPAN 419 Nineteenth Century Spanish Novel (3)
Treats representative authors and texts. Emphasizes examining attitudes and reactions to realism and naturalism in presentation of views involving class, gender, and other societal concerns. Prereq.: SPAN 352 or permission of Department Chair.

SPAN 434 Twentieth Century Hispanic Literature (3)
Presents the ideologies and literary styles of 20th century Hispanic countries. Prereq.: SPAN 351 or permission of Department Chair.

SPAN 435 The Spanish-American Novel (3)
Studies the development of the Spanish-American novel from the beginning to the present. Presents a literary analysis and critical evaluation of the most representative works and authors. Prereq.: SPAN 352 or permission of Department Chair.

SPAN 439 African Presence in Hispanic Literature (3)
Presents an analysis, interpretation, and appreciation of a broad selection of readings covering civilization and literature by and about African descendants from Africa, Spain, and the Americas. Involves treatment of texts as both literature and as commentary on social and cultural issues. Prereq.: SPAN 301 or permission of Department Chair.

SPAN 480 Applied Linguistics-Spanish (3)
Introduces prospective teachers to the linguistic analysis of the Spanish language. Presents linguistic concepts in phonology, morphology, syntax, semantics and usage contrasting Spanish with English. Prereq.: SPAN 301 and 302 or permission of Department.

SPAN 486 Literature of the Golden Age (3)
Studies the main authors, their works, and their literary and social significance. Includes reading of the most important works of the Golden Age. Requires discussions and reports. Prereq.: SPAN 352 or permission of Department.

SPAN 487 Don Quixote De La Mancha (3)
Examines the texts of Cervantes with close attention to his masterpiece, Don Quixote. Discusses issues involving class, gender and race. Prereq.: SPAN 301 or permission of the Department Chair.

SPAN 488 Spanish Language in Society: Sociolinguistics (3)
Examines the use of language variation within different levels and groups in society. Includes topics on the use of pronouns, dialectology, Afro-Hispanic influences, euphemisms, and discourse analysis. Prereq.: SPAN 301 or permission of Department Chair.

SPAN 489 Contemporary Latin American Culture (3)
Provides a general view of current social and political events in Latin America. Gives special attention to the impact of Hispanic culture on the U.S. Prereq.: SPAN 301 or permission of Department Chair.

CCFL 364 Special Projects (3)
Provides use of foreign language skills in a particular area of application through projects, such as internships, work outside the classroom, and community service. Open to juniors. Requires that supervision by faculty advisors be arranged prior to registration. Prereq.: Permission of Department Chair.

CCFL 394 Independent Study (Junior Level) (3)
Allows the student to work on the junior level in special areas not included in current Departmental offerings. Requires that special arrangements be made with Department prior to registration. Prereq.: 2.8 cumulative GPA and permission of Department Chair.

CCFL 464 Special Projects (3)
Provides projects or specialized study which will aid in use of foreign language skills or acquisition of technical knowledge in a particular area of application, i.e., internship, work outside the classroom, community service. Requires that arrangements be made with Department prior to registration. Prereq.: Permission of Department Chair.

CCFL 495 Independent Study (Senior Level) (3)
Allows the student to work on the senior level in special areas not included in current Departmental offerings. Requires that special arrangements be made with Department prior to registration. Prereq.: 2.8 cumulative GPA and permission of Department Chair.

AUDL 225 Anatomy & Physiology of Hearing (3)
Focuses on the structural anatomy and physiology of the hearing mechanism, with special attention to the central nervous system as it relates to hearing.

AUDL 334 Audiology (3)
Provides an introduction to hearing disorders and basic hearing measurement and interpretation. Emphasis on pure tone audiometry, speech and immittance audiometry, and interpretation of audiograms. Prereq.: AUDL 225.

AUDL 455 Speechreading and Auditory Training (3)
Introduces principles and methods for teaching hearing-impaired individuals to integrate auditory and visual cues for the comprehension of spoken language. Prereq.: AUDL 334.

SPLP 115 Introduction to Linguistic Analysis (3)
Provides general introduction to articulatory phonetics, distinctive feature analysis, and phonology. Covers the morphological and syntactical structure of English.

SPLP 116 Introduction to Sociolinguistics (3)
Emphasizes the role of language in society and the various social factors which affect language usage. Analyzes social dialect features as an example of variation in language.

SPLP 205 Speech and Language Development (3)
Includes a description of speech and language development, language assessment, and sociolinguistic diversity. Considers educational implications of these various dimensions of language development.

SPLP 224 Anatomy & Physiology of Speech (3)
Provides an introduction to the anatomy and physiology of the vocal and speech mechanisms. Discusses the respiratory, phonatory, and articulatory systems in terms of their structure and function, with emphasis on muscles and their innervations.

SPLP 312 Language Acquisition (3)
Investigates the various theories and processes of child language acquisition. Emphasizes normal acquisition, but aspects of deviant language development also will be examined. Prereq.: SPLP 115.

SPLP 317 Sign Language
An examination of the linguistic bases for AMESLAN, SEE, Signed English, and other manual sytems used by the deaf and severely hearing impaired individuals. Sociolinguistic consideration included.

SPLP 332 Speech and Language Pathology (3)
Offers an orientation to the profession of speech and language pathology. Focuses on articulation, language, stuttering, aphasia, cleft palate, and cerebral palsy. Considers comprehensive diagnostic procedures and therapeutic approaches for each disorder. Prereq.: SPLP 224.

SPLP 333 Functional Disorders (3)
Focuses on the study of communication disorders of a functional nature. Includes disorders of articulation, voice, fluency, and delayed language. Explores the nature of each disorder, along with diagnostic and therapeutic techniques. Prereq.: SPLP 332.

SPLP 334 Organic Disorders (3)
Focuses on the study of speech and language disorders associated with structural and neurological disturbances. Examines aphasia, cleft palate, motor speech disorders, and cerebral palsy. Discusses the nature, etiology, structural, and neurological correlates of each disorder and treatment strategies. Prereq.: SPLP 332.

SPLP 344 Observations (3)
Includes the observations of clinical activities as well as an introduction to clinical writing, including the writing of diagnostic protocols, evaluation reports, and intervention plans. Requires one hour per week of instruction and a minimum of three hours of supervised clinical observation per week. Prereq.: SPLP 334.

SPLP 434 Diagnostics (3)
Focuses on theoretical study and practical experience in administration of tests, interpretation of test results, application of diagnostic labels, determination of candidacy for therapy, and report writing. Prereq.: SPLP 312, 333, 334.

SPLP 435 Procedures and Methods in Management of Communication Disorders (3)
Introduces the student to traditional and contemporary methods for rehabilitating speech and language problems associated with organic and functional disorders. Prereq.: SPLP 312, 333, 334.

SPLP 460 Clinical Practicum (Optional) (3)
Focuses on the practical application of theory in the diagnosis and treatment of communication disorders of functional and organic origin training site is in the University Speech and Hearing Clinic. Prereq.: SPLP 333, 334.

SPLP 495 Independent Study (3)
Allows qualified students to participate in independent study under the guidance of a faculty member. Concentrates on broadening and enriching the students' knowledge and scope in various areas of communication disorders. Prereq.: Permission of chairperson.

GRADUATE
COURSE DESCRIPTIONS

AUDL 520 Diagnostic Audiology (3)
Focuses on techniques and interpretation of diagnostic test batteries. Introduces pure tone, speech, immittance audiometry and the role they play in differential diagnosis of hearing impairment; overview of special diagnostic testings. Includes calibration of test equip-ment and environment. Prereq.: AUDL 225.

AUDL 552 Aural Rehabilitation (3)
Provides an overview of acoustical and perceptual phonetics and the impact of hearing loss. Addresses assessment of hearing-impairment and its implications for habilitation/rehabilitation. Reviews techniques for speech-reading, auditory training and counseling, including an overview of cued speech, manual communication systems and amplification systems (auditory training units, hearing aids and assistive listening devices). Prereq.: AUDL 520.

AUDL 617 Manual Communications Systems (3)
Examines the linguistic bases for AMESLAN, SEE, Signed English, and other manual systems used by the severely hearing-impaired and the deaf. Considers sociolinguistic issues.

SPLP 507 Speech and Hearing Disorders and Related Disciplines (3)
Provides an overview of the practice of speech-language pathology, including requirements for certification as an SLP, the discipline's code of ethics, and disorders and client populations served by the SLP. This course is required for new graduate students without an SLP background. Preeq.: Graduate standing.

SPLP 510 Survey of Linguistic Theory (3)
Surveys descriptive and theoretical models for analyzing the grammar of a language. Gives particular attention to traditional and current models of grammatical analysis. Includes exercises in rule-writing for particular aspects of English syntax. Prereq.: Graduate standing.

SPLP 513 Sociolinguistics: Survey of Social Dialects (3)
Surveys the linguistic rules characterizing various social dialects of American English, including historical and social issues which have led to diversity in American English. Includes as assignments the extraction of socially diagnostic linguistic variables from samples of English dialects.

SPLP 520 Neuroanatomy of the Speech and Hearing Mechanism (3)
Examines the anatomy and physiology of the central and peripheral nervous systems as they relate to the speech and hearing mechanisms. Prereq.: Graduate standing.

SPLP 534 Stuttering (3)
Highlights and contrasts the differences between normal and abnormal non-fluency. Acquaints the student with various theories pertaining to the causes and onset of stuttering; introduces the student to a variety of approaches to the diagnosis, treatment, and counseling techniques involved in stuttering therapy. Prereq.: Graduate standing.

SPLP 535 Language Disorders (3)
Examines the pragmatic, semantic, and syntactic features of children exhibiting disorders of oral and written language. Provides practical experience in the use of common languge assessment protocols and the application of various language intervention strategies. Requires a basic knowledge of normal language acquisition. Prereq.: SPLP 510.

SPLP 536 Phonological Disorders (3)
Focuses on systems of speakers exhibiting phonological disorders, with emphases on diagnosis, analysis of phonological data, and remediation strategies. Discusses normal phonological acquisition as a baseline for examining disordered systems. Prereq.: SPLP 510.

SPLP 560 Practicum in Speech (3)
Provides supervised clinical practicum in the identification, diagnosis, and treatment of communication disorders, including techniques of interviewing and counseling. Includes discussion of requirements for the profession and professionalism. Prereq.: Permission of the clinical coordinator.

SPLP 611 Physiological and Acoustic Phonetics
Examines anatomical and physiological factors that relate to the acoustic analysis of features found in connected speech. Laboratory exercises in speech acoustics will also be included.

SPLP 634 Aphasia (3)
Focuses on language disorders in adults and children caused by lesions of the central and peripheral

nervous systems. Discusses specific disorders such as aphasias due to left hemisphere lesions, congenital aphasia, language disturbances caused by right hemisphere lesions, traumatic brain injury, and dementias, including Alzheimer's disease. Prereq.: SPLP 520

SPLP 635 Structural Abnormalities/ Voice Disorders (3)
Examines the perceptual and physical characteristics disorders of voice. Discusses the etiology of these disorders and various assessment and treatment procedures. Prereq.: SPLP 520.

SPLP 636 Neurophysiological Disorders of Speech and Swallowing (3)
Focuses on speech and swallowing disorders related to central and peripheral nervous system disturbances. concern to motor speech disorders and dysphagia; the etiology and specific sites of lesion and resultant effects upon communication. Also discusses clinical management of these disorders. Prereq.: SPLP 520 or permission of instructor.

SPLP 674 Research Methods in Communication Sciences (3)
Introduces students to basic research and statistical procedures in the communication sciences. Demonstrates how research can be used to answer important questions in both speech/language and hearing disorders. Prereq.: Graduate standing.

SPLP 695 Independent Study (3)
Allows graduate students the opportunity to explore areas of academic interest in which no formal course is available. Gives the graduate student the opportunity to explore an area which may lead to a thesis problem or which will provide further understanding in a particular area. Prereq.: Permission of Department chairperson.

SPLP 698 Elective (3)
Subject varies.

SPLP 699 Thesis (VC)
Gives the student an opportunity to apply research theories and methodologies to the study of a topic of importance in the selected discipline. Enrolls students in the course according to their areas of concentration and faculty availability and willingness to direct the thesis project. Prereq.: Permission of Department chairperson.

DEPARTMENT OF MASS MEDIA, VISUAL AND PERFORMING ARTS

(Programs in this department are under review and curriculum requirements are subject to change. Please see the Department for changes pertinent to your program.)

Yvonne P. Carter, M.F.A., Chairperson
Building 46, Room A03-B
(202) 274-7402

Full-time Faculty
Professors Y. Carter, M. Cleary, M. Cooper, C. Jones, H. Roach, M. Rode, H. Van Buren
Associate Professors L. Barton Jr., C. Belanger, J. V. Elam, A.C. Gray, P. Interdonato, J. Korey, N. Ormond
Assistant Professors M. Alston, J.A. Baldinger, L.D. Jones, W. Lattimore, G.H. Smith, R. Wells

The Department of Mass Media, Visual and Performing Arts offers programs in Art, Graphic Design, Mass Media, Music, Printing, and Theatre Arts. Discipline, technique, and skill are developed and nurtured. The distinguished faculty brings years of impressive, creative, artistic, and technical experience; international recognition; and academic credentials appropriate to their respective programs.

The Art Program offers the Bachelor of Arts degree in Art which has two options: 1) Studio Art; and 2) Art Education. The Bachelor of Arts degree in Studio Art has concentrations in painting, printmaking, drawing and graphic design. The Art Program also offers the Associate degree in Graphic Design.

The Mass Media program offers four-year program options in Journalism and Television Production. All Bachelor's degree programs in mass media require a minimum of a one semester internship with public or commercial mass media institutions or an acceptable equivalent.

The Performing Arts component offers programs in Music and Theatre, as well as a non-degree Dance Arts sequence in the Theatre program. The Music program provides specialized professional training in various disciplines of music and general courses for cultural enrichment. Two degrees are offered in the Music program: the Bachelor of Music degree in Music and Music Education and the Associate in Arts degree in Music.

The Printing Program offers a B.S. in Printing Management and an A.A.S. in Printing Technology. Utilizing the latest in computer software, students are prepared for a wide variety of career opportunities. These range from traditional print on paper to web-internet publishing and new media such as interactive CD ROM.

The Theater Program offers undergraduate courses leading to the Bachelor of Arts degree. The Theater program prepares students to enter the profession as stage managers, actors, playwrights, and technical staff.

There are a number of computer laboratory facilities in the Department of Mass Media, Visual and Per-forming Arts designed to support instruction and to prepare students for work in internships and entry level positions, as well as to provide the necessary hands-on experience.

The majority of the offerings in the visual and performing arts satisfy the University-wide requirement in fine arts. Mass media courses do not apply.

The Department offers three Certificate Programs: Certificate in Desktop Publishing, Certificate in Multimedia, and Certificate in Photography.

All of the Department's programs provide practical experiences through student productions, exhibitions, performances, and publications.

ART PROGRAM

The Art Program is based on the premise that a solid foundation in technical skills and exercise of a craft permit the greatest growth and creativity. Some general objectives of the Department are: to provide students with marketable artistic skills, to increase awareness of the role of art in all cultures throughout history, and to serve as an artistic resource for the community.

The Art Program prepares students for work as exhibiting artists, advanced study, teaching, and related vocations, such as print media and computer graphics, as well as for positions in art museums/galleries and alternative spaces and government agencies.

The four-year Bachelor of Arts Degree in Art offers two options: Studio Arts with concentrations in painting, printmaking, graphic design and drawing; and Art Education. The Art Education option offers concentrations in painting, printmaking, graphic design, and drawing. Teacher education programs in art and music are accredited by the National Association of State Directors of Teacher Education and Certification.

BACHELOR OF ARTS IN ART

Total Credit Hours of College-Level Courses Required for Graduation: 120 credit hours, except for Art Education, which requires 133 credit hours.

Studio Art: 120
Art Education: 133

There are two options for the Bachelor of Arts degree in Art: Studio Art and Art Education.

Core Courses: for All Four-Year Options in Art

ARTS	101	Introduction to Drawing	3
ARTS	102	Figure Drawing	3
ARTS	110	Design Fundamentals I	3
ARTS	124	Computer Art I	3
ARTS	145	Photography I	3
ARTS	184	Fundamentals of Art Appreciation	3
		or an optional Art History Course	
ARTS	231	Introduction to Painting	3
ARTS	241	Introduction to Printmaking	3
ARTS	281	World Art History I	3
ARTS	282	World Art History II	3
ARTS	285	African-American Art History	3
SPCH	115	Public Speaking	3
ARTS	251	Introduction to Sculpture	3
		or	
ARTS	261	Introduction to Ceramics	
		or	
ARTS	205	Advanced Figure Drawing	

Option 1: Studio Art

Required courses
All students seeking the Studio Art option must take Advanced Studio Project I and II (ARTS 471 and 472 - 6 credit hours).

Additional Required Courses for each Concentration in the Studio Art Option:

Concentration 1 in Studio Art: Painting

ARTS	331	Advanced Painting I	3
ARTS	332	Advanced Painting II	3
ARTS	333	Advanced Painting III	3

Concentration 2 in Studio Art: Printmaking

ARTS	341	Advanced Printmaking I	3
ARTS	342	Advanced Printmaking II	3

ARTS 343 Advanced Printmaking III 3

Concentration 3 in Studio Art: Drawing

ARTS 301 Advanced Drawing and Design I . 3
ARTS 302 Advanced Drawing and Design II . 3
ARTE 375 Tools and Materials of the Artist . . 3
or
ARTS 331 Advanced Painting I 3

Concentration 4 in Studio Art: Graphic Design

ARTS 309 Advanced Visual Design I 3
ARTS 310 Advanced Visual Design II 3
ARTS 325 Graphic Design Lab 3
ARTS 411 Package and Graphic Design 3-D . 3
ARTS 494 Graphic Design Practicum 3
ARTS 496 Graphic Design Seminar 3

Art Electives

ARTS 375 Tools and Materials of the Artist 3
or
ARTE 435 Mural Painting 3
ARTS 431 Advanced Painting IV 3
ARTS 334 Portrait Painting 3
ARTE 441 Advanced Printmaking IV 3

Electives

Students may select three 3 credit hour courses from Music, Art History, Theatre, or Television.

Comments

A minimum grade of "C" is required in all art classes for the major. The University-wide fine arts requirement must be fulfilled from courses in music, dance, or drama.

Option 2: Art Education

All students seeking the Art Education option must take Creative Crafts (ARTS 271 - 3 credit hours). Students may prepare to teach at the elementary or secondary level.

Also, students seeking the art education option may select a concentration from one of the following four areas: painting, printmaking, drawing, and graphic design for art education.

Concentration 1 in Art Education: Painting

ARTS 331 Advanced Painting I 3
ARTS 332 Advanced Painting II 3
ARTS 333 Advanced Painting III 3

Concentration 2 in Art Education: Printmaking

ARTS 341 Advanced Printmaking I 3
ARTS 342 Advanced Printmaking II 3
ARTS 343 Advanced Printmaking III 3

Concentration 3 in Art Education: Drawing

ARTS 301 Advanced Drawing and Design I . 3
ARTS 302 Advanced Drawing and Design II . 3
ARTE 375 Tools and Materials of the Artist 3
or
ARTS 331 Advanced Painting I 3

Concentration 4 in Art Education: Graphic Design (Education)

ARTS 126 Typography 3
ARTS 309 Advanced Visual Design I 3
ARTS 310 Advanced Visual Design II 3
ARTS 411 Graphic Design 3-D 3
ARTS 496 Graphic Design Seminar (Secondary education only) 3

Professional Education: (K-12 Certification Requirements):

EDFN 220 Foundations of Education 3
EDFN 222 Children and Youth in Urban Schools 3
EDPY 300 Educational Psychology 3
SPED 204 Introduction to Education of Exceptional Children 3
RDNG 314 Teaching Reading in the Elementary Schools 3
or
RDNG 315 Teaching Reading in the Secondary Schools 3
ECED 105 Principles of Child Development (Elementary) 3
or
EDPY 244 Human Development and Behavior (Secondary) 3
EDFN 445 Methods of Teaching Art in Pre-K-12 3
ELED 434 Observation and Student Teaching in the Elementary Schools VC
or
EDFN 471 Observation and Student Teaching in the Secondary Schools VC

Comments:

Art Education is essentially a four and one-half-year program. Student teaching requires an entire semester. It is suggested that students attend summer sessions to alleviate heavy scheduling in the senior year when

student teaching is taken. A minimum grade of "C" is required in all art and professional studies courses. Students must complete all required 200-, 300-, and 400-level courses prior to admittance to student teaching.

MASS MEDIA ARTS PROGRAM

The Mass Media Arts Program consists of a set of required core courses with two concentration options: journalism and television production. The Journalism Program prepares students to pursue careers in print media as reporters, copy editors, and editors. Some graduates enter the field of public relations as media or community relations specialists, while others utilize their background to prepare for careers in law and urban studies. The Television Program prepares students to pursue careers in television production and management, as well as in the government as media specialists. Some utilize this background for careers in marketing, promotions, and sales. After completing 15 credit hours in the major, the student's progress is reviewed by Departmental advisors. Students must maintain a 2.5 grade point average to continue in the major. Students are encouraged to do internships related to their disciplines.

BACHELOR OF ARTS IN MASS MEDIA

Total Credit Hours of College-Level Courses Required for Graduation: 120

Required Core Courses for the Bachelor of Arts Degree in Mass Media:

JOUR	211	Fundamentals of Journalism	3
MMED	105	Processes of Communication	3
MMED	107	Introduction to Mass Media	3
MMED	214	Introduction to Public Relations	3
MMED	215	Advertising	3
MMED	315	Writing for Media	3
SPCH	115	Public Speaking	3
Total			**21**

Option 1: Television Production

Additional Required Courses for the option in Television Production:

ARTS	145	Basic Photography	3
MMED	116	Audio Visual Foundations	3
TELV	201	Fundamentals of Television	3
TELV	211	Introduction to Studio T.V. Production	3
TELV	212	Advanced Studio T.V. Production	3
TELV	234	Fundamentals of Film Production	3
TELV	311	Introduction to Remote T.V. Production	3
TELV	312	Advanced Remote T.V. Production	3
THEA	281	Lighting I	3
THEA	371	Directing I	3
MMED	398	Directed Study Journalism/TV	3
MMED	495	Independent Study in Mass Media	3
MMED	497	Communicative Arts Seminar	3

Select two courses from the following: 6

ARTS	110	Design Fundamentals	3
ARTS	115	Graphic Design I	3
THEA	111	Stagecraft I	3

Mass Media Electives: 12
Students may select four 3 credit hour courses from courses in Studio Art, Theatre, English, Political Science, or PRTC 225 and 226 Scanning and Computer Imaging.

Comments:
A minimum grade of "C" is required in all major courses.

Option 2: Journalism
Additional Required Courses for the Print Journalism Option:

JOUR	212	Reporting	3
JOUR	213	Newspaper Production	3
JOUR	311	News and Journalism Lab I	3
JOUR	312	News and Journalism Lab II	3
JOUR	314	Feature Writing	3
MMED	398	Directed Study Journalism/TV	3
MMED	495	Independent Study in Mass Media	3
MMED	497	Communicative Arts Seminar	3
PRTC	207	Introduction to Desktop Publishing	2
PRTC	227	Introduction to Desktop Publishing Lab	1
ARTS	110	Design Fundamentals	3
ENGL	219	Advanced Writing	3
ENGL	316	Advanced Grammar	3
		or	
ENGL	290	Grammar for Journalists	3

Electives: Students may select four courses from the following list (12 credit hours) or see advisor for alternative selection.

HIST	101	U.S. History to 1865	3
HIST	102	U.S. History (Since 1865)	3
HIST	111	Introduction to African History I	3
POLI	205	Introduction to Political Science	3
POLI	206	Introduction to American Government	3
POLI	285	Introduction to Political Ideologies	3
PSYC	201	Principles of Psychology I	3
ECON	201	Principles of Economics I	3
ARTS		Art	3
TELV		Television	3
THEA		Theatre	3

Comments
A minimum grade of "C" is required in all major courses. To enroll in Independent Study, the student must have a cumulative GPA of 2.8.

PRINTING PROGRAM

The Printing Program offers two degree programs-Associate in Applied Science in Printing Technology and Bachelor of Science in Printing Management. The educational experience challenges the student's creativity using the latest in computer software. Students are prepared for a wide variety of career opportunities that range from traditional print on paper to web-internet publishing, as well as new media such as interactive CD ROM.

ASSOCIATE IN APPLIED SCIENCE IN PRINTING TECHNOLOGY

The Associates degree in Printing Technology involves the latest digital technology applied to both *imaging and publishing.* The degree prepares students for careers in the printing and publishing industries through a wide variety of document and information preparation. This associate degree has a two plus two option that allows all earned credits to be applied towards a Bachelor's degree.

ASSOCIATE IN APPLIED SCIENCE IN PRINTING TECHNOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 60-61

General Requirements:

ARTD	115	Graphic Design	3
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	101	General College Mathematics I	3
MATH	102	General College Mathematics II	3
CHEM	105	Fundamentals of Chemistry Lecture	3
CHEM	106	Fundamentals of Chemistry Lab	1
ECON	201	Principles of Economics I	3
Total			**22**

Required Courses

Program Requirements

PRTC	201	Electronic Page Layout Lecture	2
PRTC	203	Electronic Page Layout Laboratory	1
PRTC	105	Introduction to Graphic Communications Lecture	2
PRTC	106	Introduction to Graphic Communications Lab	1
PRTC	111	Production Planning and Assembly Techniques Lecture	2
PRTC	112	Production Planning and Assembly Techniques Laboratory	1
PRTC	125	Digital Photography Lecture	2
PRTC	126	Digital Photography Laboratory	1
PRTC	135	Basic Offset Press Operation Lecture	2
PRTC	136	Basic Offset Press Operation Lab	1
PRTC	204	Finishing Operations Lab	1
PRTC	205	Finishing Operations Lecture	2
PRTC	206	Color Publishing Lecture	2
PRTC	246	Color Publishing Laboratory	1
PRTC	107	Intro. Desktop Publishing Lecture	3
PRTC	108	Intro. Desktop Publishing Lab	1
PRTC	208	Desktop Publishing Lecture.	2
PRTC	228	Desktop Publishing Lecture.	1
PRTC	209	Small Printing Plant Management	3
PRTC	225	Scanning and Computer Imaging Lecture	2
PRTC	226	Scanning and Computer Imaging Laboratory	1
PRTC*		Technical electives	6
Total			**39**

***Approved Technical Electives**

PRTC	216	Advanced Digital Imaging Lecture.	2
PRTC	218	Advanced Digital Imaging Lab.	1
PRTC	217	Offset Color Printing Lecture	2
PRTC	219	Offset Color Printing Laboratory	1
PRTC	235	Advanced Offset Press Operations Lecture	2
PRTC	236	Advanced Offset Press Operations Laboratory	1
PRTC	290	Printing Seminar	3

PRTC	295,495	Directed Independent Study	3
		Accounting elective	6
		Computing elective	6
		Design elective	6
		Production and Operations Management	6
		Contracts or Procurement	6

ASSOCIATE IN ARTS IN GRAPHIC DESIGN

The Associate degree in Graphic Design applies creative problem solving to various *visual communications* needs. Equipped with a strong foundation in aesthetics, the students master the latest computer applications and apply this knowledge to either traditional print or the various forms of new digital media. Associate degree allows all earned credits to be applied towards a Bachelor's degree.

Total Credit Hours of College-Level Courses Required for Graduation: 45

Required Courses for the Associate in Arts in Graphic Design

ARTD	101	Introduction to Drawing	3
ARTD	102	Figure Drawing	3
ARTD	110	Design Fundamentals I	3
ARTD	124	Computer Art I	3
ARTD	145	Photography	3
ARTC	115	Graphic Design I	3
ARTD	126	Typography	3
ARTD	201	Graphic Art and Illustration	3
ARTD	202	Computer Illustration	3
ARTD	205	Computer Illustration-Technical	3
ARTD	212	Graphic Design II	3
ARTD	213	Publication Design	3
ARTD	245	Photography (VC)	3
ARTD	225	Scanning and Computer Imaging	2
ARTD	226	Scanning and Computer Imaging Lab	1
ARTD	275	Graphic Workshop and Portfolio	3
Total			45

BACHELOR OF SCIENCE IN PRINTING MANAGEMENT

The Bachelor's degree in Printing Management (Graphic Communications) is a continuation of the above mentioned degrees with three options. The degree allows student to chose a focus in their course of study in Multimedia, Publications Management, or Information Technology. The program is intended to build upon knowledge learned at the Associate level and prepare the student for advanced technical, creative, management, or ownership positions within the industry.

Prerequisite: Associate in Applied Science in Printing Technology.

This program adds two years of program requirements to the AAS program in Printing Technology.

Total Credit Hours of College-Level Courses Required for Graduation: 122

General Requirements

ACTC	201	Fundamentals of Financial Accounting	3
MMGT	304	Introduction to Marketing Management	3
BMGT	304	Introduction to Management	3
BMGT	306	Personnel Management	3
ECON	202	Principles of Economics II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
PHYS	101,103	Introduction to College Physics (Lecture, Lab)	4
		Art Design elective	3
		Philosophy elective	3
		P.E. Health, Speech or Natural Science	2
Total			**33**

Required Courses

Program Requirements

PMNG	301	Printing Estimate I Lecture	3
PMNG	303	Printing Estimate I Lab	1
PMNG	302	Printing Estimate II Lecture	3
PMNG	304	Printing Estimate II Lab	1
PMNG	305	Statistical Quality Control and Instrumentation I Lecture	3
PMNG	306	Statistical Quality Control and Instrumentation I Lab	1
PMNG	325	Elements of Production Management	3
PMNG	216	Advanced Digital Imaging Lecture	2
PMNG	218	Advanced Digital Imaging	1
PMNG	484	Statistical Quality Control And Instrumentation II	3
PMNG/ARTD		General electives	6
Total			**27**

THEATRE ARTS PROGRAM

The Theatre Arts program offers undergraduate courses leading to the Bachelor of Arts degree. The Theatre

Arts Program prepares students to enter the profession as stage managers, actors, playwrights and technical staff, or to pursue graduate study.

After completing 15 credit hours in the theatre arts program, the student's record is reviewed by the program faculty. Students are allowed to continue in the program if their GPA in the major courses is at least 2.5. Students are encouraged to engage in internships related to the field of theatre arts.

BACHELOR OF ARTS IN THEATRE ARTS

Total Credit Hours of College-Level Courses Required for Graduation: 120

Required Courses for the Bachelor of Arts Degree in Theatre Arts:

MMED	105	Processes of Communication	3
THEA	104	Introduction to Theatre Arts	3
THEA	111	Stagecraft I	3
SPCH	115	Public Speaking	3
THEA	144	Theatre Management	3
THEA	231	Ritual Through Italian Renaissance Theatre	3
THEA	232	Late Renaissance Through Romantic Theatre	3
THEA	261	Acting Improvisation	3
THEA	262	Acting II	3
THEA	265	Performance Workshop (One credit hour per course)	3
THEA	281	Lighting	3
THEA	321	Modern and Contemporary Theatre	3
THEA	322	Theatre of the Black Experience	3
THEA	324	Playwriting I	3
THEA	371	Directing I	3
THEA		300- or 400-level electives*	9
MMED	497	Communicative Arts Seminar	3

Theatre majors may select nine credit hours from the following electives:*

THEA	264	Creative Dramatics	3
THEA	325	Playwriting Seminar	3
THEA	361	Acting III	3
THEA	364	Advanced Problems in Acting	3
THEA	495	Independent Study in Theatre	3
DANC		Dance	3
MUSC		Voice	3

General Electives: (12)

Comments:
A minimum grade of "C" is required in all major courses. Students must complete one credit hour in Performance Workshop per semester for three semesters before entering the senior year.

MUSIC PROGRAM

The Music Program provides specialized professional training in various disciplines of music and general courses for cultural enrichment. Two degrees are offered: the Bachelor of Music and the Associate in Arts in Music.

The Bachelor of Music degree is offered in two options: Music and Music Education. The Bachelor of Music (Music) degree offers six areas of concentration: voice; keyboard; orchestral instruments; theory and composition; jazz; and gospel music. This four-year degree program prepares students for performing careers and for graduate study leading to post-secondary academic music positions.

The Bachelor of Music (Music Education) degree offers three areas of concentration: vocal music education, piano music education, and instrumental music education. This five-year degree program prepares students for Pre-K-12 school teaching.

The two-year Associate in Arts in Music degree is available in two options: Music and Music Education with three areas of concentration: instrumental, keyboard, and vocal.

To be admitted to any of the degree programs, students must apply to the Music Program, audition in their performance area(s), and pass the Music Program's placement examinations.

ASSOCIATE IN ARTS IN MUSIC

Total Credit Hours of College-Level Courses Required for Graduation: 65

Music Education: 72

Core Courses: For All Two-Year Options in Music:

MUSC		Performing Ensemble Courses*	4
MUSC	100	Materials of Music I	3
MUSC	101	Materials of Music II	3
MUSC	102	Ear Training and Sight Singing I	2
MUSC	103	Ear Training and Sight Singing II	2
MUSC	106	History of Afro-American Music	3
MUSC	200	Materials of Music III	3

MUSC	201	Materials of Music IV	3
MUSC	202	Ear Training and Sight Singing III	2
MUSC	203	Ear Training and Sight Singing IV	2
MUSC	270	Computer Applications to Music I	3
PHYS	115	Physics of Music	3
PHYS	117	Physics of Music Lab	1

*Specific performing ensemble courses are required in certain programs.

Applied Major

Select one of the following eight credit hour sequences: (8)

Applied Major Keyboard: MUSC 115, 115, 215, 215.

Applied Major Voice: MUSC 125, 125, 225, 225.

Applied Major Instrument: MUSC 135, 135, 235, 235.

Applied Minor

Select one of the following four credit hour sequences: (4)

If Applied Major Voice or Applied Major Instrument is selected: MUSC 116, 116, 216, 216. If Applied Major Keyboard is selected, select one of the following four credit hour sequences:

Applied Minor Keyboard: MUSC 116, 116, 216, 216, or Applied Minor Voice MUSC 126, 126, 226, 226, or Applied Minor Instrument MUSC 136, 136, 236, 236.

Option I: Associate in Arts in Music

Concentration: Instrumental; Keyboard/ Instrumental; Keyboard/Keyboard.

Additional Required Courses:

MUSC	130	Jazz Improvisation I	2

Note: *(MUSC 130 Requires Two Semesters)*

MUSC	210	Directed Study (A.A. Seminar)	2

Concentration: Vocal; Keyboard/Vocal

Additional Required Courses:

MUSC	210	Directed Study (A.A.Seminar)	2
ITAL	114	Italian Diction for VoiceMajors	2

Comments for Option I:

A grade point average of 2.0 is required for all music courses and 3.0 for all applied major courses.

Option II: Associate in Arts in Music - Music Education

Additional Core Courses for all Music Education Options:

MUSC	275	Dominant Trends in Music Education	2
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3

Concentration: Instrumental; Keyboard/ Instrumental

Additional Required Courses:

MUSC	020	Voice Group Instruction	1
MUSC	240	String Methods	2

Concentration: Vocal; Keyboard/Vocal

Additional Required Courses:

GERM	114	German Diction for Voice Majors	2
ITAL	114	Italian Diction for Voice Majors	2

Comments for Option II:

A grade point average of 2.5 is required for all music courses and 3.0 for all applied major courses.

BACHELOR OF MUSIC

Total Credit Hours of College-Level Courses Required for Graduation: 130

Music Education: 144-155

Core Courses for All Four-Year Options in Music:

MUSC		Performing Ensemble Courses*	8
MUSC	100	Materials of Music I	3
MUSC	101	Materials of Music II	3
MUSC	102	Ear Training and Sight Singing I	2
MUSC	103	Ear Training and Sight Singing II	4
MUSC	106	History of Afro-American Music	3
MUSC	200	Materials of Music III	2
MUSC	201	Materials of Music IV	2
MUSC	202	Ear Training and Sight Singing III	2
MUSC	203	Ear Training and Sight Singing IV	2

MUSC	270	Computer Applications to Music I	3
MUSC	410	Directed Studies (B.M. Seminar)	3
PHYS	115	Physics of Music	3
PHYS	117	Physics of Music Lab	1

*Specific Performing Ensemble Courses are required in certain programs.

Applied Major: (16)

(Except for the concentration in Theory and Composition.)

Select one of the following three sequences:

Applied Major Keyboard:
MUSC 115, 115, 215, 215, 315, 315, 415, 415

Applied Major Voice:
MUSC 125, 125, 225, 225, 325, 325, 425, 425

Applied Major Instrument:
MUSC 135, 135, 235, 235, 335, 335, 435, 435

Applied Minor: (4)

If Applied Major Voice or Applied Major Instrument is selected: MUSC 116, 116, 216, 216

If Applied Major Keyboard is selected, select one of the following four credit hour sequences:

Applied Minor Keyboard:
MUSC 116, 116, 216, 216
or
Applied Minor Voice:
MUSC 126, 126, 226, 226
or
Applied Minor Instrument:
MUSC 136, 136, 236, 236

Option I: Four-year program in Music

Concentration 1 in Music: Gospel Music

Additional Required Courses:

MUSC	181	Gospel Music Improvisation I	2
Note: *MUSC 181 Requires Two Semesters*			
MUSC	281	Gospel Music Improvisation II	2
Note: *MUSC 281 Requires Two Semesters*			
MUSC	290	Keyboard Harmony I	1
MUSC	291	Keyboard Harmony II	1
MUSC	372	Choral Conducting	3
MUSC	381	Gospel Music Improvisation III	2
Note: *MUSC 381 Requires Two Semesters*			
MUSC	382	Gospel Arranging I	2
MUSC	383	Gospel Arranging II	2
MUSC	384	History and Aesthetics of Gospel Music I	2
MUSC	385	History and Aesthetics of Gospel Music II	2
MUSC	386	Principles of Gospel Music Pedagogy	2
MUSC	481	Gospel Music Improvisation IV	2
Note: *MUSC 481 Requires Two Semesters*			
HIST	165	History of Black America II	3
MUSC		Music electives	3

Concentration 2 in Music: Jazz

Additional Required Courses

MUSC	107	Jazz History	3
MUSC	130	Jazz Improvisation I	2
Note: *(MUSC 130 Requires Two Semesters)*			
MUSC	230	Jazz Improvisation II	2
Note: *(MUSC 230 Requires Two Semesters)*			
MUSC	271	Computer Applications to Music	3
MUSC	330	Jazz Improvisation III	2
Note: *(MUSC 330 Requires Two Semesters)*			
MUSC	331	Jazz Arranging I	2
MUSC	332	Jazz Arranging II	2
MUSC	374	Instrumental Conducting	3
MUSC	430	Jazz Improvisation IV	2
MUSC	431	Jazz Compositional Techniques and Advanced Arranging	3
MUSC		Music electives	3

Concentration 3 in Music: Keyboard

Additional Required Courses:

MUSC	119	Piano Sight-Reading	1
MUSC	290	Keyboard Harmony I	1
MUSC	291	Keyboard Harmony II	1
MUSC	300	History of Western Music I	3
MUSC	301	History of Western Music II	3
MUSC	318	Ensemble Accompanying	2

For instruction in Conducting, select the appropriate course from:

MUSC	372	Choral Conducting	3
		or	
MUSC	374	Instrumental Conducting	3
MUSC	390	Form and Analysis I	2
MUSC	391	Form and Analysis II	2
MUSC	392	Orchestration I	2
MUSC	397	Counterpoint II	2
MUSC	418	Piano Literature	2

MUSC	419	Piano Pedagogy	2
MUSC		Music electives	3

Concentration 4 in Music: Orchestral Instrument

Additional Required Courses

MUSC	087	Chamber Ensemble	2
MUSC	300	History of Western Music I	3
MUSC	301	History of Western Music II	6
MUSC	374	Instrumental Conducting	3
MUSC	391	Form and Analysis II	2
MUSC	392	Orchestration I	2
MUSC	396	Counterpoint I	2
MUSC	397	Counterpoint II	2
MUSC	438	Applied Literature	2
MUSC	450	String Pedagogy I (String Majors Only)	2
MUSC	451	String Pedagogy I, II (String Majors Only)	2
MUSC		Music electives	3

Concentration 5 in Music: Music Theory and Composition

Additional Required Courses

Applied Major

Select one of the following three sequences: 4

Applied Major Keyboard:
MUSC 115, 115
or
Applied Major Voice:
MUSC 125, 125
or
Applied Major Instrument:
MUSC 135, 135

MUSC	271	Computer Applications to Music II	3
MUSC	290	Keyboarding Harmony I	1
MUSC	291	Keyboard Harmony II	2
MUSC	300	History of Western Music I	3
MUSC	301	History of Western Music II	3
MUSC	372	Choral Conducting	3
MUSC	374	Instrumental Conducting	3
MUSC	390	Form and Analysis I	2
MUSC	391	Form and Analysis I, II	2
MUSC	392	Orchestration I	2
MUSC	393	Orchestration II	2
MUSC	394	Music Composition I	2
MUSC	395	Music Composition II	2
MUSC	396	Counterpoint I	2
MUSC	397	Counterpoint II	2

Select four credit hours from either of the following two sequences: (4)

MUSC	490	Music Composition III	2
MUSC	491	Music Composition IV	2
		or	
MUSC	410	Directed Study (Comparative Theory Seminar)	2
MUSC	492	Music Theory History	2
MUSC	493	20th Century Music Literature	2
MUSC		Music electives	3

Select six credit hours from either of the following two sequences: 6

FREN	141	French for Reading Knowledge I	3
FREN	142	French for Reading Knowledge II	3
		or	
GERM	141	German for Reading Knowledge I	3
GERM	142	German for Reading Knowledge II	6

Concentration 6 in Music: Voice
Additional Required Courses:

MUSC	260	German Vocal Literature	2
MUSC	300	History of Western Music I	3
MUSC	301	History of Western Music II	3
MUSC	360	French Vocal Literature	2
MUSC	361	Opera Workshop	2
MUSC	372	Choral Conducting	3
MUSC	390	Form and Analysis I	2
MUSC	391	Form and Analysis II	2
MUSC	460	Vocal Pedagogy I	2
MUSC	461	Vocal Pedagogy II	2
MUSC		Music elective	1
FREN	114	French Diction for Voice Major I	2
FREN	115	French Diction for Voice Major II	2
GERM	114	German Diction for Voice Major I	2
GERM	115	German Diction for Voice Major II	2
ITAL	114	German Diction for Voice Major I	2
ITAL	115	Italian Diction for Voice Major II	2
SPCH	115	Public Speaking	3

Comments for Majors
A grade point average of 2.0 is required for all music courses and 3.0 for all applied major courses. A recital in the junior and senior year is required. The student must complete the appropriate 400-level applied major course each fall and spring semester until the senior recital is performed and accepted.

Option II: Five-year program in the Bachelor of Music - Music Education

Core courses are the same as those listed for Option I: Music

Additional Required Courses for all Music Education Concentrations:

MUSC	275	Dominant Trends in Music Education	2
MUSC	300	History of Western Music I	3
MUSC	301	History of Western Music II	3
MUSC	391	Form and Analysis II	2
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	300	Educational Psychology	3
SPED	304	Survey of Exceptional Children	3
RDNG	419	Teaching Reading in Content Areas	3
EDFN	458	Music for the Specialist (K-12)	3
EDFN	443	Student Teaching in the Elementary School (Music)	3
EDFN	470	Observation and Student Teaching in Secondary Schools	3

Concentration 1 in Music Education: Instrumental; Keyboard/Instrumental

Additional Required Courses

MUSC	240	String Methods	2
MUSC	338	Woodwind Methods	2
MUSC	348	Brass Methods	2
MUSC	368	Percussion - Guitar Methods	2
MUSC	374	Instrumental Conducting	3
MUSC	379	Teaching/Administration of Instrumental Music in the Public Schools	3
MUSC	392	Orchestration I	2

Concentration in Music Education: Vocal; Keyboard/Vocal

Additional Required Courses

MUSC	307	Vocal Arranging	2
MUSC	370	Foundations of Teaching Band and Orchestral Instruments	3
MUSC	372	Choral Conducting	3
FREN	114	French Diction for Voice Major I	2
GERM	114	German Diction for Voice Major I	2
ITAL	114	Italian Diction for Voice Major I	2

Additional Required Course for the Vocal Concentration:

MUSC	428	Vocal Literature	2

Additional Required Course for the Keyboard Vocal /Instrumental Concentration:

MUSC	417	Piano Literature and Pedagogy Laboratory	2

Comments for Option 2:
A grade point average of 2.5 is required for all music courses and 3.0 for all applied major courses. A recital in the senior year is required. The student must complete the appropriate 400-level applied major course each fall and spring semester until the senior recital is performed and accepted.

CERTIFICATE IN DESKTOP PUBLISHING

A Certificate in Desktop Publishing can enhance the career options for someone with a degree or a person just entering the field of computer-assisted publishing. Graphic Communications is a major enterprise in the D.C. Metropolitan area. Persons with writing and editorial or creative skills should find this certificate option opens new career opportunities. The program is based on current computer applications used in the field and provides the student with "hands on" experiences designed to make them proficient in many forms of graphic communications.

CERTIFICATE IN DESKTOP PUBLISHING

Total Credit Hours of College-Level Courses Required for Certificate: *27/30

Required Courses

ARTD	105	Foundations I	3
PRTC	207	Intro. to Desktop Publishing	3
ARTD	126	Typography	3
PRTC	109	Digital Applications	3
PRTC	125	Digital Imaging	3
PRTC	225	Scanning & Imaging	3
ARTD	213	Publication Design	3
PRTC	111	Digital Assembly	3
ENGL	316	English/Editing and Proofing	3
*Computer Keyboarding or demonstrated proficiency			3

CERTIFICATE IN MULTIMEDIA

The Certificate in Multimedia provides concentrated content for students who want to upgrade their skill levels. Courses focus on interface design, animation,

interactive CD, and Web presentations. The Certificate also targets those who are currently working in the field, who desire to be certified in the specialized area.

The curriculum is designed to give the aspirant a balanced content of design, interaction, and technical skills. Flexibility in curriculum design allows students of varying backgrounds to proceed within a multimedia course sequence, tailored to their specific needs. The curriculum addresses beginning, technical, and design-oriented students.

CERTIFICATE IN MULTIMEDIA

Total Credit Hours of College-Level Courses Required For Certificate: 27

Required Courses

ARTD 124	Computer Art I	3
ARTD 115	Graphic Design I	3
ARTD 209	Interactive Multimedia	3
ARTD 201	Computer Illustration I	3
ARTD 206	Multimedia I (Authoring)	3
ARTD 203	Animation & Motion Graphics	3
ARTD 208	Multimedia Web	3
ARTD 202	Computer Illustration II	3
ARTD 235	HTML	3

CERTIFICATE IN PHOTOGRAPHY

The Certificate in Photography expands the content of popular courses while offering additional content for a specialization. The program will provide new career opportunities for visual specialists and photographers. Digital concepts and digital imaging from an aesthetics, as well as a production point of view are incorporated into course content. Lighting concepts taught are also useful in 3D modeling and set design. Digital photography and use of imaging manipulation software are standard parts of the curriculum. Content covers both the creative capture and use of images, as well as contemporary digital computer software and techniques used to enhance, publish, and produce various types of media.

CERTIFICATE IN PHOTOGRAPHY

Total Credit hours of College-Level Courses Required for Certificate: 27

ARTD 124	Photography	3
ARTD 245	Photography (Visual Communication)	3
PRTC 125	Digital Imaging	3
PRTC 225	Scanning & Computer Imaging	3
ARTD 115	Graphic Design I	3
ARTD 249	Large Format Photography	3
ARTD 247	Digital Photography	3
THEA 281	Theater Lighting	3
ARTD 248	Photo Journalism	3

COURSE DESCRIPTIONS

ARTE 375 Tools and Materials of the Artist (3)
Focuses on traditional and experimental tools and materials used in the creation of art and encourages exploration of personal expression through alternate media. Prereq.: ARTS 112, ARTS 102 and 200-level studio sequence or permission of instructor.

ARTE 385 African Art History (3)
Surveys the styles of the people of western and central Africa with reference to cultural influences on the art and styles. Assigns readings, field trips, and written reports. Prereq.: None.

ARTE 387 Contemporary World Art (3)
Examines visual expressions of the world, including painting, sculpture, and other forms created after World War II to contemporary times presented in a cultural and historical context. Assigned readings, field trips, and written reports. Prereq.: None.

ARTE 431 Painting (Various Media) (3)
Emphasizes advanced development of a personal style in the student's choice of a variety of painting media. Prereq.: 300-level painting studio sequence or permission of instructor.

ARTE 435 Mural Painting (3)
Covers the process of modern mural painting on interior and exterior surfaces and its use to artists as a mode of personal expression and to artist/teachers. Prereq.: 300-level painting studio sequence or permission of instructor.

ARTE 441 Advanced Printmaking (3)
Explores contemporary and experimental printmaking techniques, including photocopying, mixed media, and use of new technologies. Prereq.: 300-level print-making studio sequence or permission of the instructor.

ARTE 477 Independent Study in Art (3)
Provides for independent study in any phase of art for studio and art education majors under the direction and supervision of art faculty. Offers the advanced student a more in-depth study of area of specialization. Prereq.:

300-level studio sequence in area of specialization and permission of Department Chair.

ARTS 101 Introduction to Drawing (3)
Provides a general introduction to the fundamentals of drawing, including the study of line, value, texture, space, linear perspective, and experimental approaches to making drawings using a variety of media. Open to all students. Prereq.: (None).

ARTS 102 Figure Drawing (3)
Explores drawing through the study of the human figure, using the muscular and skeletal structure as a foundation, using a variety of media and including color. Prereq.: ARTS 101 or permission of instructor.

ARTS 110 Design Fundamentals I (3)
Investigates two- and three-dimensional space and color through the utilization of the elements and principles of art as foundation for visual expression. Applies design theory through assigned projects in a variety of media. Open to all students. Prereq.: (None).

ARTS 145 Photography (3)
Introduces a comprehensive approach to black and white photography as both a graphics, as well as a fine arts tool; use of the adjustable camera; the development of the negative, and the production of the photographic print. Studies techniques in composition, lighting, films, and dark room processing. Applies digital photography concepts. Prereq.: A 35mm camera is required for the course.

ARTS 184 Fundamentals of Art Appreciation (3)
Presents basic tools for understanding and discussion of visual expression from a variety of perspectives. Discusses design elements and various media with reference to social and historical context. Includes assigned reading, field trips, and written reports. Open to all students. Prereq.: (None).

ARTS 205 Advanced Figure Drawing (3)
Focuses on intensive study of the human figure, with particular emphasis upon muscular, skeletal, and surface anatomy. Allows students to draw directly from draped and undraped figures, as well as human skeletons, and create drawings as finished statements using the figure as primary subject. Prereq.: ARTS 101, ARTS 102.

ARTS 231 Introduction to Painting (3)
Introduces techniques and theory of working in oil, watercolor, and acrylic paints and an exploration of the elementary techniques in creative painting. Prereq.: ARTS 102, ARTS 110 or permission of instructor.

ARTS 241 Introduction to Printmaking (3)
Explores the fundamentals of basic fine art printmaking through a variety of techniques and media, with emphasis on relief processes. Prereq.: ARTS 102, ARTS 110 or permission of instructor.

ARTS 251 Introduction to Sculpture (3)
Introduces basic sculpture materials and methods, including plaster, clay, armature building, and casting. Additive and subtractive methods of sculpture are explored. Includes additional outside work, readings, and field trips. Lec. and lab. Prereq.: ARTS 102, ARTS 112, or permission of instructor.

ARTS 261 Introduction to Ceramics (3)
Introduces students to the practice of ceramics techniques. Focuses on non-functional forms. Designed for ceramics and art education majors. Includes additional outside work, readings, and field trips. Prereq.: ARTS 101, ARTS 110, ARTS 112 or permission of instructor.

ARTS 271 Creative Crafts (3)
Provides experience in techniques and design in a variety of media such as weaving, paper-mache, mosaics, fabric hangings, collages, graphics, and other areas of crafts and introduces the student to procedures in presenting art projects for educational and recreational purposes. Open to all students. Prereq.: (None).

ARTS 281 World Art History I (3)
Presents a chronological survey of art and visual expression across cultures. Emphasizes purposes of creating and the role of the creator in an historical and cultural context from prehistory to c. 1400. Assigns reading, field trips, and written reports. Open to all students. Prereq.: (None).

ARTS 282 World Art History II (3)
Presents a chronological survey of art and visual expressions across cultures. Emphasizes purposes of creating and the role of the creator in an historical and cultural context from c. 1400 to the present. Assigns readings, field trips, and written reports. Open to all students. Prereq.: (None).

ARTS 285 African-American Art History (3)
Provides an historical survey of African-American art and its global influences in a variety of styles and visual expressions. Emphasizes social and historical context. Assigns readings, field trips, and written reports. Open to all students. Prereq.: (None).

ARTS 288 Multicultural Traditions in American Art (3)
Examines the contributions of American artists from various cultural and ethnic traditions that are often neglected in traditional art history courses. Includes outside work, readings, field trips, and written reports. Prereq.: (None).

ARTS 294 Directed Studies (3)
Provides a structure for independent studio work at the sophomore level under the close supervision and direction of an art faculty member. Provides independent studio time equal to the amount of time required of all three credit studio courses. Requires weekly conferences with instructor. Prereq.: ARTS 110, ARTS 102 and permission of Department Chair.

ARTS 301 Advanced Drawing and Design I (3)
Explores the principles advanced in the freshman foundation sequence and provides an opportunity to work with more complicated drawing and design problems. Emphasizes working toward original and personal means of visual expression using a variety of drawing media. Prereq.: ARTS 205 or permission of instructor.

ARTS 302 Advanced Drawing and Design II (3)
Explores further the work of Advanced Drawing and Design I with the same emphasis, but expands the range of materials used and further explores original and personal means of visual expression using drawing media. Prereq.: ARTS 205 or permission of instructor.

ARTS 309 Advanced Visual Design I (3)
Studies advanced concepts and applications of graphic design principles in print graphics. Focuses on corporate imaging, special projects, and advanced computer applications, exploring techniques in scanning, texture-making, and special effects. Applies objectives to publication and other printable formats. Prereq.: ARTD 213 or permission of instructor.

ARTS 310 Advanced Visual Design II (3)
Focuses on advanced concepts and applications in media related graphics. Gives attention to multimedia formats, special projects, and advanced computer applications exploring techniques in animation and authoring programs. Allows students to design special presentations to include slide and interactive shows with sound effects, animation, and pictorial libraries. Prereq.: ARTS 309 or permission of instructor.

ARTS 325 Graphic Design Lab (3)
Provides students the opportunity to select a design specialty area and graphic problem. Generates assignments from instructor that combine student computer/traditional skills to accomplish objectives, with special focus on software mastery. Explores additional concepts in typography, print, and media graphic techniques with exposure to contemporary hard/software. Prereq.: ARTS 309 or permission of instructor.

ARTS 331 Advanced Painting I (3)
Continues exploration of techniques presented in Introduction to Painting with focus on study of a specific medium, including watercolor, oil, or acrylic. Prereq.: ARTS 231 or permission of instructor.

ARTS 332 Advanced Painting II (3)
Continues exploration of techniques presented in Introduction to Painting with focus on study of specific medium, including watercolor, oil, or acrylic. Prereq.: ARTS 231 or permission of instructor.

ARTS 333 Advanced Painting III (3)
Continues exploration of techniques presented in Introduction to Painting with focus on study of specific medium, including watercolor, oil, or acrylic. Prereq.: ARTS 231 or permission of instructor.

ARTS 334 Portrait Painting (3)
Focuses on developing the skills of portrait painting through the use of more complex techniques and compositions and builds on the foundation acquired in Introduction to Painting (ARTS 231). Prereq.: ARTS 231, ARTS 102 or permission of instructor.

ARTS 341 Advanced Printmaking I (3)
Continues exploration of techniques presented in Introduction to Printmaking with focus on study of a specific medium, including silkscreen, etching, or lithography. Prereq.: ARTS 241 or permission of instructor.

ARTS 342 Advanced Printmaking II (3)
Continues exploration of techniques presented in Introduction to Printmaking with focus on study of a specific medium, including silkscreen, etching, or lithography. Prereq.: ARTS 241 or permission of instructor.

ARTS 343 Advanced Printmaking III (3)
Continues exploration of techniques presented in Introduction to Printmaking with focus on study of a specific medium, including silkscreen, etching, or lithography. Prereq.: ARTS 241 or permission of instructor.

ARTS 394 Directed Studies (3)
Provides an opportunity for independent studio work at the junior level under the close supervision and direction of an art faculty member. Independent studio time is equal to the amount required of all three credit studio courses. Requires weekly conferences with instructor. Prereq.: ARTS 110, ARTS 102 and permission of Department Chair.

ARTS 411 Package and Graphic Design 3-D (3)
Explores three-dimensional concepts as applied to package design, exhibit design, and other 3-D commercial formats. Covers traditional and computer-aided design techniques and reviews 2-D and 3-D software, utilizing concepts of color, type, materials, and presentation methods. Prereq.: ARTS 310 or permission of instructor.

ARTS 471 Advanced Studio Project I (3)
Provides a structure for advanced work. Allows the student, in collaboration with an art faculty member, to develop a problem in an area of specialization and resolve the problem through visual projects that eventually culminate in a student exhibition. Prereq.: Completion of required 300-level courses in area of specialization and permission of Department Chair.

ARTS 472 Advanced Studio Project II (3)
Continues Advanced Studio Project I. Course culminates in senior art exhibition by student and involves all aspects of mounting an exhibition. Prereq.: ARTS 471 and permission of Department Chair.

ARTS 485 Museum Techniques (3)
Provides an introduction to how a museum functions, including conservation of art works, display techniques, hanging, and exhibits, and general aspects of gallery operation. Includes theory and practical experience through cooperation with local museums and galleries. Prereq.: Art history sequence, 200-level studio sequence, and permission of Department Chair.

ARTS 494 Graphic Design Practicum (3)
Provides intern/apprenticeship experience with a local ad agency, design studio, or communications media entity for one semester to gain first-hand experience in the graphic design communications community. Prereq.: ARTS 310 or permission of instructor.

ARTS 496 Graphic Design Seminar (3)
Applies knowledge to advanced project assignment related to job environment conditions. Emphasizes total job assignment concept, including initial con-cepts, design comprehensive, electronic pre-press, production, and final presentation. Instructs students to prepare a professional portfolio. Prereq.: ARTD 411 or permission of instructor.

TELV 201 Fundamentals of Television (3)
Introduces television and video production. Surveys technical requirements and characteristics of video input, output, and control systems. Allows students to operate cameras, videotape recorders, and audio input and control. Uses technical and creative lighting techniques. Prereq: MMED 116 or permission of instructor.

TELV 211 Introduction to Studio TV Production (3)
Introduces studio production techniques, including set-up, operation, and primary care of hardware, studio personnel job descriptions, and the production crew. Prereq: TELV 201.

TELV 212 Advanced Studio TV Production (3)
Continues Introduction to Studio TV Production. Emphasizes the role of the producer/director. Allows students to write, produce, and direct short programs and record them for evaluation and critique. Uses advanced audio, lighting, and switching techniques. Prereq: TELV 211.

TELV 234 Fundamentals of Film Production (3)
Focuses on picture as a communication medium-synthesis of time and space; the image, shot, and sequence as ideograms; the development of personal statements in Super 8 format via portraits and camera essays. Prereq: ART 145 or test in basic photography with permission of Department Chair.

TELV 311 Introduction to Remote TV Production (3)
Introduces ENG and EFP hardware, field production techniques, beginning with the location survey, electronic editing principles, and aesthetic conventions. Highlights industry standards and portability of product. Prereq: TELV 212

TELV 312 Advanced Remote TV Production (3)
Continues Introduction to Remote TV Production. Provides practical work in planning, scripting, and managing the controlled and uncontrolled action of the dramatic, news, documentary, and commercial formats. Prereq: TELV 311.

JOUR 211 Fundamentals of Journalism (3)
Surveys the journalism profession and practice of journalism with emphasis on news, gathering, writing, and editing according to format and stylebook rules. Provides practice in basic writing skills and daily assignments that emphasize accuracy and deadlines with skill development drills in note-taking and interviewing. Focuses on classroom assignments that are geared to the mandatory use of the VCT's in the News and Journalism Lab. Prereq: ENGL 212, PRTC 207 or PRTC 277, plus examination by the Department or permission of the instructor.

JOUR 212 News Reporting (3)
Introduces students to specialized news gathering, writing, and editing by way of beat reporting and rewrite assignments. Introduces techniques of developing news contacts; and writing stories by research and intensive interview (controlled aggression). Teaches editing stories according to the AP/UPI Stylesbook. Provides off-campus assignments; deadlines-oriented stories have to be composed and edited on the VDT's in the News and Jounalism Lab. Prereq.: JOUR 211.

JOUR 213 Newspaper Production (3)
Empasizes practical aspects of print media production, including copy editing, photo cropping, headline writing, copy fitting, electronic composition, design, and layout. Emphasizes measuring columns, gallery proofing, and manual paste-up, as well as exposure to electronic page design and layout methods using the News Lab computers. Prereq: JOUR 211 or permission of the instructor.

JOUR 311 News and Journalism Lab I (3)
Provides practical experiences for students as news reporters, researchers, copy editors, make-up editors, layout editors, editorial writers, reviewers, columnists, and critics for the News and Journalism Laboratory newspaper, the *FREE VOICES.* Prereq: JOUR 213, JOUR 312.

JOUR 312 News & Journalism Lab II (3)
Continues Lab I, with participants being rotated in several editorial positions during the semester. Focuses on developing theme-centered issues of *FREE VOICE*. Allows the entire class to work as newsroom staff of a small weekly newspaper, learning collective responsibility, as well as professionalism and workplace ethics. Develops skills in troubleshooting most of the normal newsroom problems. Prereq.: JOUR 311 or permission of the instructor.

JOUR 314 Feature Writing (3)
Provides advanced writing course in feature length non-fiction for magazines and newspapers. Emphasizes generating article ideas, focusing research on the topic, stylistic writing, and close editing in this advanced writing course in feature length non-fiction for magazines and newspapers. Studies magazine analysis and market research with heavy writing assignments for publication. Includes practice writing query letters to editors. Emphasizes developing a personal filing system of source materials collected via research for articles. Prereq.: JOUR 211.

MMED 105 Processes of Communication (3)
Introduces factors involved in human communication; study of the human being as receiver and sender of information; methods of encoding and decoding information; mechanics of communication, and the nature of communication systems from the intra-personal to mass communication. (Required of all Mass Media and Theatre majors.)

MMED 107 Introduction to Mass Media (3)
Introduces history and development of mass communication. Studies the effect of mass media upon society and the corresponding effect of economic, social, and political structures upon the nature and function of mass communications. May be taken concurrently with MMED 105.

MMED 116 Audio Visual Foundations (3)
Surveys physical principles of sound, light, optics, and basic electronics essential to understanding television, motion pictures, and other methods of information storage and retrieval.

MMED 214 Introduction to Public Relations (3)
Surveys public relations as a management function, using the media approach for free positive publicity. Emphasizes PR writing skills and news management by developing media and community relations. Provides a comparative study of the structure, functions, and strategies of major local PR organizations. Gives writing assignments which include news releases, public service spots, media coverage requests, fund-raising letters, print and electronic ad copy, PR campaigns, and crisis management program. Prereq.: MMED 107.

MMED 215 Advertising (3)
Surveys the advertising industry, with emphasis on advertising as a marketing tool. Emphasizes organizational objectives, target market determination; the market and media mix and client and agency aspects of advertising; designing, executing, and evaluating the advertising campaign. Prereq.: MMED 107.

MMED 315 Writing for Media (3)
Teaches writing for film and television. Focuses on script formats and writing requirements for both mediums; fiction and nonfiction treatments, screenplays, teleplays, and shooting scripts. Prereq.: Permission of instructor.

MMED 398 Directed Study Journalism/TV (3)
Allows for project proposals approved by the instructor, planned and executed in the student's area of interest. Requires weekly progress meetings. Prereq.: Junior standing, 2.8 GPA in major courses, and permission of Department Chair.

MMED 495 Independent Study of Mass Media (3)
Allows for thesis proposal, project, or internship under supervision of instructor with approval of Department Chairperson. Prereq.: Junior standing, 2.8 GPA in major, and permission of Department Chair.

MMED 497 Communicative Arts Seminar (3)
Allows for an interdisciplinary seminar focusing on problems of creation and communication common to theater, dance, and mass media. Allows the student to draw heavily on course work in area of concentration. Explores through reading, class reports, journals, and relevant individual projects the relationships between the public, the artist, or the mass communicator. Provides a larger and more unified perspective of the individual's major field. Prereq.: Junior standing, 2.5 GPA in major and permission of Department Chair.

MUSC 003 Introduction to Jazz Improvisation (1)
Focuses on the fundamentals of jazz improvisation, nomenclature, chord construction, scale construction, analytical listening, and their application to performance. Provides fundamental exercises in improvisation. Prepares students for acceptance into Jazz Improvisation I. Course may be repeated. Prereq.: Audition.

MUSC 005 Fundamentals of Music Theory (2)
Provides the students with background information and skills necessary for the advanced study of music. Satisfies requirement for music majors who do not pass the placement examination in music theory to gain admittance to MUSC 100, MUSC 102. Also open to non-majors. Prereq.: None.

MUSC 010 Keyboard Group Instruction (1)
Provides group class instruction for non-majors or students needing preparation for acceptance into 100-level applied keyboard classes. Prereq.: (None).

MUSC 020 Voice Group Instruction (1)
Provides group class instruction for non-majors or students needing preparation for acceptance into 100-level applied vocal classes. Students are encouraged to enroll concurrently in either MUSC 005 or MUSC 010. Prereq.: None.

MUSC 025 UDC Chorale (1)
Develops musicianship and vocal skills through the study and performance of choral literature of various styles and periods. Satisfies elective course for general student body and a required course for voice majors. Prereq.: Audition.

MUSC 026 The Voices (1)
Develops musicianship and vocal skills through the study and performance of gospel music literature. Prereq.: Audition.

MUSC 027 Chamber Singers (1)
Provides an opportunity for students to prepare and perform chamber works for various combinations of voices and periods of music. Allows public performances. Prereq.: Audition.

MUSC 028 Vocal Workshop (2)
Studies and performs various vocal ensemble media, including oratorio, opera, musicals, and other genres. Prereq.: Audition.

MUSC 033 Small Jazz Ensemble (1)
Studies and performs music in the jazz idiom through small jazz ensembles. Provides instruction to qualified students with demonstrated performance capabilities. Prereq.: Audition.

MUSC 035 Woodwind Ensemble (1)
Studies and performs representative literature of various periods and styles for woodwind instruments. Allows public performances. Prereq.: Audition.

MUSC 045 Brass and Percussion Ensemble (1)
Studies and performs representative literature for brass and percussion instruments. Allows students to perform for the public. Prereq.: Audition.

MUSC 055 Symphonic Ensemble for Strings (1)
Provides rehearsal and performance literature, including original works from the Baroque through the Contemporary period. Allows for public performances by this Department to the University-wide and community service organization. Prereq.: Audition.

MUSC 070 Instrumental Group Instruction (1)
Provides group class instruction for non-majors or students needing preparation for acceptance into 100-level applied instrumental classes. Students may select instruction on a single woodwind, brass, string, or percussion instrument. Prereq.: None.

MUSC 085 UDC Pep Band (1)
Emphasizes selected literature appropriate for a variety of activities, including sports events and other University functions. Is open to all university students. Prereq.: Audition.

MUSC 086 Jazz Lab Band (1)
Studies and performs music in the jazz idiom through a Big Band ensemble. Provides instruction to qualified students with demonstrated performance capabilities. Prereq.: Audition.

MUSC 087 Chamber Ensemble (1)
Provides experience in chamber ensemble performance and reacquaints the student with a knowledge of literature for the respective genre. Allows public performances. Prereq.: Audition.

MUSC 088 UDC Marching Band (1)
Emphasizes development of performance skills through the study of a wide variety of music of various styles and periods. Requires mandatory performance for appropriate University functions. Prereq.: Audition. Open to all University students.

MUSC 089 UDC Concert Band (1)
Focuses on the development of performance skills through the study of music of various styles and periods. Requires mandatory performance for appropriate university functions. Prereq.: Audition. Open to all university students.

MUSC 100 Materials of Music I (3)
Studies harmony and melody in the diatonic style, focusing on concepts of intervals, scales, melodic form, four-part harmony, and contrapuntal writing. Emphasizes analysis, keyboard application, written examples, and exercises. Prereq.: MUSC 005 or placement exam in music theory. Co-req.: MUSC 102.

MUSC 101 Materials of Music II (3)
Continues Materials of Music I. Prereq.: MUSC 100. Co-req.: MUSC 103.

MUSC 102 Ear Training and Sight Singing I (2)
Applies materials concurrently studied in Materials of Music I to the keyboard and to the skills of ear training and sight singing. Teaches melodic and simple harmonic diction. Prereq.: MUSC 005 or placement exam in music theory. Co-req.: MUSC 100.

MUSC 103 Ear Training and Sight Singing II (2)
Continues Ear Training and Sight Singing I. Prereq.: MUSC 102. Co-req.: MUSC 101.

MUSC 105 Music Appreciation (3)
Increases student's appreciation and understanding of music in the Western classical tradition. Requires students to supplement the classroom lecture-discussions and text readings with required listening and reports of outside concert attendance. Prereq.: None.

MUSC 106 History of African-American Music (3)
Studies the roots and influence of African--and early American contributions up to the present day. Focuses on traditional music of Black composers and performers as compared to existing Western forms, from

folk songs and jazz to sonatas and symphonies. Prereq.: None.

MUSC 107 Jazz History (3)
Surveys the development of jazz, from the early roots in Black vocal forms to the present avant-garde styles. Allows for opportunities for live performances and discussions by visiting jazz artists. Prereq.: None.

MUSC 115 Applied Major Keyboard (2)
Offers individually arranged lessons of prescribed literature of various periods of music and problems of technique and performance in course designed for piano majors only. Requires recital performance. Allows substitution of a master class for the first semester freshman. Requires two semesters. Prereq.: Audition.

MUSC 116 Applied Minor Keyboard (1)
Offers individually arranged and/or classroom (group) lessons, prescribed literature of all periods, and techniques and problems of performance. Encourages recital performance. Two semesters required. Prereq.: Audition.

MUSC 119 Piano-Sight Reading (1)
Offers step-by-step approach to sight-reading techniques for the piano major. Prereq.: Piano majors or permission of instructor.

MUSC 125 Applied Major Voice (2)
Offers individually arranged lessons of prescribed literature of various periods of music and problems of technique and performance in course designed for voice majors only. Requires recital performance. Allows substitution of a master for the first-semester freshman. Requires two semesters. Prereq.: Audition.

MUSC 126 Applied Minor Voice (1)
Offers individually arranged lessons, prescribed literature of all periods, and techniques and problems of performance. Encourages recital performance. Requires two semesters. Prereq.: Audition.

MUSC 130 Jazz Improvisation I (1)
Provides student training in the application of improvisational techniques encompassing all standard forms and styles in the jazz idiom. Allows a student in a small group to apply the techniques and approaches discussed in class. Requires two semesters. Prereq.: Audition.

MUSC 135 Applied Major Instrument (2)
Offers individually arranged woodwind, brass, string, or percussion lessons of prescribed literature of various periods of music and problems to technique and performance in the course designed for instrumental majors only. Requires recital performance. Allows substitution of a master class for the first semester freshman. Requires two semesters. Prereq.: Audition.

MUSC 136 Applied Minor Instrument (1)
Offers individually arranged woodwind, brass, string, or percussion lessons of prescribed literature of various periods of music and problems of technique and performance. Encourages recital performance. Requires two semesters. Prereq.: Audition.

MUSC 181 Gospel Music Improvisation I (1)
Teaches improvisation techniques basic to the study of performance in Black American gospel music. Emphasizes replication of standard improvisatory patterns. Requires two semesters. Prereq.: Audition.

MUSC 200 Materials of Music III (3)
Studies harmony and melody in the chromatic style, including modulation as a formal procedure. Introduces harmonic practices and analytical systems of the 20th Century. Prereq.: MUSC 101. Co-req.: MUSC 202.

MUSC 201 Materials of Music IV (3)
Continues Materials of Music III. Prereq.: MUSC 200. Co-req.: MUSC 203.

MUSC 202 Ear Training and Sight Singing III (2)
Applies materials concurrently studied in Materials of Music III to the keyboard and to the skills of ear-training and sight-singing. Emphasizes melodic and harmonic dictation. Prereq.: MUSC 103. Co-req.: MUSC 200.

MUSC 203 Ear Training and Sight Singing IV (2)
Continues Ear Training and Sight Singing III. Prereq.: MUSC 202. Co-req.: MUSC 201.

MUSC 210 Directed Studies (VC)
Offers opportunities for supervised independent study. Prereq.: Permission of Program/Area faculty.

MUSC 215 Applied Major Keyboard (2)
Continues Applied Major Keyboard. Requires recital performances. Requires two semesters. Prereq.: Two semesters of MUSC 115.

MUSC 216 Applied Minor Keyboard (1)
Continues Applied Minor Keyboard. Requires two semesters. Prereq.: Two semesters of MUSC 116.

MUSC 225 Applied Major Voice (2)
Continues Applied Major Voice. Requires recital performance. Requires two semesters. Prereq.: Two semesters of MUSC 125.

MUSC 226 Applied Minor Voice (1)
Continues Applied Minor Voice. Requires two semesters. Prereq.: Two semesters of MUSC 126.

MUSC 230 Jazz Improvisation II (1)
Continues Jazz Improvisation I. Requires two semesters. Prereq.: MUSC 130.

MUSC 235 Applied Major Instrument (2)
Continues Applied Major Instrument. Requires recital performance. Requires two semesters. Prereq.: Two semesters of MUSC 135.

MUSC 236 Applied Minor Instrument (1)
Continues Applied Minor Instrument. Requires recital performance. Requires two semesters. Prereq.: Two semesters of MUSC 135.

MUSC 240 String Methods (2)
Introduces and analyzes common string method publications and identification of instructional objectives based on their approaches; practical application of string methodological techniques and lessons in the playing of the violin, viola, violoncello, double-bass, and harp. Prereq.: Sophomore standing in music.

MUSC 260 German Vocal Literature (2)
Surveys vocal literature of primarily eighteenth and nineteenth century Germany. Studies various techniques of interpretation and presentation as a basis for artistic performance and comprehensive teaching. Prereq.: MUSC 114.

MUSC 270 Computer Applications to Music I (3)
Acquaints the student with basic materials and techniques of a computer-assisted workstation and applications for music composition, performance, recording, and music publishing. Prereq.: Sophomore standing in music.

MUSC 271 Computer Applications to Music II (3)
Continues Computer Applications to Music I with an emphasis on individually assigned projects. Prereq.: MUSC 270.

MUSC 275 Dominant Trends in Music Education (2)
Surveys philosophies, materials, methods, and approaches of Suzuki, Orff, Kodaly, Carabo-Cone, Montessori, Dalcroze, and others. Introduces basic approaches to electronic music in the computer. Studies and discusses their implementation in methodology to public school music. Prereq.: Sophomore standing in music.

MUSC 281 Gospel Music Improvisation II (1)
Continues Gospel Improvisation I. Prereq.: Two semesters of MUSC 181.

MUSC 285 Business of Music (3)
Acquaints the student with every aspect of the music business and provides a background study into the related areas of the music industry and the institutions through which it operates. Includes a guest lecturer series which brings industry professionals to discuss a variety of topics, including careers in the music business, publishing, operation of a record label, promotions, negotiations of a record deal, and independent record distribution. Prereq.: None.

MUSC 290 Keyboard Harmony I (1)
Teaches practical skills at the keyboard in melodic harmonization, transposition, chord movement and voicing, figured bass realization, accompanying skills to instrumental and vocal ensembles, and creative improvisation. Prereq.: Two semesters of MUSC 215 or MUSC 216.

MUSC 291 Keyboard Harmony II (1)
Continues Keyboard Harmony I. Prereq.: MUSC 290.

MUSC 300 History of Western Music I (3)
Studies history, literature, performance practices, and compositional styles of music from antiquity to 1750. Discusses the relationship between music and parallel movements in various areas. Involves recorded listening and score analyses. Prereq.: Junior standing or permission of instructor.

MUSC 301 History of Western Music II (3)
Studies history, literature, performance practices, and compositional styles of music from 1750 to present. Discusses the relationship between music and parallel movements in various areas. Involves listening to recorded music and score analyses. Prereq.: MUSC 300.

MUSC 307 Vocal Arranging (2)
Studies techniques of scoring for vocal ensembles of specific ages, abilities, and sizes. Develops

arrangements, from simple unaccompanied unison songs to more complex accompanied writing, with emphasis on stylistic and constructional features unique to particular kinds of music. Prereq.: MUSC 201, MUSC 203.

MUSC 315 Applied Major Keyboard (2)
Continues Applied Major Keyboard. Requires two semesters. Prereq.: Two semesters of MUSC 215.

MUSC 318 Ensemble Accompanying (2)
Explores fundamental techniques of accompanying solo voice or instruments and training accompanying and chamber music performance skills. Provides instruction for students who will be coached in various historical styles and periods. Requires one student recital or master class performance. Prereq.: MUSC 115 or permission of instructor.

MUSC 325 Applied Major Voice (2)
Continues Applied Major Voice. Recital performance required each semester. Requires two semesters. Jury required each semester. Prereq.: Two semesters of MUSC 225.

MUSC 330 Jazz Improvisation III (1)
Continues Jazz Improvisation II. Prereq.: Two semesters of MUSC 230.

MUSC 331 Jazz Arranging I (2)
Studies arranging for ensembles of varying sizes and instrumentation. Analyzes representative works and acquaintance with Fundamentals of Orchestration. Prereq.: Junior standing in music-jazz studies or permission of instructor.

MUSC 332 Jazz Arranging II (2)
Continues Jazz Arranging I. Prereq.: MUSC 331.

MUSC 335 Applied Major Instrument (2)
Continues Applied Major Instrument. Recital performance required. Requires two semesters. Prereq.: Two semesters of MUSC 235.

MUSC 338 Woodwind Methods (2)
Introduces methods and materials used in the teaching and playing of woodwind instruments. Prereq.: Junior standing in music.

MUSC 348 Brass Methods (2)
Introduces methods and materials used in the teaching and playing of brass instruments. Prereq.: Junior standing in music.

MUSC 360 French Vocal Literature (2)
Surveys French vocal literature of the nineteenth and twentieth centuries. Discusses techniques of interpretation and presentation for performance and studio teaching purposes.

MUSC 361 Opera Workshop (1)
Introduces and exposes the vocal performance major to the art of singing and acting via study and practical experience. Provides instruction in body movement for the stage, study in interpretation and characterization, and a study of selected operas. Prereq.: MUSC 100, MUSC 225.

MUSC 368 Percussion-Guitar Methods (2)
Introduces methods and materials used in the teaching and playing of percussion instruments and the guitar. Prereq.: Junior standing in music.

MUSC 370 Foundations of Teaching Band & Orchestral Instruments (3)
Surveys methods and materials on band and orchestral instruments in the field of school music and their application in performance. For Music Education, Vocal and Keyboard-Vocal Option majors only. Prereq.: Junior standing in music.

MUSC 372 Choral Conducting (3)
Introduces choral conducting techniques, basic concepts of choral tone, diction in choral singing, rehearsal techniques, basic elements of musical style and interpretation, and representative choral literature. Prereq.: Junior standing in music.

MUSC 374 Instrumental Conducting (3)
Concentrates on applied baton technique. Discusses representative literature, which includes school music materials. Concentrates on interpretation of style. Prereq.: Junior standing in music.

MUSC 379 Teaching/Administration of Instrumental Music in Public Schools (3)
Discusses typical problems in the administration and teaching of instrumental music in public schools for human and public relations, personal contacts, and curriculum. Requires practicum experiences. Prereq.: Junior standing in music education.

MUSC 381 Gospel Music Improvisation III (1)
Continues Gospel Music Improvisation II. Prereq.: Two semesters of MUSC 281.

MUSC 382 Gospel Music Songwriting and Arranging I (2)
Teaches techniques of scoring, voicing, and designing appropriate arrangement and instrumental accompaniments for gospel music. Prereq.: MUSC 201, MUSC 203.

MUSC 383 Gospel Music Songwriting and Arranging II (2)
Continues Gospel Music Songwriting and Arranging I. Prereq.: MUSC 382.

MUSC 384 History and Aesthetics of Gospel Music I (2)
Studies the socio-cultural and historical setting of gospel music in the context of the Black American experience in Western culture. Studies of the major stylistic periods and major composers of gospel music from 1920-1970. Discusses problems in the development of value criteria relevant to the gospel idiom. Prereq.: Sophomore standing in music**.**

MUSC 385 History and Aesthetics of Gospel Music II (2)
Continues History and Aesthetics of Gospel Music I from 1970 to the present. Prereq.: MUSC 384.

MUSC 386 Principles of Gospel Music Pedagogy (2)
Studies the methodology for teaching gospel music performance. Prereq.: Junior standing in music.

MUSC 390 Form and Analysis I (2)
Studies form as an evolutionary process from early church monody, secular polyphony, up through the Baroque period in music history, with analysis of appropriate literature from these early periods. Prereq.: MUSC 201, MUSC 203.

MUSC 391 Form and Analysis II (2)
Studies the various forms in music, including the classical, romantic, and modern periods. Surveys the contemporary analytical technique of form. Analysis will be stressed in this section of the course. Prereq.: MUSC 390 or MUSC 301, MUSC 203.

MUSC 392 Orchestration I (2)
Provides practical application of orchestration principles to elementary and secondary school teaching. Discusses techniques in scoring and arranging for small ensembles,as well as score reading and transcribing. Prereq.: MUSC 201, MUSC 203.

MUSC 393 Orchestration II (2)
Continues Orchestration I with a primary focus on the orchestration of large scale compositions. Prereq.: MUSC 390.

MUSC 394 Music Composition I (2)
Teaches creative writing of small forms in various idioms, approached through analysis and stylistic emulation of contemporary scores, selected listening and critical appraisal of original creative work. Offers an advanced seminar for several students or on an individual basis. Prereq.: MUSC 201, MUSC 203.

MUSC 395 Music Composition II (2)
Continues Music Composition I. Prereq.: MUSC 394.

MUSC 396 Counterpoint I (2)
Teaches the compositional style and technique of vocal polyphony in the 16th century, approached through species counterpoint, analysis, selective listening, and creative writing or performing. Prereq.: Junior standing in music.

MUSC 397 Counterpoint II (2)
Investigates the compositional style and technique of 18th Century instrumental forms which found their culmination in the works of J. S. Bach; emphasizes the metamorphosis of such forms through the romantic period into 20th Century neo-classical style. Prereq.: Junior standing in music.

MUSC 398 Electronic Music Laboratory (2)
Acquaints the student with materials, equipment, and techniques of the computer-assisted electronic music studio as applied to all facets of music composition/ arranging. Prereq.: MUSC 271.

MUSC 406 Symphonic Literature (2)
Studies the chronological development of symphonic literature and the orchestra from the 18th Century to the present. Studies representative composers through the analysis of scores and recorded performances. Prereq.: MUSC 301.

MUSC 410 Directed Studies (VC)
Provides an upper level course (under this designation) not included in the present Departmental offerings, as well as supervised independent study. Prereq.: Permission of Department Chair.

MUSC 415 Applied Major Keyboard (2)
Continues Applied Major Keyboard. Requires two semesters. Prereq.: Two semesters of MUSC 315.

MUSC 417 Piano Literature and Pedagogy Laboratory (2)
Surveys piano literature from the pre-Baroque to the twentieth-century periods and provides supervised student teaching in the piano laboratory. Focuses on analysis, research, listening, performance, and emphasis on piano pedagogical principles for various ages. Prereq.: Piano majors with senior standing in Music Education.

MUSC 418 Piano Literature (2)
Surveys piano literature from the Baroque to the contemporary periods. Concentrates on analysis, research, listening, performance, and student teaching demonstration with special emphasis on pedagogical techniques. Prereq.: Senior standing; piano majors only.

MUSC 419 Piano Pedagogy (2)
Explores the concepts and practical applications of piano performance and pedagogy. Prepares the piano major for professional teaching in the private piano studio with emphasis on beginning and intermediate instruction. Provides supervised student teaching in the piano laboratory. Prereq.: MUSC 418.

MUSC 425 Applied Major Voice (2)
Continues Applied Major Voice. Recital performance required. Requires two semesters. Prereq.: Two semesters of MUSC 325.

MUSC 428 Vocal Literature (2)
Surveys vocal literature from early treatises to contemporary songs. Discusses techniques of interpretation and presentation for performance and teaching purposes. Prereq.: Senior standing, voice majors only.

MUSC 430 Jazz Improvisation IV (1)
Continues Jazz Improvisation III. Prereq.: Two semesters of MUSC 330.

MUSC 431 Jazz Compositional Techniques and Advanced Arranging (2)
Continues Jazz Arranging II. Prereq.: MUSC 332.

MUSC 435 Applied Major Instrument (2)
Continues Applied Major Instrument. Requires recital performance for two semesters. Prereq.: Two semesters of MUSC 335.

MUSC 438 Applied Literature (2)
Teaches instrumental literature from the twentieth century periods. Concentrates on analysis, research, listening, and performance. Prereq.: Senior standing; orchestral instrument majors only.

MUSC 450 String Pedagogy I (2)
Designed for the string major. Examines theory and development of string pedagogy as traced through available sources. Emphasizes methods of research. Requires a paper on a topic approved by the instructor. Prereq.: Two semesters of MUSC 235.

MUSC 451 String Pedagogy II (2)
Continues String Pedagogy I. Applies research to applied teaching with particular emphasis on the physiological aspects of string instrument performance. Requires teaching simulations and demonstrations. Prereq.: MUSC 450.

MUSC 460 Vocal Pedagogy I (1)
Acquaints students with the fundamentals of voice production and provides them with opportunities for research into, and comparative analysis of the various schools and methods of teaching singing from the establishment of the Italian Schola Cantorum to date. Prereq.: MUSC 325.

MUSC 461 Vocal Pedagogy II (1)
Continues Vocal Pedagogy I. Prereq.: MUSC 460.

MUSC 462 History of Opera (2)
Explores in-depth background of opera beginnings, its development, national styles, various elements, types of opera, literary sources and influences, use of ballet, and production components. Prereq.: **MUSC 226,** MUSC 301.

MUSC 463 Oratorio Literature (2)
Explores literature for solo voice and small ensembles in the standard oratorios, cantatas, masses, etc. Exposes operatic works no longer being staged but now being performed primarily in concert versions (e.g., operas of Handel). Prereq.: MUSC 226, MUSC 301.

MUSC 464 English and American Vocal Literature (2)
Surveys classical vocal literature of England and America from the pre-Elizabethan period to the present. Prereq.: Voice majors only.

MUSC 466 Italian Vocal Literature (2)
Explores Italian vocal literature for the solo voice and small ensembles from the Renaissance to the present. Prereq.: MUSC 225.

MUSC 481 Gospel Music Improvisation IV (1)
Continues Gospel Music Improvisation III. Prereq.: Two semesters of MUSC 381.

MUSC 490 Music Composition III (2)
Continues Music Composition II. Prereq.: MUSC 390.

MUSC 491 Music Composition IV (2)
Continues Music Composition III. Prereq.: MUSC 490.

MUSC 492 Music Theory History (2)
Provides an overview of the development of tonal or harmonic concepts in Western classical music through the study of selected treatises and music scores representative of specific historical developments in music theory/history. Prereq.: Senior standing; music theory majors only.

MUSC 493 20th Century Music Literature (2)
Studies 20th century compositional practice through score reading, listening and analysis; surveys important composers, their compositional styles, socio-political influences on their work, and their own impact on the musical scene, from 1900 to present. Prereq.: Senior standing; music theory majors only.

DANC 101 Modern Dance I (1)
Introduces the basic principles of modern dance, which include gravity, posture, balance, gesture, centering, rhythm, spatial relationships, movement dynamics, and breathing. Exposes students to the historical background of modern dance and to dance performances by local and professional companies. Requires studio work and studio performance.

DANC 102 Modern Dance II (1)
Continues Modern Dance I. Emphasizes the development of body placement, movement dynamics, strength, flexibility, and endurance. Requires studio work and studio performance. Prereq.: Modern Dance I or permission of the instructor.

DANC 110 Ballet I (1)
Explores ballet as it relates to the human anatomy and dance history. Introduces basic ballet techniques.

DANC 201 Modern Dance III (1)
Emphasizes advanced dance principles and techniques. Prereq.: DANC 102.

DANC 202 Modern Dance IV (1)
Continues techniques learned in Advanced Modern Dance I. Prereq.: DANC 201 or permission of instructor.

DANC 224 Jazz I (1)
Explores jazz dance as it relates to the human anatomy, jazz music, and dance history. Introduces dance techniques necessary to perform jazz idioms.

THEA 104 Introduction to Theater Arts (3)
Studies theater as a medium of artistic expression and communication. Explores processes involved in transformation of script into theatrical production. Analysis of play structure and genre: tragedy, comedy, and melodrama. Includes reading of characteristic plays; critiquing of live theater.

THEA 111 Stagecraft (3)
Introduces technical theater: survey of tools, materials, basic construction, and painting techniques; students create theatrical sets and properties. Uses lecture laboratory format used to combine theory with practical application.

THEA 144 Theater Business Management (3)
Examines problems and practices in American theater management, past and present, i.e., front house organization; fundraising; season scheduling; costs; promotion; and box office procedures. Introduces backstage organization, with emphasis on the function of the stage manager.

THEA 231 Ritual Through Italian Renaissance Theater (3)
Studies representative play scripts and the styles, conventions, and practices of the theaters for which they were written, from ritual origins through the Italian Renaissance. Discusses Yoruba ritual, Greek, Roman, Medieval, Asian, Italian, Renaissance theater history and scripts.

THEA 232 Late Renaissance Through Romantic Theater (3)
Studies representative play scripts and the styles, conventions, and practices of the theaters for which they were written, from the late Renaissance through 19th Century Romanticism, Elizabethan, Spanish Renaissance, Restoration, 17th Century French, 19th Century Romantic theater history and scripts. Prereq.: THEA 231.

THEA 261 Acting Improvisation (3)
Examines an actor's physicalizing of an idea without a written text. Focus on sensory awareness, relaxation, and concentration. Emphasizes improvisation: spontaneous invention of dramatic situations, and characters that will hold audience attention. Explores the actor-audience relationship.

THEA 262 Acting II (3)
Provides a studio course in performing a written text: emphasizes basic acting techniques, playing intentions, objectives, situations, and characterization. Prereq.: THEA 261.

1121-264 Creative Dramatics ( )
Teaching how to use improvisation and theater games to stimulate creative thinking and learning in children. Students will learn and apply classroom and theater techniques as they help a group of children or teenagers express their own experiences in games and creative scenes.

THEA 265 Performance Workshop (VC)
Requires performance of an acting role or completion of a production function in a University production. Introduces the process of live theatrical production, rehearsal and performance techniques. (Required of all theater majors. Majors must repeat for a maximum of three credits.)

THEA 281 Lighting (3)
Introduces stage lighting; practical application of optical, electrical, and aesthetic principles of light, i.e., light plot interpretation; control board operation; selection and installation of simple sound equipment; set-up, editing, and operation of show tapes; maintenance of light and sound equipment.

THEA 321 Modern and Contemporary Theater (3)
Studies representative playscripts, styles, conventions, and practices of theaters for which they were written, from Ibsen to the present day. Discusses realism, anti-realism, epic theater, absurdism, and selected contemporary experimental theater formats and scripts.

THEA 322 Theater of the Black Experience (3)
Studies the works of Black playwrights and the styles, conventions, and practices of the theaters for which they were created, from ancient oral tradition to the present.

THEA 324 Playwriting I (3)
Introduces writing for theater; includes analysis of playwriting in dramatic literature; writing exercises concentrating on specific techniques, i.e., visualization of environment, behavioral study of character, the use of dialogue, action, and metaphor. Culminates in completion of a one-act play.

THEA 325 Playwriting Seminar (3)
Conceptualizes through creative writing subject matter capable of being developed into a major work with complications, reversals, and a resolution evolving from motivated characterization. Allows classroom presentation of work in progress and a readers theater presentation of selected student scripts. Prereq.: THEA 324.

THEA 361 Acting III (3)
Continues Acting II. Emphasizes integration of internal and external techniques of character development in longer scenes. Requires student to present a final acting project. Prereq.: THEA 262 or permission of instructor.

THEA 364 Advanced Problems in Acting (3)
Explores problems in acting presented through plays in non-realistic styles. Prereq.: THEA 361 and audition.

THEA 371 Directing (3)
Introduces methods of play directing: techniques of script analysis, methods of organization, and principles of appropriate leadership for rehearsal and performance. Requires final project. Prereq.: THEA 262 or permission of instructor.

THEA 372 Directing II (3)
Continues Directing with emphasis on directing one-act plays: techniques in conceptualizing the script, auditioning, rehearsal planning, and coaching of actors. Provides an opportunity for students to develop several scenes and to select and produce a one-act play. Prereq.: THEA 371.

THEA 495 Independent Study in Theater I (3)
Allows students to work independently on a supervised advanced project. Subject to approval of supervising faculty member. Prereq.: 2.8 cumulative GPA, minimum of 60 semester hours, and permission of Department Chair.

PRTC 105 Introduction to Graphic Communications (2)
A prerequisite course for students entering the printing technology and management program. Designed as an overview course for students before taking other specialized printing courses. Orient students to the

different printing processes. Emphasizes lithography with the main thrust on an introduction to computers. Lec. 2 hrs.

PRTC 106 Introduction to Graphic Communications Lab (1)
Applied experiences in a laboratory setting to be taken concurrently with PRTC 105. Lab 3 hrs., Co-req.: PRTC 105.

PRTC 107 Desktop Publishing (3)
Introduces students to the basic fundamentals of computer operations and desktop publishing using page layout software. Pagemaker and Typestyler are primary programs used in the course. Students learn both hardware and software while manipulating various elements of type, photography, and graphics, as well as being given an overview of publishing. Topics include basic page formatting, composition, proofreading, and layout skills in combination with the use of peripheral hardware, such as scanners, printers and digital storage devices. Tutorial lessons and problem solving projects become methods of learning. Font controls, color models, graphic formats, use of stock photography, etc. are also discussed. Lec. 2 hrs.

PRTC 108 Desktop Publishing Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 207. Lab. 3 hrs., Co-req.: PRTC 207.

PRTC 109 Digital Applications (3)
An entry level course which introduces students to a series of digital applications used in the Graphic Communications and Multi Media/Web Design fields. The power of desktop computers armed with appropriate software offers the user powerful design and publishing tools. The student will explore and experience three digital applications, specifically, Adobe Photoshop, Adobe Illustrator, and QuarkXPress. This course is designed primarily as a studio class with the objective of providing beginning students with the skills needed to utilize these applications as creative tools in more advanced classes in the curriculum. Lecture, demonstrations and tutorials are the primary teaching strategy used in the class. Lec. and Lab.

PRTC 111 Digital Assembly (2)
Introduces the student to an area of electronic publishing which prepares digital documents for printing production. Involves the preparation and output of those documents to film, or direct to plate, in a pre-imposed (assembled) format for the purpose of producing printing plates. The digital technology has revolutionized traditional prepress techniques. Although traditional assembly terminology along with some of the more traditional table skills are introduced early in the semester, the emphasis is placed on the skills needed to analyze printing production from a production planning perspective. Topics and activities will include signature and book work, folding techniques, producing binder dummies, calculating press sheet size, trim and press related decision making, along with the outputting of work to both laser printer and imagesetters using a number of "digital imposition" and "trapping" software programs. Lec. 2hrs.

PRTC 112 Digital Assembly Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 111. Lab. 3 hrs.

PRTC 125 Digital Imaging (2)
Students utilize Photoshop as image manipulation tool while learning scanning techniques. Students manipulate photographs and graphic attributes, including color, contrast, and other digital darkroom techniques. Photo retouching, use of filters, duotones, color, scanning, masking and scaling are all topics learned by students. The course use lectures to transmit relevant concepts and theory and laboratories to learn techniques that use Photoshop as a creative tool for problem solving. File formats, size and resolution factors are also addressed. The course focuses on both web and traditional publishing issues. Lec. 2 hrs., Preq.: Digital Applications or permission of instructor.

PRTC 126 Digital Imaging Lab (2)
Applied experiences in a laboratory setting to be taken concurrently with PRTC 125. Lab. 3 hrs.

PRTC 135 Offset Press Operations (2)
Introduces the fundamentals of offset press concepts as they relate to setting up and running small to medium sheetfed offset equipment. Concepts relating to web offset, ink, paper and general press problems will also be introduced. Combines theory and problem solving with a "hands on" approach to learning. Lec. 2 hrs.

PRTC 136 Offset Press Operations Lab (1)
Applied experiences in a laboratory setting to be taken with PRTC 135. Lab. 3 hrs.

PRTC 201 Electronic Page Layout (2)
The first phase of computerized typesetting is concerned with the fundamental principles, procedures, techniques, and the application of electronic paste up of "camera-ready copy" for the production of negatives for the major printing processes. The student will become fully oriented and proficient in the utilization of

makeup for correcting, ruling, and electronic page layout. The student will also use transparent acetate overlays as a method of preparing a color printing job. Most projects will utilize the MacIntosh computer. Lec. 2 hrs.

PRTC 203 Electronic Page Layout Lab (1)
Applied experience in a laboratory setting to be taken concurrently with PRTC 201. Lab. 3 hrs., Co-req.: PRTC 201.

PRTC 204 Finishing Operations Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 205. Lab. 3 hrs.

PRTC 205 Finishing Operations (3)
Provides a basic understanding of a number of topics: paper and its manufacture, its properties and its relationship to printing, and postpress production. Emphasis will be focused upon basic paper terms, paper classifications, basic and standard sizes, weights and general mathematical concepts needed for determining paper requirements. Additional topics include the paper pricing catalog, ordering paper, and understanding mailing operations and postal regulations. Problem-solving issues in relationship to time required to perform various operations to complete the job are included in the class. Lec. 2 hrs. Prereq.: PRTC 111.

PRTC 206 Color Publishing (2)
Examines advanced electronic pre-press concepts. Students will work in a digital environment with QuarkXPress, Adobe PhotoShop, Adobe Page-maker, Adobe Presswise and Freehand or Illustrator. The emphasis in document preparation will be to work in a multiple application environment where color files will be output to laser printers, color proofers and to our Linotronics imagesetter. Students will create files in various applications, importing them into a pagination program for assembly and output. Color projects will include the design and layout of covers, magazine pages, and posters. Lec. 2 hrs., Prereq.: PRTC 101.

PRTC 208 Advanced Desktop Publishing (3)
Students learn fundamentals of picture-making and image building techniques that are applied to communication graphics. Focus on developing vector drawing program skills while exploring color dynamics. Composition, object construction, illustration techniques and software manipulation produce graphics for publication, media, web and multimedia applications. Primary software is Macromedia Free Hand. Lec. 2 hrs., Prereq.: PRTC 207

PRTC 209 Graphics Management (3)
An introductory applied management course. Student learning focuses on production, work flow, and the various stages of graphic communications, freelance design, and e-commerce. Various topics include quality control, cost factors, human resource issues, government regulations, and other managerial and financial techniques. Students learn basic applied concepts of contracting and specifications writing. The course requires writing a business plan and is primarily lecture-oriented. Lec. 3 hrs., Prereq.: Sophomore standing.

PRTC 216 Advanced Digital Imaging (2)
Students will study the total color reproduction system as it relates to the printing processes. Students will evaluate the process and design the criteria for color separations. They will explore advanced techniques of digital color imaging and proofing by producing a variety of products. Lec. 2 hrs., Prereq.: PRTC 225

PRTC 217 Offset Color Printing (2)
This course will deal with the theory, techniques, and problems associated with printing multi-color and full color work. Emphasis is placed on running of critical color work in sheet-fed offset press equipment. Students refine the skills learned in previous press classes, along with developing more experience in press operations. Lec. 3 hrs., Prereq.: PRTC 235

PRTC 218 Advanced Digital Imaging Lab (1)
Applied experiences in a laboratory setting to be taken concurrently with PRTC 216. Lab. 3 hrs., Co-req.: PRTC 216

PRTC 219 Offset Color Printing Lab (1)
Applied experiences in a laboratory setting to be taken concurrently with PRTC 217. Lab. 3 hrs., Co-req.: PRTC 217

PRTC 225 Computer Scanning and Imaging (2)
This course is intended for students with significant prior experience using image manipulation software such as Adobe Photoshop. It is a continuation of the digital imaging course. The course applies advanced theory and techniques to traditional and electronic (digital) publishing materials. Students scan color originals and output to an imagesetter. Students will work with a wide variety of image requirements and output to various proofing media. Students review issues involved with desktop scanning technology as well as high end scanning devices. Lec. 2 hrs., Prereq.: PRTC 125, or permission of the instructor.

PRTC 226 Computer Scanning and Imaging Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 225. Lab. 3 hrs., Co-req.: PRTC 225.

PRTC 228 Advanced Desktop Publishing Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 208. Lab. 3 hrs., Co-req.: PRTC 208.

PRTC 235 Advanced Offset Press Operation (2)
Students will be concerned with running of basic line and halftone work on single color press equipment. Emphasis will be placed on press operations, whereby students will be required to run and submit various projects for evaluation. In the theory portion of the course, students will be introduced to lithographic plates and ink as related to offset press; offset press problems, and multi-color sheet-fed and offset web press concepts. Lec. 2 hrs. Prereq.: PRTC 135.

PRTC 236 Advanced Offset Press Operation Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 235. Lab. 3 hrs., Co-req.: PRTC 235.

PRTC 246 Color Publishing Lab (1)
Applied experiences in laboratory setting to be taken concurrently with PRTC 206. Lab. 3 hrs., Co-req.: PRTC 206.

PRTC 290 Seminar-Practicum (4)
A simulated production atmosphere will be created for the student. This prepares the learner for future occupations within this multi-faceted industry. Each student will spend time doing production work and playing some management role within the organization. This course will utilize all previous knowledge acquired by the student in a summary or capstone activity. The class meets for 8 hrs. per week. Lab. 6 hrs., Prereq.: Sophomore standing.

PRTC 295 Directed Independent Study (3)
With the approval of the department chairperson and under the direction of a member of the Graphic Communications faculty, the student will select a specific problem or subject in technology or multi media/web design and study it in-depth. A plan of study is required. Prereq.: Sophomore standing.

PMNG 301 Cost Estimating I (2)
The basic course teaches the principles and procedures for estimating the cost of various stages of the printing and publishing process. Students will analyze written contract specifications. They will determine best planning method for production; evaluate the costs of materials and outside services; and determine productive time. Students will learn how to calculate hourly costs rates and hourly productive rates, and will review profit margins and pricing practices in the industry. Lec. 3 hrs., Prereq.: PRTC 209.

PMNG 302 Cost Estimating II (2)
This course is a continuation of Cost Estimating I. It embraces the principles and procedures for costing methods for digital and traditional graphic imaging for both the offset lithography and web printing. Emphasis is placed on the determination of time allowances for the cost of manufacturing the job. In this regard, the text details the manufacturing components of current imaging and printing technologies. Students further investigate sources of time data, classification of operations data, standard times, and the use of basic time schedules and procedures. Through the preparation and organization of this information they can be cost estimated accurately. This leads to improved cost controls, financial production control, and enhanced company profitability. Lec. 3 hrs., Prereq.: PMNG 302.

PMNG 303 Cost Estimate I Lab (1)
Applied experience in a laboratory setting to be taken concurrently with PMNG 301. Lab. 2 hrs., Co-req.: PMNG 301.

PMNG 304 Cost Estimate II Lab (1)
Applied experience in a laboratory setting to be taken concurrently with PMNG 302. Lab. 2 hrs., Co-req.: PMNG 302.

PMNG 305 Statistical Quality Control (2)
Introduction to applied statistics and instruments used in data collection for quality control processes in the graphic communications industry. Students will explore basic descriptive and applied statistical techniques used in quality control, operate instruments used in paper testing, ink testing, color analysis, press operation, and other functions of process control. Emphasis will be placed on evaluation of data in accordance with the systems approach to quality control. Lec. 3 hrs. Prereq.: Junior standing, or permission of the instructor**.**

PMNG 306 Statistical Quality Control Lab (1)
Applied experience in a laboratory setting to be taken concurrently with PMNG 305. Lab 2 hrs., Co-req.: PMNG 305.

PMNG 390 Special Topics in Printing and Management (2)
A comprehensive treatment will be presented on one or more advanced areas of Printing Technology and Management. Lec. 2 hrs., Rereq.: Permission of the Instructor.

PMNG 392 Special Topics in Printing and Management Lab (1)
Applied experience in a laboratory setting to be taken concurrently with PMNG 390. Lab 2 hrs., Co-req.: PMNG 390.

PMNG 425 Elements of Production Management (3)
A continuing study of the production management function. The theory, practices, and application of four subject areas are stressed; methods of engineering measurement and analysis; systems concepts in the Printing and Publishing industry; operations planning and control; and design of printing processes. An emphasis on cost saving techniques is central to the class. Primarily a lecture-oriented course, technical report writing and case study methods will be an integral part of this course. Lec. 3 hrs., Prereq.: Junior Standing, or permission of the instructor.

PMNG 484 Color Management and Prepress (3)
A junior level course which deals with concepts relating to the theory of color, color perception, color management, color measurement and color specification. Introduces a host of topics, including the creation and use of color profiles, color working spaces, color gamuts, and the implementation of color sync in various software applications. The use of instrumentation, including densitometers, colorimeters, spectrophotometers and spectrodensitometers are all employed. These instruments are utilized in conjunction with a number of software programs to help measure, specify and control color, from "soft proofing," to producing color separations, to film output, and to monitoring and controlling color in the pressroom. Issues associated with ink control, fingerprinting printing presses, along with color specifications systems, such as SWOP, GRACOL and SNAP will all be introduced. Lec. 2 hrs., Lab. 3 hrs.

PMNG 495 Directed Independent Study (3)
With the approval of the department chairperson and under the direction of a member of the Graphic Communications faculty, the student will select a specific problem or subject in management, technology, or multi media/web design and study it in-depth. A formal plan of study is required. Prereq.: Junior standing.

ARTD 105 Foundations I (3)
Students are introduced to the basic fundamentals of graphic communications and design. Core principles, aesthetics, conceptualization and visualization processes are the focus of this class. Rapid viz drawing is taught as an integral part of the problem solving process; students are required to investigate, synthesize, and problem solve. They are introduced to perspective, abstraction, and shape/symbol creation with an introduction to the proper use of color. Students focus on developing visualization skills as a means to communicate thoughts, ideas, and messages. Lec. 3 hrs.

ARTD 115 Graphic Design I (3)
Students apply basic design concepts to a variety of graphic communication formats. Layout and design form the foundation for graphic design problem solving techniques. Shape, composition, division of space, combined with type, art and color become a primary focus. Students produce advertising pieces, desktop designs, posters, cover, and other graphics. These concept are applied to print and other forms of digital media. Lec. 3 hrs., Lab. 2 hrs.; Prereq.: ARTD 105; PRTC 207; PRTC 109 or permission of instructor.

ARTD 124 Computer Art I (3)
An introductory course in the creation and production of art using the computer as a creative tool. Students explore the computer as a graphic tool. The course provides an overview and exploration of graphic and paint software in a workshop atmosphere. Students utilize templates while learning computer basics, aesthetics and composition building. The focus is on paint programs, such as Painter and Photoshop. Projects, course objectives, and assignments result in the production of posters and other creative employing various experimental techniques. The use of hardware, software, and other peripheral equipment is explored in this class.

ARTD 126 Typography (3)
This class is a comprehensive survey of type used as a graphic design element. Type selection, classifications, font usage, and type controls become a focus in this course. A further exploration of type/font dynamics,

creative manipulation, and special effects as they are applied to pages and publications, titles, web, media, and information designs. The course also combines technical requirements and rules of typesetting using proper style guides in conjunction with the aesthetics of good typography. Prereq.: ARTD 105, PRTC 207, PRTC 109 or permission of instructor.

ARTD 145 Advertising Photography (3)
A comprehensive course in black and white photography, use of the adjustable camera, the development of the negative, and the production of the photographic print. Techniques in composition, lighting, films and dark room processing are studied. Digital photography concepts will be introduced to the learner.

ARTD 201 Computer Illustration I (3)
Students learn the fundamentals of picture making and image building techniques that are applied to visual communications. The course focuses on developing vector drawing skills while exploring the dynamics of color. Students learn composition, object construction, illustration techniques, and software manipulation to produce graphics for both publications and web/multimedia applications. Primary software used is Macromedia, FreeHand. Prereq: ARTD 105; ARTD 124; PRTC 109.

ARTD 202 Computer Illustration II (3)
Students apply advanced concepts in vector and raster techniques to editorial, corporate, and multimedia illustration projects. The course focus is on further developing vector drawing program skills. This is done while expanding the research ability and also improving database and image manipulation visualization capabilities of the student. Technical object rendering and shading concepts are explored. PhotoShop, FreeHand, and Illustrator become primary software used in the course. Prereq.: ARTD 201.

ARTD 203 Animation and MotionGraphics (3)
Students are introduced to basic fundamentals of animation used in multimedia and web graphics. Basic concepts in frame and character animation are reviewed. Students use Adobe Premier to create and edit graphic and digital video sequences. Shockwave, QuickTime, Flash, Director, and contemporary techniques are explored in the class. Prereq.; ARTD 209; ARTD 206; or permission of instructor.

ARTD 205 Computer Illustration – Technical (3)
Presents traditional and computer techniques in object/product rendering. Explores computer-aided design and basic three-dimensional programs in both black/white and color, as well as concepts of perspective and technical drawing. Studies business graphics, charts, graphs, and flow diagrams. Prereq.: ARTD 124, ARTD 201.

ARTD 206 Multimedia (Director) (3)
Introduces basic fundamentals of authoring and scripting multimedia productions, using Director software or special scripting language(s). Students combine graphic elements, text, audio, video and animated sequences to produce interactive products and materials. Storage and transfer formats include CD ROM, video, Jag, and Zip formats. Primary Multimedia software is Director 7, Authorware and other software are explored. Students design interactive prototype schemes, navigation elements, and graphic interfaces after formulating overall design and content-flow charts or diagrams. Prereq.: ARTD 115; ARTD 201 or permission of instructor.

ARTD 207 Web and Internet Design (3)
Students apply multimedia concepts to web page and site design, along with advanced multimedia project emphasis. CD ROM media is used as primary format. Advanced graphic techniques and interface design utilize Adobe PhotoShop, 3D solid modeling, and special effects programs. Macromedia Director becomes the primary authoring software. Prereq.: ARTD 206; ARTD 201; or permission of instructor.

ARTD 209 Interactive Multimedia (3)
Explores basic concepts in interactive multimedia and information design. Fundamental concepts include scripting, organizing, and planning the information design. Students manipulate digital media to communicate using text, graphics, animation, sound, and new media. Research and audience analysis become critical. Retrevial techniques and image databases are also important. The course teaches students to interface good digital design with a focus on interactivity, navigational, and linking concepts/procedures that create a good flow of the information used in the projects. Prereq.: ARTD 115; ARTD 201; or permission of instructor.

ARTD 212 Graphic Design II (3)
Teaches students how to apply intermediate design concepts to various communication formats. Course focuses on marketing concepts, visualization, and more

complex design problem solving. Information and advertising design layout concepts utilize contemporary grid systems to compose a wide variety of formats. Students apply concepts to web, Internet, publication, and promotion graphics. Document "pre-flighting" concerns are also addressed. Prereq.: ARTD 115 or permission of the instructor.

ARTD 213 Publication Design (3)
Covers concepts in publication design that include both traditional and digital applications. Students perform intermediate level page, brochure, newsletter, and visual communication design. The class stresses typographic control and image manipulation. An introduction to electronic pre-press. Camera-ready preparation for printing technology will prepare students a good prospect for an overall job assignment. Prereq.: ARTD 115 or ARTD 126 or permission of instructor.

ARTD 245 Visual Communication Photography (3)
Emphasizes studio concepts in photography as a visual communication course. Gives special attention to studio lighting, backgrounds, and small, medium, and large format camera work. Provides students work in advertising, illustration, editorial, photo-journalism, and fashion photography. Teaches Digital computer concepts. Prereq.: ARTD 145 or permission of the instructor.

ARTD 247 Digital Photography (3)
Teaches the basic principles and concepts of digital photography. Students learn how to optimize the camera and files to fit the end use, as well as the artistic requirement of the project. Students will capture the images and down load them onto a computer for image editing in PhotoShop and printing in both color and black and white. Composite image, single image manipulation, and special effects are incorporated with color editing, resulting in projects applicable to web, multimedia and print information design. Group projects are encouraged. Prereq.: Basic Photography or permission of instructor.

ARTD 248 Photo Journalism (3)
The student will use the camera to create "strong" individual images, as well as good picture sequences in a variety of events and situations. Working with a writer or being the writer, the student will learn that as a photojournalist, the process to research picture content with great care. Students will also learn the essentials of how picture editing can support or help craft the story or article. Prereq.: Basic Photography or permission of instructor.

ARTD 249 Large Format Photography (3)
Teaches the parts and operational features of large format cameras and how to overcome the limitation of monocular vision with the understanding that photography reduces images to a two dimensional form. The student will also discover how to apply the same principles of light and shadows mastered by the great painters to acquire the appearance of the third dimension and the realism that accompanies those techniques. Prereq.: Basic Photography or permission of instructor.

ARTD 275 Portfolio and Marketing Workshop (3)
Focuses on preparing students for the job market through portfolio preparation and presentation. This course is taken at the senior level in the AAS or BS program. Students prepare portfolios by revising, re-doing or creating new assignments. Career guidelines, job pricing, and marketing tips are discussed. Portfolio review and resume are required.

ARTD 295 3D Modeling and Animation (3)
Students explore the world of three-dimensional graphic environments utilizing basic, and intermediate modeling techniques. Primitives are transformed into complex object models. Other topics focus on scene building, texture mapping, and animation procedures. The course includes motion analysis, project prototypes, and application to web, gaming, multimedia, and Quicktime videos are addressed. Additional light and camera techniques are taught to enhance student production. Prereq.: ARTD 203; or permission of instructor.

ARTD 296 Digital Photography (3)
Students utilize digital camera technology to produce rich and complex imagery for aesthetic and communication graphic usage. Composite image, single image manipulation, and special effects are incorporated with color editing in yielding projects applicable to web, multimedia, and print information design. Group projects are encouraged. Prereq.: ARTD 209; ARTD 206; or permission of the instructor.

ARTD 301 3D Modeling and Animation (3)
Students explore the world of three-dimensional graphic environments utilizing basic and intermediate modeling techniques. Primitives are transformed into complex object models. Other topics focus on scene building, texture mapping, and animation procedures.

The course includes motion analysis, project prototypes, and application to web, gaming, multimedia and Quicktime videos are addressed. Additional light and camera techniques are taught to enhance student production. Prereq: ARTD 203 or permission of instructor.

ARTD 401 New Media-Multi Media (3)
Students focus on advanced multimedia and web publishing, requiring basic interactive skills. Students combine areas of digital imaging, electronic publishing, 2-D and 3-D animation and motion graphics, 3-D modeling, sound, and scripting. Topics cover multimedia skills development that emphasize interactive projects and web modules for sales, entertainment, and training. The course will focus on group dynamics, such as video editing and project prototyping. Prereq.: ARTD 203; or Permission of Instructor.

DIVISION OF SCIENCE AND MATHEMATICS

DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

Freddie Dixon, Ph.D., Chairperson
Building 44, Room 200-03
(202) 274-7401

Full-time Faculty
Professors C. Cousin, D. Demeyers, F. Dixon, M.A. Elhelu, R. Fergusson, P. Ganganna, C. Jiles, Y. Lee, A.K. Olowofoyeku, H. Phelps, J.R. Preer, C. Ramsundar, H. Sekon, R. Singh
Associate Professors J. Grant, B.S. Harvey, T. Kakovitch

The Department of Biological and Environmental Sciences offers programs leading to the Bachelor of Science degree in Biology, Environmental Science, and Nutrition and Food Science. Also offered is an Associate in Applied Science degree in Water Quality and Marine Science. The baccalaureate degree programs prepare students for careers as teachers, marine scientists, research assistants, environmental analysts, technicians, dieticians, food technologists, and biotechnologists. Many of our students enter and complete graduate and professional schools (e.g., medical, dental, law). The two-year Associate in the Applied Science degree program is designed to provide students with academic and laboratory skills needed to develop, monitor, and maintain water quality, and to extract and use natural resources of the oceans.

The Department has facilities that support faculty/ student research and student training. The research in the Department utilizes state-of-the-art equipment and addresses problems that are of major concern to mankind. Research laboratories in the Department include: a molecular biology laboratory, a transmission electron microscopy suite, atomic absorption spectrophotometry, and environmental sciences laboratories, among others. Faculty members publish their results in refereed journals; procure research grants from private, state, and federal agencies; and perform a variety of public service activities. Consistent with the mission of the University, the Department of Biological and Environmental Sciences offers educational opportunities to students who seek academic preparation to meet the demands of a changing technological world.

BIOLOGY PROGRAM

The Biology Program offers the Bachelor of Science degree with two options: Biology and Biology Education. The Biology option prepares students to enter professional careers and graduate or professional schools. The Biology Education option is designed for students seeking to qualify for teacher certification in elementary or secondary education.

BACHELOR OF SCIENCE DEGREE IN BIOLOGY

Option I: Biology

Total Credit Hours of College-Level Courses Required for Graduation: 120

Core Courses: (All students in the Biology option must take the core courses.)

BIOL	101	Biological Science Lec I	3
BIOL	102	Biological Science Lec II	3
BIOL	103	Biological Science Lab I	1
BIOL	104	Biological Science Lab II	1
BIOL	226	Zoology Lecture	3
BIOL	228	Zoology Laboratory	1
		or	
BIOL	225	Invertebrate Zoology Lec	3
BIOL	224	Invertebrate Zoology Lab	1
BIOL	235	Botany Lecture	3
BIOL	234	Botany Laboratory	1
BIOL	241	General Microbiology Lec	3
BIOL	240	General Microbiology Lab	1
BIOL	361	General Genetics Lecture	3
BIOL	360	General Genetics Lab	1

BIOL	493	Senior Seminar I	2
		or	
BIOL	494	Senior Seminar II	2
CHEM	111	General Chemistry Lecture I	3
CHEM	112	General Chemistry Lecture II	3
CHEM	113	General Chemistry I	1
CHEM	114	General Chemistry II Lab	1
CHEM	231	Organic Chemistry Lecture I	3
CHEM	232	Organic Chemistry Lecture II	3
CHEM	233	Experimental Organic Chemistry I	2
CHEM	234	Experimental Organic Chemistry II	2
MATH	113	Precalculus w/Trigonometry I	3
MATH	114	Precalculus w/Trigonometry II	3
MATH	215	Calculus for Business, Social, and Life Sciences	4
		or	
BIOL	337	Biostatistics Lecture	3
BIOL	338	Biostatistics Laboratory	1
PHYS	101	Introduction to College Physics I	3
PHYS	102	Introduction to College Physics II	3
PHYS	103	Introduction to College Physics Lab I	1
PHYS	104	Introduction to College Physics Lab II	1

Other Required Courses

BIOL		Biology electives (300-level or above)	16
		Other electives	4
FREN	101	Beginning French I	3
FREN	102	Beginning French II	3
		or	
SPAN	101	Beginning Spanish I	3
SPAN	102	Beginning Spanish II	3
		(Two semesters in the same language are required at or above the 100-Level.)	

Additional Comments or Requirements

Only grades of "C" (2.00 G.P.A.) or better in major courses accepted towards a B.S. degree in Biology.

Option II: Biology Education

The Core Courses in Option I (Biology) are required for all students in Option II (Biology Education) in addition to the other required courses listed below.

Required courses in education for the elementary and secondary education concentration are as follows:

EDFN	221	Foundation of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3
SPED	204	Introduction to Education of Exceptional Children	3
EDPY	300	Educational Psychology	3
RDNG	315	Teaching Reading in the Secondary Schools	3

Elementary Education

ELED	307	Methods and Materials of Teaching Science in the Elementary School	3
ELED	434	Student Teaching in the Elementary School	6-12

Secondary Education

EDFN	446	Teaching Science in the Secondary School	3
EDFN	471	Observation and Student Teaching in Secondary Schools	6-12

Additional Comments or Requirements

Only grades of "C" (2.00 G.P.A.) or better in major courses are accepted towards a B.S. degree in Biology.

ENVIRONMENTAL SCIENCE PROGRAM

The Environmental Science Program offers the Bachelor of Science degree in Environmental Science and the Associate in Applied Science degree in Water Quality and Marine Science. The Environmental Science Program is designed to prepare graduates for professional positions in the field of air and water quality control, coastal zone management, and marine science. The Associate in Applied Science degree programs in Water Quality and Marine Science prepare students to use the natural resources of the oceans and to monitor and maintain water quality.

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE

Total Credit Hours of College-Level Courses Required for Graduation: 124

Required Courses:

ENSC	145	Introduction to Environmental Science Lecture	3
ENSC	146	Introduction to Environmental Science Lab	1
BIOL	241	General Microbiology Lecture	3
BIOL	240	General Microbiology Lab	1

ENSC	247	Environmental Statistics	3
ENSC	107	Integrated Science I Lec	3
ENSC	109	Integrated Science I Lab	1
MRSC	116	Marine Biology	3
MRSC	119	Marine Biology Lab	1
MRSC	216	Geological Oceanography Lecture	3
MRSC	218	Geological Oceanography Lab	1
WTQL	121	Chemical Analysis of Water Quality Lecture	3
WTQL	123	Chemical Analysis of Water Quality Lab	1
WTQL	221	Wastewater Technology Lecture	3
WTQL	223	Wastewater Technology Lab	1
ORNH	324	General Soils Lecture	3
ORNH	325	General Soils Lab	1
ENSC	448	Environmental Field Problems	4
ENSC	450	Environmental Health Lecture	3
ENSC	451	Environmental Health Lab	1
ENSC	452	Air Pollution Lecture	3
ENSC	453	Air Pollution Lab	1
ENSC		Departmental elective	3
BIOL	101	Biological Science I Lecture	3
BIOL	103	Biological Science I Lab	1

Other Required Courses

APCT	104	Introduction to Application of Computers	2
APCT	105	Introduction to Applications of Computers Lab	1
CHEM	111	General Chemistry I Lecture	3
CHEM	112	General Chemistry II Lecture	3
CHEM	113	General Chemistry I Lab	1
CHEM	114	General Chemistry II Lab	1
CHEM	231	Organic Chemistry I	3
CHEM	232	Organic Chemistry II	3
CHEM	233	Experimental Organic Chemistry I	2
CHEM	234	Experimental Organic Chemistry II	2
MATH	112	Technical Mathematics II	4
MATH	215	Calculus for Business and Science	3
PHYS	101	Introduction to College Physics I	3
PHYS	103	Introduction to College Physics I Lab	1
PHYS	102	Introduction to College Physics II	3
PHYS	104	Introduction to College Physics II Lab	1

Additional Comments or Requirements

Only grades of "C" (2.00 G.P.A.) or better in major courses are accepted towards a B.S. degree in Environmental Science.

ASSOCIATE IN APPLIED SCIENCE IN WATER QUALITY & MARINE SCIENCE

Total Credit Hours of College-Level Courses Required for Graduation: 64

ENSC	145	Introduction to Environmental Science Lecture	3
ENSC	146	Introduction to Environmental Science Lab	1
ENSC	107	Integrated Science I Lecture	3
ENSC	109	Integrated Science I Lab	1
BIOL	241	General Microbiology Lecture	3
BIOL	240	General Microbiology Lab	1
MRSC	116	Marine Biology Lecture	3
MRSC	119	Marine Biology Lab	1
MRSC	216	Geological Oceanography Lecture	3
MRSC	218	Geological Oceanography Lab	1
WTQL	121	Chemical Analysis of Water Quality I Lecture	3
WTQL	123	Chemical Analysis of Water Quality I Lab	1
WTQL	122	Chemical Analysis of Water Quality II Lecture	3
WTQL	124	Chemical Analysis of Water Quality II Lab	1
BIOL	101	Biological Science I Lecture	3
BIOL	103	Biological Science I Lab	1
CHEM	111	General Chemistry I Lecture	3
CHEM	112	General Chemistry II Lecture	3
CHEM	113	General Chemistry I Lab	1
CHEM	114	General Chemistry II Lab	1
APCT	104	Introduction to Applications of Computers Lecture	2
APCT	105	Introduction to Application of Computers Lab	1
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	4
PHYS	101	Introduction to College Physics I	3
PHYS	102	Introduction to College Physics II	3
PHYS	103	Introduction to College Physics I Lab	1
PHYS	104	Introduction to College Physics II Lab	1

Additional Comments or Requirements
Only grades of "C"or better (2.00 GPA) in major courses are accepted towards an A.A.S. degree in Water Quality and Marine Science.

NUTRITION AND FOOD SCIENCE PROGRAM (NFSC)

The Department of Biological and Environmental Sciences offers a Bachelor of Science degree in Nutrition and Food Science program. The program is designed to prepare students to maximize their qualifications for entrance into the dietetic and/or food processing and food technology industry. The program offers two areas of emphasis: dietetics and food science. Each program provides for competencies in several areas of work; however, each option is designed specifically for certain professional careers.

The baccalaureate degree in Nutrition and Food Science with a dietetics option fulfills the requirements of the Didactic Program in Dietetics (DPD) and is accredited by the Commission on Accreditation/Approval for Dietetics Education (CAADE) of the American Dietetic Association (ADA). The Dietetics major develops an understanding and competency in food, nutrition, dietetics, management, clinical nutritional care, nutrition education, community nutrition and supportive courses in physical and biological sciences (biochemistry, anatomy & physiology, microbiology, statistics, and chemistry). The curriculum is developed within the conceptual framework of the accreditation standards and knowledge competencies for the dietetic profession set and published by the American Dietetic Association. The completion of the Bachelor's degree with dietetics option qualifies students to enter post-baccalaureate internship program , which leads to eligibility to take the nationally administered examination to become a Registered Dietitian (RD).

The Food Science option is concerned with the application of the fundamental principles of the physical, biological, and behavioral sciences and engineering to understand the complex and heterogeneous materials recognized as food. The food science program is designed to meet the requirements within the conceptual framework of the profession set and published by the Institute of Food Technologists and prepares students for careers in food industry and food safety.

The Nutrition and Food Science graduates in both of these options frequently elect to go on to graduate studies in Nutrition or Food Science. Dietetics graduates are prepared for wide scope of rewarding careers such as dietitians, licensed nutritionists, educators, consultants, researchers, food columnists, and entrepreneurs. The graduates with food science option are prepared to enter careers as food research specialists, food columnists, food technologists, health inspectors, food analysts, product developers, and quality control staff.

BACHELOR OF SCIENCE IN NUTRITION & FOOD SCIENCE NUTRITION OPTION

Total Credit Hours of College-Level Courses Required for Graduation: 127

Required Departmental Courses (54 credits)

NFSC	103/105	Introduction to Food Science Lecture/Laboratory	4
NFSC	104/106	Introduction to Nutrition Lecture/Laboratory	4
NFSC	209/211	Food Processing Lecture/Laboratory	4
NFSC	313	Nutrition in the Life Cycle .	3
NFSC	314/316	Community Nutrition Lecture/Laboratory	3
NFSC	315/319	Food Economics Lecture/Laboratory	3
NFSC	317	Advanced Nutrition	3
NFSC	320/321	Nutrition Education Lecture/Laboratory	3
NFSC	374/375	Geriatric Nutrition	3
NFSC	421/423	Therapeutic Nutrition I Lecture/Laboratory	4
NFSC	422/424	Therapeutic Nutrition II Lecture/Laboratory	4
NFSC	426/428	Food Systems Management I Lecture/Laboratory	3
NFSC	427/429	Food Systems Management II Lecture/Laboratory	3
NFSC	442/444	Food Chemistry Lecture/Laboratory	4
NFSC	453/455	Food Analysis Lecture/ Laboratory	4
NFSC	490	Senior Seminar and Research	2

Required Supporting Courses: 37 credits

CHEM	111	General Chemistry I	3
CHEM	112	General Chemistry II	3
CHEM	113	General Chemistry I Lab	1
CHEM	114	General Chemistry II Lab . . .	1
CHEM	231	Organic Chemistry Lecture I .	3
CHEM	232	Organic Chemistry Lec. II . . .	3
CHEM	233	Organic Chemistry Lab I	2
CHEM	234	Organic Chemistry Lab II . . .	2

CHEM	260/261	Biochemistry	4
MATH	247	Elementary Statistics	3
BIOL	111/113	Fundamentals of Human Anatomy and Physiology I Lecture/Lab	4
BIOL	112/114	Anatomy and Physiology II Lecture/Lab	4

University-wide Requirements: 36 credits

Social Science			6
Fine Arts			3
Foreign Language			6
PHIL	105	Introduction to Logic	3
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Lit & Advanced Writing I	3
ENGL	212	Lit & Advanced Writing II	3
MATH	113	Precalculus with Trigonometry I	3
MATH	114	Precalculus with Trigonometry II	3

Note: Recommended social sciences courses: a) Introduction to Psychology and b) Introduction to Sociology.

B.S. NUTRITION AND FOOD SCIENCE FOOD SCIENCE OPTION

Total credit hours of college level courses required for graduation: 125

Required Departmental Courses: 56 credit hours

NFSC 103/105	Introduction to Food Science Lecture/Laboratory	4
NFSC 104/106	Introduction to Nutrition Lecture/Laboratory	4
NFSC 209/211	Food Processing Lecture/Laboratory	4
NFSC 313	Nutrition in the Life Cycle	3
NFSC 314/316	Community Nutrition Lecture/Laboratory	3
NFSC 317	Advanced Nutirtion	3
NFSC 320/321	Nutrition Education Lecture/Laboratory	3
NFSC 324/325	Food Sanitation Lecture/Lab	4
NFSC 326/328	Food Microbiology Lecture/Laboratory	4
NFSC 415/416	Food Engineering Lecture/Laboratory	4
NFSC 426/428	Food Systems Management I Lecture/Laboratory	3
NFSC 427/429	Food Systems Management II Lecture/Laboratory	3
NFSC 454	Food Quality Control Lecture/Laboratory	4
NFSC 453/455	Food Analysis Lecture/Laboratory	4
NFSC 490	Senior Seminar and Research	2

Supporting Courses: 32 credits

CHEM 111/112	General Chemistry I, II Lecture	6
CHEM 113/114	General Chemistry I, II Laboratory	2
CHEM 231/232	Organic Chemistry I Lecture	3
CHEM 233/234	Organic Chemistry I Laboratory	2
BIOL 240/241	General Microbiology Lecture/Laboratory	4
PHYS 101/103	Introduction to College Physics I Lecture/Laboratory	4
BIOL 101/103	Biological Science I Lecture/Laboratory	4
MATH 247	Elementary Statistics	3
BIOL	Biostatistics	3

University-wide Requirements: 37 credits hours

	Social Sciences	6
	Fine Art	3
	Foreign Language	6
PHIL 105	Introduction to Logic	3
ENGL 111	English Composition I	3
ENGL 111	English Composition II	3
ENGL 211	Literature and Advanced Writing I	3
ENGL 212	Literature and Advance Writing II	3
MATH 113	Precalculus with Trigonometry I	3
MATH 215	Calculus for Business Social and Life Sciences	4

Recommended Electives

NFSC 210/212	Food Processing II Lecture/Laboratory	4
NFSC 318	Child Health and Nutrition	3
NFSC 324/325	Food Sanitation and Waste Disposal Lecture/Laboratory	4

Additional Comments and Requirements

Majors who intend to apply for dietetic internship upon completion of Bachelor of Science degree in Nutrition and Food Science with dietetic option will be eligible to receive a Verification Statement duly attested by the Director of the DPD Program.

The students are required to complete comprehensive examination and exit interview prior to the issuance of the Verification Statement.

Only grades of "C" or better in major courses (2.00 G.P.A.) Are accepted towards a Bachelor of Science degree in Nutrition and Food Science.

COURSE DESCRIPTIONS

BIOL 101 Biological Science I (3)
Introduces the concepts of modern biological principles, with emphasis on the physical and chemical basis of life processes. Lec. 3 hrs., Co-req.: BIOL 103.

BIOL 102 Biological Science II (3)
Presents the structural and functional features of animal and plant systems, including interactions existing between major groups of organisms. Lec. 3 hrs., Prereq.: BIOL 101, 103. Co-req.: BIOL 104.

BIOL 103 Biological Science I Laboratory (1)
Focuses on the experimental principles of the physical and chemical processes of life. Lab 3 hrs., Co-req.: BIOL 101.

BIOL 104 Biological Science II Laboratory (1)
Examines unifying relationships between living organisms through dissection of a representative vertebrate. Emphasis is also placed on energy, respiration, structure, and function of organs, organ systems, and the total organism. Lab 3 hrs., Prereq.: BIOL 101, 103. Co-req.: BIOL 102.

BIOL 111 Fundamentals of Human Anatomy & Physiology I (3)
Focuses on the human body as it relates to function, organization, and interrelationship of body structures as they form an integrated functional organism. Lec. 3 hrs., Co-req.: BIOL 113.

BIOL 112 Fundamentals of Human Anatomy and Physiology II (3)
Details a continuation of Fundamentals of Human Anatomy and Physiology I. Emphasizes body systems and how they contribute to homeostasis. Lec. 3 hrs., Prereq.: BIOL 111, 113. Co-req.: BIOL 114.

BIOL 113 Fundamentals of Human Anatomy and Physiology I Laboratory (1)
Examines the cellular, tissue, and organ levels of the organization of the human body and how these units coordinate activities and function in the living organism. Lab 3 hrs., Co-req.: BIOL 111.

BIOL 114 Fundamentals of Human Anatomy and Physiology II Laboratory (1)
Focuses on detailed examination of the structure and function of the body systems with emphasis on balanced coordination of the living organism. Lab 3 hrs., Prereq.: BIOL 111, 113. Co-req.: BIOL 112.

BIOL 122 Essentials of Human Biology (3)
Introduces basic concepts and principles of body structure and function. Special emphases are given to transport mechanisms and the dynamics of steady state equilibrium. Lec. 3 hrs., Prereq.: Permission of Department chair. Co-req.: BIOL 123.

BIOL 123 Essentials of Human Biology Laboratory (1)
Focuses on the basic organizational and principal functions of the human body in a hierarchal manner. Emphasis is also placed on the microscopic and macroscopic components of the human body. Lab 3 hrs., Co-req.: BIOL 122.

BIOL 195 Independent Study/Biology (1-4)
Provides an opportunity for students to arrange with an instructor in the Department to work on a topic selected prior to registration. Prepares reports on laboratory, library, and/or field research topics approved by the instructor on subjects not regularly covered in the Department. Lec. and/or Lab 6 hrs. Prereq.: Permission of Department chair.

BIOL 215 Histological Techniques (3)
Exposes students to the procedures used in the preparation of various animal tissues for histochemical studies. The lecture presentations correlate the structural and functional features of animal cells and tissues. Lec. 3 hrs., Prereq.: BIOL 102, 104 and BIOL 112,114. Co-req.: BIOL 216.

BIOL 216 Histological Techniques Laboratory (1)
Prepares and stains tissue samples for microscopic examination. Applies histochemical stains to label specific chemical components of cells and tissues. Lab 3 hrs., Prereq.: BIOL 102, 104 and BIOL 112, 114. Co-req.: BIOL 215.

BIOL 224 Invertebrate Zoology Laboratory (1)
Examines prepared slides and specimens of invertebrates and classifies them based on the taxonomical nomenclature. Lab 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 225.

BIOL 225 Invertebrate Zoology (3)
Studies selected invertebrates with special attention to those of the local area. Emphasis is placed on the morphology and physiology of organisms. Lec. 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 224.

BIOL 234 Botany Laboratory (1)
Details laboratory exercises that address plant anatomy and functions. Lec. 3 hrs., Prereq: BIOL 102, 104. Co-req.: BIOL 235.

BIOL 235 Botany (3)
Introduces the fundamental concepts of the scientific investigation of life, ranging from the cell as a living unit to the more complex plant life. Lec. 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 234.

BIOL 240 General Microbiology I Laboratory (1)
Focuses on exercises involved with isolation and identification of bacteria, yeast, and molds. Lab 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 241.

BIOL 241 General Microbiology I (3)
Examines the basic principles concerning microbial life and its relationship to human welfare. Lec. 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 240.

BIOL 245 Clinical Microbiology (3)
Emphasizes the structure, function, and pathogenic nature of various microorganisms as they relate to infection, body resistance, and diagnostic testing. Lec. 3 hrs., Prereq.: BIOL 102, 104 or permission of instructor. Co-req.: BIOL 246.

BIOL 246 Clinical Microbiology Laboratory (1)
Focuses on exercises that involve the use of microbiological techniques in culturing select groups of microorganisms. Prereq: BIOL 102, 104. Co-req.: BIOL 245.

BIOL 295 Independent Study Biology (1-4)
Provides an opportunity for students to arrange with an instructor in the Department to work on a topic selected prior to registration. Students prepare reports on laboratory, library, and/or field research topics approved by the instructor on subjects not regularly covered in the Department. Lec. and/or Lab 6 hrs., Prereq.: Permission of Department Chairperson.

BIOL 317 General Physiology Laboratory (1)
Provides experiments on the functioning of animal cells, tissues, and organs. Lab 3 hrs., Prereq.: BIOL 102, 104; CHEM 112, 114. Co-req.: BIOL 319.

BIOL 319 General Physiology (3)
Details the principles of animal physiology presented with references to the functioning of cells, tissues, and organs. Emphasizes basic cell functions and biological control systems, such as membrane phenomena, energy and cellular metabolism, protein synthesis, muscle contraction, and other areas of functional biology. Lec. 3 hrs., Prereq.: BIOL 101, 102; CHEM 112, 114. Co-req.: BIOL 317.

BIOL 325 Human Anatomy (3)
Presents general study of the structure and organization of organs and organ systems of the human body. Studies the skeletal, muscular, circulatory, digestive, and nervous systems. Lec. 3 hrs., Prereq.: BIOL 102, 104; BIOL 226, 228. Co-req.: BIOL 328.

BIOL 326 Mammalian Histology (3)
Presents the basic concepts of the structure of tissues and organs of mammals at the light and ultrastructure levels. Lec. 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 327.

BIOL 327 Mammalian Histology Laboratory (1)
Includes identification of cells, tissues, and organs of mammals at the light microscopic and electron microscopic levels. Lab 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 326.

BIOL 328 Human Anatomy Laboratory (1)
Emphasizes dissection of organisms for studying the various systems: skeletal, muscular, digestive, urinary, cardiovascular, and nervous system. Lab 3 hrs., Prereq.: BIOL 102, 104; BIOL 226, 228. Co-req.: BIOL 325

BIOL 330 Cell Biology I Laboratory (1)
Includes the principles and techniques of cell biological experimentation, involving chemical and molecular structure of cells, cellular respiration, and structure of cells. Lab 3 hrs., Prereq.: BIOL 240, 241; BIOL 360, 361; CHEM 112, 114. Co-req.: BIOL 331.

BIOL 331 Cell Biology I (3)
Introduces the molecular basis of cell structure and functions with consideration of subcellular organelles, including the processes of cellular metabolism and oxidative regulation of control mechanisms in cell

metabolism. Lec. 3 hrs., Prereq.: BIOL 240, 241; BIOL 360, 361; CHEM 112, 114. Co-req.: BIOL 330.

BIOL 332 Cell Biology II (3)
Focuses on the molecular aspects of mitosis and meiosis, including molecular models of intergenic and intragenic recombination, DNA repair, and mutation. Discusses cellular biology, such as inborn errors of metabolism, the role of vitamins, cell transformation, and related subjects, and understanding of the major lines of research in the area. Lec. 3 hrs., Prereq.: BIOL 330, 331. Co-req.: BIOL 333.

BIOL 333 Cell Biology II Laboratory (1)
Includes techniques of recombinant DNA and principles of cell biological experimentation. Lab 3 hrs., Prereq.: BIOL 330, 331. Co-req.: BIOL 332.

BIOL 335 Mycology (3)
Focuses on characteristics, reproductive structures, and medically important fungi. Emphasis is placed on nutritional adaptations and fungal diseases of plants, animals, and humans. Lec. 3 hrs., Prereq.: BIOL 240, 241; Co-req.: BIOL 336.

BIOL 336 Mycology Laboratory (1)
Examines prepared slides and specimen of yeasts, molds, and fleshy fungi. Includes exercises involving isolation and identification of mildews, rusts, smuts, yeasts, and mushrooms. Lab 3 hrs., Prereq.: BIOL 240, 241; Co-req.: BIOL 335.

BIOL 337 Biostatistics (3)
Introduces the principal statistical techniques used in the analysis of biological data. Lec. 3 hrs., Prereq.: BIOL 224, 225 or BIOL 240, 241, or BIOL 234, 235. Co-req.: BIOL 338.

BIOL 338 Biostatistics Laboratory (1)
Analyzes data from experiments in biology and ecology with computers. Prereq.: BIOL 224, 225 or BIOL 240, 241, or BIOL 234, 235. Co-req.: BIOL 337.

BIOL 344 Immunology Laboratory (1)
Emphasizes the fundamentals of serologic procedures and their roles in a variety of infectious and non-infectious conditions; presents a series of diagnostic tests to detect specific antibodies in sera and biological fluids. Lab 3 hrs., Prereq.: BIOL 240, 241. Co-req.: BIOL 346.

BIOL 346 Immunology (3)
Introduces the principles involved with the immune response in man and higher animals. Emphasizes antibody formation and antibody-antigen reactions. Lec. 3 hrs., Prereq.: BIOL 240, 241. Co-req.: BIOL 344.

BIOL 360 General Genetics Laboratory (1)
Identifies modes of inheritance utilizing alleles of various characteristics to show phenotypic expression. Lab 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 361.

BIOL 361 General Genetics (3)
Presents the mechanisms of inheritance and expression of hereditary traits of representative microorganisms, plants, and animals; includes the structure and function of the gene at the molecular level. Lec. 3 hrs., Prereq.: BIOL 102, 104. Co-req.: BIOL 360.

BIOL 362 Advanced Genetics (3)
Examines the chemical basis of gene expression, the mechanism of nucleic acid replication, the genetic code, protein synthesis, and phenotype variation due to gene mutation. Lec. 3 hrs., Prereq.: BIOL 360, 361; CHEM 112. Co-req.: BIOL 363.

BIOL 363 Advanced Genetics Laboratory (1)
Examines phenotypic expression utilizing alterations to typical Mendelian ratios such as gene mutations, chromosomal aberrations, and novel phenotypes. Lab 3 hrs., Prereq.: BIOL 360, 361. CHEM 112. Co-req.: BIOL 362.

BIOL 364 Embryology Laboratory (1)
Details the fetal development in selected organisms from gamete formation to organogenesis. Lab 3 hrs., Prereq.: BIOL 224, 225 or BIOL 226, 228. Co-req.: BIOL 365.

BIOL 365 Embryology (3)
Introduces selected vertebrates with emphasis on gametogenesis, morphogenesis, organogenesis, and developmental physiology. Lec. 3 hrs., Prereq.: BIOL 225, 224 or BIOL 226, 228. Co-req.: BIOL 364.

BIOL 395 Independent Study (4)
Provides an opportunity for students to arrange with an instructor in the Department to work on a topic selected prior to registration. Prepares reports on laboratory, library and/or field research topics approved by the instructor on subjects not regularly covered in the Department. Lab 6 hrs., Prereq: Permission of the Department chairperson.

BIOL 401 Undergraduate Research I (4)
Supervises the planning, conducting, and reporting of independent laboratory and/or library research as part of an honors program in the biology unit; analyzes reports on data obtained as a result of independent laboratory and/or library research; work designed to encourage students to pursue graduate studies. Lab 6 hrs., Prereq.: Permission of Department Chairperson.

BIOL 402 Undergraduate Research II (4)
Continues Undergraduate Research I. Lab 6 hrs., Prereq.: Permission of Department Chairperson.

BIOL 405 Electron Microscopy (3)
Presents techniques of specimen preparation and use of the electron microscope in a study of the ultrastructure of animal and plant cells. Lec. 3 hrs., Prereq.: BIOL 326, 327 or Permission of Department Chair. Co-req.: BIOL 406.

BIOL 406 Electron Microscopy Laboratory (1)
Prepares specimens for examination with the electron microscope. Lab 3 hrs., Prereq.: BIOL 326, 327 or permission of Department Chairperson. Co-req.: BIOL 405.

BIOL 443 Principles of Virology Laboratory (1)
Involves the preparation of bacteriological media, cultivation of bacteria, and growth of bacteriophages. Applies immunological techniques used in assaying viruses; and includes a special project involving limited research on a related topic. Lab. 3 hrs., Prereq.: BIOL 240, 241. Co-req.: BIOL 445.

BIOL 444 Principles of Parasitology Laboratory (1)
Examines the life cycle of parasites in the animal kingdom via preserved specimen, light microscopy, and live specimen. Emphasizes life cycles with vertebrate and invertebrate hosts. Lab 3 hrs., Prereq.: BIOL 224, 225 or 226, 228. Co-req.: BIOL 446.

BIOL 445 Principles of Virology (3)
Presents the chemical, physical, and biological properties of animals, plants, bacteria and viruses. Includes cultivation and purification of animal viruses and determination of viral titer. Lec. 3 hrs., Prereq.: BIOL 240, 241. Co-req.: BIOL 443.

BIOL 446 Principles of Parasitology (3)
Involves primarily the parasite-host relationship. Includes also the variations of permanency of the association, degree of intimacy, and degree of pathogenicity. Lec. 3 hrs., Prereq.: BIOL 224, 225 or 226, 228. Co-req.: BIOL 444.

BIOL 490 Molecular Biology (3)
Introduces students to the basic concepts of molecular biology with emphasis on nucleic acid structure, gene expression, and recombinant DNA methodology. Lec. 3 hrs., Prereq.: BIOL 240, 241; BIOL 361, 360. Co-req.: BIOL 491.

BIOL 491 Molecular Biology Laboratory (1)
Emphasizes electrophoretic separation of nucleic acids and proteins. Introduces purification and enzymatic digestion of nucleic acids, principles of agarose and polacrylamides gel electrophoresis; Southern, Northern, and Western blotting, DNA sequencing and finger-printing, RFLP's, PCR and other applications in biotechnology. Lab 3 hrs., Prereq.: BIOL 490. Co-req.: BIOL 490.

BIOL 493 Senior Seminar I (2)
Involves the preparation, presentation, and discussion of current scientific topics and original research papers. Includes a series of articles to be discussed and presented to students. Lec./demo. 2 hrs., Prereq.: Senior standing in biology.

BIOL 494 Senior Seminar II (2)
Continuing activities of Senior Seminar I. Lec./demo. 2 hrs., Prereq: Senior standing in biology.

BIOL 495 Independent Study (1-4)
Provides an opportunity for students to arrange with an instructor in the Department to work on a topic selected prior to registration. Prepares reports on laboratory, library, and/or field research topics approved by the instructor on subjects not regularly covered in the Department. Lab 6 hrs., Prereq.: Permission of Department Chair.

ENSC 107 Integrated Science I Lecture (3)
Emphasizes the usefulness of science by presenting specific scientific information concerning the urban environment. Includes interdisciplinary topics, such as plants, soil formation, basic chemistry, soil chemistry, measurements, human functions, nutrition, environmental diseases, and the history of African Americans in the development of science. Lec 3 hrs., Co-req.: ENSC 109.

ENSC 109 Integrated Science I Laboratory (1)
Presents information on measurements, plants, chemistry, nutrition, soil science, energy, air pollution, water pollution, and environmental diseases. Lab 3 hrs., Co-req.: ENSC 107.

ENSC 145 Introduction to Environmental Science (3)
Introduces the environment by studying the atmosphere, hydrosphere, lithosphere, biosphere, and the natural cycles which influence man. Provides information on the impact of man on these spheres through water and air pollution, solid waste disposal and noise. Lec. 3 hrs., Co-req.: ENSC 146.

ENSC 146 Introduction to Environmental Science Lab (1)
Investigates the principles of environmental science with emphasis on the ecosystem. Lab 3 hrs., Co-req.: ENSC 145.

ENSC 246 Environmental Microbiology (3)
Introduces the fundamentals of microbiology with emphasis on the comparative nature of various groups of microorganisms, their distribution and activities. Presents the interrelationships of individual microbial populations with their macro and micro environments. Lec. 3 hrs., Prereq.: BIOL 102, 104 equivalent or permission of Department hairperson. Co-req.: ENSC 249.

ENSC 247 Environmental Statistics (3)
Introduces concepts and application of statistics to environmental science problems. Provides problem sessions that are intended to give a thorough knowledge of basic graphic and statistical techniques for drawing inferences from sets of data. Prereq: MATH 111, MATH 112 or equivalent.

ENSC 249 Environmental Microbiology Laboratory (1)
Provides techniques in isolating, cultivating, and identifying microbes found in soil, air, and water. Lab 3 hrs., Prereq.: BIOL 102, 104 equivalent or permission of Department Chairperson. Co-req.: ENSC 246.

ENSC 347 Environmental Law (3)
Provides a general background on the controlling laws applicable to private and public rights to a healthful and clean environment. Includes the national environmental policy acts, regulatory laws (state, national, and international) on commercial fisheries, marine resources, sports fisheries, forestry, and wildlife. Prereq.: Permission of the Department Chair.

ENSC 350 Conservation of Natural Resources (3)
Details the functioning of organisms and their interrelationship with the environment. Provides ecological concepts, biochemical cycles, productivity, competition, predator-prey relations, basic ecological variables, growth patterns, biotic communities, and genetic diversity. Surveys natural resources of water, soil, forest, grasslands, minerals, wildlife, and recreation areas. Lec. 3 hrs., Prereq.: ENSC 145, 146. Co-req.: ENSC 351.

ENSC 351 Conservation of Natural Resources Laboratory (1)
Details laboratory experiments in the principles of ecology and conservation of natural resources. Lab 3 hrs., Prereq.: ENSC 145, 146. Co-req.: ENSC 350.

ENSC 445 Applied Thermodynamics (3)
Provides information on the first and second laws of thermodynamics for control volumes and fixed-gas systems. Emphasizes properties of liquids, vapors, and gases. Lec. 3 hrs., Prereq.: CHEM 112.

ENSC 448 Environmental Field Problems (4)
Involves field and laboratory research in environmental problems, collection of data, statistical analysis, and preparation of comprehensive final report. Prereq.: Permission of the Department Chair.

ENSC 450 Environmental Health (3)
Examines the effect of gaseous particulate pollutants on human health. Provides the epidemiology, pathogenesis, diagnosis, and etiologic agents of diseases, including other topics: hazardous wastes, pests, pest control, food additives, air-borne, water-borne, and soil-borne organisms. Lec. 3 hrs., Prereq.: MRSC 246, 249, CHEM 112. Co-req.: MRSC 451.

ENSC 451 Environmental Health Laboratory (1)
Provides exercises that examine disease agents and diseases related to the environment. Studies computer models on air and water pollutants. Lab 3 hrs., Prereq.: ENSC 246, 249, CHEM 112. Co-req.: ENSC 450.

ENSC 452 Air Pollution (3)
Examines meteorological and air pollution control theories. Includes atomic absorption analysis and computer data handling techniques. Emphasizes sampling methods and techniques of analysis. Lec. 3 hrs., Lab 3 hrs., Prereq.: PHYS 102, ENSC 145, 146. Co-req.: ENSC 453.

ENSC 453 Air Pollution Laboratory (1)
Includes atomic absorption analysis and computer data handling techniques. Lab 3 hrs., Prereq.: PHYS 102, ENSC 145, 146. Co-req.: ENSC 452.

ENSC 454 Waste Management (3)
Examines current problems in the management of wastes, with particular emphasis on the solid waste disposal crisis, including legal requirements, waste treatment and disposal technology, toxicological methods, risk assessment techniques, and hazardous waste plan development. Lec. 3 hrs., Prereq.: CHEM 233. Co-req.: ENSC 455.

ENSC 455 Waste Management Laboratory (1)
Includes atomic absorption spectrophotometry for heavy metals and gas-liquid chromatography for toxic organic compounds, statistical and site assessment methods and examination of new technology for waste disposal and recycling. Lab 3 hrs., Prereq.: CHEM 233. Co-req.: ENSC 454.

ENSC 495 Independent Study (1-4)
Focuses on special topics under supervision of a faculty member. The subject and extent of work must be agreed upon in advance. Prereq.: Senior standing and permission of Department Chair.

GOSC 302 Geomorphology (3)
Provides an overview of the dynamic processes responsible for the origins and evolution of various landforms and landscapes for the earth and other planetary bodies. Emphasizes the genetics of land-forms quantitatively and qualitatively and a mix of various theories and application which combines with field observation and measurement. Lec. 3 hrs., Prereq.: ENSC 145, 146. Co-req.: ENSC 104.

GOSC 303 Geomorphology Laboratory (1)
Provides a series of investigations on the evolution of land forms and processes from maps and math calculations on field explorations. Lab 3 hrs., Prereq.: ENSC 145, 146. Co-req.: ENSC 102.

GOSC 304 Air Photo Interpretation and Remote Sensing (3)
Provides information on the use of mosaics, photos, photo mapping, and electromagnetic systems in gathering environmental and resource data. Interprets the imagery of the earth taken from air-imagery in developing methods of data gathering for multi-disciplinary studies. Lab 3 hrs., Prereq.: Permission of the Department Chair. Co-req.: ENSC 306.

GOSC 306 Air Photo Interpretation and Remote Sensing Laboratory (1)
Provides students with skill in interpretation and analysis of numerous satellite imagery, air photo, and geophysical methods of underground exploration. Lab 3 hrs., Permission of the Department Chair. Co-req.: ENSC 304.

MRSC 111 Introduction to Aquatic and Marine Sciences (3)
Provides an introduction to the aquatic and marine environment through sciences used to investigate these environments. Presents the ecology of mining and impounded fresh water. Lec. 3 hrs., Co-req.: MRSC 112.

MRSC 112 Introduction to Aquatic and Marine Science Laboratory (1)
Provides laboratories that will study the inhabitants of aquatic and marine environments, as well as their physical, chemical, and biological impact on these biomes. Lab 3 hrs., Co-req.: MRSC 111.

MRSC 114 Environmental Instrumentation Laboratory (1)
Emphasizes the instrumentation necessary for obtaining oceanographic samples and their analysis. Lab 3 hrs., Co-req.: MRSC 115.

MRSC 116 Marine Biology (3)
Acquaints students with plant and animal life in the marine environment. Emphasizes the biological, physical, and chemical processes affecting marine life in the intertidal waters, the open ocean, and the benthic habitats. Prereq.: BIOL 101, 103 and permission of Department Chair. Co-req.: MRSC 118.

MRSC 117 Scuba Diving (2)
Provides those academic skills which will enable students to function successfully and safely under water. Introduces the student to basics in the pool and in open water, thereby providing the knowledge and skill to investigate the underwater world (upon completion, a personalized I.D. card and a national certification from the Professional Association of Diving Instructors (PADI), Santa Ana, California, will be received.) Prereq.: Swimming test, physical check up. Co-req.: ENSC 120.

MRSC 119 Marine Biology Laboratory (1)
Investigates the plants and animals found in the sea and their relationship to one another and their environment. Lab 3 hrs., Co-req.: MRSC 116.

MRSC 120 Scuba Diving Laboratory (1)
Emphasizes swimming, snorkeling, and scuba techniques utilized in recreational and research diving and pool training. Lab 3 hrs., Co-req.: MRSC 117.

MRSC 214 Physical Oceanography Laboratory (1)
Emphasizes the nature and extent of physical properties of the oceans. Lab 3 hrs., Prereq.: PHYS 101. Co-req.: ENSC 215.

MRSC 215 Physical Oceanography (3)
Provides information on the nature and extent of the oceans and the causes and effects of its physical properties. Lec. 3 hrs., Prereq.: PHYS 101. Co-req.: ENSC 214.

MRSC 216 Geological Oceanography (3)
Provides an understanding of the formation and bottom topography of the continental shelf, the continental slope, and the ocean basin. Studies the environments of marine dominated shorelines. Prereq.: ENSC 108, 110; ENSC 114, 115 and ENSC 117. Co-req.: ENSC 218.

MRSC 217 Advanced Scuba Diving (2)
Provides certified divers with a structured, well-supervised means to gain practical experience needed after initial certification. Enables students to participate in various underwater tasks to broaden their awareness of the environment and their capabilities as divers. Lec. 2 hrs., Prereq.: Open Water Scuba Certification and permission of the instructor. Co-req.: ENSC 220.

MRSC 218 Geological Oceanography Laboratory (1)
Emphasizes the analytical and applied methods of sampling of geological data. Lab 3 hrs., Prereq.: ENSC 108, 110; ENSC 114, 115 and ENSC 116, 117. Co-req.: ENSC 216.

MRSC 220 Advanced Scuba Diving Laboratory (1)
Demonstrates diving techniques practiced by recreational and research divers which are practiced and mastered under pool situations prior to open-water checkouts. Prereq.: Open Water Scuba Certification and permission of the instructor. Co-req.: ENSC 217.

NFSC 103 Introduction to Food Science Laboratory (1)
Focuses on basic laboratory exercises dealing with characteristics of raw materials, food development, preparation, and preservation. Lab 3 hrs., Co-req.: NFSC 105.

NFSC 104 Introduction to Nutrition Laboratory (1)
Emphasizes laboratory exercises on analyzing the nutrients of the food consumed in a day by using computer software and skills to conduct basic nutrition assessment. Lab 3 hrs., Co-req.: NFSC 106; Prereq: None

NFSC 105 Introduction to Food Science Lecture (3)
Explores food science and technology, the early history of food, and the development of the industry. Examines the future opportunities, with emphasis on general characteristics of raw materials, harvesting, processing, and the methods of food preparation to preserve the color, flavor, and nutrient content of food. Lec. 3 hrs., Co-req.: NFSC 103; Prereq: None

NFSC 106 Introduction to Nutrition (3)
Provides basic information on nutrients, their ingestion, digestion, absorption, transportation, metabolism, interaction, storage, functions, effects of deficiency, requirements, and dietary sources. This course also provides an understanding of how scientific facts in nutrition relate to the well-being of the human body. Lec. 3 hrs., Prereq: None; Co-req.: NFSC 104.

NFSC 209 Food Processing I Laboratory (1)
Provides laboratory exercises in canning, freezing, dehydration, and fermentation. Lab 3 hrs., Prereq.: NFSC 103, 105. Co-req.: NFSC 211.

NFSC 211 Food Processing I Lecture (3)
Explores the fundamental principles involved in food processing, refrigeration, freezing, thermal processing, dehydration, fermentation, emulsions, and others. Lec. 3 hrs., Prereq: NFSC 105, 103. Co-req.: NFSC 209.

NFSC 212 Food Processing II Lecture (3)
Explores the fundamental principles and major unit operations involved in the technology and commercial manufacture of fabricated foods, snack foods, cereals, mayonnaise, salad dressings, and food plant layouts. Lec. 3 hrs., Prereq.: NFSC 209, 211. Co-req.: NFSC 210.

NFSC 214 Food Processing II Laboratory (1)
Provides laboratory exercises in the manufacture of fabricated foods, snack foods, cereals, mayonnaise, and in the preservation of fruits and vegetables. Lab. 3 hrs., Prereq.: NFSC 209, 211. Co-req.: NFSC 212.

NFSC 313 Nutrition in the Life Cycle (3)
Focuses on how the effects of nutrition and nutrient needs change steadily throughout life into old age. Emphasizes the special nutritional problems from conception to old age. Prereq.: NFSC 106, 104.

NFSC 314 Community Nutrition Laboratory (1)
Emphasizes developing the required skills to understand the complexities of external environment to achieve health outcomes and develop strategic approaches and effective programs to improve dietary patterns of all segments of society. Lab 3 Hrs., Prereq: NFSC 313, Co-req: NFSC 316.

NFSC 315 Food Economics Lecture (2)
Emphasizes interrelating basic food principles with practice to achieve functional laboratory capability and to develop scientific knowledge of and skills in the preparation and evaluation of food, cost control, time management, and energy conservation. Emphasizes food serving for special occasions in relation to meal planning. Prereq.: NFSC 105, 103. Co-req.: NFSC 319.

NFSC 316 Community Nutrition Lecture (2)
Emphasizes developing the skills required to use the scientific facts of nutrition and related science to help individuals, families, and communities to identify and apply information to their daily lives. Identifies and discusses the governmental agencies and organizations that provide food and nutrition services. Prereq.: NFSC 315.

NFSC 317 Advanced Nutrition (3)
Emphasizes the significance of recent advances of fundamental concepts in the science of nutrition. Presents basic biochemical cytology from the viewpoint of the nutritionist, bringing the nutrients to their locus of physiological and biochemical action. Prereq.: NFSC 106, 104, CHEM 135, 136.

NFSC 318 Child Health and Nutrition (3)
Evaluates ways of achieving excellent nutritional status in children. Discusses nutrient needs for optimal growth and health during early years of life and application of nutrition knowledge to the daily challenges of feeding children and forming lasting dietary patterns that will serve them well throughout their lives. Prereq.: None.

NFSC 319 Food Economics Laboratory (1)
Emphasizes understanding the various foods and their behaviors alone and in combinations during food preparation. Identifies food assistance and nutrition resources available and accessible to groups with special needs. Develop skills in menu planning based on the policies of food assistance program guidelines, resources of human energy, controlling food costs, establishing food budgets, and reviewing menus to ensure nutritional adequacy. Lab 3 Hrs., Prereq.: NFSC 313, Co-req.: NFSC 315.

NFSC 320 Nutrition Education Lecture (2)
Emphasizes correlating nutrition with everyday teaching. Explores broad projects and activities. Evaluates developing appropriate teaching tools for nutrition education. Concentrates on developing skills to adapt to individual, group, and community interests and needs. Prereq.: NFSC 317 and/or permission from instructor. Co-req.: NFSC 321.

NFSC 321 Nutrition Education Laboratory (1)
Develops nutrition education projects, lesson plans, activities, and teaching tools. Concentrates on implementing the learned skills to adapt to individual, group, and community interests and needs. Emphasizes developing curriculum, learning objectives, and goals for nutrition programs. Prereq.: NFSC 317. Co-req.: NFSC 320.

NFSC 324 Food Sanitation and Waste Disposal Laboratory (1)
Stresses laboratory exercises for GMP and the main tenets of sanitary conditions in the food processing and preservation industry. Lab 3 hrs., Prereq.: NFSC 211, 209. Co-req.: NFSC 325.

NFSC 325 Food Sanitation and Waste Disposal Lecture (3)
Examines the fundamental principles involved in maintaining sanitary standards in a food plant, including water and waste disposal. Focuses on the conditions and factors necessary to comply with regulatory agencies. Lec. 3 hrs., Prereq.: NFSC 211, 209. Co-req.: NFSC 324.

NFSC 326 Food Microbiology Lecture (3)
Explores the relationship of the habitat to the occurrence of microorganisms in foods; the microbiology of food spoilage and food manufacturing; the physical, chemical and biological spoilage and destruction of microorganisms in foods, a microbial examination of foodstuffs; and public health sanitation

and bacteriology. Lec. 3 Hrs., Prereq: BIOL 240, 241; Co-req: NFSC 328.

NFSC 328 Food Microbiology Lab (3)
Focuses on laboratory exercises that identify food pathogens and their control in producing wholesome foods. Examines microbes of foodstuffs and their public health significance and bacteriology. Lab 3 Hrs., Prereq: BIOL 240, 241; Co-req: NFSC 326.

NFSC 374 Geriatric Nutrition Lecture (2)
Provides discussion of the social, physical, and financial problems which affect the nutritional status of the elderly. Focuses on the theories of aging, the pathophysiological changes that accompany the aging process, and the common diseases associated with aging. Prereq.: Permission of Department chairperson. Co-req.: NFSC 375.

NFSC 375 Geriatric Nutrition Laboratory (1)
Provides students an opportunity to work with the geriatric population in various settings and conduct surveys to establish their nutritional status. Lab. 3 hrs., Prereq: Permission of Department chairperson. Co-req.: NFSC 374.

NFSC 415 Food Engineering Lecture (3)
Examines engineering concepts and unit operations applied to food processing. Engineering principles include mechanics, fluid mechanics, transfer and rate processes, and process control instrumentation. Lec. 3 hrs., Co-req.: NFSC 416.

NFSC 416 Food Engineering Laboratory (1)
Analyzes laboratory exercises dealing with fluid mechanics, heat transfer, mass transfer, energy and material balances, and refrigeration and thermal process evaluations. Lab 3 hrs., Prereq.: PHYS 101, MATH 215. Co-req.: NFSC 415.

NFSC 421 Therapeutic Nutrition I Lecture (3)
Discusses medical terminology, the nutritional care process, the biochemical functions of vitamins, nutrition intervention and care of the patient, Medical Record Documentation, diet modifications, and interactions between drugs and nutrients. Emphasizes nutritional care in diseases of the gastrointestinal, liver, and biliary system, allergies, neoplastic diseases and methods of nutritional support. 2 hrs., Prereq.: NFSC 317, CHEM 135. Co-req.: NFSC 422, 423.

NFSC 422 Therapeutic Nutrition II Lecture (3)
Provides information on the physiology, pathology, nutritional treatment, and management of diabetes mellitus, cardiovascular diseases, renal diseases, AIDS, metabolic diseases, diseases of the nervous system, and test diets. Lec. 2 hrs., Prereq.: NFSC 421, 423. Co-req.: NFSC 424.

NFSC 423 Therapeutic Nutrition I Laboratory (1)
Performs nutritional assessment on a homogeneous population, analyzes the data, and presents the results. Plans, modifies, prepares meals, and develops instructional materials for patients with gastrointestinal, liver, biliary neoplastic diseases, and allergies. Analyze the menus for nutritional adequacy. Lab. 3 hrs., Prereq.: NFSC 317, CHEM 135. Co-req.: NFSC 421.

NFSC 424 Therapeutic Nutrition II Laboratory (1)
Plans, modifies, and prepares meals and develops diet instructional materials for patients with diabetes, cardiovascular, renal, and metabolic diseases. Emphasizes nutritional support for patients with AIDS and various test diets. Lab 3 Hrs., Prereq.: NFSC 421, 423. Co-req.: NFSC 422.

NFSC 426 Food Systems Management I Lecture (2)
Discusses the concept of the food service system, the marketing of food service operations, the types of food service delivery systems, and the menu, food selection, storage, receiving, procurement, specifications, inventory records, recipe standardization, production control, personnel management, and planning the physical layout. Lec. 2 hrs., Prereq.: NFSC 315, 319. Co-req.: NFSC 428.

NFSC 427 Food Systems Management II Lecture (2)
Discusses the processes and tools used in effective management, theories of management, and administrative leadership. Emphasizes Total Quality Management, mechanics of cost control, Quality Assurance in food production, and use of computers in food service operations. Lec. 2 Hrs., Prereq: NFSC 426, 428; Co-req: NFSC 429.

NFSC 428 Food Systems Management I Laboratory (1)
Visits various food service institutions to observe food service operations, maintains visitation records, and analyzes and critiques the operations. Provides

opportunities to complete a portfolio, simulates interviewing, and performs evaluation exercises in a classroom setting. Provides opportunities to network with representatives of Consumer and Regulatory Affairs to observe commercial food service operation's licensing procedures. Lab. 3 hrs., Prereq.: NFSC 315, 319. Co-req.: NFSC 426.

NFSC 429 Food Systems Management II Laboratory (1)
Provides laboratory experiences in developing mission statements, slogans, objectives, scheduling, organizational charts, communication strategies, budgets, and work simplification methods. Lab 3 Hrs., Prereq: NFSC 426, 428; Co-req: NFSC 427.

NFSC 442 Food Chemistry Laboratory (1)
Emphasizes laboratory exercises that deal with changes occurring during the processing and utilization of food. Lab 3 hrs., Prereq.: NFSC 209, 211, CHEM 135. Co-req.: NFSC 444.

NFSC 444 Food Chemistry Lecture (3)
Focuses on the basic composition, structure, and properties of food, and the chemistry of changes occurring during processing and utilization. Lec. 3 hrs., Prereq.: NFSC 209, 211, CHEM 135. Co-req.: NFSC 443.

NFSC 453 Food Analysis Laboratory (1)
Performs quantitative physical and chemical analysis of food and food products using various analytical procedures and instrumentations. Lab. 3 hrs., Prereq.: NFSC 442, 444. Co-req.: NFSC 455.

NFSC 454 Quality Control Lecture (3)
Focuses on analytical and statistical applications to the control of food and food products; acceptability, uniformity, appeal, health hazards, aesthetic factors, and consumer acceptance testing. Lec 3 Hrs., Prereq: NFSC 442, 444; Co-req: NFSC 456.

NFSC 455 Food Analysis Lecture (3)
Provides the study of the principles, methods, and techniques necessary for the quantitative physical and chemical analysis of food and food products. The analysis will be related to the standards and regulations for food processing. Lec. 3 hrs., Prereq.: NFSC 442, 444. Co-req.: NFSC 453.

NFSC 456 Quality Control Laboratory (1)
Focuses on laboratory exercises to control food and food products during production in meeting the buyer's specifications. Lab 3 hrs., Prereq.: NFSC 209, 211. Co-req.: NFSC 454.

NFSC 490 Senior Seminar and Research (2)
Critical review of literature on recent research in nutrition and food science and acquiring competency in writing proposals, assisting in conducting research, and presenting the findings of research. This course is also designed to develop teaching tools, and to conduct panel discussions, seminars, and symposia. Prereq.: Senior standing and permission of the Department Chairperson; Co-req: None.

ORNH 324 General Soils (4)
Provides information on soil texture, organic matter, plant nutrients and their relationship to fertilizers, lime, peat, and soil conditions. Lec. 3 hrs., Prereq. CHEM 112. Co-req.: ENSC 325.

ORNH 325 General Soils Laboratory (1)
Provides information on soil analysis, including organic matter, texture, structure, nutrients and cation exchange capacity. Lab. 3 hrs., Prereq.: CHEM 112. Co-req.: ENSC 324.

WTQL 121 Chemical Analysis of Water Quality (3)
Introduces the chemical procedures employed in the analysis of water and waste and wastewater. Employs procedures commonly used in a wastewater treatment plant, including instrumental methods of analysis. Lec. 3 hrs., Prereq.: CHEM 111. Co-req.: WTQL 123.

WTQL 123 Chemical Analysis of Water Quality Laboratory (1)
Emphasizes the chemical procedures employed in the analysis of water and wastewater, including laboratory methods for instrumental analysis. Lab 3 hrs., Co-req.: WTQL 121.

WTQL 126 Introduction to Water Quality (3)
Conveys an understanding of the ecology of moving and impounded fresh water under various conditions. Provides knowledge of the importance of physical and chemical properties and the effects of dissolved materials in water. Lec. 3 hrs., Co-req.: ENSC 127.

WTQL 127 Introduction to Water Quality Laboratory (1)
Emphasizes the physical and chemical properties of water. Lab 3 hrs., Co-req.: BIOL 126.

WTQL 221 Wastewater Technology (3)
Details the fundamental principles of wastewater collection, treatment, and disposal. Stresses

mathematical principles relevant to water plant operations. Emphasizes wastewater aeration with newest technologies available. Provides for problem-solving sessions which will treat flow methods and wastewater reactors at different stages. Provides new concepts of tertiary treatment. Lec. 3 hrs., Prereq.: ENSC 126, 127, 145, 146; Co-req.: WTQL 223.

WTQL 223 Wastewater Technology Laboratory (1)
Emphasizes the principles of wastewater collection and wastewater aeration. Lab 1 hr., Prereq.: ENSC 145, 146. Co-req.: WTQL 221.

WTQL 245 Water Quality Practicum (3)
Provides students with practical experience by direct observation of plant operations in wastewater treatment plants, emphasizes maintenance of a daily log of activities, as well as periodic written reports prepared by the student and evaluated by the instructor. Nine (9) hours per week on plant site. Prereq: Permission of Department Chairperson.

DEPARTMENT OF CHEMISTRY AND PHYSICS

Isadora J. Posey, Ph.D., Chairperson
Building 44, Room 200-18
(202) 274-7410

Full-time Faculty
Professors D.S. Blackman, G. Eng, R.L. Johnson, D.S. Khatri, N.S. Kondo, W.C. Nottingham, S.S. Pannu, I.J. Posey, E.H. Rogers Jr., L.C. Speller, S. Sullivan, P.C. Thorstenson
Associate Professor M.H. Hajiyani

The Department of Chemistry and Physics provides education and training in the physical sciences of chemistry and physics, both for students majoring in these disciplines and for those majoring in other science and nonscience areas. Its course offerings include, as well, those needed for many interdisciplinary fields (e.g., biophysics, biochemistry, premedicine, chemical physics). The courses in the Department are designed to prepare students to reason about physical events and to develop technical skills. Students learn to solve problems, perform experiments, collect and analyze data, and report findings. The programs prepare students for advanced study, for careers as technicians, and for scientific careers in government, industry, and educational institutions.

THE CHEMISTRY PROGRAM

The Bachelor of Science degree in Chemistry has three options: the Chemistry option, Chemistry with American Chemical Society (ACS) Certification option, and the Chemistry Education option. The ACS Certified Chemistry option meets the guidelines of the ACS Committee on Professional Training. The Chemistry Education option allows students to fulfill requirements for teacher certification. Many chemistry majors are admitted to medical, dental, and other professional schools. Graduates of the Chemistry Program go on to earn the Master's and Ph.D. degrees or to seek employment immediately after graduation. In either case, chemistry graduates have been very successful in their careers with the federal government and private industry. All faculty members hold the Ph.D. degree and are committed to teaching and research and to providing students both a challenging environment for learning and opportunities for growth and development. The Chemistry Program offers excellent research opportunities for undergraduate majors.

BACHELOR OF SCIENCE IN CHEMISTRY

Total Credit Hours of College-Level Courses Required for Graduation: 120 (Options 1 and 2)
130 (Option 3)

Required Core Courses:

CHEM	111	General Chemistry I	3
CHEM	112	General Chemistry II	3
CHEM	113	General Chemistry I Lab	1
CHEM	114	General Chemistry II Lab	1
CHEM	225	Descriptive Inorganic Chemistry	2
CHEM	231	Organic Chemistry I	3
CHEM	232	Organic Chemistry II	3
CHEM	233	Experimental Organic Chemistry I	2
CHEM	234	Experimental Organic Chemistry II	2
CHEM	245	Quantitative Analysis Lecture.	3
CHEM	247	Quantitative Analysis Lab	2
CHEM	351	Physical Chemistry I Lecture	3
CHEM	352	Physical Chemistry II Lecture	3
CHEM	353	Physical Chemistry I Lab	2
CHEM	354	Physical Chemistry II Lab	2
CHEM	355	Physical Chemistry Calculations I	1
CHEM	356	Physical Chemistry Calculations II	1
CHEM	445	Instrumental Methods of Analysis Lecture	3

CHEM	447	Instrumental Analysis Lab	2
APCT	104	Introduction to Application of Computers	2
APCT	105	Introduction to Application of Computers Lab	1
MATH	151	Calculus Lecture I	3
MATH	155	Calculus I Lab	1
MATH	152	Calculus Lecture II	3
MATH	156	Calculus II Lab	1
MATH	253	Calculus Lecture III	3
MATH	255	Calculus III Lab	1
PHYS	201	University Physics I Lecture.	3
PHYS	202	University Physics II Lecture.	3
PHYS	205	University Physics I Lab.	1
PHYS	206	University Physics II Lab.	1
BIOL	101	Biological Sciences I Lecture.	3
BIOL	102	Biological Sciences II Lecture.	3
BIOL	103	Biological Sciences I Lab	1
BIOL	104	Biological Sciences II Lab	1

Additional Required Courses

Option 1: Chemistry

General Electives 17

Option 2: Chemistry (with American Chemical Society Certification).

CHEM	411	Senior Research I	2
CHEM	412	Senior Research II	2
CHEM	425	Inorganic Chemistry	3
CHEM	426	Inorganic Chemistry Lab	2
CHEM	461	Biochemistry I	3
CHEM	463	Experimental Bio-chemistry I	2
CHEM		Chemistry electives (approved by Department)	3

Option 3: Chemistry Education

In addition to the required core courses for the Bachelor of Science degree in Chemistry, the following courses are required for students who wish to pursue teacher certification on the secondary level:

SPED	204	Survey of Exceptional Children	3
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban School	3
EDPY	244	Human Development and Behavior	3
EDPY	300	Educational Psychology	3
RDNG	315	Teaching of Reading in Secondary Schools	3
EDFN	446	Methods of Teaching Science	3
EDFN	471	Observation and Student Teaching	6

Additional Comments or Requirements

A grade point average of 2.00 is required in major courses. A minimum grade of "C" is required in chemistry courses.

Students who successfully complete Option 2 will receive a certificate from the American Chemical Society.

Students interested in the teacher education (secondary) option should consult with the chairperson of the Department of Education for further academic advising. Students must earn a grade of "C" or better in all required education courses except Observation and Student Teaching, which requires a grade of "B" or better.

PHYSICS PROGRAM

The Bachelor of Science degree in Physics has two options, the Physics option and the Physics Education option. The Physics Education option provides the flexibility that enables students to fulfill requirements for teacher certification for secondary schools. Graduates of the Physics Program enroll in some of the finest graduate schools in the country. Some are currently enrolled in graduate school, and many have received Master's or Ph.D. degrees in physics and work as research scientists.

The Physics Program has a diverse faculty, all of whom hold the Ph.D. degree. Faculty members are strongly committed to teaching and research, and offer to students a rich environment for learning. The Physics Program provides excellent research opportunities for undergraduate majors enrolled full-time at the University.

BACHELOR OF SCIENCE IN PHYSICS

Option 1: Physics

Total Credit Hours of College-Level Courses Required for Graduation: 120

Required Core Courses

PHYS	201	University Physics I Lecture.	3
PHYS	202	University Physics II Lecture	3
PHYS	203	University Physics III Lecture.	3
PHYS	205	University Physics I Lab	1
PHYS	206	University Physics II Lab	1

PHYS	211	Laboratory Techniques I	1
PHYS	212	Laboratory Techniques II	1
PHYS	331	Mechanics I	3
PHYS	332	Mechanics II	3
PHYS	341	Advanced Physics Lab I	1
PHYS	342	Advanced Physics Lab II	1
PHYS	345	Optics	3
PHYS	346	Thermodynamics	3
PHYS	441	Modern Physics I	3
PHYS	442	Modern Physics II	3
PHYS	451	Senior Project I	2
PHYS	452	Senior Project II	2
PHYS	461	Electricity and Magnetism I	3
PHYS	462	Electricity and Magnetism II	3
PHYS	499	General Examination in Physics	1
PHYS		Physics electives	9

Additional Required Courses:

CHEM	111	General Chemistry I Lec.	3
CHEM	112	General Chemistry II Lec.	3
CHEM	113	General Chemistry I Lab	1
CHEM	114	General Chemistry II Lab	1
APCT	231	Introduction to Computer Science I	3
APCT	232	Introduction to Computer Science II	3
APCT	233	Introduction to Computer Science I Lab	1
APCT	234	Introduction to Computer Science II Lab	1
MATH	151	Calculus I Lecture	3
MATH	155	Calculus I Lab	1
MATH	152	Calculus II Lecture	3
MATH	156	Calculus II Lab	1
MATH	253	Calculus III Lecture	3
MATH	255	Calculus III Lab	1
MATH	225	Linear Algebra	3
MATH	254	Differential Equations	3
		Elective	3

Option 2: Physics Teacher Education

Total credit hours of college-level courses required for graduation: 144

In addition to the required courses for a Bachelor of Science degree in Physics, the following courses are required for students who wish to pursue teacher certification on the secondary level.

SPED	204	Survey of Exceptional Children	3
EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3
EDPY	300	Educational Psychology	3
RDNG	315	Teaching of Reading in the Secondary Schools	3
EDFN	446	Methods of Teaching Science	3
EDFN	471	Observation and Student Teaching in the Secondary Schools	6

Additional Comments or Requirements

Registration for physics electives requires prior departmental approval. A physics major must earn a grade of "C" or better in each required course.

Students interested in the teacher education (secondary) option should consult with the chairperson of the Department of Education for further academic advising. Students must earn a grade of "C" or better in all required education courses except Student Teaching, which requires a grade of "B" or better.

COURSE DESCRIPTIONS

CHEM 105 Fundamentals of Chemistry Lecture (3)

Surveys the essential concepts of inorganic chemistry with emphasis on health-related applications. CHEM 105 is not acceptable for credit toward graduation for students majoring in chemistry. When taken as a prerequisite for CHEM 111 (General Chemistry I Lecture), there is no co-requisite. When taken to satisfy the University-wide science requirement, concurrent enrollment in CHEM 106 (Fundamentals of Chemistry Laboratory) is required. Lec. 3 hrs., Prereq: High School Algebra (2 yrs.) or equivalent.

CHEM 106 Fundamentals of Chemistry Laboratory (1)

Introduces basic laboratory techniques through a collection of experiments designed for students who have little or no laboratory experience. Introduces basic laboratory techniques. Requires concurrent enrollment in CHEM 105. Lab 3 hrs.

CHEM 109 Introductory Chemistry Lecture (3)

Presents and explains properties of matter in terms of modern theories and concepts. CHEM 109 is not acceptable for credit toward graduation for students majoring in chemistry. When taken as a prerequisite for CHEM 111 (General Chemistry I Lecture), there is no co-requisite. When taken to satisfy the University-wide science requirement, concurrent enrollment in CHEM

106 (Fundamentals of Chemistry Laboratory) is required. Lec. 3 hrs., Prereq.: High school algebra (2 yrs.) or equivalent.

CHEM 111 General Chemistry I Lecture (3)
Examines atomic structure, stoichiometry, periodic table, chemical bonding, molecular structure, properties of gases, liquids and solids, acids and bases, and oxidation-reduction reactions. Lec. 3 hrs., Prereq.: High school chemistry or CHEM 105, or CHEM 109, two years of high school algebra. Co-req.: CHEM 113.

CHEM 112 General Chemistry II Lecture (3)
Examines chemical thermodynamics, chemical kinetics, chemical equilibria, electrochemical reactions, nuclear chemistry, coordination complexes, and organic chemistry. Lec. 3 hrs., Prereq.: CHEM 111; Co-req: CHEM 114.

CHEM 113 General Chemistry I Laboratory (1)
Concentrates on the principles of chemistry with emphasis on statistical treatment of experimental data. Requires concurrent enrollment in CHEM 111. Lab 3 hrs.

CHEM 114 General Chemistry II Laboratory (1)
Emphasizes the experimental principles of solution chemistry. Requires concurrent enrollment in CHEM 112. Lab 3 hrs., Prereq.: CHEM 113.

CHEM 135 Essentials of Organic and Biochemistry Lecture (3)
Studies classes of organic compounds, their structure, nomenclature, and characteristic reactions; structure, function, and metabolism of proteins, carbohydrates, lipids, and nucleic acids. Requires concurrent enrollment in CHEM 136. Lec. 3 hrs., Prereq.: CHEM 105 or CHEM 109 or CHEM 111.

CHEM 136 Essentials of Organic and Biochemistry Laboratory (1)
Illustrates the basic properties of organic and biological compounds and some of the reactions they undergo, including functional group analysis through experimental exercises. Requires concurrent enrollment in CHEM 135. Lab 3 hrs.

CHEM 225 Descriptive Inorganic Chemistry (2)
Discusses the descriptive chemistry of the elements and their compounds in depth with trends, similarities, and comparisons among their properties being emphasized. Lec. 2 hrs., Prereq.: CHEM 112.

CHEM 231 Organic Chemistry I Lecture (3)
Studies the structure, nomenclature, stereochemistry, reactions, and reaction mechanism of hydrocarbons, alkyl halides, and alcohols. Lec. 3 hrs., Prereq.: CHEM 112. Co-req.: CHEM 233.

CHEM 232 Organic Chemistry II Lecture (3)
Examines the preparation and reactions of alkyl halides, alcohols, phenols, ethers, aldehydes, ketones, amines, carboxylic acids and their derivatives, sugars, and other biologically important compounds. Lec. 3 hrs., Prereq.: CHEM 231. Co-req.: CHEM 234.

CHEM 233 Experimental Organic Chemistry I (2)
Experiments in the techniques of separation, purification, and identification of pure substances; preparations and reactions of selected organic families; and introduction to infrared spectroscopy. Lab 6 hrs., Prereq.: CHEM 114. Co-req.: CHEM 231.

CHEM 234 Experimental Organic Chemistry II (2)
Introduces nuclear magnetic resonance, ultraviolet and mass spectroscopy; preparations and reactions of oxygenated organic compounds; introduction to qualitative organic analysis. Lab 6 hrs., Prereq.: CHEM 233. Co-req.: CHEM 232.

CHEM 245 Quantitative Analysis (3)
Discusses the theories of volumetric and gravimetric analysis with particular emphasis on acid-base, precipitation, complex formation and oxidation-reduction reactions. Lec 3 Hrs., Prereq: CHEM 112.

CHEM 247 Quantitative Analysis Laboratory (2)
Includes experiments illustrating volumetric, gravimetric, and potentiometric methods of analysis. Lab 6 hrs., Co-req.: CHEM 245.

CHEM 351 Physical Chemistry I Lecture (3)
Examines the physicochemical systems with application to the first, second, and third laws of thermodynamics; thermochemistry; homogeneous and heterogenous equilibria; electrochemistry; ionic equilibria; liquids and surface chemistry. Lec. 3 hrs., Prereq.: CHEM 112, MATH 152, PHYS 201. Co-req.: CHEM 353.

CHEM 352 Physical Chemistry II Lecture (3)
Discusses the kinetic theory of gases; kinetics and mechanism; molecular structure and symmetry; quantum theory and spectroscopy; statistical

mechanics; irreversible processes in solution; crystal structure and solid state. Lec. 3 hrs., Prereq.: CHEM 351. Co-req.: CHEM 354.

CHEM 353 Physical Chemistry I Laboratory (2)
Provides laboratory instruction in experimentation; treatment of experimental data and error analysis; report writing; and theory and operation of instruments. Lab 4 hrs., Co-req.: CHEM 351.

CHEM 354 Physical Chemistry II Laboratory (2)
Examines the techniques of physical measurements; error analysis. Explores thermodynamic measurements; chemical dynamics; spectroscopy; physical property measurements; electrochemical and conductivity measurements. Lab 4 hrs., Prereq.: CHEM 353. Co-req.: CHEM 352.

CHEM 355 Physical Chemistry Calculations I (1)
Teaches calculations based on the application of theories as studied in Physical Chemistry I Lecture. Lec. 1 hr., Co-req.: CHEM 351.

CHEM 356 Physical Chemistry Calculations II (1)
Teaches calculations based on the application of theories as studied in Physical Chemistry II Lecture. Lec. 1 hr., Co-req.: CHEM 352.

CHEM 411 Senior Research I (2)
Provides directed research in chosen area of chemistry. Includes techniques in literature searching, utilization of basic and specialized instrumentation, and preparation of scientific reports. Primarily for chemistry majors; other qualified majors may be considered. Lab 6 hrs., Prereq.: Permission of Department chair.

CHEM 412 Senior Research II (2)
Continues research project begun in CHEM 411.The student analyzes and interprets data, and prepares a final written report. Requires presentation of a seminar to the Department. Lab 6 hrs., Prereq.: CHEM 411.

CHEM 425 Inorganic Chemistry (3)
Studies atomic structure related to the periodic arrangement of elements. Discusses modern theories of bonding and acid-base systems. Includes structure, molecular symmetry, and group theory of inorganic compounds. Lec. 3 hrs., Prereq.: CHEM 351.

CHEM 426 Inorganic Chemistry Laboratory (2)
Examines the preparation of inorganic and organometallic compounds, illustrating advanced preparation techniques, including characterization by spectroscopic methods. Includes equilibrium and kinetics of related reaction systems. Lab 4 hrs., Prereq.: CHEM 353.

CHEM 435 Qualitative Organic Analysis (3)
Illustrates the systematic identification of organic compounds. Includes separation of mixtures; functional group analysis; and preparation of derivatives for characterization and identification. Lec. 1 hr., Lab. 4 hrs., Prereq.: CHEM 232 and CHEM 234.

CHEM 436 Advanced Organic Synthesis (2)
Provides an advanced laboratory course in organic chemistry. Discusses the techniques for the preparation, purification, and identification of organic compounds, with emphasis on newer developments. Determines mechanisms of reactions by kinetic and product analysis. Lab 4 hrs., Prereq.: CHEM 234.

CHEM 437 Advanced Organic Chemistry (3)
Examines theoretical organic chemistry. Discusses inductive, steric, and resonance effects; kinetic methods for determining reaction mechanisms; molecular rearrangements; and basic concepts in molecular orbital theory. Lec. 3 hrs., Prereq.: CHEM 232.

CHEM 445 Instrumental Methods of Analysis (3)
Studies the theory of instrumental methods of analysis, including potentiometry, coulometry, polarography, absorption spectrophotometry, chromatography, atomic spectroscopy, nuclear magnetic resonance, and other chromatographic methods of analysis. Lec. 3 hrs., Prereq.: CHEM 247 and CHEM 352.

CHEM 447 Instrumental Analysis Laboratory (2)
Provides the practices in electroanalytic methods, including potentionometry, coulometry, and polarography; optical methods, including visible, ultraviolet, infrared, and atomic absorption spectroscopy. Gas and high performance liquid chromatography and nuclear magnetic resonance are also discussed. Lab 4 hrs., Co-req.: CHEM 445.

CHEM 461 Biochemistry I (3)
Discusses the chemistry and function of biologically important compounds (amino acids and proteins, enzymes, carbohydrates, lipids, nucleic acids), membrane structure and transport, and the

thermodynamics of biological systems. Lec. 3 hrs., Prereq.: CHEM 232.

CHEM 462 Biochemistry II (3)
Studies the chemistry and regulation of major metabolic pathways, and fundamentals of molecular biology (replication of DNA, transcription, the genetic code, protein biosynthesis, and modern genetic technology) including a discussion of the ethical implications of contemporary practices. Lec. 3 hrs., Prereq.: CHEM 461.

CHEM 463 Experimental Biochemistry I (2)
Introduces techniques and applications of modern biochemistry, such as physicochemical studies of amino acids, purification, characterization, and kinetic study of an enzyme, isolation and characterization of DNA, utilization of chromatographic and electrophoretic methods. Lab 6 hrs., Prereq.: CHEM 234. Co-req.: CHEM 461.

PHYS 101 Introduction to College Physics I Lecture (3)
Introduces laws of motion and the concept of energy, thermal and elastic properties of matter, and theories of waves and sound. Fulfills physics requirement for biology, premed, and other science majors. Includes one additional hour per week for problem solving. Lec. 3 hrs., Prereq.: MATH 111 or equivalent. Co-req.: PHYS 103.

PHYS 102 Introduction to College Physics II Lecture (3)
Continues Introduction to College Physics I Lecture. Includes the study of electricity and magnetism, electronics, geometrical and physical optics, and a description of atomic and nuclear structure. Fulfills physics requirement for biology, premed, and other science majors. Includes one additional hour for problem solving. Lec. 3 hrs., Prereq.: PHYS 101, Co-req.: PHYS 104.

PHYS 103 Introduction to College Physics I Laboratory (1)
Accompanies Introduction to College Physics I Lecture and must be taken concurrently with this lecture course. Lab 2 hrs. Laboratory section must correspond to the lecture section.

PHYS 104 Introduction to College Physics II Laboratory (1)
Accompanies Introduction to College Physics II Lecture and must be taken concurrently with this lecture course. Lab 2 hrs. Laboratory section must correspond to the lecture section.

PHYS 105 Introductory Physics for Radiologic Technologists Lecture (3)
Offers specific objectives in relevant areas of applied physics. Includes topics ranging from the concepts involved in measurement and the properties of matter to the concepts of charge and current and ionizing radiation. Lec. 3 hrs. Prereq.: MATH 111.

PHYS 107 Physics for the Health Professions Lecture (3)
Applies the fundamental concepts of mechanics, electricity, magnetism, and modern physics to practices, principles, and techniques of health sciences. Includes problem solving to develop the basis for understanding physiological processes, such as sight, neural conduction, and hearing. Lec. 3 hrs. Prereq.: MATH 111.

PHYS 108 Physics for the Health Professions Laboratory (1)
Accompanies Physics for the Health Professions Lecture, and must be taken concurrently with this lecture course. Lab 2 hrs.

PHYS 109 Introductory Physics for Radiologic Technologists Laboratory (1)
Accompanies Introductory Physics for Radiologic Technologists Lecture, and must be taken concurrently with this lecture course. Lab 2 hrs.

PHYS 114 Astronomy and Space Science Lecture (3)
Introduces the principles of astronomy, which includes a discussion of the origin of the universe, theories of the nature of the universe, fundamental principles of solar and stellar systems, stellar phenomena, and space flight dynamics. Lec. 3 hrs., Co-req.: PHYS 116.

PHYS 115 Physics of Music Lecture (3)
Introduces acoustics and the theory of wave phenomena as related to the physical aspects of music. Primarily for music majors. Lec. 3 hrs. Prereq.: MATH 111. Co-req.: PHYS 117.

PHYS 116 Astronomy and Space Science Laboratory (1)
Accompanies Astronomy and Space Science Lecture. Includes experiments in physics as related to topics covered in the lecture. Includes visit to a planetarium

located in the area. To be taken concurrently with PHYS 114. Lab 2 hrs.

PHYS 117 Physics of Music Laboratory (1)
Accompanies Physics of Music Lecture. To be taken concurrently with PHYS 115. Lab 2 hrs.

PHYS 201 University Physics I Lecture (3)
Begins a sequence designed for physics majors and others who want a rigorous, calculus-level study on the general topics of classical and modern physics, with emphasis on problem solving. Includes Newtonian mechanics, with emphasis on the conservation laws of physics, fluid mechanics, heat, and thermodynamics. Lec. 3 hrs. Requires a weekly two-hour discussion and problem solving session. Prereq.: MATH 151. Co-req.: PHYS 205.

PHYS 202 University Physics II Lecture (3)
Continues University Physics I. Includes the study of wave motion, electric and magnetic fields, DC and AC electrical circuits, electromagnetic waves, and optics. Emphasizes problem solving. Requires a passing grade on a physics objective test to obtain credit for the course. Lec. 3 hrs. Requires a weekly two-hour discussion and problem solving session. Prereq.: PHYS 201, MATH 152. Co-req.: PHYS 206.

PHYS 203 University Physics III (3)
Continues University Physics II. Includes the study of relativity, quantum theory, atomic, molecular and nuclear physics, and an introduction to solid state physics. Required for physics and engineering majors. Lec. 3 hrs. Requires a weekly two-hour discussion and problem solving session. Prereq.: PHYS 202. Co-req.: For engineering majors, PHYS 207.

PHYS 205 University Physics I Laboratory (1)
Concentrates on experiments in the principles of physics and must be taken concurrently with PHYS 201. Lab 2 hrs.

PHYS 206 University Physics II Laboratory (1)
Continues University Physics I laboratory and must be taken concurrently with PHYS 202. Lab 2 hrs.

PHYS 207 University Physics III Laboratory (1)
Accompanies University Physics III Lecture and must be taken concurrently with PHYS 203. Lab 2 hrs.

PHYS 211 Laboratory Techniques I (1)
Introduces techniques of importance to physical scientists including electronic circuit construction and the use of science instruments. Provides instruction for science majors and students interested in experimentation. Lab. 2 hrs., Prereq.: PHYS 101 or PHYS 201.

PHYS 212 Laboratory Techniques II (1)
Continues Lab Techniques I. Introduces instruments and methods used in research laboratories in the physical sciences. Explores the use and calibration of standard electrical and electronic instruments. Provides instruction for science majors and others interested in instrumentation. Lab. 2 hrs., Prereq.: PHYS 211.

PHYS 225 Radiological Physics Lecture (3)
Offers specific objectives in the following areas of applied physics: AC devices in radiological physics, the physical principles, the circuitry, and the fundamentals of operation of Roentgenographics, the physics governing use and operational safety of x-ray and other kinds of Roentgenographic equipment. Lec. 3 hrs., Prereq.: PHYS 107.

PHYS 227 Radiological Physics Laboratory (1)
Accompanies Radiological Physics Lecture and must be taken concurrently with PHYS 225. Lab 2

PHYS 331 Mechanics I (3)
Studies mechanics using Newton's laws of motion. Includes a discussion of velocity and acceleration in plane polar coordinates, cylindrical coordinates, and spherical coordinates; simple harmonic motion, damped harmonic motion and forced harmonic resonance, and constrained motion of a pendulum; Kepler's three laws of motion; and dynamics of systems of many particles. Lec. 3 hrs., Prereq.: PHYS 202, MATH 152.

PHYS 332 Mechanics II (3)
Continues Mechanics I. Includes a discussion of mechanics of rigid bodies in two and three dimensions; physical pendulum, and Lagrange's and Hamilton's equations of motion; and dynamics of oscillating systems, coupled harmonic oscillators. Lec. 3 hrs., Prereq.: PHYS 331.

PHYS 341 Advanced Physics Laboratory I (1)
Concentrates on laboratory experiments in modern physics and various experiments using scientific apparatus in laser spectroscopy, magnetics, ultra-sonics, x-rays, or nuclear physics. Designed for science majors. Lab. 2 hrs., Prereq.: Permission of Department chair.

PHYS 342 Advanced Physics Laboratory II (1)
Continues Advanced Physics Laboratory I in an area of study other than the one chosen in Advanced Physics Laboratory I. Lab 2 hrs., Prereq.: PHYS 341.

PHYS 345 Optics (3)
Studies the techniques and instruments of both classical and modern optics from lenses to lasers. Provides instruction for science majors. Lec. 3 hrs., Prereq.: PHYS 202.

PHYS 346 Thermodynamics (3)
Studies thermodynamic systems making use of equations of state. Covers the first, second, and third laws of thermodynamics. Includes a discussion of some engineering applications and topics for physical chemistry. Lec. 3 hrs., Prereq.: PHYS 202, MATH 152.

PHYS 381 Mathematical Methods in Science I (3)
Studies various mathematical techniques, including series, complex variable theory, vector calculus, and differential equations, with emphasis on solving practical problems in chemistry, engineering, and physics. Lec. 3 hrs., Prereq.: PHYS 202, MATH 152.

PHYS 382 Mathematical Methods in Science II (3)
Continues Mathematical Methods in Science I. Applies applications to more advanced problems in differential equations, boundary value problems, etc. Lec. 3 hrs., Prereq.: PHYS 381

PHYS 418 Statistical Mechanics (3)
Discusses the development of certain thermodynamic concepts from the statistical point of view. Uses kinetic theory of gases where applicable. Lec. 3 hrs., Prereq.: PHYS 346.

PHYS 441 Modern Physics I (3)
Introduces quantum mechanics, covering the Schrödinger equation, tunneling phenomena, the hydrogen atom, multielectron atoms, and a survey of statistical mechanics. Lec. 3 hrs., Prereq.: PHYS 203, MATH 254.

PHYS 442 Modern Physics II (3)
Continues Modern Physics I. Applies the theory set forth in Modern Physics I to more specialized areas. Includes the physics of molecules and lasers, an introduction to the physics of solids, and the study of nuclear and particle physics. Lec. 3 hrs., Prereq.: PHYS 441.

PHYS 451 Senior Project I (VC)
Investigates research problems using facilities of the laboratory and library. Requires approval and supervision by designated physics faculty. Prereq.: Permission of chairperson.

PHYS 452 Senior Project II (VC)
Continues Senior Project I. Requires each major to write a scientific paper based on senior project research and make an oral presentation of the paper to the physics faculty and students. Prereq.: PHYS 451.

PHYS 461 Electricity and Magnetism I (3)
Provides mathematical treatment of the theory of electricity and magnetism with emphasis on electrostatic fields, the electric potential, and an introduction to the laws of magnetic interaction. Lec. 3 hrs., Prereq.: PHYS 202, MATH 254.

PHYS 462 Electricity and Magnetism II (3)
Continues Electricity and Magnetism I, including the study of electromagnetic induction, linear networks, dielectric and magnetic materials, Maxwell's equations, and electromagnetic waves. Lec. 3 hrs., Prereq.: PHYS 461.

PHYS 481 Mathematical Methods of Physics I (3)
Provides a treatment of several topics in mathematics of special importance in physical science. Includes vector and tensor analysis, integration in the complex plane, boundary value problems, and special functions.
Emphasizes the physical interpretation of problem solution. Lec. 3 hrs., Prereq.: PHYS 382.

PHYS 482 Mathematical Methods of Physics II (3)
Continues Mathematical Methods of Physics I with applications of the topics related to real physical systems. Lec. 3 hrs., Prereq.: PHYS 481.

PHYS 499 General Examination in Physics (1)
Involves reading problems and a weekly discussion in a seminar setting. Requires a passing grade on the Department's general examination. Lec. 1 hr., Prereq.: Permission of Chairperson.

DEPARTMENT OF MATHEMATICS

Lorenzo Hilliard, Ph.D., Chairperson
Building 32, Room B06-F
(202) 274-5153

Full-time Faculty
Professors B.J. Anderson, J. Bakshi, A. Borpujari, M. Hall, V. Katz, J.C. Keegel,
Associate Professors L. Blagmon-Earl, W.R. Coleman, W. Hamilton, W. Hawkins, L. Hilliard, W.H. Jones, P. Ly, M.S. Phua, V.Y. Steadman, K. Viehe
Assistant Professors B.Brown-Mangum, R. Cohen, J. Griffin, L. Horton, W. Rice III

The Department of Mathematics offers the degrees of Bachelor of Science and Master of Science in Teaching.

All new students, including transfer and readmit students, are required to take the Mathematics Placement Test before enrolling in classes. Based on the results of this test, a student enrolls in Basic Mathematics (MATH 005), Introductory Algebra (MATH 015), or a college level mathematics course (numbered MATH 100 or higher). Students should consult with their major departments to determine the college level course required in that discipline.

The Department also offers mathematics courses for students in other majors and professional in-service courses to the Washington community. The primary objectives of every mathematics course are to develop students' mathematical skills and to inculcate good habits of rigorous and critical thinking. The Department continues to emphasize the application of technology to enhance learning. Our goal is to have technology-driven learning activities as a part of all our courses.

To support instruction, the Department provides laboratories for students at all levels. For students in developmental mathematics courses, the MathPower Lab, located in Building 32, B-Level, provides tutorial and proficiency testing services. Audio, video, and computer-aided, as well as peer tutoring services, are also available in the laboratory.

For students in calculus or statistics courses, the Calculus Laboratory, located in Building 32, Room B-Level, has 30 networked student stations providing DERIVE, Minitab, MPP, MDEP, and Gyrographics. In addition to regularly scheduled class meetings in the laboratory, the Department provides over 30 hours of supervised open laboratory instruction for student use. The MAC (Mathematics and Statistics Activity Center) located in Building 42, 2nd Floor, provides person-to-person and computer-aided-tutoring for all college-level mathematics and statistics courses up through Differential Equations (and beyond as resources permit). MAC provides a setting for further training, mentoring, and guidance for Mathematics majors.

The Mathematics Education option and the M. S. T. program are accredited by the National Association of State Directors of Teacher Education and Certification.

MATHEMATICS PROGRAM

The Bachelor of Science degree program offers three options: Mathematics, Statistics, and Mathematics Education. Each program option will afford students an excellent preparation for a career in a mathematically-related field or for graduate study in mathematics, mathematics education, or in a related field. Advanced mathematics classes are generally small, enabling faculty to give each student personal attention as needed.

BACHELOR OF SCIENCE IN MATHEMATICS

Minimum Total Number of Credit Hours of College Level Courses Required: 120

Core Requirements (Required in all Degree Options):

PHIL	105	Introduction to Logic	3
APCT	231	Introduction to Computer Science I	3
APCT	233	Introduction to Computer Science I Lab	1
MATH	151,155	Calculus I, Calculus I Lab	4
MATH	152,156	Calculus II, Calculus II Lab	4
MATH	225	Linear Algebra	3
MATH	253,255	Calculus III, Calculus III Lab	4
MATH	176	Introduction to Mathematical Concepts	3
MATH	254	Differential Equations	3
		or	
MATH	260	Differential Equations w/Linear Algebra	4
MATH	351	Advanced Calculus I	3
MATH	411	Abstract Algebra I	3
MATH	490	Senior Seminar	1

Option 1: Mathematics

Additional Courses Required:

MATH	461	Complex Analysis I	3
MATH	352	Advanced Calculus II	3
		or	

MATH	412	Abstract Algebra II	3
		or	
MATH	462	Complex Analysis II	3

In addition, four advanced Mathematics elective courses must be chosen from the following list and must be approved by the Department of Mathematics.

MATH	316	Number Theory*	3
MATH	335	Classical Geometry*	3
MATH	352	Advanced Calculus II	3
MATH	381	Probability and Statistics	3
MATH	382	Probability With Applications	3
MATH	385	Regression Analysis With Applications	3
MATH	386	Analysis of Variance w/Application	3
MATH	409	History of Mathematics*	3
MATH	412	Abstract Algebra II	3
MATH	425	Advanced Linear Algebra	3
MATH	431	Modern Geometry I*	3
MATH	432	Modern Geometry II*	3
MATH	435	Differential Geometry	3
MATH	445	Topology	3
MATH	451	Real Analysis I	3
MATH	452	Real Analysis II	3
MATH	462	Complex Analysis II	3
MATH	475	Mathematical Logic	3
MATH	480	Mathematical Statistics I	3
MATH	481	Mathematical Statistics II	3
MATH	482	Numerical Analysis I	3
MATH	483	Numerical Analysis II	3
MATH	485	Mathematical Modeling	3
MATH	495	Independent Study	3
MATH	499	Special Topics In Mathematics	3

*At most, two of these may be chosen in the Mathematics Option.

Option 2: Statistics

Additional Courses Required

MATH	381	Probability and Statistics	3
MATH	382	Probability With Applications	3
MATH	385	Regression Analysis w/Application	3
MATH	386	Analysis of Variance w/Application	3
MATH	480	Mathematical Statistics I	3
MATH	481	Mathematical Statistics II	3

Option 3: Mathematics Education

Additional Courses Required

MATH	315	Number Structures With Application	3
MATH	381	Probability and Statistics	3
MATH	409	History of Mathematics	3

Two of the following three courses

MATH	335	Classical Geometry	3
MATH	431	Modern Geometry I	3
MATH	432	Modern Geometry II	3

Education Courses required for Mathematics Education Option: (Note: The education course requirements are subject to change according to teacher certification criteria.)

EDFN	220	Foundations of Education	3
RDNG	315	Teaching Reading In Secondary Schools	3
EDPY	300	Educational Psychology	3
SPED	204	Survey of Exceptional Children	3
EDFN	454	Methods and Materials of Teaching Mathematics In Secondary Schools	3
EDFN	471	Observation and Teaching in the Secondary Schools	(VC)
EDFN	222	Children and Youth in Urban Schools	3
EDPY	244	Human Development and Behavior	3
		or	
ECED	105	Principles of Child Development	3

Additional Comments or Requirements
Mathematics majors must earn a grade of "C" or better in each required course in the Mathematics major program, and for the Mathematics Option, in each mathematics elective course. Students must earn a grade of "C" or better in all required education courses except Observation and Student Teaching which requires a grade of "B" or better.

MASTER OF SCIENCE IN TEACHING MATHEMATICS

The M.S. In Teaching Mathematics is designed to provide quality graduate training for 1) in-service secondary teachers who wish to pursue full certification in mathematics; 2) secondary mathematics teachers who wish to update their mathematics and mathematics teaching skills, and 3) recent college graduates who wish to pursue a degree in teaching mathematics at the secondary level. In-service secondary mathematics

teachers who wish to enroll in mathematics courses for "refresher" purposes are welcome to enroll in the program courses for which they qualify. The program emphasizes both advanced mathematical content and the development and reinforcement of effective pedagogy. Successful degree candidates will have satisfied the licensing requirements for secondary school teachers of mathematics in the District of Columbia Public Schools.

Admission Requirements
An applicant for admission to the M.S.T. program in mathematics must hold a bachelor's degree from an accredited college or university and have completed the equivalent of Calculus III (MATH 253). An applicant who does not satisfy the latter requirement may be admitted provisionally until the requirement is met.

Submit to the Office of Graduate Admissions an application package which includes official transcripts, three letters of recommendation from persons acquainted with the applicant's professional competence or potential for graduate study, an essay, and Graduate Record Exam scores.

Complete all requirements for admission to graduate studies.

Comprehensive Examination: Required

Thesis: None Required

Under the direction of an advisor, candidates for the Master of Science in Teaching Mathematics (MST) degree must:

1. Complete a minimum of 30 credit hours of graduate credits, 24 of which must be in mathematics. The remaining six hours will normally be taken in mathematics, mathematics education, and/or education. Students who have not been licensed to teach in the District of Columbia must satisfy the licensing requirements for secondary school teachers of mathematics in the District of Columbia. Depending on work completed prior to admission to the MST Program, the licensing requirements may extend a student's program far beyond the 30 credit hours minimally required for the completion of the program.

2. Pass a final comprehensive examination based on the courses completed in the program. Students may satisfy this requirement by enrolling in the course, MATH 600, which is a one-credit course designed exclusively for this purpose. The final exam for the course serves as the comprehensive examination for the program. A student must perform at the level of "B" in order to pass the examination.

3. Satisfy the certification requirements for secondary teachers of mathematics in the District of Columbia.

4. Pass the Graduate Writing Proficiency Examination.

5. Complete the requirements for the MST degree within five years from the time admitted to the degree program.

Graduate Writing Proficiency Examination
Completion of the Graduate Writing Proficiency Exam at or above the level set by the University is required of all graduate students. Students must take the writing proficiency examination in the first semester of enrollment. Students must register to take the examination, which is administered only once each semester.

Course Requirements
Under the direction of an advisor, candidates for the MST degree are required to complete the following courses:

MATH	551	Probability and Statistics I for Teachers	3
MATH	581	Seminar I for Mathematics Teachers	3
MATH	582	Seminar II for Mathematics Teachers	3
MATH	541	History of Mathematics for Teachers	3
MATH	525	Number Theory for Teachers	3
MATH	546	Computers in the Secondary Classroom	3
MATH	600	Comprehensive Summary	1

At least one course from each of the following categories:

Geometry

MATH	511	Classical Geometry for Teachers	3
MATH	515	Modern Geometry I for Teachers	3
MATH	516	Modern Geometry II for Teachers	3

Algebra

MATH	501	Linear Algebra for Teachers	3

MATH 521 Abstract Algebra I for Teachers . . 3
MATH 522 Abstract Algebra II for Teachers . . 3

Analysis

MATH 505 Advanced Calculus I for Teachers 3
MATH 506 Advanced Calculus II for Teachers 3
MATH 502 Differential Equations for Teachers 3
MATH 565 Complex Analysis I for Teachers . 3
MATH 566 Complex Analysis II for Teachers . 3

Electives

MATH 575 Numerical Analysis I for Teachers 3
MATH 576 Numerical Analysis II for Teachers 3
MATH 552 Probability and Statistics II for Teacher 3
MATH 547 Mathematics Modeling for Teachers 3
MATH 599 Topics in Mathematics VC

COURSE DESCRIPTIONS

MATH 005 Basic Mathematics (3)
Develops the decimal numeration system; arithmetic of whole numbers; rational numbers as common fractions and as decimals; percents; ratios and proportions; arithmetic of integers; properties of order; and geometric formulas. Provides basic mathematics skills for beginning college students who have not demonstrated competency in arithmetic computation. Lec. 3 hrs.

MATH 015 Introductory Algebra (3)
Develops properties of whole numbers, integers, rational numbers, and real numbers; graphing; solution of equations and inequalities; exponents; polynomials and factoring; rational expressions; scientific notation; roots and radicals. Lec. 3 hrs., Prereq.: MATH 005 or appropriate scores on the Mathematics Placement Test. Provides basic algebraic skills for students who have not demonstrated competency in algebra.

MATH 101 General College Mathematics I (3)
Provides mathematical skills, knowledge, and understanding necessary to function in a technological society. Topics include: problem solving; sets and logic; numeration and mathematical systems; linear equations and inequalities; and graphing. Lec. 3 hrs., Prereq.: MATH 015 or appropriate scores on the Mathematics Placement Test. Students whose major requires specific mathematical skills should not enroll in MATH 101 or MATH 102. Consult your academic department.

MATH 102 General College Mathematics II (3)
Continues MATH 101. Explores measurement and geometry; trigonometry of right triangles; consumer mathematics; and an introduction to probability and statistics. Lec. 3 hrs., Prereq.: MATH 101.

MATH 105 Intermediate Algebra (3)
Develops basic geometric ideas, the real number system and algebraic expressions, factoring, exponents, radicals, rational expressions, first degree equations and inequalities, quadratic equations, the Cartesian plane, and systems of equations. Provides intermediate algebra instruction for students with competence in introductory algebra but who require additional preparation prior to enrollment in courses that lead to calculus (e.g., MATH 113 or MATH 116). Lec. 3 hrs., Prereq.: MATH 015 or appropriate score on the Mathematics Placement Test.

MATH 111 Technical Mathematics I (4)
Provides introduction to algebraic concepts, definitions, notations, operations and symbols with emphasis on analysis and solution of applied problems. Includes algebraic fractions; exponential notation; linear and quadratic equations; simultaneous equations; inequalities; graphing; and linear programming. Lec. 4 hrs., Prereq.: MATH 015 or appropriate scores on the Mathematics Placement Test. Provides instruction primarily for students in two-year technology programs. Important note: credit will be awarded for only one of: MATH 111, MATH 113 or MATH 115.

MATH 112 Technical Mathematics II (4)
Continues MATH 111. Provides introduction to concepts, notations, operations, and symbols used in geometry, trigonometry, and calculus with emphasis on analysis and solution of applied problems. Includes exponential and logarithmic functions; geometry; trigonometric functions; solution of right and oblique triangles; radian measure; vectors; continuous functions and limits; derivatives and applications; integrals; and graphing functions. Lec. 4 hrs., Prereq.: MATH 111. Important note: credit will be given for only one of: MATH 112, MATH 114 or MATH 115.

MATH 113 Precalculus With Trigonometry I (3)
Examines algebraic notation and symbolism; exponents and radicals; algebraic functions; solution of linear and quadratic equations and inequalities; relations and functions; rational functions and their graphs; conic sections; exponential and logarithmic functions and their graphs. Provides instruction primarily for students preparing to take calculus. Lec. 3 hrs., Prereq.: MATH

105 Important note: credit will be given for only one of: MATH 111, MATH 113 or MATH 115.

MATH 114 Precalculus With Trigonometry II (3)
Continues MATH 113. Studies trigonometric functions, identities, and their applications; solution of trigonometric equations; systems of equations and inequalities; operations with complex numbers; polynomials; and mathematical induction. Lec. 3 hrs., Prereq.: MATH 113. Important note: credit will be given for only one of MATH 112, MATH 114 or MATH 115.

MATH 115 Precalculus-Intensive (3)
Covers all the material in MATH 113 and MATH 114. A course for students who have had three or four years of secondary school mathematics. Includes a technical laboratory as an integral part of the course. Students taking MATH 115 must take the same section of MATH 120. Lec. 3 hrs., Co-req: MATH 120; Prereq: Completion of algebra, geometry and trigonometry in high school and permission of the Department of Mathematics. Important Note: Credit will be awarded for only one of the following sequences: MATH 111, MATH 112 or MATH 113, MATH 114 or MATH 115.

MATH 116 Finite Mathematics (3)
Investigates systems of linear equations, matrices and linear programming; elementary functions, especially logarithmic and exponential functions; and applications to business situations. Lec. 3 hrs., Prereq.: MATH 105 or appropriate scores on the Mathematics Placement Test.

MATH 117 Business Mathematics I (3)
Introduces applications of mathematical operations to problems involving total sales, averages, time cards, stock market reports, and invoices; use of ratio and proportion with consumer price index, shares and percentages. **Provides instruction primarily for students in two-year business programs.** Lec. 3 hrs., Prereq.: MATH 015 or appropriate scores on the Mathematics Placement Test.

MATH 118 Business Mathematics II (3)
Continues MATH 117. Investigates computation of simple and compound interest; interpretation of charts and graphs; construction of depreciation schedules; and computation of effective interest rate and true annual percentage rate. Lec. 3 hrs., Prereq.: MATH 117.

MATH 120 Precalculus-Intensive Lab (1)
Uses technology to provide visual and/or numerical support when solving problems by algebraic methods and when algebraic methods are impossible or impractical. Students taking MATH 120 must take the same section of MATH 115. Lab 2 hrs., Co-req: MATH 115.

MATH 151 Calculus I (3)
Develops concepts and skills for limits and continuity; derivatives and their applications; integrals and their applications; the Fundamental Theorem of Calculus; and elementary transcendental functions. Includes computer laboratory as an integral part of the course. Lec. 3 hrs., Co-req.: MATH 155; Prereq.: MATH 114 or permission of the Department of Mathematics.

MATH 152 Calculus II (3)
Continues MATH 151. Explores further applications of the derivative and the integral; techniques of integration; further topics in the calculus of one variable; analytic geometry; sequences and infinite series. Includes computer laboratory as an integral part of the course. Lec. 3 hrs., Co-req.: MATH 156. Prereq.: MATH 151 or permission of the Department of Mathematics.

MATH 155 Calculus I Lab (1)
Explores theoretical concepts and applications of Calculus I (MATH-151) in an experimental environment designed to employ symbolic, numerical, and graphics capabilities of a computer algebra system. Lab 2 hrs., Co-req.: MATH 151

MATH 156 Calculus II Lab (1)
Explores theoretical concepts and applications of Calculus II (MATH 152) in an experimental environment designed to employ symbolic, numerical, and graphics capabilities of a computer algebra system. Lab 2 hrs., Co-req.: MATH 152

MATH 176 Introduction to Mathematical Concepts (3)
Examines elementary set theory and logic; axiomatic systems taken from both numbers and geometry; mathematical induction; basic techniques for structuring and performing elementary proofs; and mathematical systems. Provides instruction primarily for mathematics majors. Lec. 3 hrs., Prereq.: MATH 152 and PHIL 105 or permission of the Department of Mathematics.

MATH 185 Elementary Statistics I (3)
Provides introduction to concepts and techniques of probability and statistics, including measures of central tendency and dispersion; probability and probability distributions; correlation and regression; statistical inference; and computer applications using Minitab. Presents the first of a two-course sequence. Lec. 3 hrs., Prereq.: MATH 105.

MATH 186 Elementary Statistics II (3)
Continues MATH 185. Develops concepts, skills, and applications for hypothesis testing; analysis of variance; the chi-square distribution; correlation and regression analysis; non-parametric statistics; and computer applications using Minitab. Lec. 3 hrs., Prereq.: MATH 185.

MATH 215 Calculus for Business, Economics, the Social and Life Sciences (4)
Presents concepts and skills on limits and continuity; differential and integral calculus with applications from business, economics, and the social and biological sciences. Lec. 4 hrs., Prereq.: MATH 113, MATH 116 or equivalent.

MATH 225 Linear Algebra (3)
Investigates systems of linear equations and methods of solution; matrices and matrix solutions of linear systems; matrix algebra; determinants; vectors and vector spaces; linear transformations; and inner products and norms. Lec. 3 hrs., Prereq.: MATH 151 or permission of the Department of Mathematics.

MATH 253 Calculus III (3)
Continues MATH 152. Provides additional topics in the calculus of several variables; vector and analytic geometry in space; vector-valued functions; partial differentiation; multiple integration; integration of vector fields; and Green's, Stokes', and Gauss' Theorems. Includes computer laboratory as an integral part of the course. Lec. 3 hrs., Co-req.: MATH 255; Prereq.: MATH 152 or permission of the Department of Mathematics.

MATH 254 Differential Equations (3)
Examines first order equations; linear and systems of linear differential equations; higher order equations; equations with non-constant coefficients; applications; series solutions; solution of partial differential equations; and elliptic and hyperbolic equations. Lec. 3 hrs., Prereq.: MATH 253 and MATH 225 or permission of the Department of Mathematics.

MATH 255 Calculus III Laboratory (1)
Explores theoretical concepts and applications of Calculus III (MATH 253) in an experimental environment designed to employ symbolic, numeral, and graphics capabilities of a computer algebra system. Lab 2 hrs., Co-req.: MATH 253.

MATH 260 Differential Equations With Linear Algebra (4)
Covers ordinary differential equations and topics from linear algebra and their applications to differential equations. Examines first order equations; integrating factors; series solutions; second order equations; matrices; determinants; vector spaces; eigenvalues; and other selected topics. Provides instruction for mathematics, science, and engineering students. Lec. 4 hrs., Prereq.: MATH 253 or permission of the Department of Mathematics.

MATH 315 Number Structures With Applications (3)
Provides an introduction to the real number system, its subsystems, and applications; elementary number theory. Lec. 3 hrs., Prereq.: MATH 151 or MATH 215 or permission of the Department of Mathematics.

MATH 316 Number Theory (3)
Examines divisibility; numerical functions; the arithmetic of congruency classes; solving congruences; theory of primitive roots; and quadratic reciprocity. Lec. 3 hrs., Prereq.: MATH 151 or permission of the Department of Mathematics.

MATH 335 Classical Geometry (3)
Treats plane and solid Euclidean geometry from a theoretical and historical perspective, including congruence; parallel postulate and its consequences; similarity; area and area functions; constructions; volume; and elementary transformations of the plane. Lec. 3 hrs., Prereq.: MATH 151 or permission of the Department of Mathematics.

MATH 351 Advanced Calculus I (3)
Studies completeness and order properties of the real numbers; n-dimensional Euclidean space and its topology; the Bolzano-Weierstrass and Heine-Borel theorems; limits and continuity; and theory of differentiation. Lec. 3 hrs., Prereq.: MATH 253 and MATH 176, or permission of the Department of Mathematics.

MATH 352 Advanced Calculus II (3)
Continues MATH 351. Examines theory of maxima and minima; inverse and implicit function theorems;

integration theory; infinite series; uniform convergence; and vector analysis. Lec. 3 hrs., Prereq.: MATH 351 or permission of the Department of Mathematics.

MATH 381 Probability and Statistics (3)
Explores mathematical models of random phenomena; basic probability theory; discrete probability spaces; combinatorial analysis; conditional probability; independent and dependent events; Bernoulli trials; Markov chains; fluctuations in coin-tossing and random walks; distribution functions; mean and variance of a probability law; notion of average; expectation of a function; the normal, Poisson, exponential, gamma, and related probability laws; and computer applications using Minitab. Lec. 3 hrs., Prereq.: MATH 152 or permission of the Department of Mathematics.

MATH 382 Probability with Applications (3)
Continues MATH 381. Examines approximations of binomial and Poisson distributions by the normal distribution; probabilities of functions of random variables; law of large numbers; central limit theorem; related topics; statistical inference and hypothesis testing; and computer applications using Minitab. Lec. 3 hrs., Prereq.: MATH 381. Co-req.: MATH 253 or permission of Department of Mathematics.

MATH 385 Introduction to Regression Analysis and its Application (3)
Introduces simple and multiple linear regression; stepwise regression procedure; regression diagnostics, including residual analysis, collinearity and scaling problems; and computer applications using Minitab or SPSSX. Lec. 3 hrs., Prereq.: MATH 381 or permission or the Department of Mathematics.

MATH 386 Analysis of Variance and its Application (3)
Introduces and illustrates design of experiments and analysis of variance; randomized blocks, factorial analysis, and Latin Square designs; and analysis of covariance. Includes computer applications using Minitab or SPSSX. Lec. 3 hrs., Prereq.: MATH 385 or permission of the Department of Mathematics.

MATH 393 Theory and Applications of Mathematics (3)
Explores structure of a mathematical system; sets and whole numbers; sets and arithmetic; system of whole numbers; base-ten arithmetic; arithmetic in bases other than ten; elementary number theory; system of integers; system of rational numbers; decimal expansions and real numbers; metric system; and probability and statistics. Provides instruction for students who intend to teach in elementary school**.** Lec. 3 hrs., Prereq.: MATH 102 or permission of the Department of Mathematics.

MATH 394 Informal Geometry with Applications (3)
Investigates intuitive plane geometry; measurement and coordinate geometry; elementary logic; geometric constructions; and Pythagorean Theorem. Provides instruction for students who intend to teach in elementary school**.** Lec. 3 hrs., Prereq.: MATH 393 or permission of the Department of Mathematics.

MATH 409 History of Mathematics (3)
Investigates, among other topics: mathematics of early mankind; the real number system, and the role of the ancient civilizations in its development; mathematics during the Dark Ages of Europe; mathematics during the Renaissance; and contributions of Blacks to the development of mathematics. Lec. 3 hrs., Prereq.: MATH 152 or permission of the Department of Mathematics.

MATH 411 Abstract Algebra I (3)
Studies binary operations; groups and subgroups; permutations; cyclic groups; isomorphisms; direct products; finitely generated Abelian groups; normal subgroups and factor groups; and series of groups. Lec. 3 hrs., Prereq.: MATH 176 and MATH 225 or permission of the Department of Mathematics.

MATH 412 Abstract Algebra II (3)
Continues MATH 411. Studies rings, integral domains; fields and fields of quotients of integral domains; quotient rings and ideals; homomorphism of rings; polynomials; factoring polynomials over a field; extension fields; splitting fields; separable extensions; finite fields; and Galois Theory. Lec. 3 hrs., Prereq.: MATH 411 or permission of the Department of Mathematics.

MATH 413 Applied Modern Algebra I (3)
The study of counting principles, logic, set theory, properties of the natural numbers and of the integers, functions, and some basic definitions and concepts of finite state automata. Lec. 3 hrs., Prereq.: MATH 225 or MATH 260 or permission of the Department of Mathematics. Important Note: MATH 413 does not meet the requirements for a major in mathematics.

MATH 414 Applied Modern Algebra II (3)
The study of relations, generating functions, graph theory, trees, Boolean algebra, ring theory, group theory and coding theory. Lec. 3 hrs., Prereq.: MATH

413 or permission of the Department of Mathematics. Important Note: MATH 414 does not meet the requirements for a major in mathematics.

MATH 425 Advanced Linear Algebra (3)
Examines vector spaces, dual spaces, canonical forms; eigenvalues and eigenvectors; inner product spaces; and spectral theory and applications. Lec. 3 hrs., Prereq.: MATH 176 and MATH 225, or permission of the Department of Mathematics.

MATH 431 Modern Geometry I (3)
Emphasizes foundation and structure of the development of geometry, including projective, Euclidean, non-Euclidean and finite geometries studied by means of their transformations and axiom systems. Lec. 3 hrs., Prereq.: MATH 176 and MATH 225 or permission of the Department of Mathematics.

MATH 432 Modern Geometry II (3)
Continues MATH 431. Studies algebraic projective geometry; linear algebra; vector algebra; generalized coordinate systems, and linear transformations. Lec. 3 hrs., Prereq.: MATH 431 or permission of the Department of Mathematics.

MATH 435 Differential Geometry (3)
Develops tangent vectors, normal planes; curvature; principal normals; torsion; Frenet equations; co-ordinate systems; tangent planes; normal lines; the first and second fundamental forms; normal and principal curves; Gaussian and mean curvature; the fundamental theorem of surfaces; applications of multilinear algebra to surfaces; geodesics; and differential forms. Lec. 3 hrs., Prereq.: MATH 254 or MATH 260, and MATH 352 or permission of the Department of Mathematics.

MATH 445 Topology (3)
Examines open sets, topologies, closed sets, neighborhoods, limit points, and closures and interiors; derived sets; bases, Frechet and Hausdorff spaces; continuity, homomorphisms; and connectedness and compactness. Lec. 3 hrs., Prereq.: MATH 176 or permission of the Chairperson of the Department of Mathematics.

MATH 451 Real Analysis I (3)
Examines metric spaces, the Bolzano-Weierstrass theorem, Cantor sets, sequences of functions, Borel sets and Baire functions, well-orderings, measure and measurable sets, and Lebesgue integration and Lebesgue measure. Lec. 3 hrs., Prereq.: MATH 352 or permission of the Chairperson of the Department of Mathematics.

MATH 452 Real Analysis II (3)
Continuation of MATH 451. Includes Banach and Hilbert spaces, the Hahn-Banach theorem, the open-mapping theorem, operators, dual and double dual spaces, and reflexive Banach spaces. Lec. 3 hrs., Prereq.: MATH 451 or permission of the Chairperson of the Department of Mathematics.

MATH 461 Complex Analysis I (3)
Studies complex numbers and their geometry; functions and limits; derivatives and elementary functions; line integrals; Cauchy's theorems and applications; power and Laurent series; and residues and applications. Lec. 3 hrs., Prereq.: MATH 351 or permission of the Department of Mathematics.

MATH 462 Complex Analysis II (3)
Continues MATH 461. Further studies topics in power series; conformal mappings; and harmonic functions and their applications. Lec. 3 hrs., Prereq.: MATH 461 or permission of the Department of Mathematics.

MATH 475 Mathematical Logic (3)
Includes propositional logic; predicate logic; the formalization of arithmetic and Godel's theorems; and applications to automata and data structures. Provides instruction for students who have had some experience proving theorems and desire a rigorous introduction to the foundations of mathematics. Lec. 3 hrs., Prereq.: MATH 411 or PHIL 334 or permission of the Department of Mathematics.

MATH 480 Mathematical Statistics I (3)
Examines distribution theory; sampling theory; estimation; hypothesis testing; and techniques of analyses of variance and covariance from an advanced mathematical point of view. Includes computer applications using Minitab or SPSSX. Lec. 3 hrs., Prereq.: MATH 351 and MATH 382 or permission of the Department of Mathematics.

MATH 481 Mathematical Statistics II (3)
Continues MATH 480. Explores regression analysis; application of analysis of variance; and application of time series analysis to social, biological, and physical sciences. Includes computer applications using Minitab or SPSSX. Lec. 3 hrs., Prereq.: MATH 480 or permission of the Department of Mathematics.

MATH 482 Numerical Analysis I (3)
Introduces basic computational methods for nonlinear equations; acceleration of convergence; interpolation; approximation; and numerical differentiation and integration. Supplements theoretical study with

computer programming assignments. Presents the first of a two-course sequence. Lec. 3 hrs., Prereq.: MATH 152 and competency in a programming language or permission of the Department of Mathematics.

MATH 483 Numerical Analysis II (3)
Continues MATH 482. Investigates initial value problems for ordinary differential equations; direct and iterative methods for solving systems of linear equations; the symmetric eigenvalue problem; and the least squares problem. Includes computer programming assignments. Lec. 3 hrs., Prereq.: MATH 225, MATH 482 and either MATH 254 or MATH 260 or permission of the Department of Mathematics.

MATH 485 Mathematical Modeling (3)
Introduces mathematical techniques in modeling the behavior of various systems. Includes linear programming and differential equations. Lec. 3 hrs., Prereq.: MATH 254 or MATH 260 or permission of the Department of Mathematics.

MATH 490 Senior Seminar (1)
Describes methods of presenting seminars; new mathematical discoveries; career opportunities in mathematics; other topics not covered in formal courses. Serves as a requirement for all senior mathematics majors. Lec. 1 hr., Prereq.: MATH 351, MATH 411, APCT 231 and senior status in mathematics or permission of the Department of Mathematics.

MATH 495 Independent Study (1-6)
Studies a mathematical topic not covered in any other undergraduate course. May be repeated for credit, but no more than a total of six credit hours will be awarded. Offers independent study under the direction of a faculty member. Prereq.: An agreement with an instructor describing the subject matter and method of study and written approval of the Chairperson of the Department of Mathematics.

MATH 499 Special Topics in Mathematics (3)
Covers topics determined by the Department of Mathematics. Open to all mathematics majors and other students with a sufficient background in mathematics. Serves as an extension of a regularly offered mathematics course. Prereq.: Permission of the Department of Mathematics.

GRADUATE COURSE DESCRIPTIONS

MATH 501 Linear Algebra for Teachers (3)
Examines systems of linear equations and methods of solutions, matrices and matrix solutions of linear systems, matrix algebra, determinants, vectors and vector spaces, linear transformations, and inner products and norms. Prereq.: Either MATH 151 or permission of the Department of Mathematics.

MATH 502 Differential Equations for Teachers (3)
Studies first-order differential equations, linear and systems of linear differential equations, higher order equations, equations with nonconstant coefficients, applications, series solutions, solution of partial differential equations, and elliptic and hyperbolic equations. Prereq.: MATH 253 or permission of the Department of Mathematics.

MATH 503 Fundamental Concepts of Mathematics for Elementary Teachers I (3)
Introduces topics on sets and logic, real numbers (properties and operations), numeration systems and elementary number theory. Prereq.: Permission of the Department of Mathematics.

MATH 504 Fundamental Concepts of Mathematics for Elementary Teachers II (3)
Introduces topics from modern elementary algebra, linear equations and inequalities, systems of equations, and polynomials and functions. Prereq.: Permission of the Department of Mathematics.

MATH 505 Advanced Calculus I for Teachers (3)
Studies completeness and order properties of the real numbers, n-dimensional Euclidean space and its topology, the Bolzano-Weierstrass and Heine-Borel theorems, limits and continuity, and the theory of differentiation. Prereq.: MATH 253 or permission of the Department of Mathematics.

MATH 506 Advanced Calculus II for Teachers (3)
Continues MATH 505. Develops the theory of maxima and minima, inverse- and implicit-function theorems, the theory of integration, infinite series, uniform convergence, and vector analysis. Prereq.: MATH 505 or permission of the Department of Mathematics.

MATH 507 Advanced Mathematics Concepts I for Mathematics Specialists (3)
Treats the development of methods and techniques for solving applied problems related to business, economics, and biological and physical sciences. The content includes the prerequisites for selected concepts of applied differential and integral calculus. Prereq.: Acceptable score on the placement test and permission of the director.

MATH 510 Geometry for Elementary School Teachers (3)
Develops an understanding of those fundamental geometrical concepts necessary for elementary school teachers, including congruence, similarity and measurement, geometric constructions, deductive reasoning, plane and space figures, and elements of trigonometry. Prereq.: Permission of the Department of Mathematics.

MATH 511 Classical Geometry for Teachers (3)
Treats topics in plane and solid Euclidean geometry from a theoretical and historical perspective, including congruence, the parallel postulate and its consequences, similarity, area and area functions, constructions, volume, and the elementary transformations of the plane. Examines applications to secondary school curricula. Prereq.: Either MATH 151 or permission of the Department of Mathematics.

MATH 512 Foundations of Geometry for Teachers (3)
Presents an axiomatic treatment of Euclidean and non-Euclidean geometries, Legendre's attempt to prove Euclid's parallel postulate, methods of proof, models for axiomatic systems, Hilbert's axioms, neutral geometry, the Saccheri-Legendre theorem, hyperbolic and elliptic geometries, the Poincare and Beltrami-Klein models, and philosophical implications of non-Euclidean geometries. Prereq.: MATH 253 or permission of the Department of Mathematics.

MATH 514 Topics from Calculus for Mathematics Specialists (3)
Allows mathematics specialists an opportunity to explore concepts of calculus through concrete examples. Realistic problems involving average and instantaneous rates of change, areas, volumes, and curve lengths are addressed and related to the concepts of differentiation and integration. Prereq.: Permission of program director and a placement test.

MATH 515 Modern Geometry I for Teachers (3)
Develops geometry with an emphasis on foundations and structures, including the study of projective, Euclidean, non-Euclidean and finite geometries by means of their transformations and axiom systems. Prereq.: Either MATH 152 or permission of the Department of Mathematics.

MATH 516 Modern Geometry II for Teachers (3)
Continues MATH 515. Studies algebraic projective geometry, linear algebra, vector algebra, generalized coordinate systems, and linear transformations. Prereq.: MATH 515 or permission of the Department of Mathematics.

MATH 521 Abstract Algebra I for Teachers (3)
Studies binary operations, groups, subgroups, permutations, cyclic groups, isomorphisms, direct products, finitely generated Abelian groups, normal subgroups and factor groups, and series of groups. Prereq.: MATH 501 or permission of the Department of Mathematics.

MATH 522 Abstract Algebra II for Teachers (3)
Continues MATH 521. Examines rings, integral domains, fields and fields of quotients of integral domains; quotient rings and ideals, homomorphisms of rings, rings of polynomials, factoring polynomials over a field, extension fields, splitting fields, separable extensions, finite fields, and Galois theory. Prereq.: MATH 521 or permission of the Department of Mathematics.

MATH 525 Number Theory for Teachers (3)
Examines divisibility, numerical functions, the arithmetic of congruence classes, solving congruences, theory of primitive roots, and quadratic reciprocity. Prereq.: MATH 151 or permission of the Department of Mathematics.

MATH 530 Methods for Elementary Mathematics School Specialists (3)
Treats traditional methods and materials topics, as well as curriculum trends and developments, organization for instruction and classroom management, and the use of media and calculators in elementary mathematics as related to supervision and instruction. Prereq.: Permission of the Department of Mathematics.

MATH 531 Teaching Mathematics in Urban Secondary Schools (3)
Analyzes modes of teaching mathematics, the difficulty of some concepts in secondary school mathematics, and the learning difficulties of some students. Exposes teachers to various teaching strategies to facilitate learning in mathematics and test development strategies to measure instructional intent. Requires laboratory experience. Prereq.: Permission of the Department of Mathematics.

MATH 532 Teaching Geometry in Secondary Schools (3)
Uses postulational approach to derive well-known geometrical facts and models of non-Euclidean geometries. Evaluates new curricular materials in geometry. Requires laboratory experience. Prereq.: MATH 511 or permission of the Department of Mathematics.

MATH 533 Using the Computer in Elementary Mathematics (3)
Includes elementary programming techniques, computer/machine record keeping and use of the hand held calculator in the classroom. Provides "hands on" experience with computers. Explores ways in which the computer can be used effectively in the elementary school curriculum in mathematics. Prereq.: Permission of the Department of Mathematics.

MATH 534 Problem Solving for Elementary School Teachers (3)
Includes the traditional concepts and techniques of computation and applications of mathematics to solve real world problems, techniques of stating word problems, and development of problem solving strategies. Prereq.: Permission of the Department of Mathematics.

MATH 535 Methods of Problem Solving (3)
Includes learning to read mathematically and developing methods for solving various types of applied problems related to secondary school mathematics, with the emphasis on algorithmic approaches. Allows student to develop algorithms for use in classroom. Prereq.: Permission of the Department of Mathematics.

MATH 540 History of Mathematics for Mathematics Specialists (3)
Includes topics related to the history of numbers and number systems, mathematics from ancient civilizations, Europe, Africa, and other relevant civilizations. Careful attention to the contributions of Blacks and other minorities will be emphasized. Prereq.: Permission of the program director.

MATH 541 History of Mathematics for Teachers (3)
Examines, among other topics, the mathematics of early mankind, the real number system and the role of the ancient civilizations in its development, mathematics during the Dark Ages of Europe, and mathematics during the Renaissance. Discusses the contributions of Blacks to the development of mathematics. Prereq.: Either MATH 152 or permission of the Department of Mathematics.

MATH 545 History of Teaching Mathematics (3)
Provides historical survey of educational theories, with emphasis on the teaching of mathematics. Prereq.: Permission of the Department of Mathematics.

MATH 546 Computers in the Secondary Classroom (3)
Includes programming techniques, the use of contemporary computer packages, evaluation of software and the use of hand held graphing calculators in the classroom. Participants will be provided with "hands on" experience with computers. They will also explore ways in which the computer can be used effectively in the secondary school curriculum in mathematics. Prereq.: Permission of the Department of Mathematics.

MATH 547 Mathematics Modeling for Teachers (3)
Introduces the techniques of mathematics modeling. Mathematics modeling is a special type of "problem solving", involving the following steps: problem identification, model construction or selection, identification and collection of data, model validation, calculation of solution to the model, and model implementation and maintenance. The course includes graph theory, system of equations and inequalities, numerical tables, algorithms, probability, and statistics. Prereq.: MATH 253 or equivalent, MATH 501, MATH 551 or permission of the Department of Mathematics.

MATH 550 Probability and Statistics for Elementary School Teachers (3)
Treats permutations and combinations, outcomes, sample spaces and events and probability of an event, and elementary measures of central tendency dispersion, and relationship. Prereq.: MATH 502 or permission of the Department of Mathematics.

MATH 551 Probability and Statistics for Teachers I (3)
Introduces concepts of probability, such as probability space, random variable, independence and conditional independence; the central limit theorem as a generalization of the asymptotic normality of the binomial, Poisson and other distributions; introduces basic concepts of statistics, such as estimation and hypothesis testing. Prereq.: Either MATH 152 or permission of the Department of Mathematics.

MATH 552 Probability and Statistics for Teachers II (3)
Continuation of MATH 551. Students will make full use of computers, and heavy emphasis will be placed on statistical interpretation. Topics include regression, analysis of variance, and general multivariate techniques commonly used in the social sciences. Prereq.: MATH 551 or permission of the Department of Mathematics.

MATH 555 Applications of Algebra and Probability (3)
Explores systems of equations, matrix techniques, maximizing and minimizing, networks and graphs, game theory, probability models, and computers and mathematics. Prereq.: MATH 552 or permission of the Department of Mathematics.

MATH 561 Topology for Teachers (3)
Studies open sets, topologies, closed sets, neighborhoods, limit points, closures and interiors; derived sets; bases, Frechet, and Hausdorff spaces; continuity, homomorphisms; and connectedness and compactness, with examples drawn from Euclidean spaces. Prereq.: Either MATH 351 or MATH 505 or permission of the Department of Mathematics.

MATH 563 Real Analysis I for Teachers (3)
Examines metric spaces, the Bolzano-Weierstrass theorem, Cantor sets, sequences of functions, Borel sets and Baire functions, well-orderings, measure and measurable sets, and Lebesgue integration and Lebesgue measure. Prereq.: Permission of the Department of Mathematics.

MATH 565 Complex Analysis I for Teachers (3)
Studies complex numbers, limits and continuity of complex functions; derivatives and elementary functions; the Cauchy-Riemann conditions; contour integration, Cauchy's theorem and their applications. Prereq.: Either MATH 351 or MATH 505 or permission of the Department of Mathematics.

MATH 566 Complex Analysis II for Teachers (3)
Continuation of MATH 565. The fundamental theorem of algebra, Morea's theorem, sequences, series, Laurent and Taylor series, meromorphic functions, the theory of residues and its applications, conformal mappings and their applications, fractional linear transformations, and the Schwarz-Christoffel transformation. Prereq.: MATH 565 or permission of the Department of Mathematics.

MATH 571 Mathematical Logic for Teachers (3)
Teaches students who have had some experience proving theorems and desire a rigorous introduction to the foundations of mathematics. Includes propositional logic, predicate logic, the formalization of arithmetic and Godel's theorems; and applications to automata and data structures. Prereq.: Either MATH 411 or MATH 521 or MATH 334 or permission of the Department of Mathematics.

MATH 575 Numerical Analysis I for Teachers (3)
Examines types of errors; errors from tables; differences; interpolation formulas of Gauss, Newton, Stirling, Everett, and Lagrange; double interpolation; numerical differentiation; and introduction to numerical integration. Prereq.: MATH 253 or permission of the Department of Mathematics.

MATH 576 Numerical Analysis II for Teachers (3)
Continuation of MATH 575. More numerical integration, numerical solutions of polynomial equations with real and complex coefficients, numerical solutions of transcendental equations, root squaring, and numerical solutions of differential equations by the Euler, Milne, Runge-Kutta and series methods. Prereq.: MATH 575 or permission of the Department of Mathematics.

MATH 580 Research Seminar for Elementary Mathematics Specialist (3)
Provides M.S.T. candidates in Elementary Mathematics an opportunity for individual research on current trends in mathematics curricula for elementary schools, with emphasis on review of literature in selected topics or issues. Prereq.: Permission of the Department of Mathematics.

MATH 581 Seminar I for Mathematics Teachers (3)
Provides M.S.T. candidates in Mathematics an opportunity for individual research on current trends in

mathematics curricula for secondary schools, with emphasis on review of literature in selected topics or issues. Introduces preparation of modern text materials relevant to teaching situation. Includes topics, such as computer-assisted and computer-managed instruction, constructing objectives from Bloom's affective domain, process-oriented instruction, the role of geometry in the secondary school curriculum, and managing anxiety in the mathematics classroom. Prereq.: Permission of the Department of Mathematics.

MATH 582 Seminar II for Mathematics Teachers (3)
Offers M.S.T. candidates in Mathematic a problem-oriented seminar. Includes topics such as techniques of computer-assisted instruction and the implications of computers in the mathematics classroom. Requires a project in computer-assisted instruction. Prereq.: MATH 581 or permission of the Department of Mathematics.

MATH 595 Mathematics Department Leadership (3)
Provides instruction for those master teachers of mathematics who desire to become leaders of departments of mathematics in the secondary schools. Provides tools to facilitate leadership in mathematics instruction. Emphasizes evaluating the role of the leader in providing instructional, educational, organizational, supervisory, administrative, and team leadership in the school. Prereq.: Permission of the Department of Mathematics.

MATH 599 Selected Topics in Mathematics (3)
Studies a mathematical topic not covered in any other graduate course. May be repeated for credit if the topics are different. Prereq.: Permission of the Department of Mathematics.

MATH 600 Comprehensive Summary (1)
Summarizes the M.S.T. program's mathematical content in geometry, algebra, probability and statistics, analysis, topology, and problem solving. Prereq.: 18 credit hours of mathematics in courses numbered 500 or higher.

MATH 679 Graduate Cooperative Education Internship (1-6)
Provides an approved alternative internship, generally from four to six months, whereby a learning contract is established prior to the work project. Allows the cooperative education coordinator, the student, and the employer to enter into a written agreement regarding the design and development of the cooperative education assignment. Prereq.: 12 credit hours of graduate study; a grade-point average of at least 3.00; written permission of the Department of Mathematics cooperative education coordinator, and full-time enrollment in the semester when applying.

DIVISION OF URBAN AFFAIRS, BEHAVIORAL & SOCIAL SCIENCES

DEPARTMENT OF URBAN AFFAIRS, SOCIAL SCIENCES & SOCIAL WORK

Shiela Harmon Martin, Ph.D., Acting Chairperson
Building 41, Room 413-09
(202) 274-7407

Full-time Faculty
Professors B. Ausbrook, E. Bovelle, L. Buck, J. Burton, M. El-Khawas, M. Giles, S. Hill, D. Remy
Associate Professors A. Flowers, S. Martin, L. Richards
Assistant Professors L. Buck, S. Harkness, R. Helou, W. Redmond

The Department of Urban Affairs, Social Sciences and Social Work is the primary department for students interested in studying urban issues and the social sciences. The study of urban issues and social sciences with a problem-solving orientation is at the heart of the urban land-grant university. The Department's teaching, research, and public service missions provide a context for exploring issues characteristic of racially and ethnically diverse cities within a transformed regional and world economy.

The Department prepares students with the breadth of understanding and analytical modes of thought needed in a variety of professions, from public safety and social work to academic careers. Departmental programs provide specific knowledge and technical skills that prepare students for graduate study in the respective disciplines, or related disciplines, and for careers in research, law, government, and other fields. See the program descriptions for further details.

The Department offers programs leading to the Bachelor of Arts degree in Administration of Justice, Urban Studies, History, Political Science, and Sociology. The Bachelor of Social Work degree is offered for Social Work majors. The Department also offers the Associate in Applied Science degree in Law Enforcement and Corrections Administration and courses in geography and philosophy. Faculty members are engaged in interdisciplinary teaching, and

students are encouraged to take a variety of courses from several programs.

The Urban Studies Program offers a Certificate in Nonprofit Leadership through its affiliation with American Humanics, a national alliance of colleges, universities, and nonprofit agencies preparing undergraduates for careers in youth and human service agencies. Certification enables students with any major to become prepared for a professional career in the expanding nonprofit sector of the urban economy. It also enables those with baccalaureate degrees seeking career advancement or change to acquire the necessary knowledge and skills. Leadership practitioners from Washington's vibrant nonprofit sector give guest presentations, serve as mentors, and provide internship opportunities.

The Department serves students in other departments by offering courses basic to a liberal education which are useful in increasing the student's understanding of self, of interactions with others, and of the institutions in which all of us live and work.

The Department's partnership with public and private agencies, institutions of higher education in the metropolitan area, and programs of professional development instruction for Metropolitan Police and Corrections help academic faculty fulfill its commitment to the University's unique urban land-grant mission.

CRIMINAL JUSTICE PROGRAM

Criminal Justice is the scientific and humane study of crime, the criminal justice system, criminals, and society's reactions to crime. The Criminal Justice Program offers an interdisciplinary course of study leading to associate and baccalaureate degrees in criminal justice. The associate in applied science students may concentrate their studies in corrections or in law enforcement.

The curriculum includes policy and legal issues, qualitative and quantitative research, interpersonal relations, and administrative procedures. It integrates writing and computer and verbal communications skills throughout the program. Computer-based research and analysis play a pivotal role in the criminal justice field. Students, therefore, are required in some cases, and strongly encouraged in others , to take advantage of computer-based Geography courses.

The Criminal Justice Program encourages self-directed intellectual inquiry, problem solving, ethics, and a commitment to human rights as important professional values by offering opportunities for experiential learning both in the classroom and in a variety of criminal justice agencies.

Criminal justice is ranked in the top 100 for employment opportunities with both public and private sector career options available. While undergraduate degrees offer entry-level opportunities, upward mobility requires advanced degrees.

ASSOCIATE IN APPLIED SCIENCE IN CORRECTIONS ADMINISTRATION and the ASSOCIATE IN APPLIED SCIENCE IN LAW ENFORCEMENT

Total Credit Hours of College-Level Courses Required for Graduation: 60

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
		Mathematics, 100 Level	6
		*Natural Science with Lab	4

Required Courses

HIST	102	U.S. History II	3
URST	105	Introduction to Social Science	3
PSYC	201	Principles of Psychology	3
URST	310	Ethics and Public Service	3
CRIM	100	Criminal Justice Systems	3
CRIM	102	Criminology	3
CRIM	203	Introduction to Forensic Sciences	3
CRIM	204	Forensic Sciences Lab	1
CRIM	222	Criminal Procedures	3
CRIM	224	Issues in Criminal Law	3
CRIM	232	Criminal Behavior	3
CRIM	234	Juvenile Justice	3
CRIM	271	Dynamics of Human Relations	3
CRIM	272	Conflict Resolution/Mediation Techniques electives	3

Select one Concentration

Corrections Administration Concentration:

Corrections Special Topics	6

Law Enforcement Concentration:

Law Enforcement Special Topics	6

Additional Comments or Requirements
A grade point average of 2.0 is required in major courses.

BACHELOR OF ARTS IN ADMINISTRATION OF JUSTICE

Total Credit Hours of College-Level Courses Required for Graduation: 120

General Requirements: 43

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing I	3
MATH		Mathematics, College-Level	6
		Foreign Language	6
PHIL		Philosophy	3
		*Natural Science with Lab	8
		Fine Arts elective	3
		**Social Science electives	0
SPCH	115	Public Speaking Phyical Education **or** Health Personal and Community	4
		or Natural Science with Lab	4

*Biology, Chemistry, Environmental Science, or Fundamentals of Anatomy & Physiology will satisfy Major and University-wide requirements.
**Satisfied in Program major.

Required Courses: 68

HIST	102	U.S. History II	3
URST	105	Introduction to Social Science	3
PSYC	201	Principles of Psychology	3
URST	310	Ethics and Public Service	3
GEOG	103	World Regional Geography	3
CRIM	100	Criminal Justice Systems	3
CRIM	101	Criminology	3
CRIM	203	Introduction to Forensic Sciences	3
CRIM	204	Forensic Sciences Lab	1
CRIM	271	Dynamics of Human Relations	3
CRIM	222	Criminal Procedures	3
CRIM	224	Issues in Criminal Law	3
CRIM	232	Criminal Behavior	3
CRIM	234	Juvenile Justice Systems	3
CRIM	272	Conflict Resolution/Mediation Technique.	3
CRIM	300	Constitutional Law	3
CRIM	305	Administration in Criminal Justice	3
CRIM	309	Justice in a Multicultural Society	3
CRIM	390	Practicum	3
HIST	410	History of Crime and Punishment	3
CRIM	450	Research in Justice Systems	3
CRIM	451	Research in Justice Statistical Lab	1
CRIM	491	Senior Seminar	3
CRIM	497	Program Design & Evaluation	3
GEOG	375	Introduction to Desktop GIS	3

Select one Concentration:

Law Enforcement Concentration:
Law Enforcement Special Topics 9

Corrections Concentration:
Corrections Special Topics 9

Additional Comments or Requirements
A grade point average of 2.0 is required in major courses.

URBAN STUDIES PROGRAM

The Urban Studies Program offers courses leading to a Bachelor of Arts in Urban Studies. This interdisciplinary social science program draws on the talents of faculty trained in the fields of economics, history, sociology, anthropology, social work, criminal justice, political science, public administration, and urban affairs.

The program's curriculum focuses on the socio-economic relations of urban areas and the linkages between urban development issues and the aspects of racism, gender issues, poverty, income, wealth, and ethnicity.

The program is organized around four areas:

1. the history and nature of the urbanization process;
2. the analysis of urban social issues and problems;
3. the acquisition of basic and applied research skills; and
4. policy analysis.

The undergraduate and graduate courses provide knowledge of the history of urban growth, the organization and structure of the urban economy; social structure of the urban political system; administrative structures of urban governments; the decision-making process of urban policy making, and development, implementation and evaluation. The program prepares undergraduate students for graduate and professional studies.

BACHELOR OF ARTS IN URBAN STUDIES

Total Credit Hours of College-Level Courses Required for Graduation: 120

General Requirements: 51

ORTA 101	Freshman Orientation	1
ENGL 111	English Composition I	3
ENGL 112	English Composition I	3
ENGL 211	Literature and Advanced Writing I	3
ENGL 212	Literature and Advanced Writing II	3
MATH	Mathematics, College-Level	6
	Foreign Language	6
	Philosophy	3
	Natural Science with Lab	8
	Fine Arts elective	3
SPEC 115	Public Speaking Physical Education **or** Health Personal and Community	4
	or Natural Science with Lab	4

Required Courses: **51**

URST 106	District of Columbia	3
UAFG 101	Urban Experience	3
UAFG 105	Introduction to Social Science	3
UAFG 310	Ethics and Public Service	3
GEOG 103	World Regional Geography	3
URST 205	Urban Poverty	3
URST 335	Urban Political Economy	3
URST 336	Municipal Budgetary Process	3
URST 384	Advanced Research Techniques	3
URST 405	Urban Policy Analysis	3
URST 494	Senior Seminar	3
URST 304	Urban Government	3
URST 307	Race, Class and Ethnicity	3

Three hours in Comparative Urbanization may be selected from the following:

URST 311	Comparative Urbanization: U.S.	3
URST 312	Comparative Urbanization: Europe	3
URST 313	Comparative Urbanization: Third World	3
URST	Electives in Urban Studies	9

CERTIFICATE IN NONPROFIT LEADERSHIP

The Certificate in Nonprofit Leadership prepares students for professional careers in the growing nonprofit sector through academic courses, co-curricular activities, a national management institute, and internship/volunteer experience. The certificate program is open to majors in any discipline and to holders of baccalaureate degrees interested in career development or change.

Certificate in Nonprofit Leadership
Total Credit Hours Required for Certification: 13

Required courses

URST 305	Introduction to Nonprofit Organizations	3
URST 306	Fundraising	3
URST 308	Volunteer Management	3
URST 299	American Humanics Management Institute	1

Elective courses

URST 294	Nonprofit Challenges: Topic Varies	3
APCT 104	Introduction to Application Of Computers	3
ACCT	Financial Management for Nonprofits	3
BMGT	Introduction to Nonprofit Management	3

Additional Comments or Requirements
A minimum grade point average of 2.0 is required for all urban studies courses.

HISTORY PROGRAM

The History Program offers two options leading to the Bachelor of Arts degree. The first option prepares majors for graduate study or for entering fields such as journalism, politics, law, and government. The second option prepares majors for professional work as teachers in secondary schools. History courses provide non-majors the opportunity to increase their awareness of the significance of historical change in society.

BACHELOR OF ARTS IN HISTORY

Total Credit Hours of College-Level Courses Required for Graduation: **120**
Option 1: History

Required Courses for Option 1:			**39**
HIST	101	U.S. History I	3
HIST	102	U.S. History II	3
HIST	164	History of Black Americans	3
HIST	171	World Civilization I	
		or	
HIST	172	World Civilization II	3
HIST	394	Philosophy and Methods of History	3
HIST	491	Research Seminar in History	3

Select one of the following

HIST	274	History of Socialism and Communism	3
HIST	276	Colonialism and Imperialism	3
HIST	278	History of Women in the World	3
HIST	279	History of D.C.	3
HIST	490	Selected Topics in History	3

Select at least one course from three of the following areas:

Asian History
African History
European History
Latin American History
Middle Eastern History

Three History Electives 9

Total credit hours 39
Option 2: History/Social Studies Teacher Certification

Required Courses for Option 2:			**72**
HIST	101	U.S. History I	3
HIST	102	U.S. History II	3
HIST	171	World Civilization I	3
		or	
HIST	172	World Civilization II	3
HIST	279	History of D.C.	3
HIST	394	Philosophy and Methods of History	3
HIST	491	Research Seminar in History	3
HIST		History electives	12

Education Courses Required for Option 2:

EDFN	220	Foundations of Education	3
EDFN	222	Children and Youth in Urban Schools	3
EDFN	244	Human Development and Behavior	3
SPED	204	Introduction to Education of Exceptional Children	3
EDPY	300	Educational Psychology	3
EDFN	452	Methods of Teaching in Secondary Schools	3
RDNG	315	Teaching of Reading in Secondary Schools	3
EDFN	471	Student Teaching	3

Additional Required Courses for Option 2:

GEOG	104	World Physical Geography	3
GEOG	206	World Cultural Geography	
		or	
GEOG		Geography elective	3
ECON	201	Principles of Economics I	3
POLI	206	Introduction to American Government	3
SPCH	115	Public Speaking	3
		or	
SPCH	116	Voice and Articulation	3

Select 3 credit hours in any one of the following:

Political Science (Law)
Philosophy
Psychology
Social Science
Sociology

Total credit hours 72

Additional Comments or Requirements
A minimum grade of "C" is required in all history courses.

POLITICAL SCIENCE PROGRAM

The Political Science Program offers the Bachelor of Arts degree. Consonant with the goals of the University of the District of Columbia and the College of Arts and Sciences, the Political Science Program is committed to using its resources to help solve the urban problems of the District of Columbia metropolitan area.

Toward this end, the program seeks to develop an understanding of the major concepts useful for analyzing political and social problems and the

centrality of politics in the structure and function of all social systems; to provide assistance to individuals in community programs and political activities which promote the welfare of the citizens of the Washington, D.C. area; to promote awareness of the diverse perceptions of the realities of politics in the United States and on the international level; and to assist students in developing an understanding of racial, minority, socio-economic, psycho-political, and other major issues in the contemporary world.

The Political Science Program is designed to prepare students for advanced studies in graduate school and law school, as well as entry into the government service. The program also provides supportive services through opportunities for practical experiences (internships) that enhance student development.

BACHELOR OF ARTS IN POLITICAL SCIENCE

Total Credit Hours of College-Level Courses Required for Graduation: 120

Required Courses for the Political Science Program:

POLI	205	Introduction to Political Science	3
POLI	206	Introduction to American Government	3
POLI	207	Black Politics	3
POLI	285	Political Ideologies	3
POLI	295	Political Research Skills	3
POLI	497	Methods of Political Science	3
POLI	498	Senior Seminar	3
		Political Science electives	9
Statistics			3
Total credit hours			**33**

Additional Requirements
A minimum grade of "C" is required in all required political science courses.

SOCIOLOGY PROGRAM

The Sociology Program offers the Bachelor of Arts Degree. The curriculum provides a comparative analysis of cultures, institutions, and social interaction. Students acquire knowledge of social processes and policy issues as they study social units ranging in size from small groups to global systems. Courses focus on such aspects of society as belief systems, socialization practices, the family, bureaucratic organizations, social control, and social movements and change. Students are trained to conduct research and are provided opportunities for hands-on experience through field placement in the community. The research component is a central part of the program, providing knowledge based on direct experience developing research skills which are in demand.

The curriculum prepares its majors for graduate training in sociology and several related disciplines, and for careers in a variety of professions. The courses also serve other students, providing an understanding of social interaction and social institutions and leading to increased self-awareness and understanding of others. Consequently, students learn to work more effectively with others and with the organizations in which they work and live.

BACHELOR OF ARTS IN SOCIOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 120

Required Courses for Sociology Program

SOCY	111	Introduction to Sociology	3
ANTH	113	Introduction to Anthropology	3
SOCY	320	Research Methods	3
SOCY	321	Statistics for Social Research	3
SOCY	394	Critical Analysis and Writing in the Social Sciences	3
SOCY	470	Development of Social Theory	
		or	
ANTH	474	Anthropological Theories in Perspective	3
		Sociology and Anthropology electives	15
Total			**33**

Additional Requirements
A minimum grade of "C" is required in all sociology and anthropology courses. Students are advised to take the Elementary Statistics course as their second required mathematics course before taking Statistics for Social Research.

SOCIAL WORK PROGRAM

The Social Work Program offers a course of study leading to the Bachelor of Social Work degree. The courses are designed to prepare a cadre of professionally competent, ethically based entry level social work generalists who have the skills required to resolve problems in contemporary urban living.

The program aims to develop social work generalists who understand and appreciate social work practice. They will also possess a body of knowledge and skills

relevant for beginning professional practice with individuals, families, groups, communities, and organizations. In addition, students will recognize and assume responsibility for ongoing professional development. The curriculum focuses on preparing practitioners for multilevel assessment and intervention with the aim of empowering client systems to overcome challenges. Students are also prepared to contribute to social work research and to address social policy issues through the promotion of social and economic justice. The Social Work Program is accredited at the undergraduate level by the Council on Social Work Education.

BACHELOR OF SOCIAL WORK

Total Credit Hours of College-Level Courses Required for Graduation: 120

General Requirements: 43

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH		Mathematics 100-Level	6
		Foreign Language	6
		Philosophy (I)	3
		Natural Science with Lab (2)	8
		Fine Arts elective	3
		Public Speaking **or** Physical Education **or** Health Personal and Community **or** Natural Science with Lab	4

Pre-professional Foundation:

URST	105	Introduction to Social Science	3
PHIL*	105	Introduction to Logic	3
POLI	205	Introduction to Political Science	3
ANTH	115	Introduction to Anthropology	3

Select from below for human biology requirement

BIOL	**101	Biological Science I	3
BIOL	102	Biological Science II	3
BIOL	103	Biological Science I, Lab	1
BIOL	104	Biological Science, II, Lab	1
		or	
BIOL	111	Fundamentals of Anatomy and Physiology I	3
BIOL	112	Fundamentals of Anatomy and Physiology II	3
BIOL	113	Fundamentals of Anatomy and Physiology I, Lab	1
BIOL	114	Fundamentals of Anatomy and Physiology II, Lab	1

Select one of the following

ECON	105	Economics of Social Issues	3
GEOG	347	Urban Geography	3
URST	106	The District of Columbia	3

Professional Foundation: 42

SOWK	310	Social Welfare as a Social Institution I	3
SOWK	311	Social Welfare as a Social Institution II	3
SOWK	320	Human Behavior and Social Environment I	3
SOWK	321	Human Behavior and Social Environment II	3
SOWK	330	Approaches to Interviewing	3
SOWK	331	Approaches to Group Work	3
SOWK	332	Social Work Methods I	3
SOWK	433	Social Work Methods II	3
SOWK	340	Research in Social Welfare I	3
SOWK	341	Research in Social Welfare II	3
SOWK	342	Statistical Lab I	1
SOWK	343	Statistical Lab II	1
SOWK	490	Practicum I	5
SOWK	491	Practicum II	5

*This course also meets the general education requirement in Philosophy.

**These courses will also meet the general education requirement in Natural Science.

Note: Credit hours in parentheses should be taken to meet general education requirements and have already been counted.

Additional Comments or Requirements

Students begin their core social work courses in their junior year. A grade point average of 2.5 is required in social work courses. A grade of "C" or better in each practicum course is also required.

GEOGRAPHY COURSES

Geography courses are a core set of spatial analytical courses and computer software application classes to enhance the curriculum of students in other majors. While students cannot major in geography, they may select courses that strengthen their understanding of the role of physical and cultural factors in the development of societies in the world. Students majoring in any field may also acquire competencies in the application of geographic information systems (GIS) and computer cartography.

GEOG	103	World Regional Geography	3
GEOG	104	World Physical Geography	3
GEOG	105	World Cultural Geography	3
GEOG	258	Geography of the District Of Columbia	3
GEOG	347	Urban Geography	3
GEOG	370	Introduction to Computer Mapping and Cartography	3
GEOG	375	Introduction to Desktop GIS	3
GEOG	470	Advanced Desktop GIS	3
GEOG	475	Urban & Environmental Geographic Information Systems (GIS)	3

PHILOSOPHY COURSES

While the students cannot major in Philosophy, courses are offered that provide students with an understanding of major problems that have occupied philosophers in various traditions. Specific objectives are to teach students to raise fundamental questions about society, its institutions, policies, and objectives; and to train students to examine critically the philosophical assumptions of a body of thought and to develop and articulate alternative philosophical frameworks. The course in logic develops analytical and inferential skills.

PHIL	105	Introduction to Logic	3
PHIL	106	Introduction to Problems in Philosophy	3
PHIL	107	Introduction to Philosophy of Religion	3
PHIL	108	Introduction to Social Ethics	3
PHIL	109	Philosophy of Human Nature	3
PHIL	110	Critical Reasoning	3
PHIL	206	Introduction to Modern Logic	3
PHIL	207	World Religions	3
PHIL	214	Social and Political Philosophy	3

COURSE DESCRIPTIONS

CRIM 100 Criminal Justice System (3)
Provides an overview of the criminal justice system, its main elements and their functions. The course also examines the social, political, and cultural considerations that have influenced and shaped system functions and institutions.

CRIM 102 Criminology (3)
Introduces students to the study of crime using computer software applications. Students are introduced to different types of crime and the problems of crime analysis. This course is designed to present students with the importance of a geographical and demographic analysis of the incidence of crime.

CRIM 111 Contemporary Police Systems and Problems (3)
Examines the philosophy of modern police systems in the U.S.A.; includes an evaluation of the purposes of the organization, jurisdiction, and law enforcement methods of specific law enforcement agencies.

CRIM 115 History and Philosophy of Corrections (3)
Traces the evolution of modern-day correctional thought in the United States, the development of institutional programs and architectural design, and the impact of theoretical and practical research on correctional standards and practices.

CRIM 150 Justice Issues in Society (3)
Examines a variety of contemporary justice issues in order to study the economic, political, and social basis of crime. Using a critical reasoning model, students develop a methodology of analytical reading and writing in order to study how social problems relate to crime and public safety issues.

CRIM 203 Introduction to Forensic Science (3)
Introduces students to the field of forensic science. Examines the application of science and technology to crime scene analysis. Students may utilize computers, as well as be exposed to more traditional laboratory equipment in their analysis. Prereq.: CRIM 100, 102, Co-req.: 204.

CRIM 204 Forensic Science Lab (1)
A laboratory practice course in the method and techniques of forensic science. This course is a co-requisite with CRIM 203 and must be taken concurrently.

CRIM 221 Investigations (3)
Investigation methods and techniques, with emphasis on criminal investigations. Covers crime scene search, development of leads, recognition, handling and preservation of evidence, witness identification, and techniques of interview. Prereq.: CRIM 100, 102, 111, 232.

CRIM 222 Criminal Procedure (3)
Focuses on the procedural requirements of the fourth, fifth, and sixth amendments to the U.S. Constitution through a study of leading Supreme Court cases.

CRIM 224 Issues in Criminal Law (3)
Examines issues and principles in criminal law utilizing legal concepts. These issues and principles will be examined not only from the perspective of what is required (or prohibited), but from the implications and impact of the requirement or prohibition. This will involve an examination not only from a systemic perspective, but also from the manner in which various societal groups are advantaged or disadvantaged. In addition to general introductory concepts, this course will also examine issues involving: conditions of pretrial release, grand jury, elements of offenses, affirmative defenses (such as insanity, entrapment), sentencing. Contemporary issues in criminal law will also be explored. Prereq.: CRIM 100, 102 and 232.

CRIM 232 Criminal Behavior (3)
Introduces students to the scientific study of behavior. Using a variety of behavioral problems, students will examine how criminologists study crime and criminal behavior. Satisfies the University's social science requirement.

CRIM 234 Juvenile Justice (3)
Studies the complexity of juvenile delinquency as a behavioral pattern through the examination of contemporary cultural and ecological environments and by study of the differing theories of delinquent behavior. The student examines the juvenile court and focuses on special constitutional and legal concerns facing juvenile offenders.

CRIM 235 Probation, Classification and Parole (3)
Covers general probation and parole objectives, methods, and procedures to include a working knowledge of the duties of the correctional treatment specialist. Includes the review and formulation of typical case studies and understanding of the principles and methods involved. Prereq.: CRIM 100, 102, 115, 232.

CRIM 271 Dynamics of Human Relations (3)
Introduces students to theoretical analysis, current research findings, models of helping methods, intervention designs and follow-up evaluations for the adult and juvenile in criminal justice settings. Students will have an opportunity to role play and assess their behavior, as well as interact with other students in evaluation and feedback. Prereq.: CRIM 100, 102, 232.

CRIM 272 Conflict Resolution and Mediation Techniques (3)
Examines the characteristics of these two approaches as a prerequisite for analysis of their effective utilization as both prevention and intervention techniques in avoiding or reducing the likelihood of violent confrontations. In addition, the student will develop an understanding of how appropriate use of these approaches can facilitate interaction between the criminal justice system practitioner and individuals involved in one-on-one engagements with that practitioner. Students will have an opportunity to role play and assess their behavior, as well as interact with other students in evaluation and feedback. Prereq.: CRIM 102, 232, 271.

CRIM 300 Constitutional Law (3)
Through a study of leading U.S. Supreme Court cases, students will study federalism and separation of powers issues. Students will also analyze the authority to promulgate criminal laws and policy initiatives in relationship to these issues. Prereq.: CRIM 102, 222, 224.

CRIM 301 Correctional Operations (3)
Studies basic organization and objectives of a department of corrections. Specific administrative principles required for the effective conduct and operation of a correctional organization. Relationships among the following institutional units: custodial force, treatment staff, clerical, culinary, maintenance staffs, and residents. Prereq.: CRIM 115.

CRIM 302 Police Community Relations (3)
Examines various approaches to community-based policing and the relative advantages and disadvantages of each approach. Also examined will be the implications of the diversity within the Washington, D.C. community; the operations of the various community organizations in the city; and the barriers existing which hinder effective community policing. Emphasis will be placed on the development of methodologies for increasing constructive interaction

between the police and residents. Prereq.: CRIM 111, 232, 271, 272.

CRIM 303 Comparative Criminal Justice Systems (3)
Examines and compares the criminal justice system in the United States with those of a selected group of other nations. Prereq.: CRIM 100**.**

CRIM 305 Administration in Criminal Justice (3)
Examines the organizational design, mission statements, staff roles, and the relationship between administrative processes and outcome objectives in criminal justice agencies. Emphasis is placed on the interrelationship of program goals, organizational design, and budget preparation. Prereq.: CRIM 100, 102.

CRIM 309 Justice in a Multicultural Society (3)
Examines in broad historical outline the great importance of race and similarly categorical distinctions (such as sex and religion) on the patterns of American society and how those patterns have affected the criminal justice system. A practical model for understanding racism is developed for application in a variety of settings. Junior or senior classification.

CRIM 390 Practicum (3)
Designed to provide a conceptual framework for reality testing of curriculum-related assumptions and strategies with cooperating public and private agencies. In addition to the regularly scheduled class, a ninety hour internship is required. Prereq.: CRIM 100, 102, 232 and Junior or senior classification.

CRIM 402 Community-Based Correctional Programs (3)
Examines problems of work-release and school-release programs and institutional inmates; administration of half-way houses, nonresidential programs for probationers, parolees, and drug abusers; community residences for juvenile offenders; and supervision of foster care programs. Prereq.: CRIM 115

CRIM 405 Organized Crime in the United States (3)
Examines the historic origins, organizational structure and method of operation, and goals and objectives of organized crime in the United States.

CRIM 450 Research in Justice Systems (3)
Covers the logic of scientific inquiry and its relationship to qualitative and quantitative research methodologies as applied to the justice field. Since emphasis is placed on the use of computer-based statistical programs, as well as other computer-based criminal justice research programs, this course is conducted in a computer laboratory. Co-req.: CRIM 451, 102, 232.

CRIM 451 Research in Justice\ Statistical Lab (1)
Designed to introduce students to the advanced statistical techniques used in criminal justice research. Prereq.: CRIM 102, 232.

CRIM 460 Theories of Planned Change: Society, the Environment, and Justice (3)
Examines theories and practices of both institutional and social change as they apply in the area of criminal justice. Through the utilization of computer-based forecasting and prediction methodologies, students will have an opportunity to analyze and critique a variety of intervention models applicable to criminal justice. Through examination of the manner in which change in one segment of the criminal justice system has tremendous impact on other segments of the system, students will develop an understanding for the necessity of thorough anticipation of both manifest and latent functions of any planned change. Prereq.: Junior standing.

CRIM 464 Evidence (3)
Covers the rules of evidence applicable in criminal cases which derive from a statutory or case law background, such as hearsay, presumptions and inferences, documentary evidence, etc. Excluded are those evidentiary exclusions based upon the U.S. Constitution. Prereq.: Junior or senior standing.

CRIM 491 Senior Seminar (3)
Requires students to write, in consultation with faculty, a senior thesis paper on a criminal justice topic of their choice. Prereq.: Criminal Justice seniors only and CRIM 450, 451, 497.

CRIM 495 Independent Study (VC)
Involves a program of reading and reporting planned and carried out under the guidance of a faculty member. The topic, issue, or area of student interest must concern a problem in the administration of justice, constitutional or criminal law or procedure, corrections (including probation and parole), or law enforcement. Prereq.: Junior or senior standing and a 3.2 average in courses in the field.

CRIM 496 Reading Course in Justice Systems (3)
Utilizes a seminar format. Students are responsible for completing a series of individual readings from an assigned reading list and subsequently engaging in discussion and analysis of issues raised by the readings and their relationship to the criminal justice system. Prereq.: Junior or senior standing.

CRIM 497 Program Design and Evaluation Techniques (3)
Provides practical guidance in the techniques of designing, implementing, and presenting results of justice program evaluation research. Prereq.: CRIM 450, 451.

GEOG 103 World Regional Geography (3)
Introduces students to global regions by integrating the environment, cultural, and economic spatial frameworks. The geography of individual regions will be considered, along with the interactions between them and the resulting systems of interdependence.

GEOG 104 World Physical Geography (3)
Presents a spatial systematic view of the earth and relates certain selected physical phenomena to the human-nature complex of the earth. These relationships emphasize the roles of the physical elements in man's environment. Topics include; geographic tools, earth-sun relationships, atmosphere, lithosphere, hydrosphere, and biosphere.

GEOG 105 World Cultural Geography (3)
Investigates the spatial organization of human beings and their societies. Students will have the opportunity to explore world distributions and patterns of population, cultural elements, settlements, livelihoods, and political orders as they are spatially related to the physical environment and to one another. The locational perspective examines where and why people occupy and utilize some portions of the earth's surface in preference to others.

GEOG 258 Geography of the District of Columbia (3)
Emphasizes the physical, cultural, and economic geographical framework of the Washington metropolitan area, with consideration given to its development in a historical context. Particular stress is placed upon the spatial factors which are significant in Washington's functioning urban area.

GEOG 347 Urban Geography (3)
Involves the principles governing the origin, structure, and growth of urban agglomerations. Emphasis is placed upon the phenomena of the institution and establishment and renewal of physical and cultural areas within and without metropolises. GEOG 103, 104, 105, suggested, but not required.

GEOG 370 Introduction to Computer Mapping & Cartography (3)
Introduces students to computer mapping hardware and software and cartography (the making and understanding of maps). The course will be pertinent to anyone planning to utilize current mapping software and hardware in other University courses or disciplines, positions in city and regional planning or urban policy agencies, research centers, and public and private sector employment positions.

GEOG 375 Introduction to Desktop GIS (3)
Introduces students to advanced software and hardware in the GIS technology. This can be used for scientific investigations, resource management, and development planning. The student will learn to assemble, store, manipulate, and display geographically referenced information, that is, data identified according to their location.

GEOG 470 Advanced Desktop GIS (3)
Requires the student to apply her or his computer mapping skills to real research or projects working with the University administration or research centers, outside research centers or groups, city and federal government agencies, and private sector activities.

GEOG 475 Urban and Environmental Information Systems (GIS) (3)
Provides the student the opportunity to utilize extensive databases to conduct research or work on projects and use work stations to analyze data and display the data in geographic form.

URST 101 Urban Experience (3)
Introduces students to the systematic examination of urbanization and urban issues as a worldwide process transforming the earth's landscape and reshaping the way people make their living, organize their communities, and create their cultures. Students use a case study approach to identify, define, describe, and analyze urban issues, including the political, economic, and racial/ethnic factors that give urbanization in the United States its particular pattern and character.

Course introduces students to the use of primary and secondary sources to document their observations.

URST 105 Introduction to Social Science(3)
Introduces students to the broad scope of the social sciences. Focuses on the development of an historical and cross-cultural analysis of the evolution of forms of social organization. Emphasis is on an interdisciplinary approach to major theoretical and methodological perspectives used in the social sciences.

URST 106 The District of Columbia (3)
Focuses on the process of urban growth in the Washington, D.C. area, the economic foundations of Washington, its unique form of government, race relations, spatial distribution of population, consequences of mass transit, and growth trends.

URST 205 Urban Poverty (3)
Examines the relationship of institutional racism and the American economic system to distribution of income and delivery of services. Focuses on analysis of urban policies for poor people, generally, and non-whites, in particular.

URST 254 Social Planning and Urban Problem-Solving (3)
This is a methods course. Its purpose is to introduce students to techniques of social planning, from the initial stage of problem analysis to the final stages of program implementation and evaluation.

URST 264 Women and Urban Policy (3)
Women greatly outnumber men in central cities in the U.S., and single women are especially numerous. This course examines the implications of this fact for urban policy. The factors creating and reinforcing this concentration of women in cities are also examined.

URST 274 City Neighborhoods (3)
Introduces students to the study of urban neighborhoods and the sources, methods and approaches used by social scientists in examining a neighborhood's life. Considers the reasons why neighborhoods develop their distinctive physical and social qualities and why neighborhoods change. The course includes an intensive examination of the development and change of neighborhoods in the District of Columbia from its origin as a Federal city to the present time.

URST 294 Special Topics in Urbanization (3)
Introduces a specific topic of current interest. Since the topics change, students are permitted to repeat the course for credit. Prereq.: UAFG 101

URST 299 Practicum (VC)
Gives students practical field work experience on projects and in agencies focusing on urban social problems. Requirements include written assignments and 3-4 hours of weekly field work for each credit hour

URST 304 Urban Government (3)
Examines the decision-making process involving urban areas focusing on the local, state, and national levels of government. Key aspects of urban government are analyzed in relation to community power structures. Prereq.: URST 101

URST 305 Introduction to Nonprofit Organizations (3)
Fundamental overview of the nonprofit sector and the general principles of managing a nonprofit, human service agency. Leaders from the nonprofit community give presentations on both theory and practical applications.

URST 306 Fundraising (3)
Practical orientation to nonprofit fundraising, including exploration of government, foundation, corporate, earned income, fee generating work, and other potential sources of funds for nonprofit organizations. Outside speakers and a strong hands-on component will provide focus and content.

URST 307 Race, Class, Ethnicity and Urbanization (3)
Examines urbanization as a social process in the U.S. Analyzes the impact of urbanization on the life styles, behavioral patterns, value systems, and social relations of different racial, ethnic, and class groups. Prereq.: UAFG 101.

URST 308 Volunteer Management (3)
Exploration of the field of volunteer management in profit organizations combined with presentations by representatives of a range of agencies which rely on volunteers for their operations.

URST 310 Ethics and Public Service (3)
Explores and analyzes ethical considerations in specific public service contexts. Students will be encouraged to develop a written, personal statement of their own ethical standards of public service.

URST 311 Comparative Urbanization: The United States (3)
Examines the development of American cities from colonial settlements to the present megalopolis. Examines growth patterns, development of urban governmental forms, and the place of the city in American thought. Prereq.: URST 101.

URST 312 Comparative Urbanization: Europe (3)
Examines social, political, and economic transformation of Europe, from feudalism to capitalism and subsequent urbanization. Examines application of these changes on population movements, productive activities of men and women, and the role of the state. Prereq.: URST 101.

URST 313 Comparative Urbanization: Third World (3)
Explores the emergence of Third World cities into world political economy. Historical data from a variety of sources are used to analyze the evolution of urban areas in Africa, Asia, and Latin America. Prereq.: URST 101.

URST 335 The Urban Political Economy (3)
Surveys main factors in economic change in urban society, particularly the interaction of economic and political decisions. Examines employment, age, and income, and the role of local and federal governments in economic development. Prereq.: URST 304.

URST 336 The Municipal Budgetary Process (3)
Explores urban fiscal problems, examines revenue sources, intergovernmental finance, the municipal budget, tax burden differences in the cost of governmental and social services, and alternative revenue sources. Prereq.: URST 304.

URST 355 Housing (3)
Examines the forces influencing the housing market and the role of federal, state, and local governments in the financing, production, and regulation of housing. Current policy issues in housing are explored. Prereq.: URST 101.

URST 384 Advanced Research Techniques (3)
Examines the logic of the scientific method, quantitative techniques, and data collection and analysis techniques relating to urban problems where policy decisions have important research components. Prereq.: URST 101.

URST 385 Statistical Lab (1)
Designed for advanced students. Students will learn about the data sets in the public domain and how to use available software in quantitative data analysis.

URST 395 Independent Study (3)
Enable students to pursue supervised reading and research under the direction of a faculty member. Open to urban studies students by permission of the Department Chair.

URST 405 Urban Policy Analysis (3)
Is a methods course in which students are taught the processes of urban policy and analysis and planning through the use of social science analytical methods and techniques applied to selected urban social problems. Prereq.: Junior Standing.

URST 494 Senior Seminar (3)
Gives students experience in conducting individual research projects, experience in examining a problem not yet fully explored by scholars, and an opportunity to share their research findings with others in the class. Prereq.: URST 384 and senior standing as an urban studies major.

HIST 101 United States History I (To 1865) (3)
Studies the interaction and conflict between American Indians, Africans, and Europeans; social and economic structure of the English colonies; the war for independence and nation building; slavery and the emergence of the cotton kingdom; the development of political parties in the Age of Jackson; sectional conflict in the West; and the coming of the Civil War.

HIST 102 United States History II (Since 1865) (3)
Studies the Reconstruction and the emergence of the urban industrial order; immigration; populism; and the rise of segregation and disenfranchisement; progressivism; the new imperialism and the coming of World War I; social and cultural change in the 1920's. Also covers the Depression; the New Deal and the origins of World War II; the cold war and McCarthyism; the civil rights movement, Vietnam and urban race riots; the rise of the new conservatism, and the Cold War and its aftermath.

HIST 111 African History (3)
Focuses on the broad history of continental Africa up to 1875. Provides an introductory view of African cultural traditions; state building in various regions of Africa; the coming of the white man, and the slave trade in East and West Africa.

HIST 121 Pre-Columbian and Colonial Latin American History (3)
Surveys the indigenous civilizations of the Americas and Africa, the slave trade, and the Iberian civilizations that became the third ingredient in the formation of modern Latin America and the Caribbean. Discusses the economic, political, and social overview of four centuries of existence as Iberian colonies.

HIST 122 Modern Latin American History (3)
Surveys the 19th century independence movement and the development of national identity; twentieth century revolutions, especially Mexico and Cuba, and the contemporary history of the area.

HIST 144 History of the Islamic Peoples (3)
Discusses life in pre-Islamic society; Mohammed and the rise of Islam; Islamic culture and institutions; the spread of Islam in Asia, Africa, Europe, and the United States.

HIST 154 Asian Civilization (3)
Surveys the cultural, political, economic, social, and intellectual developments in China, Japan, Korea, and Southeast Asia; communications among the Asian countries in ancient and medieval periods; Western domination in Asia from the 15th to 20th Century, and contemporary issues.

HIST 164 History of Black Americans I (3)
Discusses the impact of the European slave trade on African civilization; the establishment of slavery in Latin America, the Caribbean, and North America; the economic and political nature of slavery; the position of free Black people in a slave society up to, and including, the Reconstruction. Emphasizes the importance of early Black community and organizational development.

HIST 165 History of Black Americans II (3)
Discusses the disenfranchisement of Black America; the beginning of urban migratory experience, and group protests, including the Nationalist Movement. Course concludes with the "New Negro" movement and an examination of the Civil Rights and Liberation movements, highlighting Black intellectual leaders and the current status of Affirmative Action.

HIST 171 World Civilization I (3)
Presents the broad characteristics of traditional, classical, and feudal civilizations, examined in a chronological and comparative order. Introduces students to the basic concepts of the humanities and social sciences.

HIST 172 World Civilization II (3)
Analyzes the changes produced in the West by science, technology, industrialism, and political ideologies contributing to the formation of modern culture. Examines the transformation of the non-Western world, both from within and without, by such forces as colonialism, nationalism, revolutionary ideologies, independence, and development.

HIST 224 History of the Caribbean (3)
Surveys the culture of the indigenous people of the area, including the sugar-slavery-based socio-economic system of the colonial era, abolition, and emancipation; the Caribbean as a sphere of United States influence, and the development of the modern nations of the area, including Guyana.

HIST 233 Emergence of Western Europe (3)
Analyzes dynamic changes produced in the West by the Middle Ages, Renaissance exploration, and Reformation. Considers the major forces of change contributing to the formation of modern Western culture.

HIST 235 Age of Revolution (3)
Studies revolutions, with special emphasis on socio-economic developments in the world since the 18th century. Emphasizes the impact of revolutionary ideas on other societies and their relevance today.

HIST 244 History of the Middle East to 1800 (3)
Discusses early Islam, the Byzantine Empire, the Ottoman Turks, and the rise of the Ottoman Empire to world power.

HIST 245 The Middle East Since 1800 (3)
Discusses the development of modern Egypt, the rise of nationalism, the fall of the Ottoman Empire, European colonialism, and the impact of World War I and World War II on the Middle East.

HIST 265 Black Women in America (3)
Discusses the history of African-American women in the United States and the Third World, from the African experience to the present. Emphasizes diverse roles and activities in the African-American community and in the development of the U.S. Examines certain themes, such as the myth of the Black matriarch, the economic roles of Black women, and the participation of Black women in the liberation movement.

HIST 274 History of Socialism and Communism (3)
Discusses the Socialist movement from the French Revolution to Perestroika and the demise of communism in Eastern Europe. Discussions focus on the writings of Fourier, Saint-Simon, Owen, Marx, Engels, Lenin, Stalin, MaoZedong, Ho Chi Minh; Ernesto AChe@ Guevara, Nkrumah, Nyerere, and others.

HIST 276 Colonialism and Imperialism (3)
Examines the ideology and practices of imperialism and colonialism; patterns of colonial government and administration; impact of colonial rule; analyses of successes and failures of these systems.

HIST 278 History of Women in the World (3)
Introduces women's studies and the role of women in society through different historical stages; women's involvement with the political and educational processes in selected countries in the Americas, Europe and the Third World; and an examination of the ideals and issues of women of different classes, occupations, races, and ethnic groups.

HIST 279 History of the District of Columbia (3)
Discusses the District of Columbia from its founding to the present. Special attention is given to the development of social structures, forms of government, and urban patterns as they reflect changes in the local community. Encourages students to develop individual research projects which will contribute further to the historical understanding of the Washington, D.C. community.

HIST 305 United States Social History (3)
Explores the rapidly changing nature of society in the United States concentrating on ethnic, regional, religious, and economic shifts, with special attention to immigration, migration, and urbanization.

HIST 333 Expansion of the West (3)
Discusses the dynamics of the nation-state, the Industrial Revolution, and the changes associated with it; the origins and results of the great wars; the rise of totalitarian systems, and the development and decline of Western imperialism.

HIST 344 Contemporary History of the Middle East (3)
Discusses the political, cultural, and social developments in the Middle East since the end of World War II.

HIST 354 History of Modern China (3)
Discusses the Confucian heritage and the Qing Empire (1644-1911); China's response to Western and imperialist challenges and the Chinese Revolution, as well as the cultural changes, in the light of current Chinese scholarship and Western interpretations.

HIST 355 History of Modern Japan (3)
Discusses the political, cultural, and social development of modern Japan since the Meiji Restoration (1867); the rise and fall of the Japanese Empire; and foreign and trade relations since World War II.

HIST 394 Philosophy and Methods of History (3)
Discusses aspects of the discipline of history; theories of history and historical explanations. Emphasis is placed on the ways by which historians explain the past and the similarities and differences between historical and other forms of explanation and understanding. Selected topics in speculative and analytical philosophy of history interpretation. Prereq.: Junior standing.

HIST 395 Independent Study (3)
Is a reading course for history majors under the direction of a history faculty member. Prereq.: Junior standing or permission of the department chair.

HIST 404 United States Intellectual History (3)
Provides selective examination of philosophical, scientific, social, and religious thought in the United States, with emphasis upon the interaction of European origins and American development.

HIST 410 History of Crime and Punishment in the U.S. (3)
This course covers the 300-year period from colonial times to the present with the constantly changing definitions of both crime and punishment. The focus is placed on the great importance crime has had in the way in which politics, economics,and social values have become structured in the United States. Special attention is paid to ethnic groups and the way in which crime has provided them with mobility in American society.

HIST 490 Selected Topics in History (3)
Deals with selected topics in one of the following fields of history: Latin America, United States, Afro-Americans, Africa, Europe, Middle East, and Asia. The choice of topic in a selected area will depend upon faculty availability and student interest and need.

HIST 491 Research Seminar History (3)
Required of history majors. Provides the student with experience in research and writing in a field of concentration with supervision by faculty member. Prereq.: HIST 394.

PHIL 105 Introduction to Logic (3)
Discusses the principles of correct reasoning, with emphasis on acquisition and strengthening of basic skills, such as recognizing arguments and analyzing them into their parts; distinguishing between inductive and deductive arguments; distinguishing between deductively valid and invalid arguments, and recognizing informal fallacies.

PHIL 106 Introduction to Problems in Philosophy (3)
Introduces critical and dialectical methods in philosophy as applied to some basic issues--knowledge, freedom, morality, happiness, rights, and beauty. Emphasizes the range of positions on any given issue and develops the ability to examine these positions in a reasoned and systematic manner.

PHIL 107 Introduction to Philosophy of Religion (3)
Clarifies and discusses some major philosophic positions regarding religion, centering on the concept of God; life after death, and mysteries. Focuses on the unique features of religious language vis-a-vis ordinary language; how religious concepts and claims can be evaluated; and the possibility of the rational defense of traditional religious views.

PHIL 108 Introduction to Social Ethics (3)
Studies the theories people have held about the nature of morality and the ways these theories can be justified. Applies these theories to such social problems as abortion, sexual and racial discrimination, war, and poverty.

PHIL 109 Philosophy of Human Nature (3)
Studies the conflicting beliefs about the nature and the purpose of human life. Discusses the theories of Plato, Jesus, Marx, Freud, Sartre, Skinner, and Wilson.

PHIL 110 Critical Reasoning (3)
Discusses the basic concepts of critical thinking, with emphasis on the acquisition and strengthening of skills, such as the ability to identify the ultimate conclusion of a complex argument and the major premises offered in support of it; the ability to distinguish between valid and invalid arguments; the ability to recognize informal fallacies; the ability to evaluate the strength of non-deductive arguments, and the ability to write critical essays.

PHIL 206 Introduction to Modern Logic (3)
Covers the basic elements of modern deductive and inductive logic. Discusses the use of "not," "and," and "if and then" operators, truth tables, proof construction, Mill's Methods of Agreement and Difference, and probabilistic reasoning.

PHIL 207 World Religions (3)
Presents the basic tenets of major world religions and the similarities and differences among them. Aims to increase understanding and appreciation for different religions in the present-day global society.

PHIL 206 Social and Political Philosophy (3)
Examines the origin and nature of the state, the basis of natural rights, and the tension between the individual and the state. Includes a discussion of individualism versus collectivism.

POLI 205 Introduction to Political Science (3)
Introduces the scope and range of the discipline of political science; the role of politics in society; the nature of power and legitimacy; political functions and institutions. Also treats the enduring issues of equality, justice, and freedom as they are discussed in classical political thought, social contract theory, and contemporary ideologies.

POLI 206 Introduction to American Government (3)
Introduces the major principles of American government and politics. Focuses on major national institutions of the Presidency, Congress, and the courts; federalism; civil rights and civil liberties; and political behavior and dynamics.

POLI 207 Black Politics (3)
Introduces the study of the participation of African Americans in the American political system. Focuses on the historical and contemporary struggle of African Americans to become equal participants in the political process. Examines political strategies developed and used by Blacks in response to their minority status, including issues of affirmative action.

POLI 285 Political Ideologies (3)
Introduces the content and historical development of contemporary ideologies, such as communism, socialism, fascism, liberalism, and conservatism, and examines the nature of nationalism and imperialism.

POLI 295 Political Research Skills (3)
Introduces the fundamental concepts of political inquiry, with particular emphasis on empirical research methods. Special attention given to research problem formulation, writing, and reading comprehension skills and acquaintance with bibliographical and other research sources. Prereq.: POLI 205 or POLI 206.

POLI 306 Political Parties and Interest Groups (3)
Analyzes the structure, operations, and ideology of political parties and interest groups. A consideration of questions of conflict of interest, the extent of the power of private groups in the political system, and the impact of private power upon the community and the individual. Prereq.: POLI 205 or POLI 206

POLI 307 The Legislative Process (3)
Studies the process of policy formulation by the legislative branch of American government, with consideration to such topics as legislative leadership, legislative behavior, the executive impact on legislation, and the role of parties and interest groups in the legislative process. Prereq.: POLI 205 or POLI 206.

POLI 308 The Presidency (3)
Studies the Presidency of the United States from the perspectives of historical development, constitutional power and limits, and behavioral characteristics. Analyzes power relationships involving the Presidency and the other political subsystems. Prereq.: POLI 205 or POLI 206.

POLI 336 Seminar in Practical Politics (3)
Offers an opportunity to students to interact with people who are engaged in government and politics at the local, state, and national levels. Features resource speakers and exposes students to practical aspects of government and politics through attendance at public hearings, City Hall, the U.S. Congress, and the White House. Prereq.: POLI 206.

POLI 345 Introduction to Public Administration (3)
Introduces the basic concepts and scope of public administration with particular emphasis on the federal level, viewed from the descriptive-structural perspective and the political and social dimensions of public administration in action. Analyzes the impact of bureaucratic institutions on contemporary society, the individual, and groups. Prereq.: POLI 205 or POLI 206.

POLI 346 Bureaucracy and Policy-Making (3)
Studies the role of bureaucracies in policy-making and their interactions with the other elements of the political system. Discusses such topics as the sources of bureaucratic power, the bureaucratic policy process, and the interactions of the bureaucracy with the executive, legislative, and non-governmental structures, and the public. Prereq.: POLI 205 or POLI 206.

POLI 355 Constitutional Law (3)
Discusses the constitutional and legal framework of American political institutions and the major decisions of the United States Supreme Court which have an impact on the separation of powers, the federal system, and the role of the judicial system itself. Prereq.: POLI 205 or POLI 206.

POLI 356 Civil Rights and Liberties (3)
Studies the issues and problems of constitutional law, with particular emphasis on matters related to the Bill of Rights, such as freedom of speech and religion, right to privacy, due process, desegregation, voting rights, and public accommodations. Prereq.: POLI 205 or POLI 206.

POLI 365 Introduction to Comparative Politics (3)
Provides a comparative study of political systems using institutional, functional, and other perspectives, with an emphasis on the construction of systematic theory. Examines political systems, ranging from simple to differentiated structures, to illustrate theoretical and substantive issues and problems. Prereq.: POLI 205 or POLI 206.

POLI 366 Politics of Emerging Nations (3)
Discusses a cross-national analysis of the common problems of political development of the emerging nations. Gives attention to the impact of colonization, the role of tradition, ideologies of social change, and the role of modernizing groups and institutions, such as the military, the intelligentsia, and the party system. Discusses the economic, social, and psychological concomitants of political development. Prereq.: POLI 205 or POLI 206.

POLI 375 Introduction to International Relations (3)
Examines the basic concepts, issues, and institutions of international relations, such as the nature of sovereignty, balance of power, spheres of influence, the nation-state, and supranational organizations. Treats the

nature of diplomacy and war. Prereq.: POLI 205 or POLI 206.

POLI 376 International Law and Organizations (3)
Focuses on international law and the basic theories of the structure and function of various international organizations, including their administrative operations, with particular reference to the United Nations and its related agencies. Prereq.: POLI 205 or POLI 206.

POLI 377 United States Foreign Policy (3)
Examines the decision-making processes of American foreign policy, including the role of Congress, the federal bureaucracy, the executive, corporations, the military, and the people in the formulation of policy. Discussion of historical and contemporary issues to illustrate these processes. Prereq.: POLI 205 or POLI 206.

POLI 385 Western Political Thought (3)
Discusses a selection of the major writers, issues, and traditions of Western political philosophy and their relevance to the theoretical and practical concerns of contemporary political thought. Discusses topics such as relation of man to the state, the nature of government, and the distribution of power. Prereq.: POLI 205 or POLI 206.

POLI 386 Third World Political Thought (3)
Introduces the major political theories and systems of thought of the Third World countries, including historical development and socio-economic dimensions. Focuses on selected thinkers in Latin America, Africa, and Asia and their responses to the issues and problems of the Third World. Prereq.: POLI 205 or POLI 206.

POLI 387 American Political Thought (3)
Surveys the major intellectual influences on the political and constitutional systems of the United States. Discusses the origins of American political thought in Europe and elsewhere and the basic principles of significant political philosophies in the United States. Prereq.: POLI 205 or POLI 206.

POLI 406 Selected Topics in American Politics (3)
Examines certain aspects of American politics, selected according to student need and availability of instructor. Examples of topics to be explored: the politics of the mass media; federal legislation relating to minority interests; and an in-depth study of influential works in contemporary American politics. Prereq.: POLI 205 or POLI 206.

POLI 465 Selected Topics in Comparative Politics (3)
Analyzes certain areas of comparative politics selected according to student need and availability of instructor. Example of topics to be explored: a comparative study of selected political subsystems, such as the legislative and executive, and problems of selected areas such as Latin America, Africa, the Middle East, and Eastern Europe. Prereq.: POLI 205 or POLI 206.

POLI 475 Selected Topics in International Relations (3)
Examines certain aspects of international relations, international organizations, and foreign policy, selected according to student need and availability of instructor. Deals with such topics as power, peace, war, terrorism, arms control. Cross-national analysis of the foreign policies of the major powers, and the role of the Third World in international politics. Prereq.: POLI 205 or POLI 206.

POLI 485 Selected Topics in Political Theory (3)
Analyzes certain political issues and thinkers selected from the broad range of political theories and political philosophies. Examples of topics to be explored: contemporary issues in behavioral theory and normative philosophy, utopian theory, the theory of the open society, and anthropological political thought. Prereq.: POLI 205 or POLI 206

POLI 495 Independent Study (VC)
Investigates a subject or problem not covered by the specifically-titled courses. Available only to political science majors. Prior approval of faculty supervisor and Department Chair required. Enrollment in a second independent study course without having completed the first one is not permitted. Prereq.: Two 300-level political science courses.

POLI 497 Methods of Political Science (3)
Involves an advanced study of the nature of political inquiry, covering a brief history of the discipline of political science, the philosophical problems underlying political science research, and the major conceptual schemes or approaches of contemporary political analysis. Requires the formulation of a project research design with attention given to the choice of technique. Prereq.: POLI 295.

POLI 498 Senior Seminar (3)
Applies research skills learned in POLI 295 and POLI 497, involving completion of a research project. Requires students to demonstrate understanding and

knowledge of the scientific method as it is applied in the analysis of a manageable research problem in political science. Prereq.: POLI 497.

SOCY 111 Introduction to Sociology (3)
Studies society at the levels of direct interaction, institutions, and whole social systems. Presents the basic concepts and methods of sociology. Focuses on the U.S. and other advanced industrial societies.

SOCY 244 The Family (3)
Studies families in their social and historical context. Considers the various forms of the family appearing in different stages of societal development and the relationships to other social institutions. Attention is given to the internal dynamics of families through the life cycle, such as the role of elderly family members.

SOCY 245 Sociology of the Black Community (3)
Considers the major social structures and institutions of Black communities as a result of racism, as creative responses within the racial context, and as independent cultural developments.

SOCY 254 Black Social Movements (3)
Studies the dynamics of social movements--their origins, development, and institutionalization or demise. Examines the conditions leading to social mobilization, the internal dynamics and external alliances, and the effects on the larger society. Emphasizes African-American movements.

SOCY 264 Small Group Dynamics (3)
Studies the face-to-face interaction that forms the basic unit of all social institutions. Increases the student's self-awareness and effectiveness in working with others. Affords students an opportunity to learn from their experience in small groups, and to gain an understanding of group dynamics.

SOCY 265 Sociology of Urban Youth (3)
Focuses on children and youth in primarily urban settings to achieve an understanding of youth as they struggle with the stresses of maturing in an urban setting. Uses international and cross-cultural perspectives in discussion on children and youth in an urban setting. Gives special attention to D.C. youth.

SOCY 320 Research Methods (3)
Deals with the meaning, purposes, and basic techniques of social research. Development of research plans and of research designs using quantitative and qualitative measures. Emphasis on survey research and on participant observation. Prereq.: SOCY 111 and completion of math requirement.

SOCY 321 Statistics for Social Research (3)
Covers inferential statistics and sampling, including the following areas: hypothesis testing using parametric and non-parametric methods, analysis of variance, multiple correlation, and experimental designs.

SOCY 346 Social Stratification: Power and Inequality (3)
Studies structured social inequalities, unequal distributions of power and social mobility in societies stratified by caste, class, race, sex, and age. Includes data from feudal, slave, and capitalist societies and from the U.S. and other societies.

SOCY 354 Deviance and Social Control (3)
Discusses deviant behavior and social control of individuals and groups in class and non-class societies; also discusses processes of social control and resistance, and the roles of institutions including family, work, church, and state.

SOCY 356 Population Dynamics (3)
Explores the social and cultural causes and consequences of population dynamics, drawing heavily on illustrations from past and contemporary studies of the population of the U.S. Examines the effects of factors such as population growth, migration, and increase in longevity, on the society. Prereq.: Junior standing.

SOCY 365 Sex Roles (3)
Discusses sex and gender identities in class and non-class societies, with emphasis on modern economic, political, and cultural structures that determine the positions of men and women in contemporary society. Examines theories of sex roles. Students observe and discuss examples of sex role behavior in daily life.

SOCY 394 Critical Analysis and Writing in the Social Sciences (3)
Focuses on developing the skills of reading, critical thinking, and effective writing in the humanities and social sciences, using a variety of reading materials and assignments. Requires junior standing and completion of English requirement.

SOCY 395 Selected Topics (3)
Provides the opportunity to offer courses of special interest not normally a part of the sociology curriculum. Prereq.: Junior standing or permission of instructor.

SOCY 470 Development of Social Theory (3)
Discusses major theories which define the subject matter, concepts, and methods of the study of society. Prereq.: Junior standing or permission of the instructor.

SOCY 496 Practicum (3)
Examines a selected aspect of society through practical experience gained in field work. Places students in an organization; students presently working in an organization may receive credit for the work they are doing upon approval of the instructor. Prereq.: Junior standing and permission of Department chair.

SOCY 497 Senior Seminar (3)
Provides students the opportunity to apply their knowledge and skills to research in their areas of interest. Prereq.: Senior standing or permission of instructor.

SOCY 498 Independent Study (VC)
Allows the student to study a subject of special interest. Requires that the student make arrangements with a faculty member to supervise his/her work before registering for this course. Prereq.: Junior standing and permission of Department chair.

ANTH 113 Introduction to Anthropology (3)
Introduces the fields of anthropology, with main emphasis on cultural anthropology. Covers basic concepts, approaches, and findings of anthropologists studying the development of human cultures of the present and past.

ANTH 234 Black Societies in the New World (3)
Studies Black societies in North, Central, and South America, and the Caribbean from an historical and comparative perspective. Examines the institutions and culture of the colonial and post-colonial periods.

ANTH 235 People and Cultures of Africa (3)
Studies the economic, social, political, and religious features, examining the relationship between traditional and contemporary social forms.

ANTH 246 Ethnicity (3)
Studies the interaction, cultural differences, and adaptive features of selected ethnic groups. Covers interaction between dominant and minority groups in the United States and other societies.

ANTH 313 Physical Anthropology (3)
Studies the biological and cultural evolution and the interaction of the two. Shows how human biology makes culture possible, and how culture makes human beings, taking account of human behavior as both genetic and learned. Traces the development of differences among human populations and examines the concept of race.

ANTH 474 Anthropological Theories In Perspective (3)
Studies major contemporary social theories, emphasizing the critical analysis of original sources and the comparison of different approaches to the study of human groups in society. Prereq.: Junior standing or permission of the instructor.

SOWK 110 Introduction to Social Welfare and Social Work (3)
Introduces the fields of social welfare and social work. The course is designed as a survey exploration of the nature, purpose, and processes of social welfare as a public and private enterprise. Major attention given to the philosophical, theoretical, and operational aspects of social work as a professional practice.

SOWK 264 Concepts of Alcohol Abuse: Preventive Intervention Strategies (3)
Designed to acquaint the student with the basic issues surrounding the problem of alcoholic beverage abuse. Explores ideas concerning the use of terms "alcoholism," "alcoholic," "disease," and "treatment." Emphasis upon an historical perspective on beverage alcohol distillation, attitudes toward drinking, and the politics surrounding the production and sale of liquor. Current treatment approaches and methods of control considered.

SOWK 265 Theories of Drug Abuse: Preventive and Intervention Strategies (3)
Examines the nature, history, and selected theories of drug use and drug abuse in the United States. Attention given to the chemical properties and actions of narcotics, hallucinogens, and other consciousness altering substances. Attention given to the various attempts to control, treat, and prevent drug use and drug abuse.

SOWK 274 Introduction to Aging Studies and Special Problems of the Black Elderly (3)
Designed to introduce students to the field of Gerontology. Basic terminology, theories, and definitions used in the field of gerontology and current perspectives on scientific and social issues in aging are examined. Demographic data on the Black aged and

their needs and problems are examined as a major focus in explicating issues of concern.

SOWK 275 Ecology of Health, Illness and Aging (3)
Considers the physical and psychosocial aspects impacting on the health of the aged individual. Epidemiology of disease patterns, norms of mental and physical health, morbidity, mortality and chronic illness rates, and common pathologies and impairment associated with aging will be presented. Social and economic implications in future health care for the elderly will be explored.

SOWK 276 Introduction to the Economics of Aging (3)
Introduces the problem of economic security in later years; a comparison of past, present, and future trends in income maintenance for the elderly; A review of current insurance, pension, and annuity plans; an introduction to income supplements as special services and benefits. Provides an overview of public laws and policies relating to income and services for the elderly, implications for planning changes which will influence the economic status of elderly Americans.

SOWK 277 Working with Older People (3)
Familiarizes students with counseling services needed by older persons as they prepare for new careers, plan for retirement, and face the possibility of death. A description of some of the developmental crises of adulthood and methods of intervening. Theories and techniques of counseling will be presented along with interviewing techniques.

SOWK 310 Social Welfare as a Social Institution I (3)
Examins the nature and expressions of organized social assistance by means of philosophical and historical analysis of the social welfare institution. Emphasis is on ideology, attitudes, systems of institutions, and activities of organized groups, such as professionals, as the context within which patterned expressions of social assistance activities emerge. Special attention given to the mutual effects of the individual and social structure on social processes. Prereq.: SOWK 105 and a minimum of 45 earned credit hours.

SOWK 311 Social Welfare as a Social Institution II (3)
Examines past and current concepts, issues, and practices related to social welfare policy, social welfare programs, and on the examination and utilization of frameworks for the analysis of social welfare programs. Major emphasis on the broad notions of residual and institutional concepts of social welfare and how these influence the formulation, implementation, and execution of social welfare policy and programs. Review and analysis of selected social policies and programs. Prereq.: SOWK 310.

SOWK 320 Human Behavior and Social Environment I (3)
Focuses on the development of the individual from conception through adolescence and the impact of various aspects of the social environment on the course of that development. Each stage of development considered from the psychosocial and other selected theoretical points of view. Environmental forces that influence and shape physiological, psychological, and social aspects of human development and behavior are examined. The ecological systems approach is used as an organizing framework and to examine person-in-environment during each life stage. Prereq.: SOWK 105 and a minimum of 45 credit hours.

SOWK 321 Human Behavior and Social Environment I (3)
Focuses on the development of the individual from young adulthood through the end of life and the impact of various aspects of the social environment on the course of that development. Each stage of development is considered from the psychosocial and other selected theoretical points of view. The various social forces that influence and shape physiological, psychological, and social aspects of human development and behavior are examined. The ecological systems perspective is utilized as an organizing framework to view person-in-environment during each life stage. Prereq.: SOWK 310 and SOWK 320.

SOWK 330 Social Work Practice II (3)
Focuses on the nature and purposes of the interactional process in generalist social practice. The interactional process is presented as a collaborative partnership between worker and client. Primary focus is on method: the core process and skills used by the social work practitioner. Use of interpersonal skills are introduced in the context of implementing social work roles in generalist practice with individuals families and in professional contacts with system representatives. An interactional approach and the timed-phases of the interview are utilized as an organizing framework. Special attention is focused on practice with diverse populations and on values and ethics that guide professional social workers in their practice. Prereq: SOWK 332 and must be taken prior to or concurrent with SOWK 490 Practicum I.

SOWK 332 Social Work Practice I (3)
Examines an approach to social work practice that focuses on empowering client systems using a strengths-based perspective. Provides the foundation for generalist practice with individuals, families, and small groups. Examines the integration of the ecological systems with systems theory, human development and human diversity perspectives. Incorporates a value-centered approach with emphasis on respect for the individual, client self-determination, and promotion of social justice. Emphasis is placed upon the problem solving model, which stresses an empowering process and includes problem identification and assessment, goal setting and planning, implementation, evaluation, and termination. Content and skill related to evaluation and termination are examined in Social Work Practice II. Prereq.: This course must be taken prior to or concurrent with SOWK 321.

SOWK 334 Approaches to GroupWork (3)
Examines the use of groups in generalist social work practice focusing on development of knowledge and skill of group work; methodological approaches; review of group attributes; ecological systems framework of groups; problem-solving; identification and application of roles and skills in group settings. Social work values, human diversity, cultural competency, and empowerment are major themes examined. Attention is given to preparation for practice in settings of racial , gender, sex orientation, and social class diversity . Prereq.: SOWK 332.

SOWK 340 Research in Social Welfare (3)
Examines the nature, purpose, and conduct of social science research. Emphasis on the roles of theory, the nature of evidence, research problems, research design, the nature and sources of research data, and the relationship among research, theory, and effective practice in social work and other human services. Prereq.: SOWK 310 and SOWK 320.

SOWK 341 Research in Social Welfare II (3)
Focuses on the development of skills in the planning and conduct of survey research, particularly the descriptive, analytic, and evaluative forms. Major emphasis on learning the research process by direct experience. Prereq: SOWK 340.

SOWK 342 Research in Social Welfare Statistical Laboratory I (1)
Provides practice in nature, forms, and applications of parametric and nonparametric statistics. Theory on and practice in the use of selected statistical models, e.g., measures of central tendency and of variability, the normal curve and standard scores that are based on chi square. Prereq.: Statistical Lab I must be taken concurrently with SOWK 340.

SOWK 343 Research in Social Statistical Laboratory II (1)
Provides practice in nature, forms, and applications of parametric and nonparametric statistics. Emphasizes content on and practice in the use of selected statistical models and selected statistical tests based on chi square. Prereq.: Statistical Lab II must be taken concurrently with SOWK 341.

SOWK 364 Concepts of Family and Child Welfare (3)
Focuses on the knowledge and value base required for beginning social work practice in major family and child welfare settings. The historical and philosophical contexts of family and child welfare are explored. Major emphasis placed on knowledge about service delivery systems and upon the tasks and requisite skills of the social worker in the performance of the social worker's role. Analysis of the policy and practices of service systems in terms of effectiveness, particularly for Black families and children. Prereq.: SOWK 321.

SOWK 367 Human Behavior and Social Structure (3)
Explores the development of human behavior from normal to pathological. Emphasis is given to those forms of behavior that are characterized as deviant or pathological and often called "mental illness." Attention given to the etiology of such behavior and how its development may be influenced by biological, physiological, psychological, sociological, cultural, political, and economic factors. The relevance and implications of this material considered in relation to effective social work practice. Prereq.: SOWK 321.

SOWK 398 Independent Study (VC)
Provides an opportunity for supervised study of a particular problem or issue selected by the student in consultation with a faculty advisor. Designed for students who have shown potential for independent work on a research project. The student must submit a proposal of her or his plan of study to the Department for approval one semester prior to registration for the course. Majors can take a maximum of six credit hours. Prereq.: Junior or senior status, permission of program director. Social work and social welfare majors only.

SOWK 433 Social Work Practice II (3)
A continuation of SOWK332, Social Work Practice I. Major attention given to generalist social work practice and the impact of the environment. Emphasis on practice related to community systems, groups, institutions, and organizations. Assessment, planning, and evaluation are stressed in connection with indirect action strategies. Roles of advocate, case manager, team mentor, community organizer, and skills required are addressed. Students work in groups to apply the problem solving process to real life situations with a focus on large systems, impact, and change. Theories and concepts of power, organizational change, and community development are introduced. Course incorporates a value-centered approach, which emphasizes respect of individuals, client self-determination, and the promotion of social justice. Content on special populations is integrated into the course. Prereq: SOWK 333 and must be taken prior to or concurrent with SOWK 491 Practicum II.

SOWK 464 Dynamics of Supervision in Social Work Practice (3)
Provides an understanding of the nature, purpose, and conduct of supervision in social work practice. Major emphasis on the development of knowledge about interactive supervisory roles and tasks, the process of supervision, and the problems with which it is concerned. Specific strategies related to skill development as a supervisor are addressed. Prereq.: SOWK 332 or senior status.

SOWK 477 Management of Extended Care Facilities (3)
Identifies information necessary for the successful operation and management of extended care facilities. Focus on the preparation and maintenance of physical facilities according to the standards prescribed by agencies of housing, fire, sanitation, etc. Attention to administration and management of the facility, continuous maintenance of a unit, record keeping, budgeting, services available, nutrition, finance, insurance, and other relevant aspects.

SOWK 478 Social Psychology of the End of Life (3)
Provides an introduction to thanatology, the study of death. The philosophical, social, and psychological aspects of death and dying will be presented within the context of the life cycle.

SOWK 490 Practicum I (5)
Provides students the opportunity to acquire practice experience skills, engage in practice roles in the field, and test out theories and principles learned in the classroom in delivering services to individuals, small groups, families, organizations, and/or communities. Students are expected to complete a minimum of 200 hours of practice experience in an agency or organization during each of the two semesters. Additionally, a weekly seminar emphasizes integration and application of social work knowledge, values, attitudes and skills acquired from core courses. Prereq: SOWK 311, SOWK 330, SOWK 332 must be taken prior to or concurrent with SOWK 490.

SOWK 491 Practicum I (5)
Provides students the opportunity to acquire practice experience skills, engage in practice roles in the field, and test out theories and principles learned in the classroom in delivering services to individuals, small groups, families, organizations, and/or communities. Students are expected to complete a minimum of 200 hours of practice experience in an agency or organization during each of the two semesters. Additionally, a weekly seminar emphasizes integration and application of social work knowledge, values, attitudes and skills acquired from core courses. Prereq.: SOWK 490, SOWK 433 must be taken prior to or concurrent with SOWK 491.

DEPARTMENT OF PSYCHOLOGY AND COUNSELING

Eugene H. Johnson, Ph.D., Chairperson
Building 44, Room 200-35
(202) 274-7406

Full-time Faculty
Professors W. Chen, K.H. Dockett, E. Johnson, R. Johnson, E.R. Myers, R.M. Petty, G. Zachariah
Associate Professors B. Badwal, E.H. Lyons, M.E. Siegel
Assistant Professor G. Lummis
Visiting Professors D.M. Johnson, F.A. Johnson, N. Sahibzada

The Department of Psychology and Counseling offers the Bachelor of Science in Psychology at the undergraduate level, and the Master of Science in Clinical Psychology and the Master of Science in Counseling at the graduate level. In addition, nonmajors elect introductory psychology courses to fulfill University-wide requirements or to meet requirements in other majors. The Department operates laboratories in several areas, including neuroscience, computer applications, psychometry, and counseling and career education.

Faculty of the Department are involved in research in a variety of basic and applied areas within psychology and related disciplines; students often serve as research assistants. Faculty also involve students in professionally-related volunteer service in the community.

PSYCHOLOGY PROGRAM

The undergraduate program in the Department of Psychology and Counseling acquaints students with a wide range of subfields within the discipline while providing a solid foundation in the major theoretical perspectives of psychology and its scientific approach. Upon completion of the program, students are prepared for graduate study in any area of psychology and for entry level work in research or mental health settings.

Students begin study in the major during the sophomore year with completion of a survey course in psychology. The next semester they enroll in is a skills development course designed to strengthen the critical thinking, analytical reasoning, and writing skills needed for more advanced study. In the junior and senior years, students take advanced courses in several core areas:1) neuroscience/learning/sensation and perception/ cognitive psychology; 2) social/personality/ developmental psychology; and 3) abnormal/ community psychology.

In addition to three (3) elective courses from other subfields in psychology courses in statistics and experimental psychology are completed. At the senior level, students are encouraged to participate in research or to undertake supervised independent study projects. In the final semester, seniors take a seminar course, a capstone experience which integrates knowledge acquired in courses, practica, and independent research. Honors students may select the thesis option and, upon successful completion of their project, qualify for graduation with honors in psychology.

BACHELOR OF SCIENCE IN PSYCHOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 120

Total Credit Hours Required for Major: 43

Primary Core Requirements

PSYC	201	Principles of Psychology	3
PSYC	202	Critical Skills Development in Psychology	3
PSYC	311	Statistics I	3
PSYC	312	Statistics II	3
PSYC	313	Experimental Psychology	3
PSYC	314	Experimental Psychology Laboratory	1
PSYC	420	Senior Seminar/Thesis	3

Secondary Core Requirements:

Two of the following three courses

PSYC	225	Social Psychology	3
PSYC	235	Theories of Personality	3
PSYC	245	Developmental Psychology	3

Two of the following four courses

PSYC	317	Sensation and Perception	3
PSYC	318	Basic Conditioning and Learning	3
PSYC	319	Human Learning and Cognition	3
PSYC	415	Introduction to Neuroscience Lecture	3
PSYC	416	Introduction to Neuroscience Lab	1

One of the following two courses

PSYC	351	Community Psychology	3
PSYC	436	Abnormal Psychology	3

Psychology Electives:

Select 9 credit hours

PSYC	137	Psychology of Adjustment	3
PSYC	228	Psychology of Multicultural Relations	3
PSYC	316	Introduction to Clinical Psychology	3
PSYC	327	Group Processes	3
PSYC	335	Tests and Measurements	3
PSYC	336	Psychology of Human Sexuality	3
PSYC	343	Health Psychology	3
PSYC	346	Adult Development and Aging	3
PSYC	352	Psychology Practicum	3
PSYC	353	Environmental Psychology	3
PSYC	395	Independent Study	VC
PSYC	396	Special Topics in Psychology	VC
PSYC	405	History and Systems	3
PSYC	419	Psychopharmacology	3

Requirements from other departments

BIOL	101	Biological Science I	3
BIOL	103	Biological Science I Lab	1
BIOL	102	Biological Science II	3
BIOL	104	Biological Science II Lab	1
MATH	101	General College Math I	3
MATH	102	General College Math II	3

Additional Requirements:
Select one of the three (3) options below

PHYS	101	Introduction to College Physics I	3

PHYS 103	Introduction to College Physics I Lab	1
PHYS 102	Introduction to College Physics II	3
PHYS 104	Introduction to College Physics II Lab	1
	or	
CHEM 111	General Chemistry I	3
CHEM 113	General Chemistry I Lab	1
CHEM 112	General Chemistry II	3
CHEM 114	General Chemistry II Lab	1
	or	
PHYS 107	Physics for the Health Professional	3
PHYS 108	Physics for the Health Professional Lab	1
CHEM 109	Introductory Chemistry	3
CHEM 110	Introductory Chemistry Lab	1

Additional Comments or Requirements
Psychology majors must maintain a cumulative grade point average of 2.5 or higher in psychology courses to meet departmental requirements for graduation.

COURSE DESCRIPTIONS

PSYCHOLOGY

PSYC 137 Psychology of Adjustment (3)
Emphasizes the understanding of everyday human behavior through the application of scientific principles derived from research. Examines foundations of psychological adjustment and the development of maladaptive behavior. Discusses human reactions evoked by stressful and frustrating environmental events, as well as reactions to internal sources of frustration. Examines procedures of psychological assessment, change, and newer methods of enhancing adjustment.

PSYC 201 Principles of Psychology I (3)
Introduces students to the history, methods, major theoretical viewpoints, and concepts of scientific psychology. Provides non-majors with an overview of the field of psychology; majors gain a foundation for further study. Prereq: Sophomore standing.

PSYC 202 Critical Skills Development in Psychology (3)
Enhances critical thinking and reasoning skills. Introduces the range of concepts needed to understand the process of empirical inquiry, scientific report writing, and utilization of the research literature and sources. Teaches basic computer skills. Prereq: PSYC 201.

PSYC 225 Social Psychology (3)
Surveys the major theories and concepts of social psychology, focusing on such topics as person perception, attitude formation and change, conformity, aggression, cooperation and conflict, and interpersonal and intergroup relations. Evaluates psychology's significance for understanding contemporary social issues and conflicts. Prereq: PSYC 202.

PSYC 228 Psychology of Multicultural Relation (3)
Surveys and examines critically environmental factors affecting the psychological experiences of men and women from ethnic minority groups. Organizes research findings and philosophical concepts into an ethnocentric framework which illuminates the strengths of minority groups. Prereq: Sophomore standing.

PSYC 235 Theories of Personality (3)
Studies the major theories which describe personality development and change. Examines representative theories from psychoanalytic, social learning, factor analytic, behavioral, and humanistic orientations, along with their representative therapeutic approaches. Prereq: PSYC 201.

PSYC 245 Developmental Psychology (3)
Surveys basic concepts and theories of developmental psychology. Emphasizes the physical, cognitive, social, and emotional behaviors characteristic of individuals at each life stage. Shows how biological, cultural, and environmental factors interact to influence behavior at every life stage. Prereq: PSYC 201.

PSYC 311 Statistics I (3)
Introduces basic concepts of statistics and elementary probability. Includes the following topics: measurement, sampling, distributions and graphs, measures of central tendency and variability, standardized scores, the normal curve, correlation, regression, and probability theory. Prereq: PSYC 202.

PSYC 312 Statistics II (3)
Introduces inferential statistics and experimental design. Includes the following areas: probability, parametric and non-parametric hypothesis testing, power analysis, analysis of variance, and basic experimental design. Prereq: PSYC 311.

PSYC 313 Experimental Psychology Lecture (3)
Examines fundamentals of the experimental method in psychology. Topics include: scientific methodology; experimental design and control, ethics of research; and

writing of research reports in APA format. Prereq: PSYC 312.

PSYC 314 Experimental Psychology Lab (1)
Provides first-hand laboratory experience for students enrolled in PSYC 313 Experimental Psychology (3). Students participate in the design of experiments and the collection, analysis, and interpretation of data. Studies related to topics in learning, memory, perception, and social/personality psychology. Prereq: Must be taken concurrently with PSYC 313**.**

PSYC 315 Industrial/Organizational Psychology (3)
Examines factors involved in designing effective organizations. Reviews theories of organizational design and the application of psychological theories and concepts in industrial settings. Prereq: PSYC 202.

PSYC 316 Introduction to Clinical Psychology (3)
Examines the issues of assessment, intervention, and professional issues in clinical psychology. Addresses training and educational issues, including elements of preparation for graduate work. Explores the array of professional activities of practicing psychologists and their interactive roles with other mental health professionals. Prereq: PSYC 235 and PSYC 436 or permission of the instructor.

PSYC 317 Sensation and Perception (3)
Introduces the student to current research into sensory and perceptual phenomena. Includes topics such as sensory coding, adaptation, attention, perception of objects and space, perceptual development, and illusions. Prereq: PSYC 202 and junior standing.

PSYC 318 Basic Conditioning and Learning (3)
Studies principles of learning through systematic analysis of classical and operant conditioning. Explores both traditional and current approaches to learning and memory. Prereq: PSYC 202 and junior standing**.**

PSYC 319 Human Learning and Cognition (3)
Provides an introduction to the study of human cognition; includes topics such as memory processes, language, thought, problem solving, concept learning, attention, short-term memory, and pattern recognition. Prereq: PSYC 202 and junior standing.

PSYC 327 Group Processes (3)
Approaches the study of group dynamics through exposure to theories, research, and first-hand laboratory experiences. Emphasizes integrating theoretical learning with experiential learning in an attempt to understand the social and psychological "forces" operating in groups. Fosters greater awareness of self and others and skill in observing and diagnosing group behavior. Prereq: PSYC 201.

PSYC 335 Tests and Measurements (3)
Examines measurement theory used in test construction and use. Introduces students to representative tests of all types. Examines the social, educational, and economic implications of using standardized tests and other psychological measures with minority groups. Explores alternative assessment approaches. Prereq: PSYC 311, or permission of the instructor.

PSYC 336 Psychology of Human Sexuality (3)
Surveys major aspects of human sexuality, including attitudes, myths, and premarital, marital, and non-marital behavior. Views optimum sexual functioning, heterosexuality, homosexuality, and sexual variance from a psychological vantage point. Examines problem/dysfunctional sexual behaviors and therapeutic strategies used to treat them. Prereq: PSYC 201.

PSYC 343 Health Psychology (3)
Explores the mind-body relationship as it relates to health and illness. Biological, psychological, and social factors will be examined. The course will emphasize a systems theory view of health psychology. Students will learn practical skills for stress management and general welness. Prereq.: Junior standing or consent of instructor.

PSYC 346 Adult Development and Aging (3)
Provides an overview of the major theories of adult development. Explores myths about the physical, intellectual, social, and emotional changes associated with aging. Explores psychosocial aspects of death and dying. Prereq: PSYC 245 or permission of instructor.

PSYC 351 Community Psychology (3)
Surveys basic concepts and methods used by community psychologists to promote psychological well-being and prevent the development of problems of individuals, groups, and communities. Topics include: values and roots of community psychology, historical trends and issues in mental health service delivery, assessment of person-environment interactions, principles and models of prevention, and strategies of social change. Prereq: Junior or senior standing in psychology.

PSYC 352 Psychology Practicum (3)
Provides an opportunity for students to gain experience, through supervised on-site training in the field, applying psychological theories and methods to solve problems of individuals, groups, organizations, or communities. Includes didactic seminars to integrate classroom theory with the field experience. Field and seminar hours required. Prereq: Junior standing in psychology, including successful completion of at least two 200-level psychology courses beyond PSYC 202.

PSYC 353 Environmental Psychology (3)
Explores the various aspects of the person-environment relationship. This will include artificial environments such as homes, schools, and offices, as well as the natural environment such as national parks and hazard areas. Particular emphasis will be placed on using causal models and computer simulation as a research tool. Prereq.: Junior standing for majors or consent of instructor.

PSYC 395 Independent Study (VC)
Allows advanced psychology students to do independent research in a problem area of their choice under the direction of a faculty member. Prereq: Junior or senior standing in psychology and a cumulative grade point average of 2.8.

PSYC 396 Special Topics in Psychology (VC)
Allows for research of and writing on contemporary topics in psychology which are of special interest to students. Prereq: Junior standing in psychology/ permission of the Department Chair.

PSYC 405 History and Systems (3)
Examines the origins of psychology in philosophy and biology, and the development of psychology as a science in the nineteenth and twentieth centuries. Considers current theoretical perspectives and research in relation to the enduring issues of the role of culture, science, and technology in the development of psychological constructs. Strongly recommended for students who aspire to graduate study in psychology or related fields. Prereq: PSYC 202 and junior standing or consent of instructor.

PSYC 415 Introduction to Neuroscience Lecture (3)
Introduces the biological bases of behavior. Acquaint students with areas of psychopharmacology, neurophysiology, neuroanatomy, etc. Knowledge of these areas is seminal to the understanding of both normal and abnormal behavior. Prereq: PSYC 201.

PSYC 416 Introduction to Neuroscience Laboratory (1)
Introduces students to a variety of techniques employed to understand the neural underpinnings of behavior. The laboratory exercises will include: neurophysiological, neuropharmaco-logical, and neuroanatomical computer exercises and principles of stereotaxic surgery and neurohistology. Must be taken concurrently with PSYC 415.

PSYC 419 Psychopharmacology (3)
Provides basic information on psychoactive drugs, those that are used therapeutically and those that are used recreationally. Examines the use and misuse, mechanisms of action, known or unknown sites of action, types of neurons acted on, the disorders that these drugs are used to treat, as well as structure-function relationships. Prereq: Senior standing or permission of instructor.

PSCY 436 Abnormal Psychology (3)
Exposes students to the traditional classification system used to describe abnormal behavior and examines theories of causation and therapy. Deals with questions concerning the ethicality and validity of diagnostic classification, and the value of the disease model. Discusses the efficacy of traditional psychotherapies, the future of the community mental health concept, and the relevance of traditional approaches for treating minority groups. Prereq: PSYC 235.

PSYC 440 Senior Seminar/Thesis (3)
Provides a capstone experience for psychology majors. Integrates knowledge from surveys of major contemporary research issues. Enables students with a grade point average of 3.0 or higher to complete a thesis project which qualifies them for graduation with honors in the major. Prereq: Senior standing.

GRADUATE PROGRAM IN CLINICAL PSYCHOLOGY

The Department of Psychology and Counseling offers a program leading to the Master of Science degree in Clinical Psychology. The goals of the program are oriented toward the development of theoretical, research, and applied intervention models which are relevant to the individual as well as to society.

With the scientist-practitioner model as a focal point and with an emphasis on developing skills in theory building and research design, the Clinical Psychology Program provides training relevant to assessment, prevention, and treatment of behavioral and emotional

dysfunctions. Instruction is also provided in basic and applied research methodologies.

The program is geared toward providing students with the background needed for understanding human service delivery systems, working as clinicians, and designing research projects. The curriculum also provides the necessary foundation for the pursuit of doctoral level studies.

MASTER OF SCIENCE IN CLINICAL PSYCHOLOGY

Admission Requirements:

Applicants to the program are required to submit:

1. A complete application.

2. Official transcripts of all prior college and graduate work.

3. A minimum of two letters of recommendation from persons familiar with the applicant's academic and/or career-related activities, preferably in the field of psychology.

4. Scores from the Graduate Record Examination, Verbal, Quantitative, and Analytic Sections.

Consideration for full acceptance into the program will be given to applicants holding a baccalaureate degree in psychology, with a cumulative grade point average of 2.5 and a grade point average of 3.0 in psychology. For applicants without the baccalaureate in psychology, a minimum of 15 academic credits in psychology is required, including Introductory General Psychology, Experimental Psychology, and Statistics.

Applicants who do not meet the above criteria may be considered for conditional acceptance or for non-degree status pending completion of admission requirements.

Graduate Writing Proficiency Examination: Completion of the Graduate Writing Proficiency Exam at or above the level set by the University is required of all graduate students. Students must take the writing proficiency examination in the first semester of enrollment. Students must register to take the examination which is administered only once each semester.

Comprehensive Examinations: Required for students selecting the non-thesis option.

Thesis: Optional
A non-thesis option is available for graduate students pursuing a master's degree. Students electing this option will be prepared to fill positions as school psychologists, psychometricians, mental health psychologists, and psychology associates which do not require the doctoral degree. This option will not apply to graduate students who aspire to continue their education at the doctoral level, where they will be trained for the independent practice of clinical psychology and/or for doctoral level positions in other areas of psychology.

Academic advisement allows students to explore career options so that they can be guided toward either the thesis or non-thesis option. Those graduate students who anticipate pursuing doctoral level study in psychology will be encouraged to develop an acceptable thesis as approved by a committee of faculty and the student advisor.

The non-thesis option will require completion of all required graduate courses leading toward a Master of Science degree in Clinical Psychology with the exception of the Thesis. In lieu of the thesis, these students will be required to take two additional graduate courses, totaling at least six credit hours, including courses from the following list:

PSYC	534	Group Design and Intervention	3
PSYC	535	Consultation in Clinical Psychology and Counseling	3
CNSL	528	Drug Abuse Prevention and Treatment	3
PSYC	596	Special Topics in Clinical Psychology	3

Required Courses for the Master of Science Degree in Clinical Psychology:

PSYC	504	Psychopathology	3
PSYC	505	Advanced Personality Theory and Learning Processes	3
PSYC	506	Advanced Social and Environmental Psychology	3
PSYC	514	Social Change and Prevention Mental Health	3
PSYC	523	Assessment of Intelligence Lecture	3
PSYC	530	Assessment of Intelligence Laboratory	1
PSYC	525	Assessment of Personality Lecture	3
PSYC	526	Assessment of Personality Laboratory	1

PSYC	527	Systems of Psychotherapy	
PSYC	537	Life Span Development	3
PSYC	541	Practicum in Clinical Psychology I	3
PSYC	542	Practicum in Clinical Psychology II	3
PSYC	551	Research	3
PSYC	553	Thesis	3
		Elective	3
Total			**41**

Electives

PSYC	518	Management and Organizational Development	3
CNSL	531	Ethics, Legal and Legislative Issues	3
PSYC	534	Group Design and Intervention	3
PSYC	535	Consultation in Clinical Psychology and Counseling	3
PSYC	548	Psychopharmacology	3
PSYC	552	Advanced Statistics and Research Design	3
PSYC	553	Advanced Statistics and Research Design Lab	1
PSYC	595	Independent Research Study	(VC)
PSYC	596	Special Topics in Clinical Psychology and Counseling	3

CLINICAL GRADUATE COURSE DESCRIPTIONS

PSYC 504 Psychopathology (3)
Focuses on the interplay of psychological, social, and environmental factors at the onset of behavioral pathology. Reviews the traditional classification system used in the labeling of abnormal behavior, including issues of diagnostic reliability and validity. Examines theories of causation and interventional/therapeutic methods. Explores research developments in the field. Co-req: PSYC 505 or consent of the instructor.

PSYC 505 Advanced Personality Theory and Learning Processes (3)
Examines major theoretical approaches to personality with a focus on their relevance to issues of clinical psychology. Reviews basic learning principles in conditioning and cognitive processes.

PSYC 506 Advanced Social and Environmental Psychology (3)
Reviews major topics in the subfields of social and environmental psychology. Discusses classical research methods in these fields. Addresses a wide range of concerns including altruism, social perception, sex roles, interpersonal attraction, leadership, intergroup relations, and environmental psychology. Emphasizes the impact of environmental variables on both individuals and groups.

PSYC 514 Social Change and Prevention in Mental Health (3)
Surveys approaches to social change within the framework of prevention in mental health. Examines conceptual, empirical, and programmatic efforts in the prevention of mental disorders and the promotion of mental health. Reviews risk reduction, health promotion, empowerment, and resource development strategies for affecting individual and social changes. Prereq: PSYC 504, 505, PSYC 506 or consent of instructor.

PSYC 518 Management and Organizational Development (3)
Focuses on organizational development theory and interpersonal and intergroup relations within organizations. Examines the use of power as a motivational support for institutional repression of ethnic, sexual, and religious groups.

PSYC 523 Assessment of Intelligence Lecture (3)
Surveys representative tests and techniques used in the assessment of intelligence. Presents methodologies in the administration, scoring, and interpretation of selected intelligence tests. Provides instruction in the preparation of a written intellectual profile and the terminology used in reaching various diagnostic decisions. Co-req.: PSYC 530**.**

PSYC 525 Assessment of Personality Lecture (3)
Surveys representative tests and techniques utilized in the assessment of personality. Presents methodologies in the administration, scoring, and interpretation of selected personality tests. Provides instruction in the preparation of a written personality profile and the terminology used in reaching diagnostic decisions. Prereq.: PSYC 523, PSYC 530; Must be taken concurrently with PSYC 526.

PSYC 526 Laboratory in Assessment of Personality (1)
Provides a laboratory setting for teaching applied psychological assessment using personality tests. Must be taken concurrently with PSYC 525. Prereq.: PSYC 523, PSYC 530, or consent of instructor.

PSYC 527 Systems of Psychotherapy (3)
Provides familiarity with the major psychotherapeutic techniques available to the modern practitioner while

drawing upon traditional and current theories. Pro-vides an experiential component to the student's skills base. Prereq: or Co-req: PSYC 504.

PSYC 530 Laboratory in Assessment of Intelligence (1)
Provides a laboratory setting for teaching applied psychological assessment using intelligence tests. Must be taken concurrently with PSYC 523.

PSYC 534 Group Design and Intervention (3)
Examines the dynamics and problems which affect organizational intervention. Develops skills by focusing on group design, communication, and "process". Prereq.: PSYC 505 or consent of instructor.

PSYC 535 Consultation in Clinical Psychology and Counseling (3)
Explores theoretical and applied emphases regarding service delivery systems in related settings. Prereq.: PSYC 525, PSYC 527 or consent of instructor.

PSYC 537 Life Span Development (3)
Provides an intensive examination of the core concepts, theories, and research methods of developmental psychology. Explores developmental psychopathology which views abnormality from a framework of stability and change that is a part of the normal course of development. Prereq.: PSYC 505 or consent of instructor.

PSYC 541 Practicum in Clinical Psychology (3)
Provides a dual emphasis on the didactic and training aspects of clinical psychology. Includes experiences in an appropriate clinical setting. Provides students an opportunity to work individually or in small groups under supervision. Requires on-site and classroom hours. Prereq.: PSYC 504, PSYC 523, PSYC 525, PSYC 526, PSYC 527, PSYC 530 and consent of instructor.

PSYC 542 Practicum in Clinical Psychology I (3)
Continues Practicum in Clinical Psychology I PSYC 541. Focuses further on skill building; exploration of specialized treatment, techniques /strategies, and problem-solving. Prereq.: PSYC 541.

PSYC 548 Psychopharmacology (3)
Focuses on drug-receptors interactions, mechanisms of drug action, drug-neurotransmitter interactions, the use of drugs by medical personnel to treat their patient's disorders, and the effects of self administration of drugs. Prereq.: PSYC 504

PSYC 551 Research I (3)
Surveys statistical methods used in behavioral science research. Topics include hypotheses testing, correlation and regression, probability, and non-parametric tests. Emphasizes both theoretical and practical aspects of the methods.

PSYC 552 Advanced Statistics and Research Design Lecture (3)
Continues Research I (PSYC 551). Includes topics such as analysis of variance and covariance, regression analysis, and multivariate methods. Emphasizes statistical techniques applicable to student research interest/projects whenever possible. Prereq.: PSYC 551, Co-req.: PSYC 556 or consent of instructor.

PSYC 556 Advanced Statistics and Research Design Lab (1)
Provides laboratory experiences with computerized statistical packages widely utilized in psychology research. Allows students to explore statistical techniques and strategies appropriate for their thesis projects. Prereq.: Must be taken concurrently with PSYC 552.

PSYC 553 Thesis (VC 1-6)
Prereq.: PSYC 551 and permission of instructor.

PSYC 595 Independent Research Study (VC 1-6)
Provides an opportunity for the student who has selected an area of specialization to engage in addi-tional directed reading, discussion, and research. Prereq.: Consent of instructor/approval of Department Chairperson.

PSYC 596 Special Topics in Clinical Psychology and Counseling (VC)
Presents and discusses special topics pertaining to clinical psychology and counseling that are of interest to students. Prereq.: Graduate standing and/or written permission of instructor.

GRADUATE PROGRAM IN COUNSELING

The Department of Psychology and Counseling offers the Master of Science degree in Counseling. The program prepares individuals to function professionally as school, community, and rehabilitation counselors; as treatment providers in mental health agencies, substance abuse facilities, employee assistance

programs, career counseling, and in employment centers, therapeutic group homes, and rehabilitation centers.

The school counseling component of the program is approved by the National Association of State Directors of Teacher Education Certification and meets the certification requirements of the District of Columbia Public Schools. The 48 hours of coursework required for completion of the degree program also fulfills requirements for Board Eligible Status of the National Board for Certified Counselors. Licensure for independent practice in the District of Columbia, as well as certification as a clinical mental health counselor requires additional coursework and supervised practice.

Students interested in professional licensure or clinical certification should obtain copies of the licensure and certification standards from the state office or the appropriate professional association. To prepare to complete applications for licensure or certification after graduation, the student should maintain a file of course syllabi, independent study contracts, field placement activity logs, names and addresses of field supervisors, the program description, and course catalogs. Questions about District of Columbia licensing requirements or copies of applications should be obtained from:

D.C. Board of Professional Licensure
Application Support Division
P.O. Box 37200, Room 904
Washington, D.C. 20012-7200

MASTER OF SCIENCE IN COUNSELING

Requirements for Admission
To be considered for admission to graduate study in counseling, the applicant must meet the following requirements:

1. Hold a baccalaureate degree from an accredited college or university. Although a variety of majors may be considered appropriate background for graduate study in counseling, the successful applicant generally has a major in education and/or the social sciences.

2. Submit official transcript(s) from all previous undergraduate and graduate work. Applicants must have an undergraduate grade point average of 2.5 or higher.

3. Submit official scores from a recent administration of the Graduate Record Exam Verbal, Quantitative, and Analytical Reasoning Tests.

4. Secure two (2) letters of recommendation. One letter should be from an individual familiar with the applicant's academic preparation; the other should address the applicant's capacity for relating to clients, professionalism, and personal attributes.

Curriculum Requirements
The program of study requires a total of 48 credit hours, which includes 33 hours of core requirements, including six hours of practica and 15 hours of electives. There is no thesis requirement.

Graduate Writing Proficiency Examination
Completion of the Graduate Writing Proficiency Exam at or above the level set by the University is required of all graduate students. Students must take the writing proficiency examination in the first semester of enrollment. Students must register to take the examination, which is administered only once each semester.

Core Requirements: 33 credit hours

PSYC	504	Psychopathology	3
PSYC	537	Lifespan Development	3
CNSL	509	Counseling Philosophies and Practice	3
CNSL	510	Group Counseling	3
CNSL	513	Cultural Diversity Issues and Multicultural Counseling	3
CNSL	519	Appraisal Techniques of Counseling	3
CNSL	521	Practicum and Field Experience in Counseling	3
CNSL	522	Practicum and Field Experience in Counseling II	3
CNSL	530	Theories and Techniques of Counseling	3
CNSL	531	Ethics, Legal and Legislative Issues	3
CNSL	532	Introduction to Research and Program Evaluation	3

Electives: 15 credit hours

CNSL	507	Grief Counseling	3
CNSL	508	Organization and Administration of Counseling	3
CNSL	517	Career Theories and Development	3
CNSL	528	Drug Abuse Prevention and Treatment	3
CNSL	529	Human Sexuality and Sexual	

		Dysfunction	3
CNSL	533	Crisis Intervention	3
CNSL	538	Mental Health Treatment Technique	3
CNSL	543	Addiction Disorders	3
CNSL	544	Marriage and Family Counseling	3
CNSL	545	Independent Research Study	(VC)
CNSL	546	Counseling Children and Adolescents	3
CNSL	555	Counseling the Elderly	3
CNSL	596	Special Topics in Counseling	(VC)

Twelve (12) credit hours of coursework added in Fall 1996 for students desiring professional licensure:

PSYC	505	Advanced Personality Theory and Learning Processes	.3
PSYC	548	Psychopharmacology	3
CNSL	549	Tests in Counseling	3
PSYC	552	Advanced Statistics and Research Design	3

Rehabilitation Counseling Courses

1318-500	Foundations of Rehabilitation Counseling	3
1318-501	Psycho-social and Medical Aspect of Disability in Rehabilitation	3
1318-502	Career Counseling and Job Development and Placement in Rehabilitation	3
1318-503	Introduction to Assistive Technology in Rehabilitation Counseling	3
1318-504	Principles and Practices of Case Management in Rehabilitation	3
1318-505	Directed Readings in Rehabilitation	3

COURSE DESCRIPTIONS

COUNSELING

CNSL 507 Grief Counseling (3)
Explores philosophical, theoretical, and practical considerations necessary for work with individuals experiencing death, grief, and loss. Prepares students for work with those who are dying and their bereaved loved ones.

CNSL 508 Organization and Administration of Counseling (3)
Examines management and organizational concepts in general and highlights how these relate to educational and human service delivery systems in particular. Reviews management theory with a focus on key management functions. Examines development and functioning of school guidance offices.

CNSL 509 Counseling Philosophies (3)
Surveys counseling as a discipline by examining its philosophical foundations and the major undergirding principles and practice, including models of human development, principles of learning, and principles of guidance and counseling.

CNSL 510 Group Counseling (3)
Examines the major schools, as well as contemporary trends in group counseling, including didactic and experiential models. Provides laboratory exercises which demonstrate different group approaches, offering opportunities for students to experience both group leadership and group participation. Prereq: CNSL 509.

CNSL 513 Cultural Diversity Issues and Multicultural Counseling (3)
Reviews counseling theories and the appropriateness of each for counseling minorities: the aged, handicapped, gifted, mentally disabled, women and members of racial and ethnic groups. Prereq: PSYC 504, CNSL 509.

CNSL 517 Career Theories and Development (3)
Reviews information related to training and educating for jobs and careers, marriage and careers, and retirement careers. Utilizes a series of practical class projects, such as performing a job analysis, studying an occupational information program, reviewing systems for classifying materials and information, and critically reviewing and analyzing occupational materials from commercial publishers and professional associations to teach concepts. Studies the rationale behind the contributions of major career theorists.

CNSL 519 Appraisal Techniques of Counseling (3)
Examines techniques and methods of human appraisal, including standardized testing, autobiographical techniques, case histories, case studies, and interviews. Prereq.: CNSL 509.

CNSL 521 Practicum and Field Experience in Counseling I (3)
Requires work in an actual counseling setting under **the** direction of a qualified professional. Requires on-site and classroom hours. Prereq.: Completion of core courses. Prereq: PSYC 504, CNSL 509, CNSL 510 and CNSL 530.

CNSL 522 Practicum and Field Experience in Counseling II (3)
Continues the practicum experience with additional responsibilities to enhance continued skill development. Requires on-site and classroom hours. Prereq.: CNSL 521.

CNSL 528 Drug Abuse Prevention and Treatment (3)
Examines the physiological and psychological aspects of addiction to alcohol, narcotics, stimulants, psychotropics, hallucinogenic drugs, gambling, and sex. An intensive discussion regarding psychosocial factors leading to addictive states and an exploration of approaches and strategies for prevention, control, counseling, and treatment will be integrated across the course curriculum.

CNSL 529 Human Sexuality and Sexual Dysfunction (3)
Provides information germane to the counselor's roles as sex educator and sex counselor. Covers reproductive processes, sexual behavior, sex and gender, marriage, family and interpersonal relationships, and sex and health. Analyzes theories and empirical studies of social processes and sexual practices**.**

CNSL 530 Theories and Techniques of Counseling (3)
Surveys major counseling models and their application in schools and mental health settings. Focuses on helping the student integrate theory and practice in order to develop a personal counseling philosophy. Prereq: CNSL 519.

CNSL 531 Ethics, Legal and Legislative Issues (3)
Surveys ethics in counseling and current legislation and laws impacting the counseling profession. Provides an overview of basic legal terminology and techniques for recognizing legal problems and issues. Prepares the counselor to serve as a client advocate and expert judicial witness. Examines controversial contemporary social welfare areas for their legal implications. Prereq: CNSL 509.

CNSL 532 Introduction to Research and Program Evaluation (3)
Examines qualitative and quantitative methods used in human services research. Prepares students to read, analyze, and evaluate research. Equips them to evaluate the effectiveness of service delivery programs.

CNSL 533 Crisis Intervention (3)
Overviews theories of self-destructive behavior, crisis intervention, and suicide prevention. Explores treatment approaches for those in crises in schools and institutional settings. Prereq.: CNSL 530.

PSYC 537 Lifespan Development (3)
Explores major theories of human development. Utilizes the lifespan perspective to explore the inter-relationship of physical, cognitive, social, and emotional development at every stage from conception to death. Emphasizes the influence of social, cultural, and individual experiences in life stage transitions. Views psychopathology as normal development gone awry. Prereq: PSYC 504 or consent of instructor.

CNSL 538 Mental Health Treatment Techniques (3)
Examines traditional and contemporary mental health treatment approaches with special emphasis on techniques used in out-patient, community-based care. Prereq.: CNSL 530.

CNSL 543 Addiction Disorders (3)
Examines the physiological and psychological aspects of addiction to alcohol, narcotics, stimulants, psychotropics, hallucinogenic drugs, gambling, and sex. Assesses psychosocial factors associated with addiction. Explores a variety of treatment approaches. Prereq: PSYC 504.

CNSL 544 Family Counseling (3)
Focuses on traditional and non-traditional family life styles (including single-parent families, commune families, and the family in which two unmarried persons live together and procreate), family structures of various racial and economic groups, communication, and, communication breakdown in family relationships.

CNSL 545 Independent Research Study (3)
Provides the counselor-in-training who has selected an area of specialization an opportunity for in-depth reading, discussion, and/or field or laboratory experience in an area of interest. Prereq: Permission of instructor and Department Chair.

CNSL 546 Counseling Children and Adolescents (3)
Explores a variety of models for effecting behavioral change in the early stages of the lifespan. Exposes students to a variety of techniques for helping children and youth through counseling processes. Prereq: CNSL 530, PSYC 537.

CNSL 549 Tests in Counseling (3)
Provides knowledge of the major types of tests, administration, and scoring; the use of tests in decision-making, research, and treatment; criteria for judging tests; and the basic concepts and terminology of tests and measurements.

CNSL 555 Counseling the Elderly (3)
Examines theories and methods for counseling senior citizens. Reviews biological and sociocultural aspects of aging and the impact these have on behavior and behavioral change. Prereq: PSYC 537 or consent of instructor.

CNSL 596 Special Topics in Counseling (VC)
Presents and discusses special topics pertaining to counseling that are of interest to students. Prereq: Graduate standing and/ or written permission of instructor.

PSYC 596 Special Topics in Clinical Psychology (VC)
Presents and discusses special topics pertaining to clinical psychology that are of interest to students. Prereq: Graduate standing and/ or written permission of instructor.

COURSE DESCRIPTIONS

REHABILITATION COUNSELING

1318-500 Foundations of Rehabilitation Counseling (3)
Examines the history, philosophy, and legislation related to the development of the field. Focus is on research findings, current policies, government entities, and ethical issues.

1318-501 Psycho-social and Medical Aspect of Disability in Rehabilitation (3)
Overview of major physical, cognitive, and sensory impairments. Emphasizes functional limitations, intervention resources, contributions of medical and allied health professions and psychosocial implications of adjustment to disabling conditions.

1318-502 Career Counseling and Job Development and Placement in Rehabilitation (3)
Explores occupational information job matching systems and job placement approaches. Focuses on demand-side job development, job-seeking skills training, supported employment, transitional work, and placement techniques, including job analyses, ADA implementation, and labor market surveys.

1318-503 Introduction to Assistive Technology I Rehabilitation Counseling (3)
Examines technology in rehabilitation to support functioning of individuals with physical, cognitive, and sensory disabilities.

1318-504 Principles and Practices of Case Management in Rehabilitation (3)
Examines rehabilitation delivery systems. Explores benefit systems ethic goal development and rehabilitation planning and documentation.

1318-505 Directed Readings in Rehabilitation (3)
Provides intensive study in one or more topical areas of rehabilitation through directed readings under supervision of a faculty member.

SCHOOL OF ENGINEERING AND APPLIED SCIENCES

Ben O. Latigo, Dean
Building 42, Room 212
(202) 274-7000

The School of Engineering and Applied Sciences prepares students for professional careers in engineering, health, and applied technology. Programs are offered at the baccalaureate, associate, and certificate levels. Various options are available within certain programs to allow the student to meet his or her own individual interests. All programs in the School of Engineering and Applied Sciences encourage students to work with others in inter-disciplinary pursuits, to enhance their lives and those in their community, and to relate professionalism to scholarship through interaction with private and public institutions. The programs are designed to cultivate the intellectual ability of students, to develop their knowledge and skills, and to prepare them to think critically, analytically, and creatively. They reflect the School's awareness that career preparation for complex urban organizations requires the training of people who are intellectually and professionally motivated and capable of comprehending the environment in which these institutions function.

The faculty of the School of Engineering and Applied Sciences comprises a cadre of dedicated, responsive professionals who have broad backgrounds and who remain active in their disciplines. Both faculty and staff

work in tandem to provide a network of academic and support services that will assure competent, competitive graduates. Courses are designed to engage students in critical thinking, continuous inquiry, and the pursuit of excellence. State-of-the-art technologies are incorporated into all phases of the curriculum and research.

The School of Engineering and Applied Sciences embodies the historic purposes of the 1862 Morrill Act, which established the American land-grant university system. The three tenets of research, instruction, and service through the extension to the public of knowledge acquired through research are incorporated within the College and form the core of its mission.

DEPARTMENT OF NURSING AND ALLIED HEALTH

Dr. Connie M. Webster, Chairperson
Building 44, Room 102
(202) 274-6167

Full-time Faculty (Nursing)
Associate Professor C.M. Webster
Assistant Professors E.T. Asongwed, D. Caldwell, S. Cato, G. Green-Ridley, B.M. Scoulios
Full-time Faculty (Allied Health)
Medical Directors B. Grand, T.M. Walton
Associate Professors C.W. Phaneuf, D.C. Steinert
Assistant Professors R.D. Henderson, J.K. Hogan, S.D. Lockwood, L.T. McGuire, C.M. Terry

The Department of Nursing and Allied Health offers the A.A.S. degrees in Mortuary Science, Medical Radiography, Nursing, and Respiratory Therapy, and the B.S. in Nursing (RN-BSN).

The mission of the Department of Nursing and Allied Health is to provide exemplary educational experiences to an ethnically diverse population with a particular emphasis on the needs in the District of Columbia. The Department provides an intellectually challenging and nurturing environment that fosters the development of competent and compassionate practitioners who will assist individuals on the continuum from wellness/ illness, dying, death, and care of human remains. Students are assisted in the development of critical thinking skills, problem solving, technical, and social skills through active participation in classroom and practicum experiences.

All of the programs in the Department of Nursing and Allied Health are fully accredited by their respective professional accrediting body.

NURSING PROGRAM

The University offers the A.A.S. in Nursing and the B.S. in Nursing (RN-Completion). The curricula reflect high standards of professional practice and incorporate guidelines from practice trends, professional organizations, and accrediting agencies. Both the AASN and the BSN are fully accredited by the National League for Nursing Accreditating Commission (NLNAC) and are approved by the District of Columbia Board of Nursing.

National League for Nursing Accrediting Commission
61 Broadway – 33rd Floor
New York, NY 10006
Telephone: 212/363-5555 x 153
Fax: 212/812-0390
Web site: http://www.nlnac.org

The Associate in Applied Science (A.A.S.) in Nursing is designed to provide students with the necessary knowledge and skills for eligibility to attain licensure as a registered nurse. Successful completion of the registry examination allows the graduate to enter the health care delivery system as a registered nurse and to provide direct patient care in a variety of settings.

The Bachelor of Science (B.S.) in Nursing – RN/BSN completion – is designed for registered nurses who have already earned an Associate Degree in Nursing or completed a nursing diploma program. The program builds on knowledge attained in previous nursing education and current practice. This program prepares nurses to work in structured and unstructured settings; provide leadership/management in the coordination of care to individuals, families and the community; and provides preparation for graduate study in advance practice roles.

The LPN to RN (LPN to AASN) Accelerated Program is designed to provide the licensed practical nurse educational mobility without unnecessary barriers. Advanced placement into the AASN program will be awarded after the successful completion of the validation courses.

ACADEMIC INFORMATION

ADMISSION

Students are not automatically admitted into the Nursing Program. Eligible students must make application to the Program and admission is competitive. Students can apply for admission to the

Nursing Program after completing pre-requisite courses. The application is due on or before the third Friday in January for Fall semester and the first Friday in October (RN's only) for Spring admission to clinical nursing courses. Most students complete all non-nursing courses before entering the Program. Application submission does not guarantee admission to the Nursing Program. Applicants must be enrolled in UDC as regular students and have completed a minimum of 12 hours of pre-nursing, general education, and support courses earning a minimum grade of C in each non-nursing course and a cumulative grade point average (CGPA) of 2.3 or higher. The APG Committee reviews all applications and recommends students for admission. Students who are not accepted must reapply for consideration for admission. Admission is once per year for the AASN program and Fall or Spring for the RN-BSN program.

LPN and RN students must be graduates of a state-approved program and/or a NLNAC accredited program and hold licensure in the District of Columbia.

RN's educated in a foreign country must have their records evaluated by the appropriate international organization and on file at UDC.

TRANSFER CREDITS

Transfer students from other colleges must be in good academic standing, not on academic probation, not academically or administratively dismissed, and not barred from continuing enrollment in the Nursing Program at previous college(s). Transfer students from other colleges must be enrolled in UDC for at least one semester prior to application to the Nursing Program, meet the criteria for admission, and have earned a 2.3 or higher the CGPA to be considered for progression into the clinical program. Students will be numerically ranked based on CGPA for advancement into the clinical phase of the program. The highest ranking students will be selected as space permits.

Science courses previously taken can be no older than five years and credit by examination can be used to validate prior learning.

CREDIT BY EXAMINATION

Credit by examination of specific courses - Pharmacology Foundations in Nursing (theory and practice) may be used for the AASN program. The RN can use credit by examination for all 300 level nursing courses, except 3427-315 & 316 Essentials of Professional Nursing (theory and practicum).

VALIDATION AND ARTICULATION

The Nursing Program supports students being given the opportunity to validate prior learning and the articulation of the practical nurse into the AASN degree and registered nurse into the RN-BSN degree.

RN students from other nursing programs can take a 300 level nursing course and transfer the credit.

ACADEMIC STANDING

The grade of "C" or better is required in all courses. Only one nursing course may be repeated during the program of study.

PROGRESSION

To progress in the Nursing Program, prerequisites must be completed for each nursing course. Incomplete grade(s) must be removed before progressing to another nursing course. Where appropriate, students will be required to take national achievement examinations at the end of each nursing theory course and entrance exam.

CLASS ATTENDANCE

Classroom attendance is required and Clinical attendance in nursing is mandatory.

WITHDRAWAL/DISMISSAL

Nursing students with two grades less than "C" in nursing courses will not be retained in the program. While students may be dismissed from the Nursing Program, they are not dismissed from the University and are assisted with identifying another major. In special cases, a student may be readmitted (cases cannot involve failing grades).

HEALTH CLEARANCE

An annual physical is required prior to clinical placement and any additional immunizations (i.e. hepatitis B) required by the clinical agencies and D.C. law. CPR Completion: All student enrolled in clinical nursing are required to have and maintain current certification in cardiopulmonary resuscitation, CPR for Healthcare Providers (card "C").

POLICE CLEARANCE

Students taking clinical/practicum courses may be required to provide a police clearance by the hospital/agency.

Student Release Form: Students may be required to sign a Student Release Form. This form includes the following statement: "I hereby release the Nursing Program and the University of the District of Columbia from responsibility for any injury or illness to me (or if I am pregnant, my baby) while attending hospital or other clinical(s). I understand that risks do exist for me (and if pregnant, my unborn baby) while practicing nursing in the hospital setting, and I do assume any and all risks involved."

Professional Liability Insurance: Students are required to have and maintain professional liability insurance when beginning the clinical nursing courses and throughout the nursing curriculum. Insurance is purchased in the cashier's office (Bldg. 38, 2nd floor).

Grievance/Complaints and Appeal Procedure Students may express concerns regarding a faculty-student problem using the grievance procedure outlined in the Nursing Program Student Handbook. Every effort should be made to resolve the issue at the level it occurred.

CODE OF CONDUCT AND ETHICS

In addition to the University policy, violations of the Code of Conduct and Ethics in nursing could result in dismissal from the Nursing Program.

STATUTE OF LIMITATION

No student will be subject involuntarily to regulations and academic requirements introduced while continuously enrolled and in good standing in the Nursing Program, if the new regulations involve undue hardship or loss of academic credits earned to satisfy the requirements previously in effect. The following regulations are, however, in effect for all students:
A student, who ceased to attend the University for a period of one semester, whether voluntarily or not, is subject to all the regulations and requirements in force at the time studies are resumed unless the Director of Nursing has approved other arrangements and recorded the same in writing prior to the beginning of the absence.

Policies of the Nursing Program are subject to revision during the course of development, implementations, evaluation, and the revision of the curriculum. These changes may become effective prior to publication of the next Catalog.

The faculty reserves the right to make curriculum revisions through the Curriculum Committee without prior notice or publication, provided these changes would at no time lengthen the period of time required to obtain the nursing degree.

ASSOCIATE IN APPLIED SCIENCE IN NURSING

Total Credit Hours of College-Level Courses Required: 64-65

General education requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	101	College Level Math I	3
MATH	102	College Level Math II	3
or			
MATH	185	Elementary Statistics	3
BIOL	111	Fundamental of Anatomy** Physiology I	3
BIOL	112	Fundamental of Anatomy** Physiology II	3
BIOL	113	Fundamental of Anatomy and Physiology I Lab**	1
BIOL	114	Fundamental of Anatomy and Physiology II Lab**	1
BIOL	245	Clinical Microbiology Lecture**	3
BIOL	244	Clinical Microbiology Lab**	1

**** Required by the nursing program**

Pre-Nursing Course Requirements

MATH		College Level Math I	3
ENGL	111	English Composition I	3
BIOL	111	Anatomy and Physiology I Lec	3
BIOL	113	Anatomy and Physiology I Lab	1
PSYC	201	Principles of Psychology **	3

Required nursing courses

NURA	100	Concepts Basic to Nursing	2
NURA	105	Nursing Pharmacology	3
NURA	111	Foundations of Nursing Theory	3
NURA	112	Foundations of Nursing Practicum	2
NURA	117	Mental Health Nursing Theory	2
NURA	118	Mental Health Nursing Practicum	2
NURA	119	Maternal Newborn Nursing Theory	2
NURA	120	Maternal Newborn Nursing Practicum	2

NURA	217	Nursing Care of the Child Theory	2
NURA	218	Nursing Care of the Child Practicum	2
NURA	219	Nursing Care of Adults I Theory	2
NURA	220	Nursing Care of Adults I Practicum	2
NURA	221	Nursing Care of Adults II Theory	3
NURA	220	Nursing Care of Adults II Practicum	5
NURA	225	Nursing Process-Lab	1
NURA	290	Nursing Seminar, A.A.S	2

Licensed Practical Nurse to Associate of Applied Science in Nursing (LPN to AASN) ACCELERATED

Total credit hours of college level courses required for graduation: 64-65 credits (65 if 8800-101 is required)

Pre-Nursing Courses

General education requirements

MATH		College Level Math I	3
ENGL	111	English Composition I	3
BIOL	111	Anatomy and Physiology I Lecture	3
BIOL	113	Anatomy and Physiology I Lab	1
BIOL	112	Anatomy and Physiology II Lecture	3
BIOL	114	Anatomy and Physiology II Lab	1
PSYC	201	Principles of Psychology	3

Validation Courses

NURA	198	*LPN Validation Theory	3
NURA	199	*LPN Validation Lab	1

*15 Credits will be awarded upon successful completion of the LPN Validation Course Theory and Laboratory Components.

Additional general education requirements

ENGL	112	English Composition II	3
MATH		College Level Math II	3
		or	
MATH	185	Elementary Statistics	3
BIOL	244	Clinical Microbiology Lecture	3
BIOL	245	Clinical Microbiology Lab	1

Additional required nursing courses

NURA	105	Nursing Pharmacology	3
NURA	117	Mental Health Nursing Theory	2
NURA	118	Mental Health Nursing Practicum	2
NURA	217	Nursing Care of the Child Theory	2
NURA	218	Nursing Care of the Child Practicum	2
NURA	219	Nursing Care of Adults II Theory	3
NURA	220	Nursing Care of Adults II Practicum	5
NURA	225	Nursing Process Lab	1
NURA	290	Nursing Seminar, AAS	2

Registered Nurse to Bachelor of Science in Nursing Completion -RN to BSN

Total credit hours of college level courses required for graduation: 60 credits

General education Requirements

ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
SOCY	113	Introduction to Anthropology	3
		or	
PSYC	111	Introduction to Sociology	3
PHIL		Philosophy	3
NFSC	106	Nutrition – Lecture	3
NFSC	104	Nutrition - Lab	1
ARTS/MUSC		Fine Arts	3
CHEM	135	Essentials of Organic and Biochemistry Lecture	3
CHEM	136	Essentials of Organic and Biochemistry Laboratory	1

Required nursing courses (Prerequisite to the senior year)

NURS	315	Essentials of Professional Nursing Theory	2
NURS	316	Essentials of Professional Nursing Practicum	2
NURS	345	Pathophysiology for RN	4
NURS	354	Gerontological Nursing	3
NURS	355	Legal Issues in Nursing Practice	2

All nursing prerequisites must be completed prior to matriculation to the senior level.

Additional required nursing courses

NURS	442	Care of the Acutely Ill Theory	3
NURS	444	Acute and Rehabilitation Practicum	5
NURS	445	Management/Leadership	2
NURS	455	Nursing Research	3
NURS	460	Community Health Nursing Theory	3
NURS	461	Urban Community Health Issues Theory	3
NURS	462	Community Based Nursing Care Practicum	5

CERTIFICATE PROGRAM FOR PRACTICAL NURSING

The practical nursing program is designed for individuals with the desire and ability to nurture and provide health care to persons in hospitals, clinics, long-term care facilities, and other health care settings under the supervision of a registered nurse or physician. Two tracks are offered: a twelve (12) month day program and a sixteen-month evening program.

Admission requirements

- Must be 18 years of age or older
- Must pass a written pre-admission exam/aptitude test
- Must be a high school graduate or have a GED equivalency certificate
- Three letters of reference
- A current Cardiopulmonary Resuscitation Card
- A police clearance
- A recent physical examination results and required immunizations signed by a physician
- A current passport-size picture

Graduates are eligible to take the National Council Licensure Examination (NCLEX-PN).

CERTIFICATE PROGRAM - NURSING ASSISTANT

The Nursing Assistant Program is offered through UDC's Community Outreach and Extension Services. The program is 120 hours of instruction, which includes classroom, laboratory and clinical practicum.

Admission requirements

- No previous nursing experience necessary.
- Must be 18 years of age or older; speak, read, and write English at the sixth grade level.
  Must have a tuberculosis (TB) test signed by a physician.

Students who satisfactorily complete the Program will be eligible to take the National Nurse Aide Assessment Program (NNAAP) examinations.

COURSE DESCRIPTIONS

NURA 100 Concepts Basic to Nursing Theory (2)
Examines the developments and trends in nursing related to social, scientific, and technological influences. Ethical, legal and communication concepts impacting nursing and the organization of the health care delivery system is included. In addition, changing role functions, education, research, as well as, the philosophy of the Nursing Program is introduced. Emphasis is placed on man as a self-care agent, the health-illness continuum and the nursing process. Lec. 2 hrs. Prereq. ENGL 111, BIOL 111, BIOL 113, PSYC 201, MATH 101. Co-req.: NURA 105, NURA 111, NURA112, BIOL 112 & 114.

NURA 105 Nursing Pharmacology Theory (3)
This basic nursing pharmacology course presents concepts in the pharmacodynamics of drugs and their relation to the care of clients. Basic principles in the administration of medications and mathematical dosage calculations will be included. Lec. 3 hrs. Prereq. ENGL 111, BIOL 111, BIOL 113, PSYC 201, MATH 101; Co-req.: NURA 112, NURA 111, BIOL 112, BIOL 114, NURA 100

NURA 111 Foundations of Nursing Theory (3)
This course is designed to provide content, which focuses on the development of basic concepts related to health, normal aging, and nursing practice. Principles of communication, legal, ethical, nutritional, and pharmacological content related to the basic technologies are introduced. Lec. 3 hrs. Prereq.: ENGL 111, MATH 101; BIOL 111, BIOL 113, PSYC 201; Co-req.: NURA 112, NURA 105,BIOL 112, BIOL 114, NURA 100.

NURA 112 Foundations of Nursing Practicum (2)
This is the first nursing practicum course developed to provide opportunities for the student to use the nursing process when designing nursing systems, which assist individuals in meeting self-care requisites. This course focuses on the development of nurse agency with emphasis on assessment. Students learn basic nursing technologies and underlying scientific principles in the on-campus laboratory and apply them in long term care facilities. Lab/hosp 6 hrs. . Prereq.: ENGL 111, BIOL 112, BIOL 114, MATH 101, PSYC 201. Co-req.: NURA 111, NURA 105, NURA 100.

NURA 117 Mental Health Nursing Theory (2)
Focuses on the application of the nursing processes in the care of adults with selected psychiatric-mental health deviations. Dependent and independent modes of treatment related to each deviation in discussed. Emphasis is placed on assessment, planning, implementation, and evaluation. Scientific rationales for interventions are stressed. Lec. 2 hrs. Prereq: NURA 100, NURA 105; NURA 111; NURA 112; Coreq: NURA 118, NURA 119, NURA 120; BIOL 244 & 245.

NURA 118 Mental Health Nursing Practicum (2)
This practicum is structured to provide an opportunity for the student to apply therapeutic intervention and interpersonal and communication skills with clients in mental health settings. The planning and implementation phase of the nursing process is emphasized. Hosp. 6 hrs. Prereq: NURA 100, NURA 105; NURA 111; NURA 112;Coreq: NURA 117, NURA 119, NURA 120; BIOL 112 & 114.

NURA 119 Maternity-Newborn Nursing Theory (2)
Focuses on the trends, issues, child bearing, universal, developmental, and health deviations self-care requisites related to maternity nursing. Emphasis is placed on the nursing process, critical thinking, therapeutic intervention and communication. Lec. 2 hrs. Prereq: NURA 100, NURA 105; NURA 111; NURA 112; Coreq: NURA 117,NURA 118, NURA 120; BIOL 244 & 245.

NURA 120 Maternal – Newborn Nursing Practicum (2)
This nursing practicum provides opportunities for the student to use the nursing process in the promotion and maintenance of optimal family health within the maternity and neonatal setting. Hosp. 6 hrs. Prereq: NURA 100, NURA 105; NURA 111; NURA 112; Coreq: NURA 117, NURA 118, NURA 119; BIOL 244 & 245.

NURA 198 LPN Validation Theory (3)
This course is designed to validate and enhance integrative concepts of the Licensed Practical Nurse (LPN) that provide the foundation for registered nursing practice. Students explore selected theories, concepts, and issues that support professional practice, including therapeutic communication, problem solving, critical thinking, the nursing process, teaching-learning, planning nursing care, values clarification, and standards of professional nursing. Students refine and update previous learning in addition to defining goals for a successful transition into a Registered Nursing (R.N.) Program.
Restricted Enrollment Lec 3 hrs. Prereq.: ENGL 111, MATH 101, BIOL 111, BIOL 113, PSYCH 201.
Co-req.: NURA 105, BIOL 112, BIOL 114.

NURA 199 LPN Validation Laboratory (1)
This course is designed to validate the skills of the Licensed Practical Nurse (LPN) that provide the foundation for registered nursing practice. Students demonstrate competency in selected basic nursing skills in the on-campus laboratory. This course is the application of selected theories and concepts presented in the Validation Theory Course. The student refines and updates previous learning to facilitate a successful transition into a Registered Nursing (R.N.) Program.
Restricted Enrollment Lab 3 hrs. Prereq.: ENGL 111, MATH 101, BIOL 111, BIOL 113, PSKYCH 201. Co-req.: NURA 105, BIOL 112, BIOL 114.

NURA 217 Nursing Care of the Child Theory (2)
This courses focuses on the theoretical foundations of pediatric nursing. The nursing process provides the foundation for pediatric health promotion and illness care of the child and family. Emphasis is placed on critical thinking, therapeutic interventions and communication. Lec. 2 hrs. Prereq: NURA 117, NURA 118, NURA 119, NURA 120; Coreq: ENGL 112; MATH 102 or 185; NURA 218, NURA 219, NURA 220, NURA 221, NURA 225.

NURA 218 Nursing Care of the Child Practicum (2)
This nursing practicum provides opportunities for the student to use the nursing process in health promotion and illness care of children and their families through adolescence in the pediatric setting. Hosp. 6 hrs. Prereq: NURA 117, NURA 118, NURA 119, NURA 120; Coreq: ENGL 112; MATH 102 or 185; NURA

NURA 219 Nursing Care of Adults I Theory (2)
This is the first of two courses in the care of the adult. It provides the theoretical foundations needed to assist adults experiencing chronic health deviations. Emphasis is placed on diagnosis, pathophysiology, dependent and independent modes of treatment. Pharmacological and nutritional concepts are integrated. Lec. 2 hrs.Prereq: NURA 117, NURA 118, NURA 119, NURA 120; Coreq: ENGL 112; MATH 102 or 185; NURA 217, NURA 218, NURA 220.

NURA 220 Nursing Care of Adults I Practicum (2)
This practicum is a Medical-Surgical experience in an acute and chronic care setting. It provides the student with an opportunity to learn and apply skills that will assist adults in meeting self-care deficits that arise from physical health deviations. Application of the nursing process is continued with an emphasis on evaluation. Hosp. 6 hrs. Prereq: NURA 117, NURA 118, NURA 119, NURA 120; Coreq: ENGL 112; MATH 102 or 185; NURA 217, NURA 218, NURA 219, NURA 220.

NURA 221 Nursing Care of Adults II Theory (3)
This is the second course in the nursing care of the adult client. The content emphasizes the pathophysiology, related diagnostic procedures and treatment modalities of specific health deviations including multi-system failure affecting the adult. Additional focus is given to critical thinking, and therapeutic interventions. Clinical learning experiences take place in acute and chronic health care settings. Lec. 3 hrs. Prereq: ENGL 112; MATH 102 or 185; NURA 217, NURA 218, NURA 219, NURA 220; Co-req: NURA 222, NURA 225, NURA 290.

NURA 222 Nursing of Adults II Practicum (5)
This course provides the student with the skills needed to manage the care of persons with complex multi-system health deviations. Emphasis is placed on interdisciplinary team functioning and small group patient assignments. Opportunity is provided for increased self-direction in the utilization of the nursing process with emphasis placed on evaluation as it applies to the practice of nursing. Practicum experiences which facilitate the transition into nursing practice are provided. Hosp. 15 hrs. Prereq: ENGL 112; MATH 102 or 185; NURA 217, NURA 218, NURA 219, NURA 220; Co-req: NURA 222, NURA 225, NURA 290.

NURA 225 Nursing Process Lab (1)
This course is designed to assist the graduating student to prepare for the NCLEX examination. Computer instruction is used; student must know how to use the Internet. Lab. 3 hrs. Prereq: Graduating nursing student.

NURA 290 Nursing Seminar, A.A.S. (2)
This non-clinical nursing course explores issues and basic concepts essential to the role of the associate degree nurse in a variety of structured health care settings. Emphasis is placed on the graduate's entry into a first level nursing position. Lec. 2 hrs. Prereq: Graduating nursing student.

The following courses are offered to registered nurses in the RN-BSN Completion Program.

NURS 315 Essentials of Professional Nursing Theory (2)
This is a nursing theory course designed for registered nurses pursuing a bachelor of science degree with a major in nursing. Strategies which facilitate progression through the B.S. Nursing Program are the primary focus. Emphasis is placed upon concepts of professional nursing, physical assessment, the self-care conceptual framework and professional ethical and legal issues related to client care. Lec. 2 hrs Prereq: Junior level standing in RN-BSN completion. Co-req: NURS 316.

NURS 316 Essentials of Professional Nursing Practicum (2)
This is a practicum course for the registered nurse student. The course builds on the nurse's prior knowledge to promote development of essential behaviors characteristic of the professional nurse. The role changes required for success in baccalaureate education will be emphasized. Students have the opportunity to apply the technological skills and the skills of physical assessment in the laboratory and clinical areas. Prereq.: Junior level standing in RN-BSN completion program. Co-req.: NURS 315.

NURS 345 Pathophysiology for RNs Theory (4)
This course is designed specifically for registered nurses. Alterations from the norm and the dynamic processes in various disease states are examined. Emphasis is given to interrelationships, among the pathological, physiological, psychological, and pharmacological factors. Selected modes of diagnosis and treatment are presented. Lec. 3 hrs. Prereq.: Junior level standing in RN-BSN completion program.

NURS 354 Gerontological Nursing Theory (3)
This course focuses on current health care issues affecting the older adult. It is designed to examine the essential foundations for practice of gerontological nursing care. The course emphasizes applying the nursing process to older adults experiencing wellness and self-care limitation. Selective medication and legal and ethical concerns are discussed. Lec. 3 hrs. Prereq.: Junior level standing in RN-BSN completion program.

NURS 355 Legal Issues in Nursing Practice Theory (3)
This course is designed to provide the student with an expanded understanding of the legal responsibilities of the nurse and other health care professionals in

providing health care. Lec. 3 hrs. Prereq: Junior level standing in RN-BSN completion program.

NURS 442 Care of the Acutely Ill Theory (3)
This course is designed to present content necessary to care for adults with acute health deviations requiring immediate interventions. The psychological impact on the individual and family are examined. Lec. 3 hrs. Prereq: Senior level standing in RN-BSN completion program. Co-req: NURS 443.

NURS 444 Acute Care and Rehabilitation Nursing Practicum (6)
This is an advanced nursing practicum in acute and rehabilitation settings with a focus on the evaluation phase of the nursing process. Students are provided the opportunity to apply theories and principles of leadership and management. Hosp. 18 hrs. Prereq: Senior level standing in RN-BSN completion program. Co-req: NURS 442 and NURS 443.

NURS 445 Nursing Management/ Leadership Theory (2)
This course is designed to provide students with a knowledge base of theories of leadership and principles of management. Leadership and management are presented as a learned process that can become habitual with practice. Content is presented relative to the following: styles of leadership and management, organizational structure and management, nursing roles, staffing process, planning; direction at the lower or first level management, communication, conflict, control, and staff training. Lec. 2 hrs., Prereq.: Senior level standing in RN-BSN completion program.

NURS 455 Nursing Research Theory (3)
This course is designed to provide the student with knowledge and understanding of the research process and its relationship to the nurse's role in providing care to clients. Emphasis is placed on developing a research proposal based on the research process. In addition, students are provided the opportunity to gain knowledge and skills in critiquing published research reports in refereed journals. Lec. 3 hrs., Prereq.: Senior level standing in RN-BSN completion program.

NURS 460 Community Health Nursing Theory (3)
This course is structured to provide a theoretical base for the practice of community health nursing and application of public health, community mental health, and home health nursing concepts. Content focuses on the analysis of family biophysical, psychosocial, structural/ functional, spiritual/religious, and ethnic/cultural diversity. The impact of the family health status on the community is explored using principles from epidemiology, levels of prevention, and nursing research. Lec. 3 hrs. Prereq.: Senior level standing in RN-BSN completion program.

NURS 461 Urban Community Health Issues Theory (2)
This course is designed to provide a holistic view of the community as client. Urban community health and its relation to international, national, state, suburban, and rural community morbidity and mortality trends are explored relative to the nurse's role. The impact of economic, social, cultural, ecological, and political factors on the community environment will be examined with emphasis on health care reform and excessive deaths, illnesses, and disabilities in African Americans. Lec. 3 hrs. Prereq: Senior level standing in RN-BSN completion program.

NURS 462 Community Based Nursing Care Practicum (3)
The student develops competencies in direct and indirect nursing care for ambulatory, school, occupational, employee, student, home and institutional community-based practice settings. Emphasis is placed on developing skills in decision making, applying research findings, and using computerized databases to analyze nursing functions, community environments, services for special populations, and health care delivery systems. Prereq: Senior level standing in the RN-BSN completion program. Co-req.: NURS 460 and NURS 461.

ALLIED HEALTH PROGRAMS

ASSOCIATE IN APPLIED SCIENCE IN MORTUARY SCIENCE

The Mortuary Science Program offers an Associate in Applied Science degree. It is designed to encompass the managerial and technical aspects of funeral service and its allied areas. It also provides the basis for further study and practice in thanatology, pathology, grief counseling and postmortem examination. In addition, students are prepared to own and operate a funeral establishment.

Students develop skills in embalming, cosmetizing, dressing, casketing and are provided an experience in directing funeral services.

Upon completion of the mortuary science curriculum, the graduate is ready for the licensure board in the state they intend to practice. Employment opportunities

exist with funeral homes, hospitals, medical schools, departments of health, and the offices of medical examiners or coroners.

The Mortuary Science Program is accredited by the American Board of Funeral Service Education, Inc.

Additional Comments or Requirements:
All prerequisite courses must be completed before a student can advance into the Mortuary Science Program. There is a five-year statute of limitation on all core courses.

Achievement of a grade of "C" or better in each science, business, and core course is required. To enter the Program, a student must have a GPA of 2.3 or higher.

A student must take each mortuary sciences courses in the sequence in which it is offered. Failure to pass any mortuary science course with a grade of "C" or above will prevent the student from taking the next course in the sequence.

A student may repeat no more than three (3) Mortuary Science courses, and may repeat any mortuary science course only once.

All mortuary science required courses must be completed within five(5) years of start date or obtain review and approval of the Program Director.

MORTUARY SCIENCE

Total Credit Hours of College-Level Courses Required for Graduation: 75

Pre-mortuary science courses general requirements

ENGL	111	English Composition I	3
MATH	101	College Level Math I	3
ORTA	101	Freshman Orientation	1
APCT	104	Introduction to Applications of Computers I	2
APCT	105	Introduction to Applications of Computer Lab	1

General Requirements

BIOL	111	Fundamentals of Anatomy and Physiology I*	3
BIOL	113	Fundamentals of Anatomy and Physiology I Lab*	1
BIOL	112	Fundamentals of Anatomy and Physiology II*	3
BIOL	114	Fundamentals of Anatomy and Physiology II Lab*	1
ECON	131	Principles of Macroeconomics	3
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	101	General College Math I	3
MATH	102	General College Math II	3
SPCH	115	Public Speaking	3
BIOL	245	Clinical Microbiology*	3
BIOL	244	Clinical Microbiology Lab*	1
CHEM	105	Fundamentals of Chemistry*	3
CHEM	106	Fundamental of Chemistry Lab*	1
MBAA	201	Principles of Accounting I*	3
MBAA	202	Principles of Accounting II*	3

*Must Achieve a grade of "C" or better.

Required Courses

MTSC	104	Funeral Service Orientation	3
MTSC	105	Descriptive Pathology	3
MTSC	107	History and Sociology of Funeral Service	3
MTSC	135	Funeral Service Law	3
MTSC	205	Funeral Service Management and Principles	2
MTSC	206	Funeral Service Management and Principles Lab	2
MTSC	213	Restorative Art	2
MTSC	214	Restorative Art Lab	2
MTSC	220	Embalming and Disposition Principles 1	1
MTSC	223	Embalming and Disposition Principles I Lab	2
MTSC	230	Embalming and Disposition Principles II	1
MTSC	232	Embalming and Disposition Principles II Lab	2
MTSC	254	Psychology of Grief	3
MTSC	294	National Board Seminar	1

ASSOCIATE IN APPLIED SCIENCE IN RESPIRATORY THERAPY

The Associate in Applied Science degree in Respiratory Therapy is designed to prepare students as beginning practitioners in respiratory therapy. The curriculum provides students the knowledge and skills needed for matriculation within laboratory and clinical settings. Students are prepared to work under the direction of a physician in the diagnoses,treatment and management of patients with pulmonary disorders. Respiratory Therapists treat patients along the age continuum – from premature infants to the aged in critical care, acute care, rehabilitation, and home settings.

The Respiratory Therapy program is accredited by the Committee on Accreditation for Respiratory Care (CoARC).

With continuing advances in the medical management of patients with pulmonary disorders, there is an ever increasing employment demand for skilled respiratory therapists in hospitals, rehabilitation centers, subacute centers, long-term care settings, and in home care.

RESPIRATORY THERAPY

Total Credit Hours of College-Level Courses Required for Graduation: 68

General Requirements

MATH	101	General College Math I	3
MATH	102	General College Math II	3
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
BIOL	111	Fundamentals of Anatomy and Physiology I	3
BIOL	113	Fundamentals of Anatomy and Physiology I Lab	1
BIOL	112	Fundamentals of Anatomy and Physiology II	3
BIOL	114	Fundamentals of Anatomy and Physiology II Lab	1
CHEM	105	Fundamentals of Chemistry Lecture	3
CHEM	106	Fundamentals of Chemistry Lab	1
Elective:		PSYC 201 or SOCY 111	3
8800-101		Freshman Orientation*	1

* Required for all new students; transfer students are exempt.

RSPT	170	Introduction to Health Sciences	2
RSPT	171	Principles and Practice of Respiratory Therapy I	4
RSPT	172	Principles and Practice of Respiratory Therapy II	5
RSPT	173	Ventilation and Gas Exchange Physiology	2
RSPT	270	Critical Care and Ventilation Management	5
RSPT	271	Respiratory Therapy Pharmacology	3
RSPT	272	Introduction to Disease Management	2
RSPT	273	Cardiopulmonary Diagnostics	3
RSPT	274	Acid-Base and Hemodynamic Physiology	3
RSPT	276	Respiratory Disease Management	2
RSPT	277	Adjunctive Respiratory Therapies	3
RSPT	278	Respiratory Therapy Clinical Preceptorship	3
RSPT	279	Respiratory Therapy Seminar	3

Additional Comments or Requirements
Placement in the Principles and Practice of Respiratory Therapy I course is by application.

There is a five-year statute of limitation on all respiratory courses.

Any break in enrollment in sequential clinical courses will require demonstration of continued clinical competence prior to enrollment in the subsequent clinical course.

A student must pass each respiratory therapy course in the sequence in which it is offered. Failure to pass any respiratory therapy course with a grade of "C" or above prevents the student from taking the next course in the sequence.

Achievement of a grade of a “C” or better in each required course is necessary for successful program completion. A student may repeat a respiratory course only once, and may repeat no more than two respiratory courses.

The curriculum requires full time attendance for four (4) semesters.

Students must present proof of and maintain liability insurance, health clearance and CPR certification (Healthcare Provider) throughout their student status.

ASSOCIATE IN APPLIED SCIENCE IN MEDICAL RADIOGRAPHY

The Associate in Applied Science degree in Medical Radiography is designed to provide in-depth study of radiologic technology, which is augmented by extensive clinical experiences. The curriculum prepares graduate to assume leadership roles in the profession as well as transfer options for career and educational mobility.

Upon successful completion of the Program, the graduate is eligible to take the certification examination given by the American Registry of Radiologic Technologists.

Employment opportunities are in radiology departments of hospitals, HMO’s, clinics, and doctors’ offices.

The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

An annual physical is required prior to clinical placement and, any additional immunizations (hepatitis B) required by the clinical agencies and D.C. law.

Students must present proof of and maintain liability insurance and CPR certification (Healthcare Provider) throughout their student status.

MEDICAL RADIOGRAPHY

Total Credit Hours of College-Level Courses Required for Graduation: 91(92 credit hours if student is required to take 8800-101)

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
BIOL	111	Fundamentals of Anatomy and Physiology I- Lecture	3
BIOL	113	Fundamentals of Anatomy and Physiology I-Lab	1
BIOL	112	Fundamentals of Anatomy and Physiology II-Lecture	3
BIOL	114	Fundamentals of Anatomy and Physiology II Lab	1
MATH	105	Intermediate Algebra	3
MATH	185	Elementary Statistics	3
PHIL	105	Introduction to Logic	3

Required Radiography Courses

RDTC	106	Principles of Radiography	3
RDTC	107	Principles of Radiographic Exposure I	3
RDTC	108	Radiographic Exposure II	3
RDTC	109	Methods of Patient Care - Lab	1
RDTC	110	Radiographic Procedures I	3
RDTC	113	Radiographic Imaging I Lab	1
RDTC	114	Radiographic Imaging II Lab	1
RDTC	115	Radiographic Positioning I Lab	1
RDTC	202	Computer Applications in Radiography	2
RDTC	203	Quality Assurance	3
RDCT	210	Radiographic Procedures II Lab	3
RDTC	214	Pathology	2
RDTC	215	Radiographic Positioning II	1
RDTC	216	Special Radiographic Procedures	3
RDTC	220	Clinical Education I	5
RDTC	221	Clinical Education II	5
RDTC	222	Clinical Education III	8
RDTC	223	Clinical Education IV	8
RDTC	235	Radiation Biology	3
RDTC	290	Review Seminar	2
PHYS	105	Introduction to Physics for Radiographer Lecture	3
PHYS	109	Introduction to Physics for Radiographers Lab	1
PHYS	225	Radiologic Physics Lecture	3
PHYS	227	Radiologic Physics Lab	1

Additional Comments:

Required Courses
Students must achieve a grade of "C" or above in all required science, core, and Clinical Education courses. In addition, students must meet attendance requirements in both didactic and clinical courses. Students are also required to meet uniform requirements.

COURSE DESCRIPTIONS

MTSC 104 Funeral Service Orientation (3)
Aanalysis of the trends and traditions of funeral service, its inception, organizational structure, and avenues of expansion. Lec. 3 hrs., Pre-req.: MATH 101; ENGL 101; APCT 104 & 105. Mortuary Science Majors Only.

MTSC 105 Descriptive Pathology (3)
A study of medical terminology, various types of communicable diseases and how they may be isolated, the nature and causes of diseases, disturbances in circulation, neoplasia, cysts, forensic pathology, and the diseases of the blood and body systems. Lec. 3 hrs. Pre-req.: MTSC 104; MTSC 107; Co-req: MTSC 135; BIOL 112 & 114; CHEM 105 & 106. Mortuary Science Majors Only.

MTSC 107 History and Sociology of Funeral Service (3)
A history of funeral service with emphasis on ethnic groups that have influenced contemporary funeral principles and practices. It also involves the study of those social phenomena that affect all elements of funeral service. Lec. 3 hrs. Pre-req.: MATH 101; ENGL 111; APCT 104 &105; Co-req: BIOL 244 &245; BIOL 111 &133;MATH 102. Mortuary Science Majors Only.

MTSC 135 Funeral Service Law (3)
Legal ramifications concerning the sources of mortuary law, legal status of a dead human body, rights and duties of disposal, the rights of parties obligated for disposal of human remains. Rights and duties of the mortician, liability for funeral expenses, and the laws governing interment and disinterment. Lec. 3 hrs., Prereq.: MTSC 104; MTSC 107; Co-req: MTSC 105; BIOL 112 & 114; CHEM 105 & 106

MTSC 205 Funeral Service Management and Principles (2)
A concentration on the responsibilities of licensure and professional practices with specific emphasis regarding management of personnel, facilities and other resources. Descriptive as well as field study of implementation and direction of funerals according to sociological, theological, and psychological needs of the persons being served. Lec. 2 hrs., Lab, Pre-req: MTSC 213; MTSC 214; MTSC 220; MTSC 223; MBAA 201; ECON 131; Co-req: MTSC 206; MTSC 230; MTSC 232; MTSC 254; ACCT 202. Mortuary science students must be graduating in the spring semester.

MTSC 206 Funeral Service Management and Principles Lab (2)
Field experience in the technical and administrative aspects of the funeral service profession. Lab: 6 hrs. Co-req.: MTSC 205.

MTSC 213 Restorative Art (2)
An introduction to physiognomy, surface bones of the cranium and face, modeling techniques, head shapes, facial profiles, structures of the ear, nose, mouth and eyes. Restorative treatment outlines for burns, bullet wounds, excisions, fractures, and decapitations in conjunction with a full exploration of the color theory with emphasis on waxes and cosmetics. Lec. 2 hrs., Pre-req: ; BIOL 112 & 114; CHEM 105 & 106; MTSC 105; MTSC 135; Co-req: MTSC 220; MTSC 223; ECON 201; ACCT 201

MTSC 214 Restorative Art Lab (2)
Performing restoration techniques regarding correct form, contour, color and shape. Lab. 4 hrs. Co-req.: MTSC 213.

MTSC 220 Embalming and Disposition Principles I (1)
An analysis of the history, theory and summary of the embalming process from 4,000 BC to present with its moral and legal considerations. A study of death, pre embalming changes, technical orientation of embalming, preparation of the body, selection of arteries and veins, types of embalming chemicals with their usages, contents and dilution along with the purpose and importance of drainage. Lec. 1 hr., Pre-req: BIOL 112 & 114; CHEM 105 & 106; MTSC 105; MTSC 135; Co-req: MTSC 213; MTSC 214; ECON 201; ACCT 201. Approval of Program Director.

MTSC 223 Embalming and Disposition Principles I Lab (2)
The embalming of dead human remains, the theory of embalming practices, and laboratory management. Lab 5 hrs. Co-req.: MTSC 220.

MTSC 230 Embalming and Disposition Principles II (1)
A study of the embalming process involving cavity treatment, autopsies, necropsies, or postmortem examinations, postmortem conditions and their embalming treatments, and disaster management related to embalming. Lec. 1 hr., Pre-req :MTSC 213; MTSC 214: MTSC 220; MTSC 223; ECON 201; ACCT 201. Co-req: MTSC 205; MTSC 206; MTSC 232; MTSC 254; MTSC 294; ACCT 202; SPCA 115. Approval of Program Director.

MTSC 232 Embalming and Disposition Principles II Lab (2)
The embalming of dead human remains, the theory of embalming practices, and laboratory management. Lab 4 hrs., Co-req.: MTSC 230.

MTSC 254 Psychology of Grief (3)
Mental processes associated with the role of the funeral director in grief counseling, death, dying, immortality, normal and abnormal grief reactions including the concepts of "grief work" and the impact of death on the bereaved. Lec. 3 hrs. Mortuary Science Majors Only.

MTSC 294 National Board Seminar (1)
A methodical review of all areas of funeral service with emphases on specific competencies necessary for passing the National Board Examination as well as State Licensure Examinations. Lec. 1 hr., Pre-req.: Mortuary Science students must be graduating in the Spring semester only.

RSPT 170 Introduction to Health Sciences (2)
The student will be introduced to the contemporary systems of delivering and paying for medical care, the roles of the members of the health care team, communications within the health care setting, medical terminology, professional ethics, hospital records, and legal considerations. Lec. 2 hrs. Coreq: RSPT 171, MATH 101, BIOL 111/113, and ENGL 111.

RSPT 171 Principles and Practice of Respiratory Therapy I (4)
Topics include the chemistry and physics of medical gases, and their application and therapeutic delivery with an emphasis on oxygen administration modalities. Assessment of the patient and an introduction to infection control are included. Laboratory skills are

developed in non-invasive assessment techniques, including an introduction to chest radiography, and medical gas administration, which are then translated to the clinical setting. Lec. 2 hrs., lab 3 hours, clinical 5 hours. Co-req: RSPT 170; BIOL 111/113, MATH 101.

RSPT 172 Principles and Practice of Respiratory Therapy II (5)
This course focuses on the following principles: humidity and pharmacologic aerosol therapy, chest physiotherapy, airway management, hyperinflation therapy, and gas monitoring techniques. CPR management in the hospitalized patient builds on the student's Basic Life Support Certification. Laboratory and clinical experiences develop competency in the application of these principles. Lec. 2 hrs, Lab 3 hrs. clinical 10 hrs. Prereq: RSPT 170; RSPT 171; Co-req: RSPT 173.

RSPT 173 Ventilation and Gas Exchange Physiology (2)
This course discusses the normal physiology of the pulmonary system. It includes the physics of gas flow, the mechanics of breathing, the effects of static and dynamic lung characteristics on ventilation, ventilation perfusion relationships, gas diffusion and transport. Lec. 2 hrs. Pre-req.: RSPT 170, RSPT 171, Co-req.: RSPT 172.

RSPT 270 Critical Care and Ventilation Management (5)
This course is a continuation of Respiratory Therapy clinical skills as the student moves into management of critically ill patients with emphasis on an introduction to Intensive Respiratory Therapy. The theory, laboratory, and clinical components of this course focus on the application and management of mechanical ventilatory support in the ICU of both the adult and pediatric populations. Lec 2 hrs; Lab 3 hrs.
Clinical 10 hrs. Pre-req.: RSPT 172, RSPT 173. Co-req.: RSPT 271, RSPT 272, RSPT 273, RSPT 274.

RSPT 271 Respiratory Therapy Pharmacology (3)
This course discusses the pharmacokinetic and pharmacodynamic phases of drug action and the calculation of drug doses. Special focus is given to an in-depth study of drugs used to treat the respiratory system. Additional emphasis is placed on critical care and cardiovascular drug classes, neuromuscular blocking agents, and drugs affecting the central nervous and renal systems. Lec 3 hrs. Pre-req.: RSPT 172, RSPT 173. Coreq: RSPT 270, RSPT 272, RSPT 273, RSPT 274, or approval of the instructor.

RSPT 272 Introduction to Disease Management (2)
In this first of two disease management courses, content includes the etiology, pathophysiology and management of disease processes. Emphasis will be placed on microbiology, neonatal/pediatric pulmonary medicine, and an introduction to adult obstructive pulmonary diseases. Lec 2. Hrs. Pre-req.: RSPT 172, RSPT 173. Co-req.: RSPT 270, RSPT 271, RSPT 273, RSPT 274.

RSPT 273 Cardiopulmonary Diagnostics (3)
This course includes the techniques involved in blood gas analysis, as well as the diagnostic measures of EKG's, radiographic interpretation, bronchoscopy, pulmonary function studies, and polysomnography. Laboratory skills will include the application, calculation and interpretation of diagnostic pulmonary analysis. Equipment familiarity will be stressed as well as calibration and quality control procedures to reinforce the didactic content. Lec 2 hrs, lab 3 hrs. Prereq: RSPT 172, RSPT 173. Coreq: RSPT 270, RSPT 271, RSPT 272, RSPT 274.

RSPT 274 Acid-Base and Hemodynamic Physiology (3)
This course builds on the gas exchange physiology and chemistry courses with an emphasis on physiologic acid-base balance and blood gas interpretation. Additional content explores the cardiovascular and renal systems as they both relate to homeostatic and pathologic acid-base and hemodynamic regulation. Lec 3 hrs. Prereq: RSPT 172, RSPT 173. Coreq: RSPT 270, RSPT 271, RSPT 272, RSPT 273, or approval of the instructor.

RSPT 276 Respiratory Disease Management (2)
This course continues the study of the etiology, pathophysiology and management of disease processes exploring in detail the medical management of conditions manifesting in pulmonary dysfunction. Lec 2 hrs. Prereq: RSPT 270, RSPT 271, RSPT 272, RSPT 273, RSPT 274. Coreq: RSPT 277, RSPT 278, RSPT 279.

RSPT 277 Adjunctive Respiratory Therapies (3)
This course emphasizes the sub-specialty areas of Respiratory Care including, but not limited to pulmonary rehabilitation, home care, smoking cessation, transport, hyperbarics, ECMO, metabolic and exercise testing, nitric oxide, heliox, partial liquid ventilation, and assisting with thoracentesis,

cardioversion, chest tube insertion and management. Lec 3 hrs. Prereq: RSPT 270, RSPT 271, RSPT 272, RSPT 273, RSPT 274. Coreq: RSPT 276, RSPT 278, RSPT 279.

RSPT 278 Respiratory Therapy Clinical Preceptorship (3)
This course allows for reinforcement of skills and the development of judgment and independence as the student assumes greater Respiratory Care responsibilities. Additional critical care experience will solidfy ventilator management acumen. Specialized clinical rotations in the areas of diagnostic pulmonary functions, EKG's, hemodynamics, sleep lab, home care and pulmonary rehabilitation are provided. Clinica1 15 hrs. RSPT 270, RSPT 271, RSPT 272, RSPT 273, RSPT 274, Coreq: RSPT 276, RSPT 277, RSPT 279.

RSPT 279 Respiratory Care Seminar (3)
This is a seminar course in which the National Board for Respiratory Care examination matrices are explored. The methodical review of all areas of respiratory care services provides the framework with emphases on specific competencies necessary for passing the National Board Examination. Objectives will be met by small group review and exam analysis, computer programmed instruction, and frequent testing. Lec. 3 hrs. RSPT 270, RSPT 271, RSPT 272, RSPT 273, RSPT 274. Coreq: RSPT 276, RSPT 277, RSPT 278.

RDTC 106 Principles of Radiography (3)
This course will provide the student with an overview of radiography and its role in health care delivery. The emphasis is placed on academic and administrative structure, key departments, personnel, and to the profession as a whole. Basic principles of radiation protection will be included. Lec. 3 hrs. Pre-req: Pre-medical radiography courses. Co-req: RDTC 107, RDTC 109, RDTC 110, RDTC 113; RDTC 115, RDTC 220.

RDTC 107 Principles of Radiographic Exposure I (3)
This course is the first in a sequence of courses in radiographic quality in which the major emphasis is basic imaging modalities and radiographic processing techniques. Included is radiographic film characteristics, the theory of latent image formation, manual and automatic processing and basic imaging equipment. Lec. 3 hrs. Pre-req: Pre-medical radiography courses Co-req: RDTC 106, RDTC 109, RDTC 110, RDTC 113, RDTC 115, RDTC 220.

RDTC 108 Principles of Radiographic Exposure II (3)
This course is the second in the sequence of radiographic exposure courses. Emphasis is placed on the factors directly involved in the imaging process. Included will be manipulation of exposure factors, interpretation of both tube cooling and tube rating charts. Lec. 3 hrs. Pre-req: RDTC 106, RDTC 107, RDTC 109, RDTC 110, RDTC 113, RDTC 115, RDTC 220; Co-req: RDTC 114, RDTC 203, RDTC 210, RDTC 215, RDTC 221.

RDTC 109 Methods of Patient Care (1)
Provides laboratory exercises and demonstration in the basic practice and concepts of patient care. Included is consideration for the physical and psychological needs of the patient and family, emergency care procedures, infection control, and the role of the radiographer. Lab 1 hr. Pre-req: Pre-medical radiography courses. Co-req: RDTC 106, RDTC 107, RDTC 110, RDTC 113, RDTC 115, RDTC 220.

RDTC 110 Radiographic Procedures I (3)
This course is the first in a sequence of courses in radiographic positioning and fluoroscopic procedures. Included is basic instructions and practice in radiographic anatomy and positioning of the extremities, bony thorax, abdomen, and the alimentary tract. Lab 3 hrs. Pre-req: Pre-medical radiography courses. Co-req: RDTC 106, RDTC 107, RDTC 109, RDTC 113, RDTC 115, RDTC 220.

RDTC 113 Radiographic Imaging Laboratory I (1)
This course is the first in a sequence providing laboratory exercises and demonstrations in the basic practice and concepts of imaging modalities and radiographic processing techniques, including exposure-using manikins. Lab. 1 hr. Pre-req: Pre-medical radiography courses. Co-req: RDTC 106, RDTC 107, RDTC 109, RDTC 110, RDTC 115, RDTC 220.

RDTC 114 Radiographic Imaging Laboratory II (1)
This is the second in the sequence of radiographic laboratory exposure courses where emphasis is placed on the factors directly involved in the imaging process. Examines how to manipulate exposure factors, constructing technique charts, performing experiments to demonstrate sharpness and visibility to produce a radiograph with optimal diagnostic quality. Lab 1 hr. Co-req: RDTC108, RDTC 203, RDTC 210, RDTC 215, RDTC 221.

RDTC 115 Radiographic Positioning I (1)
This is the first in a sequence of courses to provide laboratory exercises and demonstration in the basic practice in positioning of the extremities, bony thorax, abdomen, and chest. Included are table adjusting, radiographic and/or fluoroscopic equipment, and image receptors using knowledge of anatomy. Lab. 1 hr. Pre-req: Pre-medical radiography courses. Co-req: RDTC 106, RDTC 107, RDTC 109, RDTC 110, RDTC 113, RDTC 220.

RDTC 202 Computer Applications in Radiography (2)
Introduces the student to the fundamental principles of computer technology as it relates to medical radiography. The application of the computer and its function in computer-assisted tomography, nuclear magnetic resonance, digital radiography, and medical sonography will be included. Lec. 2 hrs. Pre-req: RDTC 108; Co-req: PHYS 105 & 109, RDTC 214, RDTC 222.

RDTC 203 Introduction to Quality Assurance (3)
Introduces the evaluation of radiographic systems to assure consistency in the production of quality images. Included is instruction on radiographic quality in a progressive and structured manner; experiments utilizing all components of a quality assurance system; and the impact of state and federal quality assurance. Lec. 2 hrs. Co-req: RDTC 108, RDTC 114, RDTC 210, RDTC 215, RDTC 221.

RDTC 210 Radiographic Procedures II (3)
This is the second in the sequence of radio-graphic positioning courses. It is designed to provide instruction and practice in radiographic anatomy and positioning of those areas of the trunk and abdomen requiring the use of contrast media. In addition, contrast media, its indications, and contraindications will be discussed. Included will be advanced instruction and practice in radiographic examinations of the skull, spine and pelvis, bony thorax, and the extremities. Pediatric radiographic practices will be included. Lab 3 hrs. Co-req: RDTC 108, RDTC 114, RDTC 203, RDTC 215, RDTC 221.

RDTC 214 Pathology (2)
Examines the nature and etiology of disease and major pathological processes. Emphasis is placed on medical and surgical diseases and their major radiographic manifestations. Lec 2 hrs. Co-req. RDTC 202, RDTC 222; PHYS 105 & 109.

RDTC 215 Radiographic Positioning II (1)
This is the second in a sequence of courses to provide laboratory exercises and demonstration in the basic practice in positioning of the truck, spine, and pelvis. Included are table adjusting, radiographic and/or fluoroscopic equipment, and image receptors. Lab 1 hr. Pre-req: RDTC 106, RDTC 107, RDTC 109, RDTC 110, RDTC 113, RDTC 115, RDTC 220. Co- req: RDTC 108, RDTC 114, RDTC 203, RDTC 210, RDTC 221.

RDTC 216 Special Procedures in Radiography (3)
Surveys all specialized procedures currently performed in radiology with special emphasis on angiographies to include indications, correlative anatomy, techniques, equipment operation, and contrast media injection methods. Lec 3 hrs. Pre-req: RDTC 210. Co-req: RDTC 223, RDTC 235, RDTC 290, PHYS 225 & 227.

RDTC 220 Clinical Education I (5)
This course includes a clinical practicum. Focuses on routine radiography of the chest, abdomen, and the osseous system at a major clinical education center. Pre-req: Pre-medical radiography courses. Pre-req: Pre-medical radiography courses. Co-req: RDTC 106, RDTC 107, RDTC 110, RDTC 113, RDTC 115.

RDTC 221 Clinical Education II (5)
This course includes a clinical practicum. Focuses on the areas of routine and advanced radiography of the skull, spine, bony thorax, and shoulder girdle. Prereq: RDTC 220. Co-req: RDTC 108, RDTC 114, RDTC 203, RDTC 210, RDTC 215.

RDTC 222 Clinical Education III (8)
This course develops higher levels of skill and increased speed with greater independence and responsibility. In addition, students are provided with increased exposure to special contrast studies. Prereq: RDTC 221. Co-req: PHYS 105 & 109, RDTC 202, RDTC 214.

RDTC 223 Clinical Education IV (8)
The major focus of this course is visceral and peripheral angiography. Rotations include an outpatient facility. Students who have completed all of the required categories may elect to be rotated through areas such as sonography, nuclear medicine, and radiation therapy. Prereq: PHYS 105 & 109, RDTC 202, RDTC 214, RDTC 222; Co-req: PHYS 225 & 227, RDTC 216, RDTC 235, RDTC 290.

RDTC 235 Radiation Biology (3)
Surveys the use of radionuclides in medicine, the therapeutic use of radiation, radiotherapy

instrumentation, nuclear medicine, and the biological effects of ionizing radiation. In addition, the student will study the effects of ionizing radiation on human cells, evaluate those effects in terms of radio-sensitivity, radioresistance, and the major subdivisions of the cell, DNA, RNA, and genetic mutation. Prereq: PHYS 105 & 109, RDTC 202, RDTC 214, RDTC 222. Co-req: RDTC 216, RDTC 223, RDTC 290, PHYS 225 & 227.

RDTC 290 Review Seminar (2)
This course prepares students for the national certification examination given by the American Registry of Radiologic Technologists. Included are lectures, programmed instruction and frequent testing. Lec. 2 hrs. Pre-req: graduating seniors. Co-req: RDTC 216, RDTC 223, RDTC 235, PHYS 225 & 227.

DEPARTMENT OF ENGINEERING, ARCHITECTURE AND AEROSPACE TECHNOLOGY

Ahmet Zeytinci, Ph.D., P.E., Chairperson
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Associate Professors A.O. Adebayo, R. Belton, C. Brooks, R.E. Koehler, P.K. Poulose
Assistant Professor K. Ahdut

Cognizant of the fact that postsecondary education is multifaceted and that learning is a life-long activity consisting of formal guided instruction, independent study and experiential learning, it is the objective of the Department of Engineering, Architecture and Aerospace Technology to provide students with the foundation for continuous learning throughout life.

Primarily, the Department establishes and nurtures in the student the Knowledge, Skills and Aptitudes (KSA) necessary for entry into, and for the successful growth and development within, the career options for which it provides preparation. A critical, essential component of the Department's educational programs is the development within the student an ethical value system. This includes the KSA's required to solve problems and exercise a sense of judgement, with a focus on the needs of an urban environment.

The Department of Engineering, Architecture and Aerospace Technology brings together academic programs designed to address the urban and land grant mission of the University of the District of Columbia as it relates to technical needs. The synergy that has been created with the bringing together of such similar programs can only develop better students.

The programs are structured to provide multiple career opportunities ranging from technician to professional engineer and architect.

In all programs, classroom and laboratory instruction are provided, emphasizing applications of current technology. Students work in state-of-the-art, laboratories and have access to modern electronic instrumentation, including microcomputers and engineering work-stations appropriate to their particular discipline.

Problems related to the urban infrastructure can be directly linked to the pedagogy of the programs within the Department. Students enrolled in the Department are being prepared for professional careers in Architectural Engineering Technology, Architecture, Civil Engineering, Mechanical Engineering, Construction Engineering Technology and Management, Airway Science (Aviation Maintenance and Management), and Civil Engineering Technology.

Complete articulation is provided between the associate degree in Architectural Engineering Technology and Civil Engineering Technology and B.S. in Construction Engineering; Aviation Maintenance Technology and the B.S. in Airway Science. The associate degree in Architectural Engineering Technology is also the first two years of
the first professional degree in architecture.

Associate in Applied Science degrees in Architectural Engineering Technology, Aviation Maintenance, Civil Engineering Technology, Civil Engineering, Construction Management Engineering Technology, and Mechanical Engineering are offered. Engineering programs and Engineering Technology programs are accredited by the Engineering Accreditation Commission (EAC) and the Technology Accreditation Commission (TAC), respectively, of the Accreditation Board of Engineering and Technology (ABET). The Aviation Maintenance Technology Program prepares students for certification as Airframe and Power Plant mechanics. The program is approved by the FAA and the Department is authorized to administer the certification examinations. Graduates find immediate employment in architecture firms, public utilities, research laboratories, government agencies, and in the private sector.

The Department also offers courses in Fire Science Administration (in-service training for firefighters) leading to the Associate in Applied Science and Bachelor of Science degrees in Fire Science Administration.

AEROSPACE TECHNOLOGY PROGRAM

Aerospace Technology offers programs leading to the Bachelor of Science degree in Airway Science (Aviation Maintenance Management) and the Associate in Applied Science degree in Aviation Maintenance Technology. Students may receive certification to sit for the Federal Aviation Administration (FAA) licensing examination as an Airframe and Power Plant Mechanic. The Bachelor's degree program consists of the initial two-year curriculum leading to the A.A.S. degree and an additional two-year extension to that program.

The Associate in Applied Science curriculum prepares students for career opportunities in aviation maintenance. Courses of study emphasize mechanical operations and can lead to the degree and/or a certificate. Students enrolling in aviation maintenance technology receive training in hydraulics, pneumatics, electronics, instrumentation, metals, composites, fabric, and paint. In addition, training is provided in reciprocating and jet power plants. Training also covers troubleshooting and maintenance of Avionics Systems, as well as overall maintenance and repair of the complete aircraft and all aircrafts systems. The program is designed to permit extensive opportunities for practical experience.

The Bachelor's degree program will prepare students who have completed the first two years (the A.A.S. program) for employment at a higher level by adding management training, additional communication skills, computer training, and more aviation skills to their existing areas of expertise in aviation maintenance.

ASSOCIATE IN APPLIED SCIENCE IN AVIATION MAINTENANCE TECHNOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 90

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	111	Technical Math I	4
MATH	112	Technical Math II	4
PHYS	101	Introduction to College Physics I	3
PHYS	102	Introduction to College Physics II	3
PHYS	103	Introduction to College Physics Lab I	1
PHYS	104	Introduction to College Physics Lab II	1

Required Courses

AVMT	121	Aviation Maintenance Fundamentals Practicum	5
AVMT	122	Aircraft Composite Structures Practicum	5
AVMT	124	Aircraft Metallic Structures Practium	5
AVMT	125	Aircraft Systems and Components Practicum	5
AVMT	211	Aircraft Electrical and Electronics Systems Practicum	5
AVMT	212	Aircraft Turbine Engine Theory and Overhaul Practicum	5
GEOG	104	World Physical Geography	3
AVMT	214	Aircraft Reciprocating Engine Theory and Overhaul Practicum	5
AVMT	215	Aircraft Engine Systems and Components Practicum	5
MECH	105	Engineering Graphics	3
CCET	105	Programming for Engineering Technology Lecture	3
CCET	107	Programming for Engineering Technology Laboratory	1
Total			**73**

Additional Comments or Requirement

A grade of "C" or better is required in all courses offered by the Department, in all technical electives, and in all required physics, mathematics, and technical graphics courses.

BACHELOR OF SCIENCE IN AIRWAY SCIENCE (AVIATION MAINTENANCE MANAGEMENT)

Total Credit Hours of College-Level Courses Required for Graduation: 142

For applicants with an Associate in Applied Sciences degree in Aviation Maintenance Technology (73 credit hours). Students must possess an Aviation Mechanics Airframe and Power Plant Certificate to enroll in the Airway Science, B.S. Program.

General Requirements

ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
PSYC	201	Psychology	3
CHEM	105	Fundamental of Chemistry Lec.	3

CHEM	106	Fundamental of Chemistry Lab.	1
MATH	211	Calculus for Business	4
SPCH	115	Public Speaking	3
		Fine Arts Elective	3
		Philosophy Elective	3

Required Courses

APCT	104	Introduction to Applications of Computers Lecture	2
APCT	105	Introduction to Applications of Computers Lab	1
AVMM	111	Introduction to Aviation	3
FINA	220	Business Statistics	3
ECON	201	Economics I	3
BMGT	304	Introduction to Management	3
BMGT	306	Personnel Management	3
AVMM	435	Flight Safety	3
BMGT	409	Organizational Theory and Behavior	3
AVMM	481	Aircraft Systems Level Fault Isolation	3
AVMM	455	National Airspace System	3

Additional Comments or Requirements

The total number of credit hours required for graduation includes 73 credit hours from the prerequisite A.A.S. degree. A grade of "C" or better is required in all courses offered by the Department and in all required mathematics courses.

ARCHITECTURE PROGRAM

The Architecture Program of instruction leads to the Associate in Applied Science degree in Architectural Engineering Technology or Construction Engineering Technology and the Bachelor of Architecture degree. The Architectural Engineering Technology Program prepares students for work in architectural firms, consulting engineering firms, construction companies, building materials suppliers, and appropriate governmental agencies. The Architectural Engineering Technology Program is accredited by TAC of ABET.

In the fall of 1989, the program implemented the new Bachelor of Architecture Program which leads to the first professional degree in architecture. The studios and classes are offered in the late evenings and on Saturdays in order to accommodate the person whose career objective is to become a licensed architect but who must maintain full-time employment.

The program is designed to meet the needs of high school graduates, students with an associate degree in architecture, a four-year (non-professional) architecture degree, architectural school transfers, and architecture and construction industry technicians, draftspersons, and junior managers who may have accumulated an applicable path to the Bachelor of Architecture degree is also available.

ASSOCIATE IN APPLIED SCIENCE IN ARCHITECTURAL ENGINEERING TECHNOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 66

Additional Comments or Requirements

Technical electives require prior Department approval. A minimum grade of "C" is required for each major course.

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	4
PHYS	101	Introduction to College Physics I	4
PHYS	102	Introduction to College Physics II	4
SOCY	105	Introduction to Social Science	3

Required Courses

AETC	101	Architectural Drawing and Design I	3
AETC	102	Architectural Drawing and Design II	3
AETC	114	Materials and Methods of Construction I	3
AETC	116	Materials and Methods of Construction II	3
AETC	121	Architectural History	3
AETC	122	Introduction to Architecture	3
AETC	201	Architectural Drawing and Design III	4
AETC	202	Architectural Drawing and Design IV	4
AETC	205	Introduction to CADD	3
AETC	232	Structural Design	3
AETC	244	Environmental Systems I	3
AETC	246	Environmental Systems II	3
AETC	295	Seminar	3

BACHELOR OF ARCHITECTURE

(Prerequisite: Associate in Applied Science in Architectural Engineering or equivalent course work)

Total Credit Hours of College-Level Courses Required for Graduation: 168

General Requirements

ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
BMGT	304	Introduction to Management	3
		Fine Arts elective	3
		Philosophy elective	3
		Natural Science elective	2
		Electives	15
		Social Science elective	3

Required Courses

BARC	301	Professional Studio V	5
BARC	302	Professional Studio VI	5
BARC	321	History and Theory of Architecture II	3
BARC	322	History and Theory of Architecture III	3
BARC	401	Professional Studio VII	5
BARC	402	Professional Studio VIII	5
BARC	411	Professional Ethics and Practice I	3
BARC	412	Professional Ethics and Practice II	3
BARC	413	Preservation Rehabilitation Techniques	3
BARC	501	Professional Studio IX	5
BARC	502	Thesis Studio X	8
BARC	503	Thesis Seminar	3
CETC	231	Structural Analysis	3
CETC	233	Structural Analysis Lab	1
CETC	232	Steel Structures	3
CETC	234	Steel Structure Lab	1
CMTC	434	Concrete Structures	3
CMTC	435	Concrete Structures Lab	1
CMTC	487	Contracts and Specifications	3
CMTC	489	Contract and Specification Lab	1

Additional Comments or Requirements

Technical electives require prior Department approval. A minimum grade of "C" is required for each major course.

CIVIL ENGINEERING PROGRAM

The program for the Bachelor of Science in Civil Engineering offers four major areas of concentration: transportation, construction, geotechnical, and structural engineering. The Civil Engineering Program is accredited by the Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

The objective of the Civil Engineering Program is to prepare students for engineering careers and/or advanced study in civil engineering and to offer research and service programs for the general public. Civil engineers have the responsibility for designing various structures, including bridges, highways, and infrastructure facilities. The program places special emphasis on solving problems in urban areas, particularly in the Washington, D.C. metropolitan area. Civil engineers are employed in both industry and governmental agencies. The demand is significantly higher than the number of graduates.

The expertise of the civil engineering faculty, combined with their dedication to quality of instruction, their willingness to provide individual attention to students, and their experience provide the basis for a solid fundamental engineering education.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Total Credit Hours of College-Level Courses Required for Graduation: 127

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
		Fine Arts elective	3
		Philosophy	3
		Humanities and Social Science	6

Required Courses

CHEM	111	General Chemistry I Lecture	3
CHEM	113	General Chemistry Lab I	1
MATH	151	Calculus I Lecture	3
MATH	155	Calculus I Lab	1
MATH	152	Calculus II Lecture	3
MATH	156	Calculus II Lab	1
MATH	253	Calculus III Lecture	3
MATH	255	Calculus III Lab	1
MATH	260	Differential Equations with Linear Algebra	4

MATH	381	Probability and Statistics	3
PHYS	201	University Physics I Lecture	3
PHYS	202	University Physics II Lecture	3
PHYS	205	University Physics I Lab	1
PHYS	206	University Physics Lab II	1
		Basic Science elective	3
MECH	105	Engineering Graphics	3
ELEC	221	Electrical Circuits I Lecture	3
ELEC	223	Electrical Circuits I Lab	1
CSCI	135	Scientific Programming	3
CSCI	136	Scientific Programming Lab	1
CVEN	201	Engineering Mechanics I	3
CVEN	202	Engineering Mechanics II	3
MECH	205	Material Science	3
CVEN	206	Mechanics of Solids	3
CVEN	207	Mechanics of Solids and Materials Lab	1
MECH	208	Thermodynamics	3
CVEN	301	Surveying Lecture	3
CVEN	302	Surveying Lab	1
CVEN	312	Design of Steel Structures	3
CVEN	313	Theory of Structures Lab	1
MECH	321	Fluid Mechanics	3
MECH	322	Thermodynamics and Fluid Mechanics Lab	1
CVEN	325	Hydraulic Design	3
CVEN	331	Principles of Geo-technical Engineering Lecture	3
CVEN	332	Principles of Geo-technical Engineering Lab	1
TCWS	400	Engineering in World Situation	3
CVEN	419	Concrete Design	3
CVEN	435	Foundation Design	3
CVEN	491	Senior Project I	3
CVEN	492	Senior Project II	3
		Technical electives	9

Successful completion of a two-course sequence in at least four (4) different civil engineering disciplines is required.

CIVIL ENGINEERING TECHNOLOGY PROGRAM

The Civil Engineering Technology Program prepares students as civil engineering technicians, important members of the engineering team who engage in the design, construction, and maintenance of various civil engineering projects. The graduates of the program gain employment as construction inspectors, engineering aides, materials technicians, and engineering technicians. The program is accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

ASSOCIATE IN APPLIED SCIENCE IN CIVIL ENGINEERING TECHNOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 64

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	4
PHYS	101	Introduction to College Physics I Lecture	3
PHYS	102	Introduction to College Physics II Lecture	3
PHYS	103	Introduction to College Physics I Laboratory	1
PHYS	104	Introduction to College Physics II Laboratory	1
		Social Science elective	3

Required Courses

CETC	112	Surveying I Lecture	3
CETC	113	Surveying I Lab	1
CETC	124	Construction Plan Reading	3
CETC	162	Construction Materials I	3
CETC	163	Construction Materials Lab	1
CETC	231	Structural Analysis	3
CETC	233	Structural Analysis Lab	1
CETC	232	Steel Structures	3
CETC	234	Steel Design Studio	1
CETC	236	Wood Structures	3
CETC	263	Construction Materials II	3
CETC	264	Construction Materials II Lab	1
CETC	267	Soil Mechanics	3
CETC	268	Soil Mechanics Lab	1
CCET	101	Technical Graphics	3
CCET	105	Programming for Engineering Technology	3
CCET	110	Statics & Strength of Materials Lecture	3
CCET	112	Statics & Strength of Materials Lab	1

Additional Comments or Requirements

Technical electives require prior Department approval. A minimum grade of "C" in each major course and a cumulative grade point average (GPA) of 2.00 are required for graduation. Students who are not continuously enrolled are subject to the graduation requirements current at the time of enrollment.

CONSTRUCTION ENGINEERING TECHNOLOGY PROGRAM

The Construction Engineering Technology Program provides two additional years of coursework toward a Baccalaureate degree for those who hold an Associate Degree in Architectural Engineering Technology, Building Engineering Technology, Civil Engineering Technology, or Construction Engineering Technology. The Bachelor of Science degree program prepares students to enter the construction engineering profession as construction superintendents, estimators, and construction and project managers. The program is accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

BACHELOR OF SCIENCE IN CONSTRUCTION ENGINEERING TECHNOLOGY

(Prerequisite: Associate in Applied Science in Architectural Engineering Technology)

Total Credit Hours of College-Level Courses Required for Graduation: 124

General Requirements

ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
		Philosophy elective	3
		Social Science elective	3
		Chemistry elective	4
		Fine Arts elective	3

Required Courses

CETC	112	Surveying I	3
CETC	113	Surveying I Lab	1
CETC	162	Construction Materials I	3
CETC	163	Construction Materials I Lab	1
CETC	232	Steel Structures	3
CETC	234	Steel Design Studio	1
CETC	267	Soil Mechanics Lecture	3
CETC	268	Soil Mechanics Lab	1
CMTC	381	Technical Analysis I	3
CMTC	383	Technical Analysis I Lab	1
CMTC	382	Technical Analysis II Lecture	3
CMTC	386	Technical Analysis II Lab	1
CMTC	388	Hydraulics	3
CMTC	389	Hydraulics Lab	1
CMTC	402	Engineering Economy	3
CMTC	434	Concrete Structures	3
CMTC	435	Foundation Technology	3
CMTC	475	Project Planning & Scheduling	3
CMTC	486	Construction Estimating	3
CMTC	487	Contracts & Specifications	3
CMTC	489	Contracts & Specifications Lab	1
CMTC	490	Construction Projects Mgmt	3

Additional Comments or Requirements

The total number of credit hours required for graduation includes 55 credit hours from the pre-requisite A.A.S. degree. A minimum grade of "C" in each major course and a cumulative grade point average (GPA) of 2.00 are required for graduation. Students who are not continuously enrolled are subject to the graduation requirements current at the time of enrollment.

BACHELOR OF SCIENCE IN CONSTRUCTION ENGINEERING TECHNOLOGY

(Prerequisite: Associate in Applied Science in Civil Engineering Technology)

Total Credit Hours of College-Level Courses Required for Graduation: 120

General Requirements

ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
		Technical elective	3
		Philosophy elective	3
		Social Science elective	3
		Chemistry elective	4
		Fine Arts elective	3

Required Courses

CMTC381	Technical Analysis I	3
CMTC383	Technical Analysis I Lab	1
CMTC382	Technical Analysis II Lecture	3
CMTC386	Technical Analysis II Lab	1
CMTC388	Hydraulics	3
CMTC389	Hydraulics Lab	1
CMTC402	Engineering Economy	3
CMTC434	Concrete Structures	3
CMTC435	Foundation Technology	3
CMTC475	Project Planning & Scheduling	3
CMTC486	Construction Estimating	3
CMTC487	Contracts & Specifications	3
CMTC489	Contracts & Specifications Lab	1
CMTC490	Construction Projects Mgmt	3

Additional Comments or Requirements

The total number of credit hours required for graduation includes 64 credit hours from the pre-requisite A.A.S. degree. A minimum grade of "C" in each major course and a cumulative grade point average (GPA) of 2.00 are required for graduation. Students not continuously enrolled are subject to the graduation. Students who are not continuously enrolled are subject to the graduation requirements current at the time of enrollment.

BACHELOR OF SCIENCE IN ENGINEERING
(Program Effective Fall 2002)

The BS Program in Engineering is a new initiative for undergraduate engineering education. As engineering moves toward graduate level study as the "first" degree for the practice of professional engineering, the University of the District of Columbia offers the BS in Engineering degree as a foundation for graduate studies in areas directed toward the solution of Urban Engineering Problems.

This program also prepares students for initial job entry in careers dealing with the "engineering" of the urban infrastructure. Students are well versed in the fundamentals of engineering, and in the upper division of the program may concentrate their studies in one or more selected areas of Civil and Mechanical Engineering.

BACHELOR OF SCIENCE IN ENGINEERING

Total Credit Hours of College Level Courses for Graduation: 127

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
		Fine Arts Elective	3
		Philosophy	3
		Humanities and Social Science	6
CHEM	111	General Chemistry Lecture I	3
CHEM	113	General Chemistry Lab I	1
MATH	151	Calculus I Lecture	3
MATH	155	Calculus I Lab	1
MATH	152	Calculus II Lecture	3
MATH	156	Calculus II Lab	1
MATH	253	Calculus III Lecture	3
MATH	255	Calculus III Lab	1
MATH	260	Differential Equations with Linear Algebra	4
BENG	303	Probability and Statistics for Engineers	3
PHYS	201	University Physics I Lecture	3
PHYS	202	University Physics II Lecture	3
PHYS	205	University Physics I Lab	1
PHYS	206	University Physics II Lab	1
BENG	101	Engineering for Everyday Living	3
BENG	105	Computer Aided Engineering Graphics	3
BENG	112	Engineering Experimentation	3
BENG	116	Programming for Engineering	3
CVEN	201	Engineering Mechanics I	3
CVEN	202	Engineering Mechanics II	3
MECH	205	Materials Science	3
CVEN	206	Mechanics of Solids	3
BENG	305	Electronics and Instrumentation	3
MECH	307	Thermodynamics	3
MECH	321	Fluid Mechanics	3
CVEN	405	Engineering Economics	3
BENG	406	Engineering Ethics and Practice	3
BENG	491	Engineering Design Studio I	3
BENG	492	Engineering Design Studio II	3
Technical Electives			27

NOTE: All students will take a Fundamentals of Engineering (FE) review course offered by the program and take the FE (formally the Engineering in Training, EIT) examination in the senior year, both of which are requirements for graduation.

TECHNICAL ELECTIVES

3509-302	Geomatics	3
3515-267	Soil Mechanics	3
3509-435	Foundation Design	3
3509-311	Structural Analysis	3
3509-312	Design of Steel Structures	3
3509-419	Design of Concrete Structures	3
3509-451	Urban Transportation Planning	3
3509-452	Urban Transportation System Design	3
3509-417	Matrix Method of Structural Analysis	3
3509-418	Dynamics of Structure	3
3510-308	Applied Numerical Analysis	3
3509-325	Hydraulics	3
3509-442	Water Supply Engineering	3
3509-449	Environmental Engineering	3
3515-486	Estimating	3
3515-475	Planning & Scheduling	3
3509-236	Design of Wood Structures	3
3515-162	Construction Materials I	3
3515-263	Construction Materials II	3
3515-384	Construction Equipment & Safety	3
3515-487	Contracts & Specifications	3
3515-452	Construction Project Management	3
3515-124	Construction Plan Reading	3
3510-308	Applied Numerical Analysis	3
3511-351	Heat Transfer	3
3511-361	Machine Design	3
3511-371	Analysis and Control of Dynamic Systems	3
3511-411	Mechanical Engineering Design Laboratory	3
3511-456	Computational Mechanics	3
3511-458	Finite Elements Method for Mechanical Design	3
3511-461	Applied Thermodynamics and	

	Energy Conversion	3
3511-462	Design of Energy Systems	3
3511-470	Thermal Environmental Engineering	3
3511-475	Gas Turbine Design	3
3511-476	HVAC Design	3
3511-495	Special Topics in Mechanical Engineering	3

Not all technical electives are offered each year. This selection of electives is determined by student interest and demand.

Technical electives are selected with the consultation and approval of the program director/advisor.

ASSOCIATE IN APPLIED SCIENCE IN FIRE SCIENCE ADMINISTRATION

The Fire Science Administration Program at UDC has offered DC Fire Department and Emergency Medical Services personnel college level courses at times which complement employee work schedules for over thirty years. Courses are offered on-site at the District of Columbia Fire Department Training Academy. Students are also allowed to enroll in on-campus classes when their schedule permits. Each year over 200 Fire Department and Emergency Medical Services personnel enroll in the program to gain points for promotional exams, to enhance their knowledge in a particular area of Fire Sciences, or to obtain a college level degree. A number of graduates have been promoted as a result of having completed the degree requirements. Some have become instructors, obtained employment at other institutions, and others have continued their studies as graduate students at UDC and other institutions of higher learning.

Students who satisfy the program's requirements for the four-year curriculum receive a Bachelor of Science degree in Fire Science Administration. Students completing the two-year curriculum receive an Associate degree in Applied Science Technology. Instruction is given in the principal fields of Fire Science to include Fire Suppression, Hazardous Materials, Arson Investigation, Fire Prevention, Fire Safety Codes and Standards, Fire Service Hydraulics, Advanced Fire Fighting Tactics and Strategy, Fire Protection Systems, as well as Urban Fire Safety.

The program is restricted to District of Columbia Fire Department and Emergency Medical Services personnel.

Total Credit Hours of College-Level Courses Required for Graduation: 60

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
HIST	101	United States History I	3
PSYC	201	Principles of Psychology I	3
		Natural Science course Lecture/Lab*	4
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	8
		Electives	6

*Course selected must be approved by the program director.

Required Courses

FISC	101	Fire Protection and Organization	3
FISC	102	Fire Prevention	3
FISC	103	Building Construction	3
FISC	204	Fire Service Hydraulics	3
FISC	205	Fire Protection Systems	3
FISC	206	Fire Safety Codes and Standards	3
FISC	307	Hazardous Materials	3
FISC	308	Arson Investigation	3
FISC	409	Advanced Fire Fighting Tactics and Strategy	3
FISC	410	Urban Fire Safety Seminar	3

Additional Comments or Requirements

The A.A.S. program in Fire Science Administration is restricted to District of Columbia Fire Department personnel.

BACHELOR OF SCIENCE IN FIRE SCIENCE ADMINISTRATION

Total Credit Hours of College-Level Courses Required for Graduation: 120

General Requirements

ENGL	112	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature & Advanced Writing I	3
ENGL	212	Literature & Advanced W Writing II	3
HIST	101	United States History I	3
HIST	102	United States History II	3
PHIL	105	Introduction to Problems in Philosophy	3
PSYC	201	Principles of Psychology I	3
		Natural Science Lecture	4
		Natural Science Laboratory	2
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	8

		Foreign Language	6
		Fine Arts Elective	6
SPCH	115	Public Speaking	3
HLTH	105	Personal & Community Health	2
PEDU	104	Physical Education	3

Required Courses

FISC	101	Fire Protection & Organization	3
FISC	102	Fire Prevention	3
FISC	103	Building Construction	3
FISC	204	Fire Service Hydraulics	3
FISC	205	Fire Protection Systems	3
FISC	206	Fire Safety Codes & Standards	2
FISC	307	Hazardous Materials	3
FISC	308	Arson Investigation	3
FISC	409	Advanced Fire Fighting Tactics and Strategy	3
FISC	410	Urban Fire Safety Seminar	3
FISC	495	Independent Study & Research	3

Additional Comments or Requirements
The Bachelor of Science Program in Fire Science Administration is restricted to District of Columbia Fire Department personnel.

MECHANICAL ENGINEERING PROGRAM

Primary objectives of the Mechanical Engineering Program are to provide residents of the District of Columbia in particular and others in general a coherent program of instruction in the discipline of mechanical engineering and to prepare the graduate to pursue a productive career in mechanical engineering, which is characterized by continued professional growth.

These objectives are met by providing students with a balanced curriculum in mathematics, sciences, social sciences, and humanities on one hand and engineering sciences, design, experimentation, computer skills, and ethical standards on the other hand. A competent, qualified and forward-looking faculty provides students in the program an appropriate role model.

Ancillary objectives of the Department are to provide research, professional consultation, and community services in the areas of thermal and fluid sciences, energy, mechanical systems, materials and manufacturing processes, and computer applications.

At the conclusion of the required program of study, students are awarded the Bachelor of Science degree in mechanical engineering. Opportunities for employment for mechanical engineers exist in both the public and private sectors. The mechanical engineering program is accredited by the Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

In accordance with ABET accreditation criteria and pursuant to the University's mission statement, the following program educational objectives have been established:

1. Prepare graduates for immediate employment in related fields of mechanical engineering.
2. Prepare graduates with a capacity to pursue graduate studies in mechanical engineering or related fields.
3. Prepare graduates with requisite skills to successfully undertake the Fundamental of Engineering (FE) examination and subsequent licensure as a professional engineer (PE)
4. Prepare graduates with ability and capacity to pursue lifelong learning
5. Prepare graduates with a creative desire and potential for career growth and development.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Total Credit Hours of College-Level Courses Required for Graduation: 128

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature & Advanced Writing I	3
ENGL	212	Literature & Advanced Writing II	3
CHEM	111	General Chemistry Lecture I	3
CHEM	113	General Chemistry Lab I	1
MATH	151	Calculus I Lecture	3
MATH	152	Calculus II Lecture	3
MATH	253	Calculus III Lecture	3
MATH	155	Calculus I Lab	1
MATH	156	Calculus II Lab	1
MATH	255	Calculus III Lab	1
MATH	260	Differential Equations with Linear Algebra	4
MATH	381	Probability & Statistics	3
PHYS	201	University Physics Lecture I	3
PHYS	202	University Physics Lecture II	3
PHYS	205	University Physics Lab I	1
PHYS	206	University Physics Lab II	1

Required Courses

CSCI	135	Scientific Programming Lecture	3
ELEC	221	Electric Circuits Lecture	3
ELEC	223	Electric Circuits Lab I	1
CVEN	201	Engineering Mechanics I	3
CVEN	202	Engineering Mechanics II	3

CVEN	206	Mechanics of Solids	3
CVEN	207	Mechanics of Solids and Materials Lab	1
CVEN	308	Applied Numerical Analysis	3
MECH	105	Engineering Graphics	3
MECH	205	Material Science	3
MECH	208	Thermodynamics	3
MECH	222	Engineering Measurements	3
MECH	321	Fluid Mechanics	3
MECH	322	Thermodynamics & Fluids Lab	1
MECH	341	Analysis & Synthesis of Mechanics	3
MECH	351	Heat Transfer	3
MECH	361	Machine Design	3
MECH	371	Design of Control Systems	3
MECH	406	Engineering Economics	3
MECH	461	Applied Thermodynamics and Energy Conversion	3
MECH	462	Design of Energy Systems	3
MECH	491	Senior Design Project I	3
MECH	492	Senior Design Project II	3
TCWS	400	Engineering in World Situations	1
		*Technical Electives	9
		Fine Arts Elective	3
		Philosophy Elective	3
		Humanities/ Social Science Electives	6

***Technical Electives:** A minimum of nine credit hours of technical elective courses must be taken from the following courses. The electives should be planned to include courses supplementing the basic needs and interests of the student.

MECH	356	Modern Manufacturing Process	3
MECH	455	Mechanical Behavior of Materials	3
MECH	456	Computational Mechanics	3
MECH	457	Design of Noise Controls	3
MECH	458	Finite Element Methods for Mechanical Engineering	3
MECH	470	Thermal Environmental Engineering	3
MECH	475	Gas Turbine Design	3
MECH	476	HVAC Design	3
MECH	483	Robot Mechanics and Control	3
MECH	484	Design of Robot Mechanisms	3

Additional Comments or Requirements
Four courses totaling 12 credit hours in the humanities/ social sciences, including fine arts, must be in the non-skill category, with at least two courses at an advanced level. All technical electives must have prior departmental approval. A grade point average of 2.00 is required in major courses. Students are strongly encouraged to take the Engineering-In-Training (EIT) examination prior to graduation.

CROSS-DISCIPLINARY COURSES

The School of Engineering and Applied Sciences offers the following cross-disciplinary courses. These courses are capstone courses which enhance the students' competencies and skills during the final stages of completion of their programs.

TCWS 204 Technology in the World Situation (1-3)
This course presents an overview of the exciting and challenging opportunities presented by an ever changing technology and its application in the new "crafted" world of the 21st Century. The course will explore relationships between fundamental principles and the disciplines dependent upon their "theory" with the intent to "expose" the beauty and simplicity of the world we create. How to approach problems with a technical perspective and develop facility in understanding and in the use of the fundamental "thinking" tools necessary for success in the "world of technology" will be presented. The student will experience "design" through the application of these tools.

TCWS 290 Practicum/Internship (3)
Provides students with an opportunity to develop/increase their skills in a workplace setting in their major field of study. Students may utilize a new project/assignment in their present employment or be placed in a part-time internship. Course also requires attendance at weekly seminars.

TCWS 400 Engineering in the World Situation (1-3)
Examines the ethics and philosophy of engineering practice with an overview of the role of professional societies, registration, and an introduction to project planning and management, including liability and safety issues. Lec. 1-3 hrs., Prereq.: Senior standing.

TCWS 490 Practicum/Internship (3)
Provides students with an opportunity to develop/increase their professional competencies and skills in a workplace setting in their major field of study. Students may utilize a new project/assignment in their present employment or be placed in a part-time internship. Course also requires attendance at weekly seminars.

TCWS 679 Graduate/Practicum/ Internship (3)
Provides students an opportunity to further develop their professional competencies through a professional work related experience. Students may utilize a new project/assignment in their present employment or be placed in a part-time internship. Course also requires attendance at weekly seminars.

COURSE DESCRIPTIONS
ARCHITECTURE

AETC 101 Architectural Drawing and Design I (3)
Develops the capabilities of utilizing the fundamentals of mechanical drawing, including lettering, use of instruments, and drawing of the multi-view isometric, oblique, and section type of views as applied to architectural techniques. Preliminary working drawings will be mastered in this course. Lec. 2 hrs., Lab 3 hrs.

AETC 102 Architectural Drawing and Design II (3)
Continues to develop the skill and the scope of the application of drafting and construction drawings. The course adds to the students' technical vocabulary and recognition of construction problems as related to light construction. Scaled models will be constructed during this course. Lec. 2 hrs., lab. 3 hrs., Prereq.: AETC 101.

AETC 114 Materials and Methods of Construction I (3)
Familiarizes the students with the basic properties of wood, masonry, metals, cementitious materials, and their common uses. The students acquire an elementary understanding of primary construction problems, solution, and vocabulary related to these materials. Lec. 2 hrs., Lab. 3 hrs.

AETC 116 Materials and Methods of Construction II (3)
Familiarizes the student with the basic properties of metals, concrete, cementitious materials, and their uses. They will acquire an elementary understanding of primary construction problems, solutions, and vocabulary related to these materials. Lec. 2 hrs., Lab. 3 hrs.

AETC 121 History and Theory of Architecture I (3)
Covers a brief examination of the history of Western Architecture from Pre-historic Egyptian origins to the Renaissance Movement and Baroque in Europe; Neo-Classic in America; the rise of Industrialism in America, the early Modern Movement, the International Style, and the Post Modern Movement. Lec. 3 hrs.

AETC 122 Introduction to Architecture (3)
An introduction to the study, practice, and profession of architecture. Special emphasis is placed on the evolution of contemporary architecture, as well as the social responsibilities of architects. Lec. 3 hrs.

AETC 123 Architecture and Planning Graphics (3)
Develops the capabilities of utilizing the fundamentals of architectural and planning graphics and shade and shadows. The student shall develop the skills in various media necessary for the preparation of two-dimensional and three-dimensional presentations. Lec. 2 hrs., Lab 3 hrs.

AETC 201 Architectural Drawing and Design III (4)
Provides the student with the skills necessary to understand the system of production drawing and its relation to the design development for a small building. Each student shall produce a set of production drawings. Building codes shall be incorporated in the design development for the small building. Lec. 2 hrs., Lab. 6 hrs., Prereq.: AETC 102

AETC 202 Architectural Drawings and Design IV (4)
Develops the skills to produce the basic elements for a set of architectural production drawings for a medium-sized building. The student shall understand the integration and coordination of all aspects of the building, including structural, plumbing, mechanical, and electrical systems. Lec. 2 hrs., Lab. 6 hrs., Prereq.: AETC 201.

AETC 205 Introduction to Computer-Aided Architectural Design (3)
Introduces the student to the general use of the computer as a design and production tool. The use of Computer-Aided Design Drafting (CADD) programs as a drawing and specification tool in office production and management will be studied. The course will further reinforce the construction document production techniques and principles learned in previous technical courses. Lec. 2 hrs., Lab. 3 hrs., Prereq.: AETC 102

AETC 232 Structural Design (3)
Develops the skills necessary to understand the primary elements of structural systems load calculation, load transfer, and load tables. The student shall become familiar with light frame, heavy timber, light steel, masonry, and concrete systems. Lec. 2 hrs., Prac. 3 hrs., Prereq.: MATH 112.

AETC 244 Environmental Systems I (3)
Focuses on sustainable development defined as a process that does not exhaust resources for the future generations; process that permanently enhance the capacity of people and institutions; and process in which responsibilities and benefits are broadly shared. Sustainable architecture will be discussed in a global perspective through the case study method highlighting good and bad examples. Culture, climate, urban development, rural development, urban agriculture, environmental design, and historic preservation and cultural heritage are topics that will be discussed. Lec. 3 hrs., Prereq.: AETC 102.

AETC 246 Environmental Systems II (3)
Focuses on heating, air conditioning, ventilation and conservation of energy. Teaches methods of load calculations done manually, using tables in textbooks to calculate heat transfer coefficients for any type of construction, determine temperature differences required by code or by good practice, compute the size of equipment, piping and ducts which will be appropriate to the building and to the available fuels. Simple residences or small commercial buildings will be analyzed for HVAC systems and plans will be prepared to guide the contractor for installation. Specifications for the work will be compared to optimize selection. Energy recovery and conservation will be practiced in the system designs. Lec. 3 hrs.

AETC 295 Seminar (3)
Provides the opportunity for students to develop an independent study topic of their choice related to architecture or planning. This topic shall be analyzed in depth and presented orally in class for discussion and shall include a written document for final presentation. Lec. 2 hrs., Prac. 3 hrs., Preq.: 45 credit hours of required program completed satisfactorily.

AETC 299 Independent Study (3-4)
The intensive study of a topic or special project approved by the Department Chairperson and under the supervision of an instructor assigned by the Department Chairperson.

BARC 301 Professional Studio V (5)
Provides a series of small scale problems in design will be set to assure that the student reaches a basic level of competence in addressing the problems associated with architecture. Also, the studio investigates the design relationship between the manmade and the natural environment in a study of a large scale site planning problem. Lec. 3 hrs., Lab. 6 hrs., Prereq.: AETC 202.

BARC 302 Professional Studio VI (5)
Continues Professional Studio V. Architectural problem(s) of significant programmatic content, with specific site restraints and criteria will be addressed. The student is expected to demonstrate competence in establishing a process toward presenting a solution that shows understanding of the relationship between the manmade environment and the natural environment. Lec. 3 hrs., Lab. 6 hrs., Prereq.: BARC 301.

BARC 321 History and Theory of Architecture II (3)
Studies the architecture of the African Nile Valley's Egyptian-Nubian roots, golden age Greece, and Imperial Rome. Also, covers the study of architecture, city planning, and urban design that grew out of the Christian and Islamic triumph of 3rd Century Imperial Rome and spread throughout pivotal cities of Europe, Asia, Africa, and the Americas up to the early European Renaissance Movement. Lec. 3 hrs., Prereq.: AETC 121.

BARC 322 History and Theory of Architecture III (3)
Involves a brief examination of the Mid to Late Renaissance and Baroque Movement in Europe; Neo-Classic in America; the Modern Movement (Chicago School); Frank Lloyd Wright; the International Style and the Late/Post-Modern Movement. Lec. 3 hrs., Prereq.: BARC 321.

BARC 341 Advanced Computer Simulation (3)
Continues Computer-Aided Architectural Design Course. The student will be expected to have mastered the rudiments of the Computer-Aided Design and Drafting (CADD) environment as a production tool. Explores the CADD program as a design exploration and implementation tool. The basis of the exploration will be the interpretation of both classical and contemporary architectural design works. Lec. 2 hrs., Lab. 3 hrs., Prereq.: ARCH 205.

BARC 401 Professional Studio VII (5)
The problem sets in this studio challenge the student to search for, coordinate, and consolidate the basic systems (structural, mechanical, etc., with special emphasis of the structural) with their own design process and philosophy. The solutions must recognize constraints such as D.C. codes. Lec. 3 hrs., Lab. 6 hrs., Prereq.: BARC 302.

BARC 402 Professional Studio VIII (5)
Continues Professional Studio VII, with the emphasis shifting to the cost and time management control

aspects of mid-size building design and production. Lec. 3 hrs., Lab. 6 hrs., Prereq.: BARC 401.

BARC 411 Professional Ethics and Practice I (3)
Examines the profession of architecture; historical development; relation to other professions and disciplines; and the changing role of the architect are studied. Architecture and professional societies; The American Institue of Architects; state and national registration boards; education accreditation; federal, state, and municipal organizations/agencies; legal and ethical questions relating to the practice of architecture; and emerging forms of architectural practices are examined. Lec. 3 hrs., Prereq.: BARC 302 or junior standing.

BARC 412 Professional Ethics and Practice II (3)
Examines the profession of architecture – contractual responsibilities of the architect, client, and contractor; relation to other professions and disciplines; and the changing role of the architect, client groups, and contractors. Architecture and professional societies; the American Institute of Architects, and federal, state, and municipal organizations/agencies are studied. Legal and ethical questions relating to contract letting, professional ethics, and will be examined. Practices II is preparatory to the student's final development of understanding the legal aspects of professional practice. Lec. 3 hrs., Prereq.: BARC 302, BARC 411.

BARC 413 Preservation/Rehabilitation Technology (3)
Utilizes the Secretary of the Interior's certification application, preservation guidelines, and technical specification as the basis of case study analysis of the planning and design of historic structures in Washington, D.C. Non-historic rehabilitation techniques for various structures are also analyzed. Lec. 3 hrs.

BARC 501 Professional Studio IX (5)
Explores the process of design and building that follows five well-articulated steps; programming, schematic design, and an initial competence in building technology to apply this competence realistically in the third step, design development, in a large, mixed use urban complex. The design team concept, simulating actual office practice, will be used. Lec. 3hrs., Lab. 6 hrs., Prereq.: BARC 402

BARC 502 Thesis Studio Lab X (8)
Tests the student's ability to program, design and execute a building complex (or urban design project with special permission) with minimum direction. The student must demonstrate a comprehensive level of synthesis of all of the various systems required to construct a building project. The thesis execution and presentation must also demonstrate competence in all of the previously studied design communication modes, including Computer-Aided Design Drafting (CADD). Lec. 6 hrs., Lab. 6 hrs., Prereq.: 140 hrs. in major program, BARC 503.

BARC 503 Thesis Seminar (5)
Requires the student to select a thesis topic in consultation with faculty. The student then begins research, documentation, and programming for the thesis and turns in a final document using the program thesis guidelines. This is the preliminary course for Thesis Studio. Lec. 3 hrs., Co-req.: BARC 501.

AVIATION TECHNOLOGY

AVMM 111 Introduction to Aviation (3)
Provides an historical survey of the events of aviation pioneering and developments culminating in manned spaceflight to the moon. Aircraft and aerospace vehicle design will be reviewed and students will study the fundamentals of flight theory to develop an understanding of the world of aviation. To demonstrate proficiency, each student will prepare a survey paper covering outstanding aviation events from the Wright brothers to the present time. Lec. 3 hrs.

AVMM 311 Air Traffic Control (3)
Studies the ation's airspace systems, becoming familiar with the requirements for private and commercial cross-country and international flight. The student will also be made aware of the services provided by the Federal Aviation Administration through its flight service stations, air traffic control centers, and terminal control areas. A brief history, duties, and responsibilities of each service will be presented. Each student will prepare a term paper on one area of particular interest. Lec. 3 hrs.

AVMM 354 Aviation Legislation (3)
Provides the student with insight into the responsibilities currently assigned to the Federal Aviation Administration and previously to the Civil Aeronautics Board and their predecessors in the areas of defense, flight standards, airports, aviation medicine, airway facilities, research and development, airline route structures, and the National Transportation Board. The student will select one of the above areas and prepare a detailed study of that area prior to the course completion. Lec. 3 hrs.

AVMM 435 Flight Safety (3)
Provides a proper background in flight safety and safety in related areas of aviation. Factors to be studied include safety of aircraft and aircraft systems; competence of pilots, mechanics, and other aviation personnel; and safety aspects of aviation facilities, equipment, and procedures. Lec. 3 hrs.

AVMM 455 The National Airspace System (3)
Covers problems encountered and plans for implementing the airspace system, airspace allocation and usage, facilities and developments in electronic navigation and control systems, economic impact, and social and political implications. Lec. 3 hrs.

AVMM 471 Aircraft Maintenance and Inspection Programs (3)
Identifies the requirements of type certificated aircraft airworthiness conformity and the necessity of the FAA-approved maintenance and inspection program(s). The types, applications, and implementation of maintenance and inspection programs to specific type aircraft will be emphasized. Students will author and gain "approval" for a custom program. Management of an "approved" program from a Technical Control Center/Performance Review will also be integrated in the course. Students will apply contemporary inspection technologies and methods to specified inspection requirements. Lec. 3 hrs.

AVMM 481 Aircraft Systems Fault Isolation (3)
Demonstrates the systematic, disciplined methodology of fault remediation of aircraft system malfunctions. Aircraft systems will include cockpit Com-Nav, FMS, thrust reversing, pneumatics, air conditioning, electrical power generation-distribution, auto-pilot, landing gear indicating, and other selected systems. Lab experience will include fault isolation operations on current production analog-digital transport and complex aircraft systems. Lec. 3 hrs.

AVMT 030 Maintenance for Pilots (3)
A lecture-laboratory course designed to train pilot students to perform Federal Aviation Administration allowable maintenance on certificated aircraft and powerplants. Lec. 3 hrs., Prereq: Permission of the Department Chairperson.

AVMT 121 Aviation Maintenance Fundamentals (5)
Introduces basic aircraft terminology and related federal aviation regulations, which include mechanic privileges, limitations, maintenance publications, forms and records, standard FAA aircraft, and repair and alteration drawings documentation. The student will receive instruction on the tasks required for aircraft ground handling, taxiing, and servicing. Course also includes units on aircraft construction, nomenclature, data systems, basic aero-dynamics, and practical sciences applicable to the theory of flight of fixed and rotary wing aircraft. Prac. 16 hrs.

AVMT 122 Aircraft Composites (5)
Offers comprehensive coverage on the design characteristics, material characteristics, typical construction, and the maintenance and repair of non-metallic airframe components and structures. The student will gain hands-on experience of fabric covering, wood structures, finishes, and current techniques involving fiberglass, kevlar, and graphite composites used as a primary structure on today's aircraft. Prac. 18 hrs.

AVMT 124 Aircraft Metallic Structures (5)
Offers comprehensive lecture and laboratory on the design characteristics, materials, typical construction, and maintenance of metallic airframe structures, including monocoque, semi-monocoque, tubular truss, and metallic honeycomb structures. Maintenance and repair of these structures are emphasized, along with the use of FAA-approved and/or accepted repair data typical riveted and welded repairs are practiced. Included in this course is a welding repair laboratory using oxyacetylene and inert gas welding practices. An introduction to aircraft ice and rain control and aircraft fuel systems are included in this course. Prac. 18 hrs.

AVMT 125 Aircraft Systems and Components (5)
Offers comprehensive lecture and laboratory on the following aircraft systems: landing gear, wheels, tires, brakes, hydraulics, fuel-systems, cabin atmospheric control, and ice and rain control. The final phase of this course will require the student to exercise all of his previous training to perform a 100-hour conformity inspection on a particular aircraft. Practicum 18 hours.

AVMT 132 Aircraft Welding (1)
A laboratory course designed to introduce students to aircraft gas welding. Lab 3 hrs., Prereq.: Permission of the instructor.

AVMT 135 Airframe Seminar (3)
Restricted to persons who are eligible to sit for the Federal Aviation Administration airframe examination but who are in need of a review of federal air regulations and aircraft systems and components. Lec. 3 hrs.

AVMT 211 Aircraft Electrical and Electronic Systems (5)
Emphasizes the fundamentals of direct current and alternating current. Series, parallel, and series parallel circuits will be analyzed using the Ohm's Law principle. The reading and interpretation of electrical diagrams and the use of these diagrams to troubleshoot electrical systems using the appropriate test equipment will be emphasized. Electrical system components will be examined and repaired by the students. Alternating current and transformer circuits with resistive, inductive, and capacitive components will be mastered. Battery cell construction, operation, and maintenance is emphasized. Inspection and repair of aircraft engine electrical systems including fire protection systems, engine instruments, and engine ignition systems will be studied. A final phase of study will be the inspection, checking, and repair of communications, navigation, and antenna systems. Prac. 25 hrs.

AVMT 212 Aircraft Turbine Engine Theory and Overhaul (5)
Offers comprehensive instruction about turbine engine theory of operation, design characteristics, systems operation, maintenance, inspection, and repair of typical engines. Practical training will be provided in engine inspection, overhaul, repair, run-up and fault diagnosis. Prac. 18 hrs.

AVMT 214 Aircraft Reciprocating Engine Theory and Overhaul (5)
Introduces aircraft reciprocating engine design and principles of operation and progresses into design characteristics and variables affecting engine power output. Practical training will be provided in engine inspection, overhaul, repair, run-up, and fault diagnosis. Engine lubrication, oil system configuration, oil analysis, and oil system fault isolation will be studied. Prac. 18 hrs.

AVMT 215 Aircraft Engine Systems and Components (5)
Offers comprehensive lecture and laboratory in the following engine systems: engine fuel systems, fuel metering, induction systems, engine codlings, exhaust systems, and propeller systems. The last phase of this course will require the student to exercise all his training to perform a 100 hours conformity inspection on an aircraft engine. Prac. 16 hrs.

CIVIL ENGINEERING

CVEN 201 Engineering Mechanics I (3)
Covers statics of particles and rigid bodies; equilibrium, distributed forces; centroids; center of gravity; structure-trusses, frames, machines; forces in beams and cable; friction; moments of inertia. Lec. 3 hrs.: PHYS 201.

CVEN 202 Engineering Mechanics II (3)
Covers kinematics and kinetics of a particle. Planar kinematics of a rigid body; planar kinetics of a rigid body including force and acceleration; work and acceleration; work and energy; impulse and momentum, and vibrations. Lec. 3 hrs., Prereq.: CVEN 201.

CVEN 206 Mechanics of Solids (3)
Covers axial forces, shear and moment, stress and axial loads, strain and axial deformation, torsion of shaft, stress in beams, columns, deflection of beams, energy methods, and elemental indeterminate problems. Lec. 3 hrs., Prereq.: CVEN 201.

CVEN 207 Mechanics of Solids and Materials Laboratory (1)
Covers introduction-purpose, scope, equipment/ apparatus, interpreting the text results, errors, writing reports. Experiments include physical properties of concrete, mechanical response of steel, shearing force, bending moment, member forces in truss, deflection, hinged arches, portal frames, suspended center span bridge. Lab 2 hrs., Co-req: CVEN 206. Prereq.: MECH 205.

CVEN 301 Essentials of Surveying (3)
Introduces the student to the basic principles of measurement at or near the surface of the earth. The fundamental concepts of observing and establishing the linear and angular measurements necessary to determine the horizontal and vertical position of points required for engineering works are presented. The theory of errors associated with large scale measurements and the "management" of them through survey procedures and analysis are presented. The student will develop an understanding of the "tools" (procedures and software) necessary to process field data and produce horizontal and vertical control information (e.g. adjusted traverses, bench mark elevations, contour maps, etc.). Lec. 3 hrs., Prereq.: CVEN 202.

CVEN 302 Surveying Laboratory (1)
Introduces and practices the use and care of the instruments necessary to determine horizontal and vertical positions on or near the surface of the earth are presented. The student will develop an understanding of the application of the surveying procedures required to establish horizontal and vertical control points. The student will perform field exercises for the control of horizontal and vertical positions associated with engineered construction. Instruments used include

levels (manual & automatic), theodolites (direction & repeating), distance measuring devices (tapes & electronic). Direct and indirect methods for observing and establishing measurements are covered. Prac. 42 hrs., per semester, Co-req.: CVEN 301.

CVEN 308 Applied Numerical Analysis for Engineers (3)
Covers modeling and error analysis, roots of equations; systems of linear algebraic equations, curve fitting; numerical differentiation and integration; ordinary differential equations; partial differential equations. Lec. 3 hrs., Prereq.: MATH 260.

CVEN 311 Theory of Structures Lecture (3)
Analyzes statically determinate beams and trusses, methods of determining deflection of structures, influence lines and application for moving loads and indeterminate structures including continuous beams and frames. Covers approximate analysis of indeterminate structures computer analysis of structures and performance characteristics. Lec. 3 hrs., Prereq.: CVEN 206.

CVEN 312 Design of Steel Structures (3)
Covers design of tension members, compression members, beams and columns, and their connections; design of metal structures, plate girder bridges, and buildings. Lec. 3 hrs., Prereq.: CVEN 311.

CVEN 313 Theory of Structures Laboratory (1)
Equipment/apparatus, writing reports; experiments determining internal forces, reactions and deflections of both determinate and indeterminate structures are studied. Computer-aided analysis of structures of both determinate and intermediate structures are examined. Prac. 2 hrs., Co-req: CVEN 311.

CVEN 325 Hydraulics Design (3)
Studies design and analysis of systems involving steady pipe flow for various networks; open channel flow; collection and pumping of wastewater; unsteady pipe flow; fluid measurement. Lec. 3 hrs., Prereq.: MECH 321.

CVEN 331 Principles of Geotechnical Engineering (3)
Studies soil classifications, stress, and compressibility of soils, immediate and consolidation settlement, time rate of settlement, earth pressure on structures, permeability and seepage, slope stability analysis for application in engineering design. Lec. 3 hrs., Prereq.: CVEN 206, MECH 321.

CVEN 332 Principles of Geotechnical Engineering Lab (1)
Provides laboratory tests to determine the physical properties of soils for application in engineering design. Lab 3 hrs., Co-req: CVEN 331.

CVEN 413 Design of Water and Waste Water Treatment Plants (3)
Covers design of treatment plants, waste collection and disposal facilities, waste treatment plants, and cost estimation. Lec. 3 hrs., Prereq.: MECH 321.

CVEN 416 Advanced Structural Design (3)
Covers forced-deformation responses of structures under complex loading, interaction of the structural components and their behavior for both the elastic and inelastic ranges, analysis of frames with nonprismatic members by moment distribution, slope deflection, and column analogy. Lec 3 hrs., Prereq.: CVEN 312.

CVEN 417 Matrix Method of Structural Analysis (3)
Covers analysis of highly indeterminate structures by the transfer matrix method, displacement matrix method, and the matrix forced method. Lec 3 hrs., Prereq.: CVEN 311, MATH 260.

CVEN 418 Dynamics of Structure (3)
Studies responses of free-vibration, harmonic, periodic, and dynamic loading; analysis of nonlinear structural responses for single and multi-degree systems, and effect of damping and inelastic action. Lec. 3 hrs., Prereq.: CVEN 202, CVEN 313

CVEN 419 Design of Concrete Structures (3)
Covers analysis and design of reinforced concrete slabs, beams, columns, footings, and frames using the ultimate strength method. Lec. 3 hrs., Prereq.: CVEN 312.

CVEN 435 Foundation Design (3)
Studies shallow foundation analysis and factors to consider for design, bearing capacity and settlement, mat foundations, piles, caissons, lateral earth pressures and retaining walls, site improvement techniques, design of support systems, sheet piles, and special foundation system. Lec. 3 hrs., Prereq.: CVEN 331.

CVEN 441 Wastewater Engineering (3)
Covers analysis and design of wastewater systems; unit operations and treatment kinetics; physical, chemical, and biological unit processes; principles of design of facilities for physical, chemical and biological treatment of wastewater; disposal of waste solids. Lec. 3 hrs., Prereq.: MECH 321.

CVEN 442 Water Supply Engineering (3)
Covers statistical hydrology, surface water and its collection, ground water development, water consumption, and demand; quality of water pumping, water transmission and distribution. Lec. 3 hrs., Prereq.: MECH 321.

CVEN 447 The Theory Shells (3)
Studies theory and design of shell place by membrane and bending stress theories, application to the analysis and design of cylindrical shell, domes, paraboloids. Lec. 3hrs., Prereq.: CVEN 419.

CVEN 448 Construction Techniques (3)
Covers fundamental operations in construction, construction methods, selection of equipment, cost estimates, planning and scheduling construction projects. Lec. 3 hrs., Prereq.: Senior standing.

CVEN 449 Environmental Engineering (3)
Covers hydrology; ground water; physical, chemical, and biological properties of water; introduction to water and wastewater treatment processes; physical and chemical fundamentals of air pollution; solid waste management. Introductory course for environmental engineering. Lec. 3 hrs., Prereq.: MECH 321.

CVEN 451 Urban Transportation Planning (3)
Offers "hybrid" course that prepares the student for entry level employment in the field of transportation and/or graduate study in the field of transportation. The student is introduced to the concepts and fundamental tools of transportation planning. The focus is on transportation for urban areas. Those aspects of transportation engineering necessary to better understand the "technical" solution to urban transportation problems and bring urban transportation "plans" to reality are also covered. Lec. 3 hrs., Prereq.: Junior/Senior Standing.

CVEN 452 Urban Transportation Systems Design (3)
Continues Urban Transportation Planning. The focus is on the geometric and physical design of urban transportation systems. The fundamentals of traffic engineering are presented and applied to the solution of urban road congestion. Team design projects address local contemporary transportation issues. Lec. 3 hrs., Prereq.: CVEN 451

CVEN 461 Engineering System Analysis (3)
Introduces system engineering, linear programming, duality theory and sensitivity analysis, network analysis, including CPM and PERT, integer programming, and game theory. Lec. 3 hrs., Prereq.: CVEN 308.

CVEN 490 Special Topics in Civil Engineering (1-12)
Deals with a specific area related to civil engineering that is not normally covered in regular courses and for which there is sufficient student interest; may be used as a technical elective. Prereq.: Senior standing in Civil Engineering.

CVEN 491 Senior Project in Civil Engineering I (3)
Provides group projects for senior students to design civil engineering systems. Oral presentations and written report are required. Prac. 20 hrs. effort. Prereq.: Senior standing in Civil Engineering.

CVEN 492 Science Project in Civil Engineering II (3)
Continues of Senior Project in Civil Engineering. Final project report and presentation are required., Prac. 20 hrs. effort. Prereq.: CVEN 491.

CIVIL ENGINEERING TECHNOLOGY

CETC 112 Surveying (3)
Introduces the student to the basic principles of measurement at or near the surface of the earth. The fundamental concepts of observing and establishing the linear and angular measurements necessary to determine the horizontal and vertical position of points required for engineering works are presented. The theory of errors associated with large scale measurements and the "management" of them through survey procedures and analysis are presented. The student will develop an understanding of the "tools" (procedures and software) necessary to process field data and produce horizontal and vertical control information (e.g. adjusted traverses, benchmark elevations, contour maps, etc.) Lec. 3 hrs.

CETC 113 Surveying I Laboratory (1)
Instruction and practice in the use and care of the instruments necessary to determine horizontal and vertical positions on or near the surface of the earth are presented. The student will develop an understanding of the application of the surveying procedures required to establish horizontal and vertical control points. The student will perform field exercises for the control of horizontal and vertical positions associated with

engineered construction. Instruments used include level (manual & automatic), theodolites (direction & repeating), distance measuring devices (tapes & electronic). Direct and indirect methods for observing and establishing measurements are covered. Co-req.: CETC 112, Prac. 42 hrs. per semester.

CETC 114 Surveying II Lecture (3)
Studies use and care of theodolites and electronic distance measuring devices to perform surveys relating to construction and topographic mapping. Lec. 3 hrs., Prereq.: CETC 112.

CETC 115 Surveying II Laboratory (1)
Provides practical field exercises to include computation of area and volume from field notes. Co-req.: CETC 114, Prac. 42 hrs. per semester.

CETC 124 Construction Plan Reading (3)
Covers fundamentals of blueprint reading; study and understanding of survey plans, site plans, foundation plans, architectural plans, structural plans, plumbing and mechanical plans, and electrical plans for residential and commercial construction. Lec 3 hrs.

CETC 162 Construction Materials I (3)
Studies raw materials, manufacturing process, chemical composition, types, physical properties, and uses of Portland cement; types and physical properties of coarse and fine aggregates; types and uses of concrete admixtures; design of Portland cement concrete; placing, finishing, and curing of concrete. Lec. 3 hrs., Coreq.: CETC 162

CETC 163 Construction Materials I Laboratory (1)
Laboratory tests to determine physical properties of Portland cement and aggregates, such as, normal consistency, time of setting, compressive strength of Portland cement mortar, gradation, absorption, specific gravity, and unit weight of aggregate; slump, unit weight, air content, compressive strength and flexural strength of concrete. Lab 3 hrs., Coreq.: CETC 162

CETC 231 Structural Analysis (3)
Covers aspects of structural behavior, the idealized model, stability, determinacy, analysis of statically determine structures, displacement of planar structures. Introduction to indeterminate structures. Lec. 3 hrs., Prereq.: CCET 110.

CETC 232 Steel Structures (3)
Studies the problem of rational design, codes, and specifications; design of members in tension, compression, and bending, connections and simple structures. Lec. 3 hrs., Prereq.: CETC 231.

CETC 236 Wood Structures (3)
Examines problem of rational design, codes, and specification for design of wood structural members in tension, compression, bending, bending-compression and connections. Lec. 3 hrs., Prereq. CETC 231, 233.

CETC 238 Wood Design Studio (3)
Applies theory and design procedures to wood structures and use of the code. Lec. 3 hrs. Co-req.: CETC 236.

CETC 263 Construction Materials II (3)
Covers definition, origin, and refining process of asphalt, types and physical properties of asphalt as a construction material. Examines uses of asphalt, design of asphalt mixes using Marshall mix design, and introduction to highway pavement design. Lec. 3 hrs.

CETC 264 Construction Materials II Laboratory (1)
Covers laboratory tests to determine physical properties of asphalt, such as penetration, ductility, viscosity, flash and fire point, distillation, and solubility. Marshall stability, flow and density for mix design are examined. Lab 3 hrs., Co-Req. CETC 263.

CETC 267 Geotechnical Engineering (3)
Studies origin, structure, classification, moisture-density relationship, permeability and seepage, stress distribution, consolidation, and strength characteristics of soil. Lec. 3 hrs., Prereq.: CCET 110, 112.

CETC 268 Soil Mechanics Laboratory (1)
Provides laboratory tests to determine specific gravity, grain size, Atterberg limits, in-place density, unconfined compression, direct shear, and consolidation properties of soils. Lab 2 hrs., Co-req.: CETC 267.

CETC 294 Selected Topics in Civil Engineering Technology (3-4)
Topics selected at the discretion of the instructor.

CETC 295 Independent Study (3-4)
Individual study topics of material interest to the student and instructor.

SUB-DISCIPLINES FOR CIVIL ENGINEERING

Successful completion of a two-course sequence in at least (4) four sub-disciplines of Civil Engineering are

required for a degree in Civil Engineering. Selection of the course sequences must be made from the following list:

SUB-DISCIPLINE - STRUCTURES

COURSE SEQUENCE-1
CVEN 311 Theory of Structures
COURSE SEQUENCE-II
CVEN 312 Design of Steel Structures or
CVEN 419 Design of Concrete Structures

SUB-DISCIPLINE - GEOTECHNICAL

COURSE SEQUENCE - I
CVEN 331 Principles of Geotechnical Engineer
COURSE SEQUENCE - II
CVEN 435 Foundation Design

SUB-DISCIPLINE - TRANSPORTATION

COURSE SEQUENCE - I
CVEN 451 Transportation Planning
COURSE SEQUENCE - II
CVEN 452 Transportation System Design

SUB-DISCIPLINE - CONSTRUCTION

COURSE SEQUENCE - I
CMTC 475 Project Planning Scheduling
COURSE SEQUENCE - II
CMTC 486 Construction Estimating **or**
CMTC 487 Contracts & Specifications or
CMTC 490 Construction Project Management

SUB-DISCIPLINE - HYDRAULICS

COURSE SEQUENCE - I
MECH 321 Fluid Mechanics
COURSE SEQUENCE - II
CVEN 325 Hydraulics Design **or**
CVEN 441 Waste Water Engineering **or**
CVEN 442 Water Supply Engineering

SUB-DISCIPLINE - SURVEYING

COURSE SEQUENCE - I
CVEN 301 Surveying
COURSE SEQUENCE - II
CVEN 451 Transportation Planning **or**
CVEN 452 Transportation System Design

CONSTRUCTION ENGINEERING TECHNOLOGY

CMTC 381 Technical Analysis I (3)
Studies trigonometry, differentiation, and integration of algebraic, exponential, logarithmic and trigonometric functions; application of mathematical tools in construction problems. Lec. 3 hrs., Prereq.: MATH 112.

CMTC 382 Technical Analysis II (3)
Continues CMTC 381 Technical Analysis I. Studies first order and higher order differential equations; Laplace transformation series; application to construction management problems. Lec. 3 hrs., Prereq.: CMTC 381.

CMTC 384 Construction Equipment and Safety (3)
Covers identification of construction equipment, equipment utilization; operating costs of equipment and crew; construction safety hazards; accident preventive actions; safety regulations. Lec. 3 hrs., Prereq.: Junior year standing, departmental approval.

CMTC 385 Computer Application in Construction (3)
Applies computer techniques in the solution of engineering and construction-related problems. Lec. 3 hrs., Prereq.: CCET 105, CMTC 382, departmental approval.

CMTC 388 Hydraulics (3)
Studies the laws of fluid mechanics, water pressure, flow of water in pipes, open channel flow, and flow through hydraulic structures. Lec. 3 hrs., Prereq.: Junior year standing, departmental approval.

CMTC 402 Engineering Economy (3)
Covers the application of economic principles in evaluation and comparison of engineering projects. Examines economic techniques to include interest, present value, future value, uniform series, arithmetic gradient, geometric gradient, rate of return, benefit cost analysis, depreciation, and taxes. Selected topics in macroeconomics are considered. Lec. 3 hrs., Prereq. MATH 111.

CMTC 434 Concrete Structures (3)
Studies analysis, design, and construction details of reinforced and pre-stressed concrete structures. Lec. 3 hrs., Prereq.: CETC 231, CMTC 382.

CMTC 444 Foundation Technology (3)
Covers subsurface exploration, bearing capacity, settlement, and design of foundations; lateral earth pressure and stability of braced cuts, pile foundations. Lec. 3 hrs., Prereq.: CETC 267, CMTC 382.

CMTC 475 Project Planning and Scheduling (3)
Covers principles of planning, scheduling, and allocation of resources for construction projects. Study and application of critical path method (CPM) of network diagraming and calculation. Studies Program Evaluation and Review Techniques (PERT) and allocation of constrained resources and variation of schedules to optimize costs. Lec. 3 hrs., Prereq.: CCET 105, CMTC 382.

CMTC 486 Construction Estimating (3)
Interprets specifications as they affect project costs, quantity take-offs, including items necessary for construction but not called out on drawing and specifications; estimate of labor and costs. Lec. 3 hrs., Prereq.: CCET 105, CMTC 382.

CMTC 487 Contracts and Specifications (3)
Examines elements of contract as related to engineered construction project. Provides an introduction to the technical concepts of preparing and reviewing specifications necessary for bidding and contracting engineering projects. Lec. 3 hrs., Prereq.: CMTC 382, departmental approval.

CMTC 490 Construction Project Management (3)
Covers elements of management as related to construction project; responsibilities of construction managers, on-site representatives, engineers, and inspectors; concept of developing the project team approach. Lec. 3 hrs., Prerq.: Departmental approval.

CMTC 494 Selected Topics in Construction Engineering (3-4)
Covers topics selected at the discussion of the instructor.

CMTC 495 Independent Study (3-4)
Covers individual study topics of interest to the student and instructor.

BACHELOR OF SCIENCE IN ENGINEERING

ENGB 101 Engineering for Everyday Living (3)
Introduces the future engineering and non-engineering students to the basic concepts and tools needed for urban and community problem solving. Discussion and insight to the exciting and challenging roles of the civil and mechanical engineers in planning, design, construction and operation of the urban infrastructure (electric power, gas, water and sewage distribution, transportation of people, goods and information). Use is made of word processing and electronic spreadsheets as tools for formulating and solving engineering problems that are encountered in everyday life.
Lec. 2 hrs., Lab. 3 hrs.

ENGB 105 Computer-Aided Engineering Graphics (3)
Studies the development of skills to visualize and represent two and three dimensional objects graphically; technical drawing practices, AUTOCAD 2002, typing commands, basic construction techniques, using layers, basic editing, using offset, fillet, chamfer, polyline, and multilines, geometric construction, template drawings, introduction to solid modeling.
Lec. 1 hr., Lab 4 hrs.

ENGB 112 Engineering Experimentation (3)
Introduces the fundamentals of engineering experimentation. Modern equipment and instrumentation used in engineering laboratories are presented with emphasis on measurements. State-of-the-art instruments for measurement of angle, distance, pressure and temperature are used to illustrate the importance of understanding errors and their influence on measurements. The use of electronics in measuring instruments (both analog and digital) is demonstrated through the use of civil and mechanical engineering applications. Lec. 2 hr., Lab. 3 hrs.

ENGB 116 Programming Applications (3)
Presents problem-oriented course using commercial generic software (word processing, spreadsheet, database, presentation and selected applications). The students are provided a fundamental introduction to the software and then use in the solution of engineering problems. Lec. 2 hr., Lab. 3 hrs.

ENGB 305 Electronics and Instrumentation (3)
Examines an extension of the physics topics learned in electricity and magnatism. The student is introduced to the application of the fundamental principles of DC and AC circuits, their essential components and analysis. Three-phase energy distribution systems are described. Selected aspects of solid state electronics, especially devices with application in civil and mechanical engineering, are explored. Lec. 2 hrs., Lab. 3 hrs. Prereq: PHYS 202

ENGB 303 Probability and Statistics for Engineers (3)
Focuses on the application of selected topics from the disciplines of Probability and Statistics. The topics include those necessary for the analysis and interpretation of data used in engineering design. Special attention is given to those probability and statistical models that are most frequently used in the solution of engineering problems dealing with the urban infrastructure. Lec. 2 hrs., Prac. 2 hrs.

ENGB 491, 492 Senior Design Studio-I, II (3+3)
The senior [capstone] design experience is the culmination of the student's undergraduate studies in Engineering. The design experience is a two semester "studio" course which embraces virtually all aspects of the professional practice of Engineering. It involves a multi-disciplinary approach to the solution of an urban problem. A team approach involving student participation from multiple disciplines and non-engineering disciplines as may be warranted. The studio experience requires upward of 15 hours effort per week. Preq. Senior standing

MECHANICAL ENGINEERING

MECH 101 Introduction to Engineering (3)
Introduces the student to engineering education, the engineering profession, and basic engineering concepts and tools. Topics include engineering profession and ethics, preparation for a career in engineering, engineering tools, problem solving, introduction to the design process and engineering experimentation. Lec. 3 hrs.

MECH 105 Engineering Graphics (3)
Covers development of skills to visualize and represent three dimensional objects graphically; orthographic projection; pictorial drawing; technical and electronics drawing practices; descriptive geometry; graphics and charts; graphical calculus techniques, vectors; and computer-aided graphics. Lec. 3 hrs.

MECH 205 Materials Science (3)
Covers electronic structure, crystal structure, and imperfection; elastic and plastic deformations; deformation processes, mechanical failure, creep, fatigue, and fracture. Lec. 3 hrs., Prereq.: CHEM 111.

MECH 208 Thermodynamics (3)
Covers thermodynamic concepts, zeroth law, thermodynamic properties, first law and second law analysis of closed and open systems; availability and irreversibility analysis; power and refrigeration cycles; mixture of gases and psychrometrics. Lec. 3 hrs.; Prereq.: PHYS 201.

MECH 222 Engineering Measurements (3)
Covers statistical data and error analysis; measuring systems, transducers; property measurements; signal conditioning; data output and analysis; computer applications; laboratory experiments and demonstrations using modern instrumentation. Lec. 2 hrs., Lab. 1 hrs.; Prereq.: ELEC 221.

MECH 321 Fluid Mechanics (3)
This course covers fluid properties and definitions, fluid statics, Archimedes principles, kinematics of fluids, control volume equations and analysis, Bernoulli equation, Euler equation, ideal flow equations, velocity potential and stream function, dimensional analysis, and viscous flows in pipes. Lec. 3 hrs., Prereq.: MATH 253

MECH 322 Thermodynamics and Fluid Mechanics Laboratory (1)
Examines methods of experimental fluid mechanics; and laboratory experiments in thermodynamics and fluid mechanics. Lab. 3 hrs., Prereq.: Co-req.: MECH 321.

MECH 341 Analysis and Synthesis of Mechanisms (3)
Teaches kinematics and dynamics of mechanisms; analysis of mechanisms, including linkage, cam, gear, synthesis of mechanism for prescribed performances; and computer-aided design of mechanisms. Lec. 3 hrs., Prereq.: CVEN 202, MATH 253.

MECH 342 Analysis of Dynamic Systems (3)
Covers mechanical vibrations of mechanical systems of single and multiple degrees of freedom, dynamic responses of engineering systems utilizing transfer function representation, and analysis of feed- back systems. Lec. 3 hrs., Prereq.: CVEN 202, MATH 260.

MECH 351 Heat Transfer (3)
Examines heat conduction equations, steady and unsteady state heat conduction problems; principles of heat convection, forced, free and phase-change convective heat transfer; and radiative physics and heat transfer. Lec. 3 hrs., Prereq.: MECH 321, MATH 260.

MECH 352 Robotics and Manufacturing Laboratory (1)
Provides a workshop practice course in metal cutting, forming, joining and fabrication. It includes laboratory experiments in pneumatic, hydraulic and electromechanical controls; experiments in computer-

aided manufacturing; robot motions, control and programming. Lab. 3 hrs., Prereq.: MECH 205.

MECH 356 Modern Manufacturing Processes (3)
Covers engineering materials and manufacturing properties; production processes; mechanization and automation; CNC machining. Lec. 3 hrs., Prereq.: MECH 205, CVEN 206.

MECH 361 Machine Design (3)
Examines engineering design process; theories of failure; fundamentals of mechanical design; and computer-aided design of machine elements, bearings, gears, shafts, brakes and couplings; design projects. Lec. 3 hrs., Prereq.: CVEN 206, MECH 205.

MECH 371 Design of Control Systems (3)
Identifies and examines models of mechanical, electrical, fluid, thermal, electro-mechanical, thermofluid systems, transducers, digital devices, types of controllers, performance of feedback systems; simulation, root locus and frequency response methods for design of automatic control. Lec. 3 hrs., Prereq.: CVEN 202, MATH 260.

MECH 405 Engineering Experimentation (3)
Covers experimentation theory; instrumentation systems; applications in mechanical engineering; microprocessors and peripherals; experiments in areas of mechanical engineering. Lec. 1 hr., Lab 6 hrs., Prereq.: Senior standing in Mechanical Engineering.

MECH 406 Engineering Economics (3)
Studies the application of economic principles to engineering problems and their effects on engineering decision-making. Lec. 3 hrs., Prereq.: Senior Standing.

MECH 456 Computational Fluid Mechanics (3)
Studies equations of continuum mechanics and boundary conditions; finite difference techniques for one and multi-directional Navier-Stokes equations; introduction to variational calculus; and finite element methods for fluid flow and heat transfer problems. Lec. 3 hrs., Prereq.: MECH 321, MATH 260.

MECH 457 Design for Noise Control (3)
Covers acoustic terminology, acoustic related to noise and its control, techniques for the solution of noise problems, design of vibration isolators, energy absorbers, dissipative and reactive mufflers, enclosures, barriers and panel damping. Lec. 3 hrs., Prereq.: CVEN 202, MATH 260.

MECH 458 Finite Element Methods for Mechanical Design (3)
Examines finite element techniques, data stringing, mesh generation, data checking, element calculation, postprocessing and output plots; use of finite element computer programs for solving design problems. Lec. 3 hrs., Prereq.: MECH 361, MATH 260.

MECH 461 Applied Thermodynamics and Energy Conversions (3)
Studies the optimization of power plant, internal combustion engine, refrigeration, combustion and direct thermoelectric systems; and design of reciprocating compressors, engines, nozzles and diffusers. Lec. 3 hrs., Prereq.: MECH 351.

MECH 462 Design of Energy Systems (3)
Covers the design of ducting and piping systems, design of heat exchangers and fluid/rotor energy converters; characteristics of pumps, fans, compressors and turbines, computer-aided design and simulation of energy systems. Lec. 3 hrs., Prereq.: MECH 351.

MECH 463 Mechanical Engineering Senior Laboratory I (1)
Studies dynamic data acquisition, analysis and control, aerodynamic lift and drag, pump performance, experimental methods for measuring dynamic responses, and statistical theories of measurement. Lab. 3 hrs., Prereq.: Senior standing.

MECH 464 Mechanical Engineering Senior Laboratory II (1)
Examines a computer simulation of dynamic systems, electronic and digital instruments, instrumentation and tests for measurement of performance of energy and dynamic system, and individual laboratory projects. Lab. 3 hrs., Prereq.: MECH 463.

MECH 470 Thermal Environmental Engineering (3)
Examines thermodynamic properties of moist air, psychrometric chart applications, refrigerants, binary mixtures, mechanical vapor compression refrigeration systems, absorption refrigeration systems, solar radiation calculations, and analysis of cooling towers and dehumidification coils. Lec. 3 hrs., Prereq.: MECH 351.

MECH 475 Gas Turbine Design (3)
Covers gas turbine components, component characteristics and performance, gas turbine system configurations and optimization, energy transfer between fluid and rotors, aerodynamic data of turbine and compressor blades, aerodynamic design of turbine

and compressor blades, mechanical design of turbines and compressor rotors, components matching. Lec. 3 hrs., Prereq.: MECH 461.

MECH 476 HVAC Design (3)
From a description of building functions, students research, create, plan, and design an energy efficient and cost effective building HVAC system. Lec. 3 hrs., Prereq.: MECH 461.

MECH 483 Robot Mechanics and Control (3)
Introduces types of industrial robots, sensing of robot motion and position, electro-mechanical, hydraulic and pneumatic actuators; sampled data, proportional, integral and derivative controller; robot coordinates, motion, dynamic and path control, as well as introduction to robot programming. Lec. 3 hrs., Prereq.: MECH 341, MECH 371.

MECH 484 Design of Robot Mechanism (3)
Introduces types of manipulators, manipulator parts and linkages, kinematic equations and their solutions; synthesis of manipulator mechanisms, path generation and motion trajectories, manipulator dynamics, payload and compliance, and computer-aided design of manipulator mechanisms. Lec. 3 hrs., Prereq.: MECH 483.

MECH 486 Robot Interface Design (3)
Covers microprocessor programming; control hardware characteristics; interfacing to robots, applications of electro-mechanical, hydraulic and pneumatic robots; robot programming languages; computerized numerical control, and design and optimization for manufacturing cells for specified
manufacturing processes and cycles. Lec. 3 hrs., Prereq.: MECH 483.

MECH 491 Senior Design Project I (3)
Covers creative design, design problem formulation, structure of open-ended solution processes in system design; familiarization with technological resources; group projects on design of complex mechanical systems, feasibility studies, group presentation of project feasibility, and developing impact and planning statement. Lab 6 hrs., Prereq.: MECH 351, MECH 361, MECH 371.

MECH 492 Senior Design Project II (3)
Continuation of group projects from Senior Design Project I, including consideration of economic, risk and reliability factors, and development of preliminary designs, prototypes, tests and optimization, and project report and presentation. Lab 6 hrs., Prereq.: MECH 491.

MECH 495 Special Topics in Mechanical Engineering (1-12)
Covers a specific area related to mechanical engineering that is not normally covered in regular courses and/or for which there is sufficient student interest. May be used as a technical elective. Lec. 1 hr., or Lab 3 hrs. for each credit hour. Prereq.: Permission of instructor.

MECH 496 Senior Project in Mechanical Engineering (1-12)
Individual study by the student is conducted under supervision of a faculty member, on a project related to mechanical engineering, including presentation of project report. Lec. 1 hr. or Lab. 3 hrs. for each credit hour. Prereq.: Permission of instructor.

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Samuel Lakeou, Chairman
Building 42, Room 112-E
(202) 274-7409

Full-time Faculty (Electrical Engineering & Electronics Engineering Technology)
Professors T.N. Bhar, A.J. Darby, S. Lakeou, E. Ososanya, N.D. Mills,
Associate Professors B.P. Shah, E.L. Walker
Instructors A.J. Cruz, W. Lee
Full-time Faculty (Computer Science)
Professor M.I. Jonas
Associate Professors L. Chen, G.T. Finley, T.L. Manning
Assistant Professors R.L. Clark, D.L. Shie

The Department of Electrical Engineering and Computer Science brings together programs in Electrical Engineering and Computer Science designed to address the urban land-grant mission of the University of the District of Columbia by preparing students for immediate employment in the high technology workplace and for more advanced studies.

The Department offers Bachelor of Science degree programs in Electrical Engineering (BSEE), in Computer Science (BSCS) and a Bachelor of Arts degree program in Computer Science. The Department offers also Associate of Applied Science (AAS) degree programs in Electronics Engineering Technology (AAS-EET) and in Computer Science Technology (AAS-CST). Courses leading to industry-standard certifications such as the Microsoft Certified Systems Engineer (MCSE) and Cisco Certified Network Associate (CCNA) are also offered and are applicable

towards the AAS CST program. The Department is the official site of the Cisco Networking Academy in the District of Columbia.

The BS program in Electrical Engineering and the AAS program in Electronics Engineering Technology are accredited by the Accreditation Board for Engineering and Technology **(ABET)**.

In all programs, classroom and laboratory instruction are provided with emphasis on current technology using networked computers and state-of-the-art audio visual as well as e-learning tools.

ELECTRICAL ENGINEERING PROGRAM

The Electrical Engineering Program has re-instated the **Computer Engineering Option** to allow more flexibility to students in their choice of a career path. The program has also reduced the total number of required credits from **139** to **128**.

The Electrical Engineering Program places special emphasis on such areas as analog and digital electronics, digital and analog communication systems, control systems, digital systems design, and electromechanical energy conversion. In addition, the Department houses a networked, state-of-the-art computer-aided engineering (CAE) facility comprising several engineering and PC workstations with appropriate industry-standard CAE software tools for very complex design activities, including integrated circuit (IC) layout design and **HDL(VHDL/Verilog)** synthesis and complex programmable logic device design.

Students graduating from the program are encouraged to take the **Fundamentals of Engineering (FE)** examination which qualifies them as an **Engineer-in-Training (EIT)** in their professional career and helps them become licensed professional engineers (PE).

The objectives of the program of electrical engineering are :

- To provide graduates with a strong engineering background which enables them to enter the engineering workforce serving the Washington, DC metropolitan area and elsewhere;
- To provide graduates with an adequate background to pursue advanced engineering studies; and
- To produce graduates who are computer literate and proficient in written and oral communication and have an understanding of the ethical responsibilities of the engineering profession.

The Department has contacts with various private and public employers for part-time employment and summer internships. The Electrical Engineering Program is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Total credit hours of college-level courses required for graduation: 128

General Requirements: 52 credit hours

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature & Advanced Writing I	3
ENGL	212	Literature & Advanced Writing II	3
		Humanities/Social Science Elective*	6
		Philosophy Elective	3
		Fine Arts Elective	3
CHEM	111	General Chemistry Lecture	3
CHEM	113	General Chemistry Laboratory	1
PHYS	201	University Physics I	3
PHYS	202	University Physics II	3
PHYS	205	University Physics Lab I	1
PHYS	206	University Physics Lab II	1
MATH	151	Calculus I Lecture	3
MATH	152	Calculus II Lecture	3
MATH	253	Calculus III Lecture	3
MATH	155	Calculus I Laboratory	1
MATH	156	Calculus II Laboratory II	1
MATH	255	Calculus III Laboratory III	1
MATH	260	Differential Equations with Linear Algebra	4

*3 credits must be ECON 202

Required core courses: 55 credit hours

ELEC	105	Intro. To Electrical and Computer Engineering	2
CSCI	231	Computer Science I Lecture	3
CSCI	233	Computer Science II Laboratory	1
CVEN	201	Engineering Mechanics I	3
CVEN	202	Engineering Mechanics II	3
ELEC	221	Electrical Circuits I Lecture	3
ELEC	222	Electrical Circuits II Lecture	3
ELEC	223	Electrical Circuits I Laboratory	1
ELEC	224	Electrical Circuits II Laboratory II	1
ELEC	301	Engineering Mathematics	3
ELEC	307	Probability & Statistics	

		for Engineers	3
ELEC	311	Computer Organization I	3
ELEC	312	Computer Organization II	3
ELEC	313	Computer Organization I Lab	1
ELEC	314	Computer Organization II Lab	1
ELEC	351	Electronics I	3
ELEC	352	Electronics II	3
ELEC	353	Electronics I Lab	1
ELEC	354	Electronics II Lab	1
ELEC	361	Electromagnetic Theory I	3
ELEC	362	Electromagnetic Theory II	3
ELEC	495	Senior Project I	2
ELEC	496	Senior Project II	2
Technical Electives			3

Required (***) Courses in addition to the core courses: 21 credit hours

PHYS	203	University Physics Lecture III	3
PHYS	207	University Physics Laboratory III	1
MECH	208	Thermodynamics	3
ELEC	356	Physical Electronics	3
ELEC	371	Signals and Systems	3
ELEC	467	Introduction to Communication Systems Lecture	3
ELEC	476	Introduction to Communication Systems Laboratory	1
ELEC	470	Control Systems and Applications Lecture	3
ELEC	477	Control Systems and Applications Laboratory	1

***Not required in the Computer Engineering Option.

Computer Engineering Option:

Required courses in addition to the required core courses : 21 credit hours

CSCI	232	Computer Science II Lecture	3
CSCI	234	Computer Science II Lab	1
CSCI	251	Assemblers and Systems Lecture	3
CSCI	253	Assemblers and Systems Lab	1
CSCI	412	Operating Systems	3
ELEC	459	Introduction to Digital Computer Architecture and Design	3
ELEC	478	Digital Integrated Circuits Design Lecture	3
ELEC	479	Digital Integrated Circuits Design Laboratory	1
ELEC	480	Introduction to Computer-Aided Digital Design Lecture	3

Technical Electives

ELEC	457	Digital Electronics	3
ELEC	458	Digital Signal Processing	3
ELEC	461	Electrical Energy Conversion Lecture	3
ELEC	462	Electrical Energy Conversion Laboratory	1
ELEC	465	Introduction to Microwaves	3
ELEC	466	Antenna Design Theory and Application	3
ELEC	469	Digital Communication Systems Lecture	3
ELEC	473	Digital Communication Systems Laboratory	1

Additional Comments or Requirements
Students are required to have a 2.00 grade point average in all major courses.

ELECTRONICS ENGINEERING TECHNOLOGY PROGRAM

The Department of Electrical Engineering and Computer Science offers a program leading to the Associate in Applied Science degree in Electronics Engineering Technology, which is accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET). The program provides a broad foundation in electronics circuits and devices, including computer electronics and communications. Emphasis is placed on maintenance and troubleshooting of analog and digital systems.

The primary objective of the program is to prepare students for successful employment as technicians in the following fields:

- Communications
- Public utilities
- Research and development
- Controls systems
- Manufacture of electronics equipment and systems
- Electronics servicing industry
- Digital electronics and microprocessor

ASSOCIATE IN APPLIED SCIENCE IN ELECTRONICS ENGINEERING TECHNOLOGY

Required for Graduation: 64 credit hours

General Requirements: 25 credit hours

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	4
PHYS	101	Introduction to College Physics I	3
PHYS	102	Introduction to College Physics II	3

PHYS	103	Intro. to College Physics Lab I	1
PHYS	104	Intro. to College Physics Lab II	1
Social Science Elective			3

Required Courses : 39 credit hours

EETC	101	Fundamentals of Electrical Engineering Tech. I	3
EETC	103	Fundamentals of Electrical Engineering Tech. I Lab	1
EETC	102	Fundamentals of Electrical Engineering Tech. II	3
EETC	104	Fundamentals of Electrical Engineering Tech. II	1
EETC	105	Electronics Shop Skills	2
EETC	107	Electronics Shop Skills Lab	1
EETC	120	Computer Electronics Technology	3
EETC	122	Computer Electronics Technology Lab	3
EETC	201	Electronics I	3
EETC	203	Electronics I Lab	1
EETC	202	Electronics II	3
EETC	205	Electronics II Lab	1
EETC	207	Electronic Communications	3
EETC	209	Electronic Communications Lab	1
EETC	290	Electronic Troubleshooting and Prototyping	2
EETC	292	Electronic Troubleshooting and Prototyping	2
EETC	296	Engineering Technology Seminar	1
BSOA	104	Introduction to Business	3
SPCA	115	Public Speaking	3

Additional Comments or Requirements

A grade of "C" or better is required in all courses offered by the Department and in mathematics courses.

COMPUTER SCIENCE PROGRAM

The Bachelor of Science in Computer Science enables students to enter the computing profession at a technical - scientific level or to proceed to graduate programs in Computer Science. It is a four-year program with a heavy emphasis on mathematics and the study of algorithmic processes to describe and transform information.

The objectives of the Bachelor of Science in Computer Science Degree Program are to produce graduates who are prepared for successful, immediate employment and successful entry into graduate programs in the discipline.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Total Credit Hours of College-Level Courses Required for Graduation: 129

General Requirements: 42 credit hours

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	151	Calculus I Lecture	3
MATH	155	Calculus I Lab	1
MATH	152	Calculus II Lecture	3
MATH	156	Calculus II Lab	1
		Fine Arts Elective	3
		Philosophy Elective	3
		P.E. Health and General Electives	10
		Social Science Electives (ECON 201/202)	3

Natural Science Requirements: 12 credit hours

PHYS	201	University Physics I Lecture	3
PHYS	205	University Physics I Lab	1
PHYS	202	University Physics II Lecture	3
PHYS	206	University Physics II Lab	1
Natural Science Electives **			4

**To be selected from ELEC 221/223, CHEM 111/113 or BIOL 101/103 (Lecture/Laboratory)

Other Required Courses

APCT	101	Algorithms with BASIC Lecture	3
APCT	101	Algorithms with BASIC Lab	1
APCT	231	Computer Science I Lecture	3
APCT	233	Computer Science I Lab	1
APCT	232	Computer Science II Lecture	3
APCT	234	Computer Science II Lab	1
MATH	213	Discrete Mathematics **(or)**	
MATH	413	Applied Modern Algebra I	3
MATH	225	Linear Algebra	4
MATH	253	Calculus III Lecture	3
MATH	255	Calculus III Lab	1
MATH	254	Differential Equations	3
MATH	381	Probability and Statistics	3
CSCI	115	Computing Foundations	3
CSCI	241	Introduction to File Processing	3
CSCI	251	Assemblers and Systems Lecture	3
CSCI	253	Assemblers and Systems Laboratory	1
CSCI	311	Computer Organization Lecture	3
CSCI	313	Computer Organization Laboratory	1
CSCI	352	Organization of Programming Languages	3
CSCI	341	Software Engineering	3
CSCI	410	Theory of Computing	3

CSCI	412	Operating Systems	3
CSCI	415	Computer Architecture	3
CSCI	434	Data Structures	3
CSCI	495	Senior Seminar	1
CSCI	499	Senior Project	2
CSCI		Computer Science Electives*	12

***Approved Computer Science Electives**

CSCI	254	Introduction to Computer Graphics	3
CSCI	304	Algorithmic Techniques	3
CSCI	315	UNIX Systems Programming	3
CSCI	414	Introduction to Artificial Intelligence	3
CSCI	424	Translation Software	3
CSCI	452	Database Systems Design	3
CSCI	454	Computer Graphics	3
CSCI	461	Systems Simulation	3
CSCI	490	Special Topics in CS****	3

****May include: Object Design with Java, Computer Graphics, Internet Security, Analysis of Algorithms, etc.

BACHELOR OF ARTS IN COMPUTER SCIENCE PROGRAM

The Bachelor of Arts degree in Computer Science prepares students for careers in computer programming, systems analysis, and related fields. The program content prepares students to cope effectively with problems they may encounter in public or private business endeavors and other applied areas. The objectives apply not only to the development of competency in the particular skills of computer applications, but also to the study of quantitative relationships and the attainment of skills in reasoning and logical analysis. Studies in applied computing can lead to a professional career as a programmer or as a systems analyst or to other careers where knowledge of computers is required.

BACHELOR OF ARTS IN COMPUTER SCIENCE

Total credit hours of college-level courses required for graduation: 129

General Requirements

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	116	Finite Mathematics	3
MATH	215	Calculus for Business, The Social and Life Sciences	3
Fine Arts Elective			3
Foreign Language I, II			3
Natural Science with Lab Electives			8
P.E., Health, Speech or Natural Science			3
Natural Science			2
Philosophy Elective			3
Social Science Electives			6
Total			**47**

Department Core Requirements

APCT	104	Introduction to Computers with Application Lecture	2
APCT	105	Introduction to Computers with Application Lab	1
APCT	110	Algorithms with BASIC Lecture	2
APCT	111	Algorithms with BASIC Lab	1
APCT	110	Algorithms with BASIC Lecture	2
APCT	231	Computer Science I Lecture	3
APCT	233	Computer Science I Lab	1
APCT	232	Computer Science II Lecture	3
APCT	234	Computer Science II Lab	1
Total			**14**

Program Core Requirements

BSOA	104	Introduction to Business	3
FINA	220	Business Statistics	3
CISS	402	Management Information Systems	3
CISS	403	File Management Techniques	3
CISS	410	File Management Techniques Lab	1
CISS	405	Introduction to Telecommunications	3
APCT	385	Systems Analysis and Design	3
APCT	406	Database Management Systems Lecture	3
APCT	408	Database Management Systems Lab	1
Total			**23**

Other requirements

General Electives			9
Mathematics/Sciences Electives			6
FINA	223	Quantitative Business Techniques	3
MBAA	201	Fundamentals of Financial Accounting	3
MBAA	202	Fundamentals of Managerial Accounting	3
CSTC	184	Applied Operating Systems	3
CSCI	325	Organization of Programming Languages	3
CSCI	434	Data Structures	3
*Computer Science Electives			12
Total			**45**

*To be selected with advisor's consent.

COMPUTER SCIENCE TECHNOLOGY PROGRAM

The Associate in Applied Science in Computer Science Technology has two options. The first option (Software and Programming Option) has a focus on applications programming. The student is trained in the logic of problem solving, and at the completion of the program is equipped to write computer programs in modern languages and as C++, Visual Basic, and Assembly Language. Exposure is provided to legacy languages such as Fortran and Cobol. Students are also trained in the use of modern office software application packages.

The second option (Computer Networks Option) provides for training as computer network professionals and network administrators. Courses prepare students to take several industry exams leading to certification, such as Microsoft Certified Systems Engineer (MCSE) and Cisco Certified Network Associate (CCNA). Courses in this program have the letter code CSNT.

ASSOCIATE IN APPLIED SCIENCE IN COMPUTER SCIENCE TECHNOLOGY

ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	111	Technical Mathematics I	4
MATH	112	Technical Mathematics II	4
		or	
MATH	113	Precalculus with Trigonometry I	3
MATH	114	Precalculus with Trigonometry II	3
PHYS	101	Introduction to College Physics Lecture	3
PHYS	103	Introduction to College Physics Lab	1
PHIL	105	Introduction to Logic	3
Total			**19 or 21**

Required Courses

Department Core Requirements

APCT	104	Introduction to Applications of Computers Lecture	2
APCT	105	Introduction to Applications of Computers Lab	1
APCT	110	Algorithms with BASIC Lecture	2
APCT	111	Algorithms with BASIC Lab	1
CSCI	231	Computer Science I Lecture	3
CSCI	233	Computer Science I Lab	1
CSCI	232	Computer Science II Lecture	3
CSCI	234	Computer Science II Lab	1
Total			**14**

Program Requirements

CSTC	184	Applied Operating Systems	3
APCT	311	COBOL I	3
APCT	313	COBOL I Lab	1
APCT	312	COBOL II	2
APCT	314	COBOL II Lab	1
(or modern language, Visual Basic, and Event Program with Basic)			
Programming Electives*			6
APCT	385	Systems Analysis and Design	3
Computer Science Electives*			9
Total			**28**

*Software and Program Option: Electives from advanced programming, systems, or software applications courses.

*Computer Networks Option: Electives from computer network courses, such as courses applicable to MCSE or CCNA certification.

COURSE DESCRIPTIONS

ELECTRICAL ENGINEERING

ELEC 105 Introduction to Electrical and Computer Engineering (2)
Introduces basic concepts in electrical and computer engineering in an integrated manner. Also introduces basic concepts of practical applications, illustrates a logical way of thinking about problems and their solutions, and conveys to the student the excitement of the profession. Analysis, construction, and testing of simple electrical and digital systems are discussed. Specific topics include notion of electrical current and voltage, simple digital systems, simple combinational logic circuits, and basic engineering computations using computer programs. Co-req.: MATH 151 or Permission of instructor.

ELEC 221 Electrical Circuits I (3)
Covers Ohm's and Kirchoff's Laws, Thevenin and Norton Equivalents, analysis of RL and RC networks with and without forcing functions, the RLC circuit, and computer-aided circuit simulation. Lec. 3 hrs., Co-req.: PHYS 202, ELEC 223.

ELEC 222 Electrical Circuits II (3)
Covers the sinusoidal forcing functions, sinusoidal steady-state responses using phasors, polyphase circuits, complex frequency, and frequency responses, and computer-aided circuit simulation. Lec. 3 hrs., Prereq.: ELEC 221. Co-req.: ELEC 224.

ELEC 223 Electrical Circuits I Laboratory (1)
A laboratory course to accompany Electrical Circuits I. This course is the first in a sequence of laboratory courses intended to develop a strong foundation in designing, assembling, and testing electrical circuits. Lab 3Hrs, Coreq: ELEC 221

ELEC 224 Electrical Circuits II Laboratory (1)
Continues of Electrical Circuits Lab I. Lab 3 hrs., Prereq.: ELEC 223. Co-req.: ELEC 222.

ELEC 301 Engineering Mathematics (3)
This course covers Fourier series and integral, Laplace transform, periodic functions, partial differential equations, Bessel functions and Legendre polynomials, complex analytic functions, and Taylor and Laurent series. Lec. 3 hrs., Prereq.: ELEC 260.

ELEC 307 Probability and Statistics for Engineers (3)
Covers purpose of statistics, methods of representation, sample mean, sample variance, random experiments, probability, random variable, discrete and continuous distributions, binomial, Poisson and normal distribution sampling. Lec. 3 hrs., Prereq.: ELEC 301.

ELEC 308 Applied Numerical Analysis For Engineers (3)
Covers systems of linear equations: elimination, iteration, relaxaton methods, eigenvalue problems, nonlinear equations, numerical differentiation and integration, interpolation methods of finite differences. Lec. 3 hrs., Prereq.: ELEC 301.

ELEC 311 Computer Organization I (3)
Covers foundations of digital design and digital computer systems, representation of information using the binary number system, introduction to Boolean algebra, design of combinational logic circuits, design of sequential logic circuits, design of registers, counters and memory units, and introduction to the use of register transfer language and micro-computer system design. Lec. 3 hrs., Prereq.: ELEC 222. Co-req.: ELEC 313.

ELEC 312 Computer Organization II (3)
Examines sequence and control (hardwired and microprogrammed control), instruction set architecture, CPU design, and input-output interfaces for computer design. In addition, microprocessor and microprocessor-based digital system design is introduced. Lec. 3 hrs., Prereq. ELEC 311, Co-req. ELEC 314.

ELEC 313 Computer Organization I Laboratory (1)
Covers experiments in the principles of digital circuits. Lab 3 hrs., Co-req.: ELEC 311.

ELEC 314 Computer Organization II Laboratory (1)
Covers experiments/computer simulations related to the design of computers and microprocessor based digital systems. Lab 3 hrs., Co-req. ELEC 312

ELEC 351 Electronics I Lecture (3)
Covers semiconductor diodes, bipolar junction transistors (BJT), and junction field effect transistors (JFET); design of BJT and JFET amplifiers, and computer-aided design and circuit simulation. Lec. 3 hrs., Prereq.: ELEC 222. Co-req.: ELEC 353.

ELEC 352 Electronics II Lecture (3)
Covers operational amplifiers, frequency response characteristics of transistor amplifiers, feedback amplifiers, oscillators, filters, and pulsed wave-forms. Computer-aided design and circuit simulation. Lec. 3 hrs., Prereq.: ELEC 351. Co-req.: ELEC 354.

ELEC 353 Electronics I Laboratory (1)
A laboratory course to accompany Electronics I. Includes experiments on discrete transistor characteristics and circuits. Lab 3 hrs., Co-req.: ELEC 351.

ELEC 354 Electronics II Laboratory (1)
Continues Electronics Lab I. Includes experiments on design of amplifiers and op-amp circuits. Lab 3 hrs., Co-req.: ELEC 352.

ELEC 356 Physical Electronics (3)
Covers the growth and properties of physical and optical semiconductor materials; kinetics of charge carriers in electronic devices; design, fabrication, and operation of integrated circuits and devices, and optoelectronic devices including LEDs, lasers and, solar cells. Lec. 3 hrs., Prereq.: PHYS 203.

ELEC 361 Electromagnetic Theory (3)
Covers vector calculus, orthogonal coordinates, Coulomb and Gauss laws, scalar potentials, dielectrics, capacitance, and static electric and magnetic fields and their interaction with matter, as well as Laplace and Poisson equations. Lec. 3 hrs., Prereq.: MECH 201, ELEC 222, 2539 202.

ELEC 362 Electromagnetic Theory II (3)
Continues of ELEC 361 with emphasis on Ampere's law, Biot-Savart Law, vector potential, magnetic

circuits, Faraday's Law, the application of Maxwell's equations, plane waves, and the Poynting vector. Lec. 3 hrs., Prereq.: ELEC 361.

ELEC 371 Signals and Systems I (3)
Introduces principles and techniques of continuous and discrete time linear systems analysis. Topics include signal representation, properties of systems, convolution, Fourier series and transform, FFT, sampling theorem, filtering, Laplace and Z-transform techniques. Lec. 3 hrs., Prereq.: ELEC 351, 2535 260.

ELEC 399 Junior Project (3)
Provides an opportunity for independent engineering work under guidance of a faculty member on a project suggested by either student or the Department. Student must discuss the project plan with the faculty member involved before registering. Lab 6 hrs., Prereq.: Permission of instructor.

ELEC 457 Digital Electronics (3)
Introduces integrated circuit (IC) technology. Digital logic families (TTL, TTL (LS), NMOS, CMOS, ECL, IC's) and digital IC's, examples of digital and analog IC design, memory circuits are also examined. Lec. 3 hrs., Prereq.: ELEC 352.

ELEC 458 Digital Signal Processing (3)
Examines sampling theorem, Z-transform, FFT techniques, design of IIR and FIR filters, effects of quantization and finite-word-length arithmetic. Lec. 3 hrs., Prereq: ELEC 371.

ELEC 459 Introduction to Digital Computer Architecture and Design (3)
Provides an understanding of the structure and operation of contemporary computer systems from the instruction set architecture level through the register transfer implementation level. Also explores theory and application of computation, levels of abstraction, instruction set design, assembly language programming, processor data paths, data path control, pipeline design, design of memory hierarchies, memory management, and input/output. A contemporary behavioral/functional/logical simulator will be used for projects. Prereq.: ELEC 312.

ELEC 460 Antenna Design Theory Lab (1)
This laboratory course accompanies ELEC 466 and emphasizes the hands-on analysis/design of operational antennas with the aid of modern equipments for measurement and testing. Various software packages are applied in the Lab; 3 hrs.; Co-req.: ELEC 466.

ELEC 461 Electrical Energy Conversion (3)
Covers theory of electromechanical energy conversion, DC motors and generators, power electronics, AC rotating machine theory. Lec. 3 hrs., Prereq.: ELEC 351. Co-req.: ELEC 462.

ELEC 462 Electrical Energy Conversion Laboratory (1)
Includes experiments on DC and AC motors and generators. Lab 3 hrs., Co-req.: ELEC 461.

ELEC 463 Energy Systems (3)
Examines principles of electrical power generation, transmission, and distribution with applications to present energy problems. Lec. 2 hrs., Prereq.: ELEC 461.

ELEC 465 Introduction to Microwaves (3)
Covers the analysis and design of transmission lines, microwave systems, and wave-guides. Smith chart characteristics, active and passive components, and measurement techniques. Lec. 3 hrs., Prereq.: ELEC 362.

ELEC 466 Antenna Design Theory and Applications (3)
Covers the design and construction of operational antennas and testing of the antennas so that students get an understanding of most types of antennas in common use. Lec. 3 hrs., Prereq.: ELEC 362, ELEC 465. Co-req.: ELEC 460.

ELEC 467 Introduction to Communication Systems Lecture (3)
Introduces the concepts underlying analog and digital communication systems. Topics include amplitude modulation, phase and frequency modulation, sampling and quantization theory, and pulse modulation. Effect of noise on the performance of these modulation techniques are covered. Lec. 3 hrs., Prereq: ELEC 371. Co-req.: ELEC 476.

ELEC 468 Communication Electronics (3)
Examines the analysis and design of communication circuits, including coupling networks, mixers, RF amplifiers; and AM and FM modulators and demodulators; AGC, AFC; phase-locked loops. Lec. 3 hrs., Prereq.: ELEC 352, ELEC 362.

ELEC 469 Digital Communication Systems Lecture (3)
Covers statistical methods in the analysis of digital information transmission systems, threshold effects, phase-locked demodulation, probability of error, and

optimum receivers. Lec. 3 hrs., Prereq: ELEC 467, ELEC 307.

ELEC 470 Control Systems and Applications (3)
Examines some of the techniques available for analysis and design of continuous time feed-back control systems. Topics include modeling, performance measures, transfer functions, generalized error coefficient, introduction to state-space method, stability, controllability and observability, root locus and frequency domain analysis, compensation methods, and state feedback and pole placements control system design. Lec. 3 hrs., Prereq.: ELEC 371. Co-req.: ELEC 477.

ELEC 471 Digital Control Systems (3)
Introduces the analysis and design of digital control systems, Z-transform, discrete linear systems, state-space and frequency domain analysis, and simulation and analysis using microprocessors. Lec 3 hrs., Prereq: ELEC 470.

ELEC 472 Signals and Systems II (3)
Provides mathematical tools for analysis of time-invariant and time-varying linear systems. State-space approach to analysis of systems is covered. Nonlinear and multi-variable systems are introduced. Lec. 3 hrs., Prereq.: ELEC 471.

ELEC 473 Digital Communication Systems Laboratory (1)
This is a laboratory course in digital communication. Experiments include sampling, frequency division multiplexing, and pulse code modulation. It also includes simulation techniques of digital communication systems. The course is intended to supplement the Digital Communications course. Lab 3 hrs, Co-req: ELEC 469

ELEC 474 Advanced Topics in Electrical Engineering I (3)
Senior elective. Topic is to be chosen from one of the many concentrations of electrical engineering. Lec. 3 hrs., Prereq.: Permission of instructor.

ELEC 475 Advanced Topics in Electrical Engineering II (3)
Senior elective. This is a continuation of ELEC 474. Lec. 3 hrs., Prereq.: Permission of instructor.

ELEC 476 Intro to Communication Systems Laboratory (1)
This is a laboratory course in RF and digital communication. Experiments include operation of phase-locked loop, AM and FM modulation, frequency division multiplexing, and pulse-code modulation. Lab 3 hrs., Co-req.: ELEC 467.

ELEC 477 Control Systems Laboratory (1)
Experiments include simulation of dynamic systems using analog and digital computers, parameter identification of DC motors, state-feedback controller, lead/ lag compensator design, and sample-data controllers. Lab 3 hrs., Co-req.: ELEC 470.

ELEC 478 Digital Integrated Circuit Design Lecture (3)
Studies the design process of VLSI CMOS circuits. Also covers all the major steps of the design process, including logic, circuit, and layout design. A variety of computer-aided tools are discussed and used to provide VLSI design experience that includes design of basic VLSI CMOS functional blocks, and verification of the design, testing, and debugging procedures. Prereq.: ELEC 352, 312.

ELEC 479 Digital Integrated Circuit Design Laboratory (1)
Provides VLSI design experience that includes design of basic VLSI CMOS functional blocks, verification of the design, testing, and debugging. Several complex VLSI projects will be submitted for fabrication. Co-req.: ELEC 479.

ELEC 480 Intro to Computer-Aided Digital Design (3)
Introduces the techniques of modeling digital systems at various levels of abstraction and computer-aided design algorithms applied to these models to support design and analysis tasks. Covers modeling through the use of a modern hardware description language (VHDL/Verilog), test generation, event-driven simulation algorithms, and physical design used to map the synthesized logic design onto physical IC area. This is not a how-to course on using CAD tools; it is a study of the algorithms used by CAD tools. Prereq.: ELEC 312.

ELEC 481 Digital System Design I (3)
Covers design of microprocessor-based digital control systems, and introduction to microprocessor interface devices, as well as introduction to virtual and paged memory systems. Lec. 3 hrs., Prereq: ELEC 312.

ELEC 482 Digital System Design II (3)
Covers design of digital systems using the VHDL hardware programming language, the use of VHDL to implement and test both combinational logic circuits and sequential logic circuits. Lec. 3 hrs., Prereq: ELEC 312.

ELEC 484 Introduction to Micro-programming (3)
Covers basic concepts and applications of microprogramming in digital systems. Topics include microprogramming language, simulators in computer design, hardware, and application. Lec. 3 hrs., Prereq.: CSCI 312.

ELEC 494 Senior Project Laboratory (3)
Independent engineering work is conducted under the guidance of a faculty member on a project suggested by either the student or the Department. Prior discussion of project plan with the faculty member is required before registering. Lab 6 hrs., Prereq.: Senior standing, electrical engineering.

ELEC 495 Senior Project I (2)
Conceptualization, design, building, testing, and promulgation of an electrical engineering project is carried out by the student under supervision of a faculty member. Lab 6 hrs., Prereq.: ELEC 312, 352, 362.

ELEC 496 Senior Project II (2)
Continues the design project, Senior Project I. Students will consider feasibility of design project, the effect of economic factors on the design, and make presentations in oral and written form for evaluation. Lab 6 hrs., Prereq.: ELEC 495.

ELECTRONICS ENGINEERING TECHNOLOGY

EETC 101 Fundamentals of Electrical Engineering Technology I (3)
Studies the analysis of series and parallel DC/AC circuits by using Ohm's Law, Kirchhoff's Laws, Thevenin's Theorem, and the superposition theorem. Concepts of voltage, current, resistance, inductance, capacitance, and time constants are developed. The latter part of the course deals with reactance, impedance, phasor representation, and true power. Lec. 3 hrs., Co-req.: EETC 103.

EETC 102 Fundamentals of Electrical Engineering Technology II (3)
Begins with a continuation of AC circuit theory. Series and parallel resonance are studied in detail. The concepts of frequency response and tuning are introduced, including circuit Q factor, bandwidth, and selectivity. Various types of LC filters are studied and applied. The latter part of the course is an introduction to solid-state electronics. Included are the injunction diode, rectifiers, power supply filtering, the Zener diode, and voltage regulation, and elemental bipolar junction transistor circuits. Lec. 3 hrs., Prereq.: EETC 101. Co-req.: EETC 104.

EETC 103 Fundamentals of Electrical Engineering Technology I Lab (1)
Topics in the lecture are demonstrated through experiments using modern electronic instrumentation and test equipment. Lab 3 hrs., Co-req.: EETC 101.

EETC 104 Fundamentals of Electrical Engineering Technology II Lab (1)
Topics in the lecture are demonstrated through experiments using modern electronic instrumentation and test equipment. Lab 3 hrs., Co-req.: EETC 102.

EETC 105 Electronics Shop Skills (2)
Introduces electronics shop assembly techniques; safety rules, basic tools, hardware, and equipment are covered. Schematic diagrams, circuit layout, soldering, and wiring techniques are also covered, along with experience in developing printed circuits, circuits, boolean algebra, combinational, and sequential circuits. Counters, shift registers, encoders, and decoders, with emphasis on applications systematic troubleshooting and diagnostic techniques are discussed.

EETC 107 Electronics Shop Skills Lab (1)
The laboratory covers the use of tools, instruments, and other equipment and supplies commonly found in a modern electronics shop. Lab. 3 hrs., Co-req.: EETC 105.

EETC 120 Computer Electronics Technology Lecture (3)
Continues the fundamentals introduced in Electronics Shop Skills. Digital to analog and analog to digital conversions, multiplexing and demultiplexing are studied, emphasizing practical applications of commercial devices. Microcontrollers and microprocessors interfacing, applications and device programming techniques are covered, as well as the personal computer and peripheral hardware, configuration, setup and troubleshooting; the Operating System, bootup sequences, Windows and other application packages. Introduction to data communications, networking and the internet are also taught.

EETC 122 Computer Electronics Technology Laboratory (1)
Topics covered in the lecture course are demonstrated by the use of simulation software packages and actual laboratory experimentation. Hardware and software projects using microcontrollers, microprocessors, Pic's, and Basic stamps with emphasis in real world applications are examined. System integration, interfacing and troubleshooting are explored. Lab. 3 hrs. Co-req: EETC 120.

EETC 125 Digital Logic and Digital Pulse Circuits (3)
Studies the fundamentals of digital electronics, with particular emphasis on the digital computer. The binary number system and Boolean algebra are stressed. A study of flip-flops and their application to shift registers and counters is included. The study, design, and testing of transistor flip-flop and standard timing and pulse shaping circuits found in digital electronics and computers are treated. Finally, elements of digital integrated circuits are studied, including MOS and CMOS IC's, with application to switching and gating. Lec. 3 hrs., Prereq.: EETC 101. Co-req.: EETC 127.

EETC 127 Digital Logic and Digital Pulse Circuits Lab (1)
The laboratory covers the use of tools, instruments, and other equipment and supplies commonly found in a modern electronics shop. Lab. 3 hrs., Co-req.: EETC 125.

EETC 201 Electronics I (3)
Treats solid-state electronic circuits exclusively. The PN junction diode and its applications are emphasized, including regulated power supplies. The bipolar junction transistor is treated in detail. Small-signal amplifiers in each of the three transistor con-figurations are studied. Transistor biasing is studied at length. Finally, AC operation of each of the common bias arrangements is treated. Lec. 3 hrs., Prereq.: EETC 102, Co-req. EETC 203

EETC 202 Electronics II (3)
Studies large-signal transistorized AC amplifiers, with particular attention given to maximum power output, efficiency, distortion, and operation along the AC load line. Class, A, B, AB, and complementary symmetry push-pull audio amplifiers are analyzed. Cascading of stages and coupling methods are discussed, along with interstage feedback and impedance matching. Frequency response of systems is presented. Finally, pulse and wave-shaping circuits are studied, along with applications of op amps. Lec. 3 hrs., Prereq.: EETC 201. Co-req.: EETC 205.

EETC 203 Electronics I Laboratoary (1)
Topics in the lecture are demonstrated through experiments using modern electronic instrumentation and test equipment. Lab. 3 hrs., Co-req.: EETC 201.

EETC 205 Electronics II Laboratory (1)
Topics in the lecture are demonstrated through experiments using modern electronic instrumentation and test equipment. Lab. 3 hrs., Coreq.: EETC 202.

EETC 207 Electronic Communications (3)
Studies amplitude modulation and frequency modulation communication systems. Modern transmitter and receiver circuits, including radio-frequency oscillators, frequency multipliers, amplifiers, limiters, modulators, and demodulators are treated and multi-plexing systems are included. Lec. 3 hrs., Prereq.: EETC 201. Co-req.: EETC 209.

EETC 208 Applications of Solid-State Technology (3)
Studies and applies state-of-the-art electronic components and their associated circuitry. Emphasis is on recent developments in such areas as frequency synthesis, digital tuning, and measurement, class D amplification, and electro-optical display. Among the components treated are field-effect transistors, integrated circuits, phase-locked loops, parametric devices, latching devices, light-emitting diodes, and other optoelectronic devices. Lec. 3 hrs., Prereq.: EETC 201 or 221. Co-req.: EETC 211**.**

EETC 209 Electronic Communications Laboratory (1)
Topics in the lecture are demonstrated through experiments using modern electronic instrumentation and test equipment to analyze analog communications systems. Lab. 3 hrs., Coreq.: EETC 207.

EETC 211 Applications of Solid-State Technology Lab (1)
Topics in the lecture are demonstrated through experiments using modern instrumentation and test equipment to study the most recent solid-state components and typical applications. Lab. 3 hrs., Co-req.: EETC 208.

EETC 221 Computer Electronics (3)
Covers the study, design, and testing of single-phase rectifiers, and unregulated and regulated power supplies found in modern computers; practical polyphase rectifier circuits are also included. The course treats the basic properties and applications for semi-conductor materials and devices found in computers, digital

circuits, and electro-mechanical devices. A study is made of h-parameters, with applications to amplifiers found in digital computers. Lec. 3 hrs., Prereq.: EETC 102. Co-req.: EETC 223.

EETC 223 Computer Electronics Lab (1)
Topics in the lecture are demonstrated through experiments using modern instrumentation and test equipment. Lab. 3 hrs., Co-req.: EETC 221.

EETC 222 Digital Integrated Circuits (3)
Discusses fabrication techniques, characteristics, advantages, and limitations of integrated circuits. Field-effect devices, with particular emphasis on MOS technology, are studied. Differential and operational amplifiers encountered in the digital IC field are covered. Logic families and digital building blocks, including various flip-flops, Schmitt triggers, and comparators, are covered; IC modules, including shift registers, counters, and decoders, are treated. Lec. 3 hrs., Prereq.: EETC 221, EETC 125. Co-req.: EETC 224.

EETC 224 Digital Integrated Circuits Labortory (1)
Topics in the lecture are demonstrated through experiments using modern instrumentation and test equipment. Lab. 3 hrs., Co-req.: EETC 222.

EETC 245 Polyphase Electric Circuits (2)
Examines principles of current, voltage, and power distribution in three-phase and two-phase electric circuits. The wye and delta configurations are used to illustrate the concepts and measurements of three-phase active and reactive powers; power factor and power factor improvement are considered. These concepts are then applied toward obtaining analytical solutions of simple power system problems. Lec. 2 hrs., Prereq.: EETC 102. Co-req.: EETC 247.

EETC 247 Polyphase Electric Circuits Lab (1)
Topics on electric power transmission and distribution are demonstrated through experiments using modern instrumentation and test equipment. Lab. 3 hrs., Co-req.: EETC 245.

EETC 272 Control Elements and Computer Peripherals (3)
Presents the principles and application of electric, pneumatic, and hydraulic control elements used in automation, computers and other Electro-mechanical devices. Electric control circuitry, contractors, starters, speed control, time-delay relays, limit switches, and pilot devices are studied. Computer peripherals, including storage disk drives, printers, monitors, and backup drives are covered. Finally, interfacing problems and trouble-shooting are treated. Lec. 3 hrs., Prereq.: EETC 102, MATH 112. Co-req.: EETC 274.

EETC 274 Control Elements and Computer Peripherals Lab (1)
Topics in the lecture are demonstrated through experiments using modern electronic instrumentation and test equipment. Lab. 3 hrs., Co-req.: EETC 272.

EETC 277 Assembly Language (2)
Begins with the introduction of machine language programming in binary and progresses toward programming in octal and hexadecimal. Routines are written, tested, and added as modules to a program which eventually becomes a system monitor. Next, assembly language is introduced, including the use of assembler operation codes, comments, labels, assembler directives, macros, and the use of editors and loaders. The student is encouraged to extend the features of the monitor by writing program modules in assembly language and expanding them. Finally, an introduction to data communications is presented, including serial and parallel data transfers, synchronous and asynchronous communications, and transfer rates. Laboratory projects will include CRT, keyboard, and printer drivers, ready write routines to cassette tape and floppy disk. Lec. 2 hrs., Prereq.: EETC 125. Co-req.: EETC 279**.**

EETC 279 Assembly Language Lab (1)
Machine language and assembly language programs are written and executed on modern microprocessors. Lab. 3 hrs., Co-req.: EETC 277.

EETC 278 Microprocessors I (2)
Provides overview of microprocessors, their architecture, instruction sets, assemblers, software, timing and control memory, input/output, and interrupts. The software aspect includes logic design and assembly language, monitor programs, and debugging. Interfacing-peripheral adaptors and digital-to-analog conversion are among the hardware discussed. Finally, the principal features of some currently popular microprocessors are treated, along with typical control applications. Lec. 2 hrs., Prereq.: EETC 125, CCET 105. Co-req.: EETC 280.

EETC 280 Microprocessors I Lab (2)
Topics covered in the lecture are demonstrated through experiments using assembly language programs run on modern microprocessors. Typical control applications are studied. Lab. 4 hrs., Co-req.: EETC 278.

EETC 285 Digital Systems (3)
Covers the basic concepts of modern digital computers and data communication systems, with emphasis on computer organization and control. Memory, input-output devices, and control of arithmetic operations are included. Block diagrams and flow charts are used to analyze typical synchronous and asynchronous networks. Assemblers, operating systems, compilers, and interpreters are studied along with their diagnostic troubleshooting software. Lec. 3 hrs., Prereq.: EETC 125. Co-req.: EETC 287.

EETC 287 Digital Systems Lab (1)
Topics covered in the lecture are demonstrated through exercises using microprocessors, input-output devices, and diagnostic troubleshooting software. Lab. 3 hrs., Co-req.: EETC 285.

EETC 290 Electronic Troubleshooting and Prototyping (2)
Systematic techniques of troubleshooting electronic circuits and systems are presented and applied in the laboratory. Based upon symptoms and measurements, the fault-finding procedures are carried down to the component level; extensive use is made of electronic test and instrumentation equipment. The latter part of the of the course deals with the design and development of electronic circuits to meet specifications in a real-world situation. Lec. 2 hrs., Co-req.: EETC 292 and EETC 202, Prereq. EETC 201

EETC 292 Electronic Troubleshooting and Prototyping Lab (2)
Topics covered in the lecture are demonstrated through exercises using modern test and diagnostic equipment to troubleshoot analog and digital circuits. Lab. 4 hrs., Co-req.: EETC 290.

EETC 294 Independent Study (VC)
The intensive study of one specific subject is conducted under the supervision and guidance of an assigned instructor. Requires approval of Department Chairperson.

EETC 296 Engineering Technology Seminar (1)
Presents the current employment and career opportunities in electrical and mechanical engineering technology by guest speakers from industry and governmental agencies. Personnel from the Office of Career Planning conduct workshops on matters relating to job searches, including resumes, employer interviews, and employer priorities and concerns. Lec. 2 hrs., Co-req.: Senior standing.

COMPUTER SCIENCE

APCT 104 Introduction to Computers with Applications Lecture (2)
Identifies computer equipment; examines the functions of the components of a computer; binary, octal, and hexadecimal number systems; description of various programming languages; applications of computers; hands-on introduction to word processing, spreadsheets, database managers and microcomputer operating systems. Lec. 2 hrs.

APCT 105 Introduction to Computers with Applications Laboratory (1)
APCT 1 Laboratory associated with APCT 104, Lab. 2 hrs., Co-req 04.

APCT 110 Algorithms with BASIC Lecture (2)
Discusses development of algorithms to solve scientific and commercial problems; use of counting, loops, and termination techniques; array structures; top-down design; standard and structured flowcharting of algorithms using conventional symbols. BASIC is used to implement concepts. Lec. 2 hrs.

APCT 111 Algorithms with BASIC Laboratory (1)
Laboratory associated with APCT 110, Lab 2 hrs., Co-req.: APCT 110.

APCT 231 Computer Science I Lecture (3)
Covers structured algorithm and program development using a higher-level programming language, such as C++. Use of control structures, functions, arrays, sets, and records/structures. Objects are introduced. Lec. 3 hrs., Prereq.: APCT 104 and APCT 110.

APCT 232 Computer Science II Lecture (3)
Introduces to data abstraction and objects, recursion, sorting algorithms and data structures, including stacks, queues, linked lists, and trees. Lec. 3 hrs., Prereq.: APCT 231.

APCT 233 Computer Science I Laboratory (1)
Must be taken concurrently with APCT 231, Lab 3 hrs., Co-req.: APCT 231.

APCT 234 Computer Science II Lab (1)
Must be taken concurrently with APCT 232, Lab 3 hrs., Co-req.: APCT 232.

APCT 311 Cobol I (3)
Focuses on COBOL development of business-oriented programs using I/O techniques. Basic COBOL verbs, including the PERFORM and the OCCURS will be

introduced with structured programming techniques. Lec. 3 hrs., Prereq.: APCT 104 and APCT 110.

APCT 312 Cobol II (2)
Applies advanced techniques of COBOL programming to the solution of more advanced business data processing problems; report generation, sorting and searching techniques. Lec. 2 hrs., Prereq.: APCT 311.

APCT 313 Cobol I Lab (1)
Laboratory to be taken concurrently with APCT 311. Lab. 2 hrs., Co-req.: APCT 311.

APCT 314 Cobol II Lab (1)
Laboratory to be taken concurrently with APCT 312. Lab. 2 hrs., Co-req.: APCT 312.

APCT 321 Fortran I (3)
Explores problems with applications in science and business are solved with FORTRAN; use and manipulation of arrays; transfer of control and loops. Lec. 3 hrs., Prereq.: APCT 104, APCT 110.

APCT 322 Fortran II (2)
Examines further development of skills with the FORTRAN language with programs of increased complexity and the use of advanced features of the language. Lec. 2 hrs., Prereq.: APCT 321.

APCT 323 Fortran I Lab (1)
Laboratory to be taken concurrently with APCT 321, Lab. 2 hrs., Co-req.: APCT 321.

APCT 324 Fortran II Lab (1)
Laboratory to be taken concurrently with APCT 322, Lab. 2 hrs., Co-req.: APCT 322

APCT 385 Systems Analysis and Design (3)
Teaches knowledge of the responsibility and tools of a systems analyst; stages of development in conducting the analysis and design of a system through class projects, as well as practice of the skills of a system analyst. Lec. 3 hrs., Prereq.: APCT 231.

APCT 406 Database Management Systems (3)
Focuses on capabilities, costs, and benefits of file and database systems, and sequential, hierarchial, and network data structures. Usage of one of the following systems: DB2, DBASE IV, Parodox, Oracle, Access. Lec. 3 hrs., Prereq.: CISS 310.

APCT 408 Database Management Systems Laboratory (1)
Laboratory to be taken concurrently with APCT 406, Lab. 2 hrs., Co-req.: APCT 406.

CSCI 115 Computing Foundations (3)
Features applied concepts of iteration, induction, and recursion; functions and relations; propositional logic and predicate logic; graph and tree data structures; Boolean and computer logic; finite state machines; and algorithmic problem solving. Lec. 3 hrs., Prereq.: APCT 110.

CSCI 135 Scientific Programming (3)
Teaches the formulation of algorithms in languages such as C, FORTRAN, and PASCAL to solve scientific problems. Introduces concepts in computer organization and representations. Designed for majors in engineering. Lec. 3 hrs.

CSCI 136 Scientific Programming Laboratory (1)
Laboratory to accompany scientific programming. Lab 3 hrs., Co-req.: CSCI 135.

CSTC 184 Applied Operating Systems (3)
Introduces history of operating systems; types and selection of operating systems for a particular data processing environment; functions of the main components of the operating system; interrupts, job control languages, and survey of various operating systems. Lec. 3 hrs., Prereq.: APCT 104, APCT 110.

CSCI 241 Introduction to File Processing (3)
Introduces to concepts and techniques of structuring data on bulk storage devices and experience in the use of bulk storage devices; foundation for application of data structures and file processing techniques. Lec. 3 hrs., Prereq.: APCT 232.

CSCI 251 Assemblers and Systems Lecture (3)
Introduces assembly and machine level software concepts and applications. Instruction sets, addressing techniques, input-output programs, data representations, and logic. Students will complete several projects illustrating the use of these concepts. Lec. 3 hrs., Prereq.: APCT 231.

CSCI 253 Assemblers and Systems Lab (1)
Laboratory to accompany Assemblers and Systems. Lab. 3 hrs., Co-req.: CSCI 251.

CSCI 254 Introduction to Computer Graphics (3)
Explores the impact of computer graphics on science, engineering, and office graphics application. Required system hardware components, system software components, and programming language techniques. Creation of screen plane geometry shapes. Line drawings, charts, graphs, scaling, clipping, and

modification of drawings. Lec 3 hrs., Prereq.: CSCI 231.

CSTC 294 Special Projects in Computer Applications (3)
Explores independent projects to further enhance a student's preparation for a career in programming. Designed as an elective for students wishing to gain more experience in programming skills. Prereq.: APCT 232.

CSCI 304 Algorithmic Techniques (3)
Discusses time/space complexity of algorithms, basic design, and analysis techniques and topics of current interest. Lec. 3 hrs., Prereq.: APCT 232.

CSCI 311 Computer Organization (3)
Provides foundations of digital design, including Boolean Algebra, non-decimal number systems; basic digital elements using integrated logic modules, and logic design. Lec. 3 hrs., Prereq.: APCT 231.

CSCI 313 Computer Organization Laboratory (1)
Laboratory to accompany Computer Organization. Lab. 2 hrs., Co-req.: CSCI 311.

CSCI 315 Unix Systems Programming (3)
Introduces and discusses an in-depth examination of systems programming in Unix operating environments. Lec. 3 hrs., Prereq.: APCT 231, CSCI 251**.**

CSCI 325 Organization of Programming Languages (3)
Studies of the organization of programming languages, especially the run-time behavior of programs; formal study of programming languages specification and analysis; continuation of the development of problem analysis and solution and of programming skills. Lec. 3 hrs., Prereq.: CSCI 241, CSCI 251.

CSCI 341 Software Engineering (3)
Explores issues in design, development, documentation, coding and implementation of large software projects. The tools and techniques required for all stages are addressed. The functional requirements and decomposition of model problems are discussed. Validation, test and maintenance of large software systems are also covered. Lec. 3 hrs., Prereq.: CSCI 241.

CSCI 410 Theory of Computing (3)
Introduces formal languages, automation, computability in the context of Turing machines, partial recursive functions, and complexity theory. Lec. 3 hrs., Prereq.: CSCI 325.

CSCI 412 Operating Systems (3)
Introduces operating systems; process, storage, and processor management techniques; performance and security topics. Projects given will illustrate the use of these concepts. Comparative analysis of operating systems via case studies will be made. Lec. 3 hrs., Prereq.: CSCI 251.

CSCI 414 Introduction to Artificial Intelligence (3)
Focues on issues in machine intelligence, problem solving, description matching, goal reduction, exploiting natural constraints, and backtracking. Knowledge representation and image understanding will be emphasized. Lec. 3 hrs., Prereq.: CSCI 241.

CSCI 415 Computer Architecture (3)
Examines arithmetic and control units, system aspects of computer memory and access control functions, input-output, and system organization. Lec. 3 hrs., Prereq.: CSCI 311.

CSCI 424 Translation Software (3)
Studies programming language design, error detection, and recovery techniques. Lexical analysis, syntactical analysis, symbol table handling, semantic analysis, code generation, and code optimization, compiler-compilers and examined. Lec. 3 hrs., Prereq.: CSCI 325, 434.

CSCI 434 Data Structures (3)
Studies advanced concepts of data structuring in memory and peripherals. Lists, trees, and graphs; advanced analysis of algorithms are examined. Lec. 3 hrs., Prereq.: CSCI 241.

CSCI 452 Database System Design (3)
Covers the conceptual scheme for three great data models: relational, hierarchial and network. Also discusses data definition language, data manipulation language and design theory of relational databases, including relational calculus and algebra and normal forms. Database security, integrity, maintenance, and recovery are also covered. Lec. 3 hrs., Prereq.: CSCI 241.

CSCI 461 Systems Simulation (3)
Studies and examines advanced numerical methods for computers; Monte Carlo methods; discrete event simulation and Markov processes, and simulation languages, including GPSS. Lec. 3 hrs., Prereq.: APCT 232, MATH 254 or MATH 225.

CSCI 499 Senior Project (1-2)
A senior project, consisting of the development, design, programming, documentation, and testing of a significant problem approved by the instructor. The project may be a team or individual effort. Prereq.: Senior standing.

CSCI 454 Computer Graphics (3)
Examines picture description languages, control languages, and data structures. Graphic display and graphic input devices and applications of graphic techniques are also covered. Lec. 3 hrs., Prereq.: CSCI 251.

CSCI 490 Special Topics in Computer Science (3)
A comprehensive treatment will be presented on one or more advanced areas in computer science. Lec. 3 hrs., Prereq.: APCT 231, CSCI 251.

CSCI 495 Senior Seminar (1)
Reviews and crystallizes basic concepts; analyzes and relates these concepts in view of the current state-of-the-art practices and trends for the future of the profession. Extensive use of current professional literature. Prereq.: Senior standing.

CSNT 121 Introduction to Local Networks and Administration (2)
Provides overview of networks with emphasis on the OSI seven layer model, overview of network topologies, local networks, and tasks required for daily maintenance. Prereq.: APCT 104, 105 or basic computer literacy and use of PC platform computers.

CSNT 122 Introduction to Local Networks and Administration Lab (1)
Hands-on technology-specific laboratory, such as Netplus and Windows Professional in support of CSNT 121.

CSNT 125 Advanced Local Networks (2)
Studies in depth LAN administration, including LAN hardware, software, operating system, and advanced management. Prereq.: CSNT 121, 122.

CSNT 126 Advanced Local Networks Lab (1)
Studies hands-on technology specific support, such as Server for the course CSNT 125.

CSNT 131 Computer Networking Fundamentals Lecture (3)
Introduces computer networking. Key internetworking functions of the OSI network layers are presented. The ISO/OSI reference model is explained. IP addressing and configuration, including subnetting are introduced. The functions of the TCP/IP network-layer protocols are explained. Basic concepts of router elements (RAM, ROM, CDP, show) and the essentials of router configuration are presented Co-req: CSNT 132, Pre-req: APCT 104/105 or equivalent.

CSNT 132 Computer Networking Fundamentals Laboratory (1)
This a laboratory component of the CSNT 132 lecture course. Laboratory experiments are tailored to consolidate the knowledge acquired in the lecture course. They include: identification of the functions of the TCP/IP network-layer protocols, identification of the parts in specific IP address examples, configuration of IP addressing, router configuration etc… Co-req: CSNT 131, Pre-req: APCT 104/105 or equivalent.

CSNT 221 LAN Installation and Troubleshooting (1)
Studies operating system software and installation of LANs; problem solving for LANs. Prereq.: CSNT 125, 126 or equivalent.

CSNT 222 LAN Installation and Troubleshooting Laboratory (2)
Provides hands-on support for the brief lecture component, emphasizing project and case driven troubleshooting.

CSNT 231 Internet and Wide Area Networks (2)
Focuses on connecting the LAN to the Internet and issues with wide area networks (WANs). Prereq.: CSNT 125, 126 or equivalent**.**

CSNT 232 Internet and Wide Area Networks (1)
Provides hands-on technology support, such as TCP/IP for the lecture course CSNT 231.

CSNT 235 Introduction to Web Page Development and HTML (2)
Discusses issues for Web page development, using hypertext markup language (HTML); introduces to authoring tools such as Dreamweaver and Frontpage. Prereq.: CSNT 104, 105 or equivalent.

CSNT 236 Introduction to Web Page Development and HTML Lab (1)
Provides hands-on technology-based support for the lecture course CSNT 235.

CSNT 241 Advanced Routing and Switching Lecture (3)
Continues CSNT 131 with emphasis on local and wide area networks (LAN, WAN). The advantages of network segmentation using bridges, routers, and switches will be presented. Network congestion problems and the use of half and full duplex Ethernet operation will be explained. Different WAN services: LAPB, Frame Relay, ISDN/LAPD, HDLC, PPP, and DDR will be highlighted. Prereq: CSNT 131/132

CSNT 242 Advanced Routing and Switching Laboratory (1)
This a laboratory component of the CSNT 241 lecture course. Laboratory experiments tailored to consolidate the knowledge acquired in the lecture course are presented. They include: Recognition of key Frame Relay terms and features. Configuration of Frame Relay LMIs, maps, and subinterfaces. Monitoring of Frame Relay operation in the router, identification of PPP operations to encapsulate WAN data on routers etc. Co-req: CSNT 241

COMMUNITY OUTREACH & EXTENSION SERVICES (COES)

Dean's Office
Building 52, Room 212
(202) 274-7100

The Division of Community Outreach and Extension Services is designed to provide the residents of the District of Columbia and the Metropolitan Area with a wide range of educational and training offerings, some of which are supported by grants or contracts, while others are fee based. These offerings are intended to improve the quality of life of the people we serve.

Our programs meet the diverse needs of our population. As the city's only public University, we strive to offer a broad range of vocational and academic experiences, including adult education for college preparation and readiness. It is a goal of COES to bring the University to the people.

OFFICE OF CONTINUING EDUCATION

Lucious Anderson, M.A., Acting Director
Building 52, Room 210C
(202) 274-6682

The Office of Continuing Education, in conjunction with the University's academic departments, provides opportunities for professional development and to obtain academic and technical training which may lead to the advancement of employment status, the improvement of performance on a current job, and the enhancement of the quality of life.

For information on specific programs, contact the Office of Continuing Education at (202) 274-6675.

Programs include the following:

FOOD SUPERVISOR'S CERTIFICATION AND RECERTIFICATION PROGRAMS

The Food Supervisor's Certification and Re-certification programs are conducted with the cooperation of the District of Columbia Food Protection Division of the D.C. Department of Health. The certification course, Sanitation for Retail Food Handlers, is designed to educate food service managers in proper food handling techniques. The subject areas include basic microbiology, food-borne disease prevention, waste disposal, and washing and sanitizing utensils and equipment. The re-certification course, Anatomy of Inspection, is designed for persons who have successfully completed the basic course to assist them in developing inspection capability to detect and correct violations. Subject areas include basic food sanitation review, the inspection process, and familiarization with the contents of the inspection guide.

Each five-day course consists of three hours of instruction. At the conclusion of each course, a certificate is issued to those who successfully pass an examination. The certification is mandatory for all food service supervisors and must be renewed every three years.

Applicants may contact the Office of Continuing Education at (202) 274-6675 to be scheduled for a class.

NOTARY PUBLIC PREPARATION COURSE

Notary Public Law and Procedures is a single course which teaches individuals the duties and proper performance essentials for the position of notary public. This course teaches the duties and responsibilities of the notary; how to perform their duties; how to keep records; what to charge; and how to protect themselves from damage claims. For more information, call (202) 274-6675.

TAXICAB DRIVER PROGRAM

This program provides mandatory pre-licensure training for persons interested in becoming taxicab drivers in the District of Columbia. The 40-hour program is sanctioned by the D.C. Taxicab Commission.

In addition to the pre-licensure course, the University offers the mandatory 8-hour Retraining course every four years for taxicab drivers renewing their face cards. The course includes, but is not limited to, the following: (a) Business Practices, including General Management Principles, Records Management, and Bookkeeping; (b) Public Relations and marketing skills, including social customs and courtesies; (c) District of Columbia geography with emphasis on the location of all streets and avenues, government buildings and tourist sites; and (d) compliance with local, state, and federal income tax regulations and filing requirements.

For further information call (202) 274-8686.

NON-CREDIT PROGRAMS

The Office of Continuing Education extends the resources of the University to the community by providing learning experiences in the form of short non-credit activities that are designed to provide opportunities for residents to enrich and revitalize professional skills, expand career advancement opportunities, and develop leisure activities. Program offerings are conducted on a flexible schedule that includes evening and weekend sessions. Senior citizens are allowed to participate at no cost on a space available basis. All non-credit activities are offered without regard to previous academic experiences.

OFFICE OF VOCATIONAL AND ADULT EDUCATION

Peggy A. Edler-Mack, Ed.D., Director
Building 52, Room 235
(202) 274-7193

The Office of Vocational and Adult Education makes available to the citizens of the District of Columbia, post secondary training and education that will enable them to be informed about opportunities, knowledgeable in a vocational field, and skilled for full employment and an improved quality of life. Current programs include:

APPRENTICESHIP TRAINING PROGRAM (ATP)

Certified by the District of Columbia Apprenticeship Council, the University's Apprenticeship Training Program is funded by employers for the training of their employee's in the following fields of work and study:

- Brick Masonry
- Concrete Masonry
- Drywall
- 3rd Class Engineering
- Plumbing
- Sheet Metal
- Cement Finishing
- Carpentry
- Electrical
- 6th Class Engineering
- Roofing

For more information, call 202-274-7089

OCCUPATIONAL SKILLS DEVELOPMENT

Career training in a variety of fields is available to eligible residents as certified by the DC Department of Employment Services through the Occupational Skills Development Grant Program. Training and education are offered in the following high-demand occupations. Completion of programs of study marked by an asterisk will result in the awarding of an Associate Degree:

- IT Preparation
- Practical Nurse
- Nursing Assistant
- Auto Mechanic
- Personal and Home Care
- Entrepreneurship
- Bookkeeping, Accounting and Auditing
- Food Sanitation Certification and Recertification
- Legal Assistant
- Hospitality Management and Tourism

For more information, please call 202-274-6655

COOPERATIVE EXTENSION SERVICE

Dolores Langford Bridgette, MA, Associate Director
Building 52, 3rd Floor
(202) 274-7115

The Cooperative Extension Service (CES) Educational Program is one means through which the University of the District of Columbia fulfills its land-grant mission. As an outreach program of the University, the CES off-campus educational system works directly with District residents to use the land-grant system's research-based information to solve problems related to improving the quality of life for residents of the District of Columbia. The Cooperative Extension Service conducts, non-credit classes, workshops, and demonstrations in four program areas:

- *Environment and Natural Resources* offers programs in pesticide applicator training, entomology, pathology, pest control and pesticide safety, lawns, turfs, ornamental and shade trees, interior plantscapes, structural pests, companion animals, vegetable gardening, soil testing, and urban forestry.

- *Community Resource and Economic Development* offers programs in business management, economic development, and leadership development.

- *4-H and Youth Development* offers programs for those who are 9-19 years of age in personal development, safety, youth in government, leadership, cultural understanding, horticulture, ecology, environment, and health.

- *Family and Consumer Science* offers programs designed to improve family and community living, including programs in family resources management, textiles and clothing, health and safety, family relations and child development, housing, home furnishings, and energy conservation.

The Cooperative Extensive Service relies upon advisory councils, volunteers, and program participants to assist extension agents with identifying and implementing programs that meet the interests and needs of the people. Volunteers from the community, trained in specific extension program areas, work in conjunction with extension agents to deliver extension programs throughout the city.

For additional information, contact the UDC Cooperative Extension Service at (202) 274-1725

AGRICULTURAL EXPERIMENT STATION

Gloria Wyche-Moore, Ph.D., Associate Director
Building 52, 4th Floor
(202) 274-7124

The Agricultural Experiment Station of the University of the District of Columbia is mandated to formulate a research program for the development of technology that will lead to the enhancement of the quality of life for all citizens of the District. Unlike other land-grant colleges, the University of the District of Columbia is located in a totally urban setting and, therefore, must address problems that are unique to urban areas. Research supported by the Station is conducted by faculty members from various departments and by the research staff of the Station. A concerted effort is made to involve students in all aspects of research. Such involvement includes service as research aides, education technicians and federally-supported research trainees. Faculty members who are project leaders serve as mentors for these students.

Although the Agricultural Experiment Station stands ready to serve all residents of the District of Columbia, regardless of race and economic status, it makes special effort to serve the needs of the low-income segment of the city's population. Thus, its mission emphasizes research in urban problem areas, such as homelessness, drug abuse, human nutrition, food quality and storage, water quality, other environmental concerns, urban gardening, and family life. While these areas are currently emphasized, the Experiment Station is always ready to change research emphasis to meet the needs of the District. Research results are communicated to citizens via publications developed by faculty, the staff of the station, and extension agents.

For additional information, contact the UDC Agricultural Experiment Station, 4340 Connecticut Avenue, Northwest, Building 52, 4th Floor, Washington, DC 20008. Telephone: (202) 274-7118.

WATER RESOURCES RESEARCH INSTITUTE

In the 24 years of its existence, the Water Resources Research Institute (WRRI) staff and associated investigators have contributed significantly to water resources research, management, education, and training in the District of Columbia.

The WRRI conducts, coordinates, and sponsors research through teams of experts from among a pool of over 100 experienced researchers from universities located in the District of Columbia. UDC students, both graduate and undergraduate, work with faculty researchers on research projects in conjunction with their formal education/degree programs.

Specific projects are selected according to the District of Columbia and regional water research priorities. Faculty investigations sponsored by the WRRI range broadly from surface water, groundwater, water quality, water resources conservation and management, and fisheries. Specifically, water research projects have focused efforts on Anacostia River.

The WRRI has provided exceptional service to the citizens of the District of Columbia in the fields of research, training, public education, and outreach. Federal funds and matching local funds have given impetus to this statewide service benefitting the University community and the general public by providing an increased awareness of and involvement in water resources.

SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

Herbert G. Quigley, D.B.A., Dean
Building 52, Room 508D
(202) 274-7000 Phone

Professional education in business has the function of cultivating the intellectual ability of students and of developing their knowledge and skills. Like the University, the School of Business and Public Administration is devoted to the pursuit of professional knowledge and the search for solutions to the myriad problems besetting the community.

The School of Business and Public Administration has as its goal the preparation of future leaders in business and in the management of public institutions. The programs prepare students to think critically, analytically, and creatively. They encourage students to work with others in interdisciplinary pursuits, to enhance their lives and that of the community, and to relate professionalization to scholarship through interaction with private and public institutions of the community. They reflect the School's awareness that the management of complex urban organizations requires the training of people who are intellectually and professionally motivated and capable of comprehending the environment in which these institutions function.

DEPARTMENT OF ACCOUNTING, FINANCE AND ECONOMICS

Tarsaim L. Goyal, D.Sc., Chairperson
Building 52, Room 415-D
(202) 274-7002

Full-time Faculty
Professors E.D. Chatman, E. Ezeani, T.L. Goyal, J. E. Krebs, H.G. Quigley
Associate Professors D. Boland, E.S. Green, H. Omar, D.D. Ramsey, M. Samhan, B.J. Shah
Assistant Professors D. Green, P.D. Martin, E.D. Salmon

The Department of Accounting, Finance and Economics offers courses leading to the Bachelor of Business Administration degree to students who choose to major in Accounting or Finance and the Bachelor of Arts degree to students who choose to major in the field of Economics. The Department also offers the Associate in Applied Science to students seeking a two-year business degree majoring in Computer Accounting Technology, and the Master of Business Administration degree to students who already hold baccalaureate degrees and wish to pursue an advanced degree with an emphasis in either Accounting or Finance.

The Finance and Accounting baccalaureate degree programs seek to provide students with the knowledge and skills that will be required by the twenty-first century financial and accounting industries. Students attend courses and seminars that acquaint them with the latest concepts in accounting and finance courses. They are expected to use business calculators and computer programs to solve finance and accounting problems. Seminars provide them with the opportunity to discuss topics in greater depth.

The Bachelor of Arts Program in Economics offers students career flexibility. Courses foster an understanding of economic systems, while also improving analytical reasoning and cognitive skills. Degree requirements provide an abundance of elective choices that enable majors to become well prepared for whatever follows their undergraduate years. Students may select electives that prepare them for advanced study or employment in such fields as law, business, international relations, or journalism.

The Associate degree in Computer Accounting Technology provides the student with the basic skills required for entry level accounting positions. Students are expected to learn accounting theory and principles and then apply them to contemporary accounting

systems. Students are also taught the theory and practice of taxation as it applies to individuals, partnerships, and corporations. An additional advantage of this program is that all the courses in the program may be applied for credits in the baccalaureate accounting degree program.

The Master of Business Administration programs with concentrations in Finance or Accounting are rigorous academic programs that combine the overall study of business administration with advanced course work in the specific fields of finance or accounting. Generally, these programs of study can be completed in either one or two years of full-time study, depending on the student's undergraduate background and course work. Students who already have a bachelor's degree and want to sit for the uniform certified public accountant (CPA) examination may structure their course work in order to sit for the examination and receive the M.B.A. degree.

All programs offered by the Department seek to improve students' oral, written, and presentational skills, thereby enhancing their opportunities for employment and graduate studies. The Department also encourages students to take part in such organizations as the Business Finance Association, the Accounting Club (a student chapter of the National Association of Black Accountants), or the Economics Club in order to develop student leadership and teamwork skills. From time to time the Department sponsors investment clubs, which offer students the chance to apply many of the concepts they have studied in the classroom.

ACCOUNTING PROGRAM

The Bachelor of Business Administration in Accounting requires 130 credit hours, Thirty-three hours are in accounting, 45 in other business subjects, and 52 in general education. Within the 33 credit hours of accounting, students may include an elective in an area of special interest. (Students transferring from other schools may be able to graduate with 127 hours with the approval from the Department.)

The purpose of the Accounting Program is to prepare students to cope effectively with the challenges they may face in the public, private, or industrial sectors. In addition to the development of competency in the particular skills of accountancy, students acquire a broad background in general business subjects and communication skills.

The BBA Accounting Program is fully accredited by the Association of Collegiate Business Schools and Programs (ACBSP). This certifies that the program is of high quality and meets rigorous ACBSP educational standards.

A student who completes the Accounting Program will almost meet the minimum education requirements to sit for the uniform CPA exam. The exam requires a total of 150 semester hours, and in Maryland only, 3 hours of Business Ethics (BMGT 319). For success on the CPA examination, additional accounting electives are recommended for content as well as academic credit.

BACHELOR OF BUSINESS ADMINISTRATION IN ACCOUNTING

Total Credit Hours of College-Level Courses Required for Graduation: 130

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	116	Finite Mathematics	3
MATH	215	Calculus for Business, Social and Life Sciences	4
PHIL	105	Introduction to Logic	3
SPCH	115	Public Speaking	3
		Natural Science with Lab	8
		Foreign Language	6
		Fine Arts elective	3

Required Courses

BSOA	104	Introduction to Business	3
PSYC	201	Principles of Psychology I	3
ECON	201	Principles of Macro-Economics	3
ECON	202	Principles of Micro-Economics	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
BSOA	208	Business Communications	3
LPPC	214	Legal Environment of Business	3
FINA	220	Business Statistics	3
FINA	223	Quantitative Business Techniques	3
CISS	120	Computer Applications in Business	3
ACCT	301	Intermediate Accounting I	3
ACCT	302	Intermediate Accounting II	3
BMGT	304	Introduction to Management	3
FINA	314	Business Finance	3
MKTG	304	Introduction to Marketing Management	3

ACCT	325	Cost Accounting.	3
ACCT	312	Fed. Income Tax Accounting I	3
ACCT	401	Auditing	3
ACCT	402	Auditing II	3
CISC	402	Management Information Systems	3
ACCT	407	Accounting Systems and Data Processing	3
BMGT	401	Production and Operations Management	3
BMGT	409	Org. Theory and Behavior	3
LPPC	418	Commercial Law	3
BMGT	419	Business Policy	3
ACCT		Accounting elective	3
		International Business elective . . .	3

Additional Comments or Requirements
Transfer students must earn a minimum of 12 credit hours of accounting at UDC. Transfer credits taken at the freshman or sophomore level may be applied to requirements at the junior or senior level only under certain circumstances. Students should consult the Department Chair regarding transfer credit.

General education courses must be completed in the first two years. Students may apply for admission to the Accounting Program upon meeting the following requirements:

- Completion of 60 credit hours.
- Cumulative grade point average
- of at least 2.00.
- Completion of all freshman and sophomore year requirements

A minimum grade of “C” is required in all business courses.

COMPUTER ACCOUNTING TECHNOLOGY PROGRAM

The Associate in Applied Science (A.A.S.) degree program in Computer Accounting Technology is designed to prepare students to become technicians or accounting clerks and to operate and maintain a microcomputer-oriented general accounting system.

The program trains students to enter the job market in semi-professional categories. The program also provides students with the background necessary for matriculation in the bachelor's program in accounting. The use of cooperative job assignments is encouraged to provide students with practical accounting experience.

The A.A.S. Computer Accounting Technology program is fully accredited by the Association of Collegiate Business Schools and Programs (ACBSP). This certifies that the program is of high quality and meets rigorous ACBSP educational standards.

ASSOCIATE IN APPLIED SCIENCE IN COMPUTER ACCOUNTING TECHNOLOGY

Total Credit Hours of College-Level Courses Required for Graduation: 63

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition 1I	3
PHIL	105	Introduction to Logic	3

Required courses

CISS	120	Computer Applications in Business	3
BSOA	104	Introduction to Business	3
MATH	116	Finite Math	3
MATH	215	Calculus for Business, Social and Life Sciences	4
		Natural Science with Lab	4
ECON	201	Principles of Macro-Economics	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II.	3
ACCT	215	Automated Accounting	3
ACCT	301	Intermediate Accounting I	3
ACCT	302	Intermediate Accounting II	3
ACCT	312	Federal Income Tax Accounting. I	3
ACCT	325	Cost Accounting	3
ACCT		Two Accounting electives	6
LPPC	214	Legal Environ. of Business	3
LPPC	418	Commercial Law	3

Additional Comments or Requirements
A grade of "C" or better is required in each accounting course. To satisfy the University-wide mathematics requirement, the student is advised to take MATH 116 and MATH 215. However, with prior written approval of the Department Chair, other mathematics courses may be accepted.

An accounting elective may be selected from ACCT 405, 406, 408, and 426.

With prior written approval of the Department Chair, a student may substitute FINA 314, Business Finance, for one of the two accounting electives.

FINANCE PROGRAM

The program in Finance leads to a Bachelor of Business Administration degree. The concentration in Finance presents an integrated treatment of the operational aspects of business financing and investments, and the functions of financial organizations. It also examines the interaction of government and business with respect to financial development and controls.

The program leads to careers in corporate financial management, commercial banking, thrift institution administration, mortgage lending, brokerage of securities, real estate, insurance, financial counseling, and investment management, or to government careers in regulatory agencies and budgeting. An understanding of business statistics leads to careers in business research, operations research, as well as staff advisory to top management.

The course of study is designed to combine a broadly conceived professional curriculum with a business core education. Students majoring in Finance are required to complete 130 credit hours for graduation, of which 27 hours are major courses, 51 hours are in other business subjects, and 52 are in general education courses. (Students transferring from other schools, may be able to graduate with 127 hours with the approval from the Department.)

The B.B.A. Finance program is fully accredited by the Association of Collegiate Business Schools and Programs (ACBSP). This certifies that the program is of high quality and meets rigorous ACBSP educational standards.

BACHELOR OF BUSINESS ADMINISTRATION IN FINANCE

Total Credit Hours of College-Level Courses at UDC - Required for Graduation: 130

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	116	Finite Mathematics	3
MATH	215	Calculus for Business, Social and Life Sciences	4
SPCH	115	Public Speaking	3
PHIL	105	Introduction to Logic	3
		Natural Science with Lab	8
		Foreign Language	6
		Fine Arts elective	3

Required Courses

BSOA	104	Introduction to Business	3
PSYC	201	Principles of Psychology I	3
ECON	201	Principles of Macro-Economics	3
ECON	202	Principles of Micro-Economics	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
CISS	120	Computer Applications in Business	3
BSOA	208	Business Communications	3
FINA	214	Personal Finance	3
FINA	220	Business Statistics	3
FINA	223	Quant. Business Techniques	3
FINA	304	Business Cycles and Forecasting	3
FINA	318	International Finance	3
FINA	314	Business Finance	3
FINA	411	Financial Management I	3
FINA	412	Financial Management II	3
FINA	414	Security Analysis	3
FINA	416	Financial Institutions and Capital Markets	3
LPPC	214	Legal Environment of Business	3
LPPC	418	Commercial Law	3
MKTG	304	Introduction of Marketing Management	3
BMGT	304	Introduction to Management	3
BMGT	409	Organ. Theory and Behavior	3
BMGT	414	Production and Operations Management	3
BMGT	419	Business Policy	3
CISS	402	Management Information Systems	3
		Business elective	3
FINA		Business Finance electives.	6

Within the nine (9) hours of Business electives, one course must be an International Business course.

Additional Comments or Requirements

Courses ECON 201 and 202 must be taken to satisfy University-wide social science requirements. Courses MATH 116 and MATH 215 must be taken to satisfy University-wide mathematics requirements for Business majors.

A minimum grade of "C" is required for all business courses; a grade point average of 2.00 is required for

graduation. Students not continuously enrolled are subject to the graduation requirements current at the time of re-enrollment.

ECONOMICS PROGRAM

The program major in Economics leads to the Bachelor of Arts degree. The objectives of the program are to increase economic literacy about how economic systems produce, distribute, and allocate resources; to develop an understanding of contemporary national and international economic events; to develop competencies in analyzing urban problems, particularly those related to employment, housing, and the economic conditions of African Americans and other minorities; to broaden students' knowledge of economics in areas related to their special interests and career opportunities; to develop capacities of students to do independent analysis, research, and field work in economics; and to establish theoretical and analytical tools necessary for graduate study in economics and other fields such as law or business.

The Economics Program has a large number of electives so that students can tailor their education to fit their careers. Electives can be used for courses that will lead to direct employment, law school, an M.B.A. program, or many other alternatives. Students are strongly urged to take some computer courses as electives.

BACHELOR OF ARTS IN ECONOMICS

Total Credit Hours of College-Level Courses Required for Graduation: 121

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature & Advanced Writing I	3
ENGL	212	Literature & Advanced Writing II	3
MATH	113	Precalculus w/Trigonometry I	3
MATH	114	Precalculus w/Trigonometry II	3
		(or Calculus and any second Math course)	
Philosophy			3
Natural Science with Lab - Elective			8
Foreign Language			6
Fine Arts Elective			3
Speech, Health, Physical Education or Natural Science			4

Required Courses

ECON	201	Principles of Macro-Economics	.3
ECON	202	Principles of Micro-Economics	3
FINA	306	Price Theory	3
FINA	308	Finance and Fiscal Policy	3
FINA	318	International Finance	3
ECON	499	Seminar	3
ECON		electives* (300 or higher)	12
FINA	220	Business Statistics	3
FINA	223	Quantitative Business Tech	3
		Electives in any area	**42**

***Certain FINA courses may be used to satisfy these electives. See Department Chair**

Additional Comments or Requirements

A minimum grade point average of 2.50 in economics courses is required for graduation. After taking a course beyond Principles of Economics, the principles courses may not be repeated for a higher grade.

Courses FINA 306 and FINA 308 may be transferred from another accredited institution only after the student passes a proficiency examination administered by the Department Chair. Course ECON 499 may not be transferred by proficiency and must be taken in residence.

Any economics course, with the exception of 499 (Senior Seminar), may be taken by proficiency examination. Students receive credit, but not a grade, when this option is selected.

COURSE DESCRIPTIONS

ECON 201 Principles of Macroeconomics (3) Introduces supply and demand, income and employment theories. Analyzes the causes of inflation and unemployment, and the policy alternatives for affecting macroeconomic change. Discusses the institutional arrangements of a market economy. Prereq.: May be taken before or after ECON 202.

ECON 202 Principles of Microeconomics (3) Analyzes theories of consumer behavior, production costs, and decision making by individuals and firms. Looks at price and output determination under different market conditions. Discusses factor markets and income distribution. Prereq.: May be taken before or after ECON 201.

ECON 305 Topics in Applied Economics (3)
Applies the theoretical tools of the economics principles sequence to specific situations. Prereq.: ECON 20l and 202.

ECON 326 Labor Economics (3)
Examines theoretically the variables which determine the demand and supply of labor. Also focuses on labor practices, such as union organization, fair labor practices, and collective bargaining. Prereq.: ECON 201, 202.

ECON 345 Economic History of the United States (3)
Traces the development of the economy and economic institutions of the United States. Emphasizes the contributions of African Americans to the process of economic development. Prereq.: ECON 201, 202.

ECON 355 Economic Development (3)
Examines various competing theories of development and underdevelopment, as well as alternative strategies and policies to achieve more rapid sustained growth in the less developed countries. Prereq.: ECON 201, 202.

ECON 499 Seminar (3)
Detailed examination of the seminar topic. Each student is required to do significant research in the topic and to participate actively in seminar discussion. Original paper required. Prereq: FINA 306, FINA 308.

FINA 214 Personal Finance (3)
An introduction to financial concern os the household including the concepts of budgeting, credit management and net worth. It also examines: insurance issues, individual taxation, home acquisition, investment analysis, and retirement and estate planning. Also addressed are the time value of money and the relevance of the economic environment on financial and employment decisions.

FINA 220 Business Statistics (3)
Analyzes graphical and tabular methods of representing data; measures of location and variation; elementary probability concepts; probability distributions; and index numbers and their uses. Prereq.: College Level Math.

FINA 223 Quantitative Business Techniques (3)
Examines sampling and statistical inference (estimation and hypothesis chi-square testing); simple regression and correlation analysis; introduction to multiple regression analyses; remedial actions; analyses of computer outputs; time series analyses**;** and linear programming and decision theory. Prereq.: FINA 220.

FINA 304 Business Cycles and Forecasting (3)
Studies cyclical and secular instability, theories of business cycles, problems of controlling economic instability, and techniques of forecasting. Prereq.: ECON 202 and FINA 223.

FINA 314 Business Finance (3)
An introduction to concepts used in business financial decisions. Concepts covered include the analysis of financial statements and cash flows, the time value of money, and the capital budgeting decision. The student is introduced to the money and capital markets and the valuation of securities traded in these markets. The student is also introduced to working capital management and interest rate computations. Prereq.: ACCT 202.

FINA 315 Principles of Risk and Insurance (3)
Studies the theory and legal aspects of insurance; personal and business risks; life, accident, and health insurance; fire and casualty, automobile, and marine insurance; the quantitative measurement of risk. Prereq.: FINA 314.

FINA 316 Real Estate Finance (3)
Examines the buying, selling, and financing of real estate. Topics emphasized are: real estate/personal and business; basic legal principles; construction problems; sources of real estate financing; the nature of real estate transactions; and consumer protection. Prereq.: FINA 314.

FINA 317 Public Finance (3)
Studies the allocation and distribution aspects of government budget policy; government expenditures, taxation, and debt management are discussed and analyzed. Prereq.: ECON 202.

FINA 318 International Finance (3)
Applies the theory and mechanics of international trade and finance; the role of the international financial institutions in stabilizing exchange rates and promoting world trade, and lesser developed countrie's financial problems. Prereq.: ECON 202.

FINA 411 Financial Management I (3)
An in-depth examination of financial planning and forecasting, risk and rates of return, and interest rates relevant to the financial environment. The cost of capital, capital structure and leverage, and hybrid financing techniques are introduced. Advanced capital

budgeting concepts are addressed, and derivatives and multinational considerations are introduced. Prereq.: FINA 314.

FINA 412 Financial Management II (3)
Examines the role of the financial manager in executive decision-making by the application of concepts studied in prerequisite accounting and finance courses. Concepts covered include: financial analysis and forecasting, cost of capital, capital budgeting, equity management decisions, capital structure, hybrid financing, and enterprise valuation. The course relies exclusively on case studies. Prereq.: FINA 411.

FINA 414 Security Analysis (3)
Analyzes the selection and management of investments; investment programs; sources of investment information; security price movements; risk; and industry characteristics. Prereq.: FINA 314**.**

FINA 415 Portfolio Analysis (3)
Researches and analyzes investment problems and techniques of selection and management of various types of funds. Discussion of stocks, bonds, derivatives as they relate to portfolio development. Prereq.: FINA 414 or permission of Department Chair.

FINA 416 Financial Institutions and Capital Markets (3)
Examines the process of capital formation in a free enterprise economy; the role of commercial banks and financial intermediaries as sources of short-term and long-term financing; and, the role of government regulatory agencies. Bank management issues, such as, bank lending, investments, and capital are emphasized. Prereq.: FINA 314.

FINA 495 Independent Study (3)
Independent study of selected topics in economics or finance under the supervision of a faculty member of the department. Prereq.: Permission of Department Chairperson.

ACCT 201 Principles of Accounting I (3)
First half of the elementary accounting year should be followed immediately by ACCT 202. Includes the principles of accrual-basis accounting, the accounting cycle, merchandising transactions, treatment of inventories, cash, internal control, receivables, plant assets, and other topics. Prereq.: Completion of all prescribed developmental courses. Prereq.: or Coreq.: BSOA 104 with a grade of C or better.

ACCT 202 Principles of Accounting II (3)
Second half of the elementary accounting year. ACCT 201 and 202 should be taken consecutively. Includes accounting for corporations, long-term debt, the Statement of Cash Flows, financial statement analysis, cost accounting, cost/volume/profit analysis, incremental analysis, operational and capital budgeting, and other topics. Prereq.: ACCT 201 with a grade of C or better**.**

ACCT 204 Accounting Methods (3)
Surveys accounting cycle, concepts of accounting for proprietorships, partnerships, and corporations. Limited to applicants for admission to the graduate division.

ACCT 215 Automated Accounting (3)
Applies the operation and maintenance of an automated system of accounting. Specific accounting problems will be assigned, from journalizing transactions through financial statement preparation to requiring solutions using a microcomputer which uses programmed learning modules. Prereq.: ACCT 202.
This course is for Accounting Associate Degree students.

ACCT 301 Intermediate Accounting (3)
Reviews the basic accounting concepts and principles beginning with an oversight of the balance sheet and income statement; financial statement preparation; working capital; and current assets. Advanced study of non-current assets and compound interest, annuities, and present value. Prereq.: ACCT 202.

ACCT 302 Intermediate Accounting II (3)
Studies analytical processes, including statements from incomplete records, financial statement analysis, cash-flow reporting, and price-level changes. Also covered is an introduction to accounting for pensions and leases. Prereq.: ACCT 301.

ACCT 312 Federal Income Tax (3)
Examines the federal income tax laws as they apply to individuals; examines tax consequences of business decisions and accounting procedures. Prereq.: ACCT 202.

ACCT 325 Cost Accounting (3)
Analyzes accounting for manufacturing costs, including job order costs, continuous process costs, and standard systems. Principles of budgeting for use in profit planning and control. Prereq.: ACCT 202.

ACCT 401 Auditing (3)
Uses auditing procedures and practices. Conducts a review of internal control systems, procedures for audit

verification of accounts and financial statements, preparation of auditing working papers, and audit practice cases. Prereq.: ACCT 302.

ACCT 402 Auditing II (3)
Applies advanced study of contemporary auditing practice and theory, problems in auditing and financial statement presentation, audit sampling, and auditing computerized accounting systems. Prereq.: ACCT 401.

ACCT 404 Advanced Accounting (3)
Studies partnerships: installment sales; consignments; fiduciary accounting; business combinations; actuarial methods; business consolidations; mergers; accounting for foreign currency transactions; equity and cost methods of subsidiary investment and reporting for segments of a business enterprise. Prereq.: ACCT 302.

ACCT 405 Accounting Theory (3)
Discusses contemporary theory, principles, practices, and controversies in financial accounting; specific areas, includes income reporting, price level changes, cash flows, inventories, depreciation, income tax accounting, and equities. Prereq.: ACCT 302**.**

ACCT 406 Governmental and Fund Accounting (3)
Studies fund accounting for governmental and non-profit entities, including appropriations, encumbrances, and fund transfers; the planning and budgeting cycle; agency accounting; municipal budgeting; and accounting. Prereq.: ACCT 301.

ACCT 407 Accounting Systems and Data Processing (3)
Applies modern accounting systems with emphasis on data processing, including basic concepts and standards, accounting equipment and procedures, accounting systems, such as sales and cash collection, accounts receivable, inventories, payrolls, etc. Prereq.: ACCT 302.

ACCT 408 CPA Problems (3)
Analyzes and discusses problems from recent uniform certified public accountants examinations in three areas: accounting practice, auditing, and accounting theory. Prereq.: ACCT 401.

ACCT 412 Federal Income Tax Accounting II (3)
Continues ACCT 312, including income taxes applicable to partnerships and corporations; foreign taxpayers; state taxes; gift taxes; and procedures of the Internal Revenue Service. Prereq.: ACCT 312.

ACCT 426 Managerial Accounting (3)
Uses accounting data by management in planning and controlling business activities of the firm. Covers the nature, preparation, analysis, and interpretation of accounting reports; cost accounting; capital budgeting; and internal controls and their use in the management decision process. Prereq.: ACCT 302 and ACCT 325.

DEPARTMENT OF MANAGEMENT, MARKETING AND INFORMATION SYSTEMS

Hany Makhlouf, Ph.D., Chairperson
Building 52, Room 504-B
(202) 274-7001

Full-time Faculty
Professors A.V. Ashe, P. Bachman, M.A. Brown, H.L. Dhuria, A. Joseph, D. Lyons, H.H. Makhlouf, A.H. Nowell, J.M.S. Pabley, M.Y. Seyala, M. Shapiro, S.G. Yates
Associate Professors C.A. Friedman, M. Harris, W.B. White
Assistant Professors H.G. Iroegbu, C.R. Mangold, V. Momenian, J. Ramey, J.C. Williams-Smith

The Department of Management, Marketing and Information Systems offers programs and courses leading to the following graduate, baccalaureate and associate degrees:

Master of Business Administration, Master of Public Administration, Bachelor of Business Administration in Business Management, Bachelor of Business Administration in Marketing, Bachelor of Business Administration in Procurement and Public Contracting, Bachelor of Business Administration in Computer Information and Systems Science, Bachelor Science in Office Administration, Associate in Applied Science in Business Technology, Associate in Applied Science in Administrative Office Management, Associate in Applied Science in Legal Assistant, and Associate in Applied Science in Hospitality Management.

MANAGEMENT PROGRAM

The Bachelor of Business Administration in Management is designed to prepare students for careers in business by presenting management concepts, techniques, and approaches as they apply to the leadership and operation of small, medium-size, and large or global enterprises. Emphasis is placed on planning, organizing, decision-making, human resources management, operations management, and international business.

BACHELOR OF BUSINESS ADMINISTRATION IN MANAGEMENT

Total Credit Hours of College-Level Courses Required for Graduation: 127

General Requirements

ORTA	101	Freshman Orientation	3
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Lit. and Adv. Writing I	3
EMGL	212	Lit. and Adv. Writing II	3
MATH	116	Finite Mathematics	3
MATH	215	Calculus for Business, Social and Life Sciences	4
SPCH	115	Public Speaking	3
		Natural Science with Lab	8
		Foreign Language	6
		Fine Arts elective	3
		Philosophy elective	3
ECON	201	Principles of Macro-economics	3
ECON	202	Principles of Micro-economics	3
PSYC	201	Principles of Psychology I	3

Core and Major Requirements

BSOA	104	Introduction to Business	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
FINA	220	Business Statistics	3
FINA	223	Quantitative Business Techniques	3
CISS	120	Computer Applications in Business	3
LPPC	214	Legal Environment of Business	3
BSOA	208	Business Communications	3
BMGT	304	Introduction to Management	3
MKTG	304	Introduction to Marketing Management	3
BMGT	305	Conceptual Foundations of Business	3
		or	
BMGT	319	Business Ethics	3
BMGT	306	Personnel Management	3
FINA	314	Business Finance	3
BMGT	307	Labor-Management Relations	3
BMGT	406	Decision Theory	3
BMGT	409	Organization Theory and Behavior	3
BMGT	414	Productions and Operations Management	3
TCWS	490	Practicum/Internship	
		or	
		Business Management Elective	3
		Business and Management Electives	9
BMGT	419	Business Policy and Strategy	3
		International Business Elective	3
CISS	402	Management Information Systems	3
LPPC	415	Labor Law	
		or	
LPPC	418	Commercial Law	3

Additional Comments or Requirements

The required mathematics courses are: MATH 116, Finite Mathematics and MATH 215, Calculus for Business, Social, and Life Sciences. Business electives must be taken at the 300- or 400- level. A grade of "C" is required in all business courses, including Principles of Micro and Macro Economics.

MARKETING PROGRAM

The Bachelor of Business Administration in Marketing prepares students for careers in marketing management, sales, advertising, marketing research, retailing, distribution, and international marketing. This program requires the successful completion of 127 credit hours: 52 credit hours in general education (which includes University-wide requirements), and 75 credit hours in business.

BACHELOR OF BUSINESS ADMINISTRATION IN MARKETING

Total Credit Hours of College-Level Courses

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	116	Finite Mathematics	3
PHIL	105	Introduction to Logic	3
SPCH	115	Public Speaking	3
MATH	215	Calculus for Business, Social and Life Sciences	4
		Natural Science with Lab	8
		Fine Arts elective	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
ECON	201	Principles of Macro-economics	3
ECON	202	Principles of Micro-economics	3
PSYC	201	Principles of Psychology	3
		Foreign Language	6

Core and Major Requirements

BSOA	104	Introduction to Business	3
LPPC	214	Legal Environment of Business	3
CISS	120	Computer Applications in Business	3
BSOA	208	Business Communications	3
ACCT	201	Principles of Accounting I	3
FINA	220	Business Statistics	3
MKTG	304	Introduction to Marketing Management	3
BMGT	304	Introduction to Management	3
FINA	306	Price Theory	3
ACCT	202	Principles of Accounting II	3
FINA	223	Quantitative Business Techniques	3
FINA	314	Business Finance	3
BMGT	409	Organizational Theory and Behavior	3
BMGT	414	Production and Operations Management	3
LPPC	417	Law of Marketing	3
		or	
LPPC	418	Commercial Law	3
CISS	402	Management Information Systems	3
MKTG	305	Consumer Behavior	3
MKTG	306	Promotion Management	3
		International Business elective	3
MKTG	403	Marketing Logistics	3
MKTG	404	Marketing Research	3
MKTG	405	Marketing Strategy	3
BMGT	419	Business Policy and Strategy	3
MKTG		Marketing elective	3
		Business elective	3

Additional Requirement
A minimum of "C" is required in all courses in business and economics.

PROCUREMENT AND PUBLIC CONTRACTING PROGRAM

The major in Procurement and Public Contracting prepares students for careers in procurement management in the public and private sectors of the economy. The procurement and public contracting program requires the completion of 127 credit hours: 52 credit hours in general education (which includes University-wide requirements) and 75 credit hours in business.

BACHELOR OF BUSINESS ADMINISTRATION IN PROCUREMENT AND PUBLIC CONTRACTING

Total Credit Hours of College-Level Courses
Required for Graduation: 127

General Requirements

ORTA	101	Freshman Orientation I	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	116	Finite Mathematics	3
PHIL	105	Introduction to Logic	3
SPCH	115	Public Speaking	3
MATH	215	Calculus for Business, Social and Life Sciences	4
		Natural Science with Lab	8
		Fine Arts elective	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
ECON	201	Principles of Macro-economics	3
ECON	202	Principles of Micro-economics	3
		Foreign Language	6

Core and Major Requirements

BSOA	104	Introduction to Business	3
LPPC	214	Legal Environment of Business	3
CISS	120	Computer Applications in Business	3
BSOA	208	Business Communications	3
ACCT	201	Principles of Accounting I	3
FINA	220	Business Statistics	3
BMGT	304	Introduction to Management	3
MKTG	304	Introduction to Marketing Management	3
LPPC	304	Purchasing and Materials Management	3
ACCT	202	Principles of Accounting II	3
FINA	223	Quantitative Business Techniques	3
FINA	314	Business Finance	3
BMGT	409	Organizational Theory and Behavior	3
BMGT	414	Production and Operations Management	3
LPPC	305	Federal Acquisition System	3
CISS	402	Management Information System	3
LPPC	306	Formation of Government Contracts	3
LPPC	404	Contract Administration	3
LPPC	406	Cost and Price Analysis	3
LPPC	407	Contract Negotiation	3
LPPC	408	Procurement Law	3
BMGT	419	Business Policy and Strategy	3
		Business Electives	9
		International Business elective	3

Additional Requirement
A minimum of "C" is required in all courses in business and economics.

OFFICE ADMINISTRATION PROGRAM

The Bachelor of Science in Office Administration is designed for students who wish to enter the business world as office managers or administrative assistants. The first two years in this program lead to the A.A.S. degree in Administrative Office Management. Emphasis is placed on office procedures, communication, office automation, and general office management and coordination skills.

BACHELOR OF SCIENCE IN OFFICE ADMINISTRATION

Total Credit Hours of College-Level Courses Required for Graduation: 126

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	117	Business Math I	
		or	
MATH	116	Finite Math	3
MATH	118	Business Math II	3
		or	
MATH	215	Calculus for Business, Social and Life Sciences	4
PHIL	105	Introduction to Logic	3
		Foreign Language	6
		Natural Science with Lab	8
		Fine Arts elective	3
ECON	201	Principles of Macro-Economics	3
ECON	202	Principles of Micro-Economics	3

Core and Major Requirements

BSOA	104	Introduction to Business	3
IFPT	101	Computer Keyboarding I	3
IFPT	102	Computer Keyboarding II	3
IFPT	206	Office Procedures	3
IFPT	211	Word I	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
FINA	314	Business Finance	3
PRTC	207/277	Introduction to Desktop Publishing/Lab	3
CISS	120	Computer Applications in Business	3
IFPT	212	Word II	3
BSOA	208	Business Communications	3
BMGT	304	Introduction to Management	3
MKTG	304	Introduction to Marketing Management	3
LPPC	214	Legal Environment of Business	3
FINA	220	Business Statistics	3
FINA	223	Quantitative Business Techniques	3
BMGT	409	Organization Theory and Behavior	3
		Business electives	6
BMGT	414	Production and Operations Management	3
BMGT	306	Personnel Management	3
		International Business Elective	3
BSOA	494	Special Topics in Office Systems	3
BSOA	403	Office Systems Supervision and Simulation	3
BSOA	406	Office Systems Management	3

Additional Requirements
A "C" or better is required in business courses and economics.

COMPUTER INFORMATION AND SYSTEMS SCIENCE PROGRAM

The Computer Information and Systems Science Program focuses on computer applications in business, industrial, governmental, and nonprofit organizations. It prepares students for careers in the growing field of Information Technology (IT) by developing skills in systems analysis and design, programming, network administration, database management, and Internet web site development. The objectives apply not only to the development of competency in the particular skills of computer applications, but also to attainment of skills in reasoning and logical analysis.

BACHELOR OF BUSINESS ADMINISTRATION IN COMPUTER INFORMATION AND SYSTEMS SCIENCE

Total Credit Hours of College-Level Courses Required for Graduation: 128

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
ENGL	211	Literature and Advanced Writing I	3
ENGL	212	Literature and Advanced Writing II	3
MATH	116	Finite Math	3
MATH	215	Calculus for Business, Social and Life Sciences	
		Fine Arts elective	3

		Foreign Language Electives	6
		Natural Science with Lab electives	8
		P.E. **or**	
		Public Speaking	3
		Philosophy elective	3
ECON	201	Principle of Macro-Economics	3
ECON	202	Principle of Micro-Economics	3

Required Courses

Core and Major Requirements

BOSA	104	Introduction to Business	3
CISS	120	Computer Applications in Business	3
CISS	220	Basic for Business	4
CISS	225	Problem Solving with Visual Basic	4
CISS	330	Internet Programming	4
BOSA	208	Business Communications	3
FINA	220	Business Statistics	3
CISS	401	Business Systems Analysis and Design	3
CISS	420	Database Programming	4
FINA	223	Quantitative Business Techniques	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
LPPC	214	Legal Environment of Business	3
BMGT	304	Introduction to Management	3
FINA	314	Business Finance	3
FINA	304	Introduction to Marketing Management	3
BMGT	419	Business Policy and Strategy	3
		International Business Elective	3
BMGT	409	Organization Theory and Behavior	3
		Computer Information Electives	9
BMGT	414	Production and Operations Management	3
CISS	402	Management Information Systems	3
LPPC	419	The Law and the Computer	3

BUSINESS TECHNOLOGY PROGRAM

The Associate in Applied Science degree program in Business Technology is designed to provide students with the knowledge required for entry-level positions in business, industry, and government. It is also designed to provide the essential skills needed for business start-ups and the operation of small business enterprises.

ASSOCIATE IN APPLIED SCIENCE IN BUSINESS TECHNOLOGY

Total Credit Hours of College-Level Courses

Required for Graduation: 62-63

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	116	Finite Math	
		or	
MATH	117	Business Math I	3
MATH	118	Business Math II	3
		or	
MATH	215	Calculus for Business, Social and Life Sciences	4
SPCH	115	Public Speaking	3
		Natural Science with Lab	4
		Fine Arts elective	3
ECON	201	Principles of Macro-economics	3

Major Requirements

BSOA	104	Introduction to Business	3
LPPC	214	Legal Environment of Business	3
BSOA	208	Business Communications	3
MGTC	221	Supervision	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
ECON	202	Principles of Micro-economics	3
MGTC	246	Salesmanship Principles and Practices	3
CISS	120	Computer Applications in Business	3
FINA	220	Business Statistics	3
PSYC	201	Principles of Psychology I	3
		Business elective	3

Additional Comments or Requirements

Students must receive a grade of "C" or better in economics and all business courses.

Math courses recommended for students who may be interested in pursuing the Bachelor of Business Administration Degree after completion of the A.A.S. degree requirements are: MATH 116 and MATH 215.

ADMINISTRATIVE OFFICE MANAGEMENT PROGRAM

The Associate in Applied Science in Administrative Office Management focuses on training students to operate proficiently a number of information processing

systems and prepares them to adjust to future technological changes in the work place. Competencies emphasized include oral and written communication skills; information processing software; modern office procedures; and related clerical techniques and skills as required in today's world of work. Courses taken in the associate degree program may be applied toward the Bachelor of Science in Office Administration.

Students must receive a grade of "C" or better in departmental and other business requirements.

ASSOCIATE IN APPLIED SCIENCE IN ADMINISTRATIVE OFFICE MANAGEMENT

Total Credit Hours of College-Level Courses Required for Graduation: 62-63

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	116	Finite Math	
		or	
MATH	117	Business Math I	3
MATH	118	Business Math II	3
		or	
MATH	215	Calculus for Business, Social and Life Sciences	4
		Natural Science with Lab	4
		Fine Arts elective	3

Major Requirements

BSOA	104	Introduction to Business	3
CISS	120	Computer Applications In Business	3
IFPT	101	Computer Keyboarding I	3
IFPT	102	Computer Keyboarding II	3
PRTC	207/277	Introduction to Desktop Publishing	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
ECON	201	Principles of Macro-economics	3
ECON	202	Principles of Micro-economics	3
IFPT	211	Word I	3
BSOA	208	Business Communications	3
FINA	220	Business Statistics	3
IFPT	212	Word II	3
IFPT	206	Office Procedures	3

HOSPITALITY MANAGEMENT AND TOURISM PROGRAM

The Associate in Applied Science in Hospitality Management and Tourism is designed to provide students with the knowledge and skills needed for entry level positions in the hospitality industry. It aims at developing an understanding of planning, organizing, leading, and control issues in hospitality service organizations, including hotels and restaurants. It also exposes students to the legal and marketing aspects in hospitality service organizations. It is designed for three groups of students: (1) those who would like to start their careers in the hospitality industry, (2) those who are already employed in hospitality service organizations but would like to add to their knowledge and skills, and (3) those who are interested in a career change.

Total Credit Hours for College-Level Courses Required for Graduation: 65

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	117	Business Mathematics I	3
MATH	118	Business Mathematics II	3
PSYC	201	Principles of Psychology	3
		Foreign Language Electives	6
		Natural Science Elective	4

Required Courses

BSOA	208	Business Communications	3
HMGT	104	Intro to Hospitality Industry	3
HMGT	204	Intro to Hotel Management	3
HMGT	206	Food and Beverage Mgmt	3
HMGT	208	Restaurant Management	3
HMGT	210	Intro to Hospitality Marketing	3
HMGT	212	Cost Control in Hosp. Industry	3
HMGT	214	Facilities and Housekeeping Management	3
HMGT	216	Law as Related to the Hospitality Industry	3
HMGT	218	Hospitality Accounting	3
MGTC	221	Supervision	3
HMGT	290	Internship	3
		Computer Applications Elective	3

Additional Requirement

A minimum of “C” is required in business and hospitality management courses.

LEGAL ASSISTANT PROGRAM

This program provides for a career in the paralegal field. It leads to the Associate in Applied Science degree. Requirements for the completion of the paralegal program are 62 credit hours.

ASSOCIATE IN APPLIED SCIENCE IN LEGAL ASSISTANT

Total Credit Hours of College-Level Courses Required for Graduation: 62-63

General Requirements

ORTA	101	Freshman Orientation	1
ENGL	111	English Composition I	3
ENGL	112	English Composition II	3
MATH	101	General College Math I	
		or	
MATH	116	Finite Math	3
MATH	102	General College Math II	3
		or	
MATH	215	Calculus for Business, Social and Life Sciences	4
		Natural Science with Lab	4
		Social Science elective	3

Major Requirements

LATC	161	Legal Research and Writing I	3
LATC	162	Legal Research and Writing II	3
CISS	120	Computer Applications in Business	3
LATC	171	Legal Process	3
LATC	181	Introduction to Para-Legalism	3
LATC	263	Investigative Techniques and Evidence	3
LATC	278	Law Office Administration	3
BSOA	104	Introduction to Business	3
LPPC	214	Legal Environment of Business	3
ACCT	201	Principles of Accounting I	3
LATC*		Legal Assistant electives	9
		Business, Accounting, or Law elective	3

***Recommended Legal Assistant Electives**

LATC	277	Administrative Law
LATC	255	Labor Relations Law
LATC	256	Equal Employment Opportunity Law
LATC	276	Domestic Relations
LATC	274	Criminal Law for Legal Assistants
LATC	271	Real Estate Law

CERTIFICATE IN ENTREPRENEURSHIP

This certificate program in Entrepreneurship offers a broad exposure to the business world through a selected set of courses, which could be completed in one year. Students, regardless of their major, may enroll in this program and earn a Certificate of Completion. The credits earned may also count toward an associate or a baccalaureate degree in business administration. A minimum of a "C" is required in all required courses.

Total Credit Hours of College-Level Courses Required: 24

Course Requirements

BSOA	104	Introduction to Business	3
ACCT	201	Principles of Accounting I	3
ACCT	202	Principles of Accounting II	3
LPPC	204	Legal Environ. of Business	3
MGTC	208	Principles of Finance (or FINA 314)	3
MGTC	221	Supervision (or BMGT 304)	3
MGTC	246	Salesmanship Principles and Practices (or MKTG 304)	3
BMGT	308	Entrepreneurship	3

COURSE DESCRIPTIONS

BSOA 104 Introduction to Business (3)
Examines and analyzes the basic structure and practices of the business community. Emphasis is on how modern business functions in a dynamic environment, the nature and scope of business components, the cause of business problems, and factors that tend to influence behavior in business organizations.

BSOA 208 Business Communications (3)
Covers the essential principles involved in preparing standard types of business communications, i.e., business letters, reports, and memoranda. It also provides a review of basic English principles as applied to management in all aspects of business communication. Students are expected to gain expertise in both oral and written communications. Prereq.: ENGL 112.

BSOA 403 Office Systems Supervision and Simulation (3)
Studies office systems through the use of technology and automated office procedures in a simulated office setting. It also studies advanced methods and procedures in the practice of office supervision techniques in the automated office. Prereq.: BSOA 208.

BSOA 406 Office Systems Management (3)
Examines the duties and problems of the office worker in business and professions; relationships with employer and fellow employees; and office supervision and administration. Basic course requirements include role playing, preparation of reports on office management, and techniques for both written and oral presentations. Prereq.: BSOA 208.

BSOA 494 Special Topics in Office Administration (3)
Covers the principles and current issues in administrative office management. Emphasis is on automated office supervision and administration. Prereq.: Completion of all required courses for the office administration degree.

BMGT 304 Introduction to Management (3)
Examines the concepts and principles of management; evolution of management thought; principles and methods of planning, organizing, leading, and controlling; types of plans; leadership and decision making styles; approaches to the improvement of managerial and employee performance; systems-oriented management; and the impact of computer technology on the management process. Prereq.: BSOA 104.

BMGT 305 Conceptual Foundations of Business (3)
Examines the ideological and philosophical background of the private enterprise system that forms the basis for its values and outlook and determines its place in ever-changing society. Topics include the social responsibility of business, business-government relations, and business ethics. Prereq.: BSOA 104.

BMGT 306 Management of Human Resources (Personnel Management) (3)
Examines the policies governing human resources management; human resources planning; strategies for acquiring and maintaining human resources; the personnel functions of recruitment, selection, testing, compensation, training development, and promotions and transfers. Also, personnel research programs and activities, the legal environment of human resources management, equal opportunity policies, job analysis, evaluation and classification, and reduction-in-force p procedures. Prereq.: BMGT 304 or equivalent.

BMGT 307 Labor-Management Relations (3)
Discusses the evolution of labor unions and collective bargaining, negotiation of collective bargaining agreements, agreement administration, settlement of labor disputes, and the legal environment of collective bargaining. Prereq.: BMGT 304 or equivalent.

BMGT 308 Entrepreneurship (3)
Examines and analyzes the small business sector in the American economy; the processes of establishing and managing a small business enterprise; problems associated with small business planning, financing, and staffing; and survival and growth strategies for small businesses. Prereq.: BMGT 304.

BMGT 309 Introduction to E-Commerce: Business on the Internet (3)
This course consists of five sections: Section 1-Introduction to Electronic Commerce; Section 2-Personal and business services online; Section 3 Buying online; Section 4-Doing business on the web; and Section 5-Developing an electronic commerce web site. In-class exercises and work on the computer/internet are critical and integral parts of this course. Prereq.: BSOA 104 and a computer applications course.

BMGT 319 Business Ethics (3)
Provides an overview of business ethics and decision-making codes of ethics, ethical conduct in different business situations, and ethical issues surrounding conflict of interest in business relations, and factors influencing ethical conduct.

BMGT 406 Decision Theory (3)
Discusses theories, methods, and quantitative techniques of management analysis and decision-making in business, industrial, and governmental organizations as applied to specific management functions and situations. Topics include the establishment and management of decision support systems. Prereq.: FINA 223.

BMGT 407 Multinational Corporate Management (3)
Examines the processes of planning, organizing, and control in global enterprises; the problems that confront multi-national corporate managers; and the impact of the domestic and international environments on the operations of multinational firms. Prereq.: BMGT 304.

BMGT 409 Organization Theory and Behavior (3)
Studies organization theories, concepts, and structures; individual and group behavior; the communication process; leadership; conflict management; motivation; problems of reorganization; and management of change. Prereq.: BMGT 304.

BMGT 413 Organizational Interpersonal Communication (3)
Examines the components and models of communication, communication and organizational integration, impact of communication on organization climate, analysis of communication structures and systems, individual and group communication problems, communication and goal attainment, and the development of interpersonal communication skills. Prereq.: BMGT 304.

BMGT 414 Production and Operations Management (3)
Covers the establishment of production systems, methods of production planning and scheduling, automated production systems, and approaches to production control and quality assurance. Prereq.: FINA 223.

BMGT 416 Seminar in Career and Compensation Management (3)
Explores career development programs, management of training and development programs, human resource requirements planning, labor cost trends, compensation systems in the private and public sectors, pay structures, methods of job/position classification, job evaluation, legal aspects of wage and salary administration, management of benefit programs, and research methods in career and compensation management. Prereq.: BMGT 304.

BMGT 417 Management of External Communication Systems (3)
Covers the fundamental principles and practical application of external organizational communication theory, with emphasis on the design and use of various means of message exchange between management and external groups/organizations. Topics include the public relations process, the nature of persuasive communication, corporate image building, external communication strategy, and ethical considerations in external communication. Prereq.: BMGT 304.

BMGT 419 Business Policy and Strategy (3)
Applies the skills acquired in prior courses through an integrated approach to the development of business policy and strategy. Cases and exercises in establishing, presenting, defending, and publishing business policy and strategy. Prereq.: Limited to business students in final semester before graduation.

BMGT 495 Independent Study (3)
Studies a particular problem or topic in business management under the direction of a faculty member. Maximum of three credit hours for each student degree program. Prereq.: Senior standing and GPA of 2.8 or higher.

PMGT 304 Modern Public Management (3)
Reviews techniques and principles relevant to the implementation of public policies and programs and the management of complex public service organizations. Analysis of problems and case studies focusing on the managerial functions of planning, organizing, leading, and controlling.

PMGT 305 Public Personnel Management (3)
Examines human resources planning, recruitment, selection, compensation, training and development in public organizations; job analysis and evaluation; labor relations; performance evaluations; and productivity analysis.

PMGT 308 Issues in Public Management (3)
A research seminar on the current issues facing managers of para-governmental organizations, government agencies, and non-profits groups. Prereq.: BMGT 304.

MGTC 209 Small Business Management (3)
Reviews small business planning and organization, as well as the development of practical marketing strategies, management approaches, cash flow analysis, and profit/loss projections. Basic management principles are related to case studies of various types of small business.

MGTC 221 Supervision (3)
Covers supervisory management, managing scarce resources, planning tools, decision-making and implementation, team building, evaluating work and job performance, managing information, results evaluation, managing diversity, employee development, discipline, communication, and leadership requirements.

MGTC 232 Case Studies in Personnel Management (3)
Examines case studies in personnel management. Emphasis on the identification and resolution of employment and job-related problems which influence employee productivity and morale. Prereq.: MGTC 221.

MGTC 246 Salesmanship Principles and Practices (3)
Covers principles of salesmanship, including prospecting, pre-approach, closing, self-management, sales preparation, and demonstration techniques.

MGTC 254 Microcomputer Applications in Personnel Management (3)
Provides students with advanced skills in the microcomputer and software packages applied to the personnel management functions.

MGTC 295 Independent Study (3)
Independent study under the supervision of a faculty member with prior approval of Department Chairperson.

IFPT 101 Computer Keyboarding I (3)
Introduction to the typewriter keyboard. Emphasis is placed on the development of correct keyboarding techniques, speed and accuracy, tabulation, and centering skills. Letters, memos, and related business correspondence are emphasized. Minimum speed for completion of the course is 40 wpm.

IFPT 102 Computer Keyboarding II (3)
Emphasizes advanced typewriting skills. Introduction to use of WordPerfect software. Minimum speed for completion of course is 50 cwpm. Prereq.: IFPT 101 or 40 wpm.

IFPT 206 Office Procedures (3)
Emphasizes the responsibilities of the administrative assistant in today's high-tech environment. Course provides students with the opportunity to develop business communication and human relations skills as required in a constantly changing office environment. Prereq.: BSOA 104.

IFPT 211 Word I (3)
Introduces students to the basics of word processing using Word software. Students will learn how to get started, create, save, edit, and print documents, and to use automatic text features. It also teaches the student how to enhance the appearance of documents through formatting, and to use proofing tools to correct spelling and grammatical errors.

IFPT 212 Word II (3)
Covers intermediate to advanced word processing concepts and skills using Word software. Students will learn to create and format letters, envelopes, tables, and labels; to use templates; to work with columns; and to use graphic elements in documents. Prereq.: IFPT 211.

IFPT 295 Independent Study (3)
Independent study under the direct supervision of a faculty member with prior approval of the Department Chair. Prereq.: approval of Department Chairperson.

HMGT 104 Introduction to the Hospitality Industry (3)
A comprehensive examination of the hospitality industry. Special attention is directed at developing an understanding of the hospitality industry's evolution, characteristics, importance, socio-political environment, and current/future trends.

HMGT 204 Introduction to Hotel Management (3)
Examines the functions of management applied to hotels, and motels and other lodging establishments. Topics include hotel/motel planning, the internal organization structure of different types of hotels and motels, functions performed within all major departments, the establishment and implementation of coordinating procedures, international standards in hotel/motel facilities and services, and the application of the systems approach in hotel/motel operations. Prereq.: HMGT 104.

HMGT 206 Food and Beverage Management (3)
Covers the types and designs of food and beverage service systems; factors in the selection and purchasing of food items and beverages; storage and inventory management; cost-price analysis; pricing decision; the human element in food and beverage service systems; interaction with other units in hotel-motel systems; food production equipment acquisition; menu development principles; management control methods; and quality assurance. Prerq.: HMGT 104.

HMGT 208 Restaurant Management (3)
Examines the principles and techniques applicable to the management of different types of food service organizations. Topics include restaurant planning, market research, financial feasibility, internal organization structure, staffing requirements, menu management, pricing, promotion management, food safety and health regulations, and quality assurance methodology. Prereq.: HMGT 104.

HMGT 210 Introduction to Hospitality Marketing (3)
Introduces marketing principles and techniques applied to the hospitality industry, the planning and execution of marketing strategies and other marketing plans in hotels, motels, restaurants, and tourism-related businesses. Prereq.: HMGT 104.

HMGT 212 Cost Control in the Hospitality Industry (3)
Focuses on the approaches to cost analysis, evaluation, and containment in the hospitality industry. Productivity and efficiency improvement measures in the operations of hospitality service organizations. Prereq.: HMGT 104.

HMGT 214 Facilities and Housekeeping Management (3)
The management of facilities and household operations in hotels, including room preparation, cleaning, guest services, security, and maintenance. Prereq.: HMGT 104.

HMGT 216 Law as Related to the Hospitality Industry (3)
Reviews hotel, motel, restaurant, and tourism law, which develops an understanding of the responsibilities the law imposes on the hospitality industry. Topics include the legal obligations to guests/customers and employees, and contract law. Prereq.: HMGT 104.

HMGT 218 Hospitality Accounting (3)
Presents an analysis of accounting systems and controls typically used in the hospitality industry. A survey of the major managerial accounting principles and techniques such as working capital management, case forecasting and budgeting, interpretation of financial statements, and cash flow analysis. Emphasis is placed on formalized reporting for managerial effectiveness. Prereq.: HMGT 104, ACCT 201.

HMGT 222 Computer Application in the Hospitality Industry (3)
Examines the implementation and utilization of computer-based decision support systems in hospitality service organizations; computer applications in hotel, motel, restaurant, and tourism/travel-related business sub-unit operations and functions; and the management of hospitality service information systems. Prereq.: HMGT 104.

LPPC 214 Legal Environment of Business (3)
Introduces the American legal institutions; the judicial, executive, and legislative branches of government; judicial reasoning; administrative procedures; law; government regulation of business; contracts and torts: studies of the basic elements of determining contract or tort liability; the formation, operation, and discharge of contracts in a business context. Prereq.: Sophomore standing.

LPPC 304 Purchasing and Materials Management (3)
Introduces the purchasing function as an element of business operation, purchasing system organization; coordination with other functions; concepts of materials management; economy effected by prudent buying. Prereq.: BMGT 304, ECON 202.

LPPC 305 The Federal Acquisition Systems (3)
Studies the conception and planning of a program; the budget process in programming, planning and justifying the funding for programs; establishment of individual requirements and earmarking them for procurement; preparation of work statements and specifications; initiation of the procurement request; socio-economic programs and their objectives. Prereq.: BMGT 304.

LPPC 306 Formation of Government Contracts (3)
Examines the procurement process, with special emphasis on methods of procurement and types of contracts and grants used by the federal government. The requirements for competition in contracting sealed bidding, procurement law and regulations, ethics, records, and files. Prereq.: LPPC 304.

LPPC 404 Contract Administration (3)
Studies the government's system of contract management; structure and use of contract administration functions; coordination with procurement activities and audit agencies. Prereq.: LPPC 306.

LPPC 406 Cost and Price Analysis (3)
Studies techniques for determining proper price for purchased items; cost elements, estimating, and the government approach to formulating methods of pricing research, development, hardware, and services. Prereq.: LPPC 404.

LPPC 407 Contract Negotiation (3)
Studies the negotiation process; the limitations imposed by law and regulation; the evaluation process in competitive negotiation; strategy and tactics employed in noncompetitive negotiation, and the preparation for and conducting negotiations. Prereq: LPPC 306.

LPPC 408 Procurement Law (3)
Examines areas of public law and regulations that affect the rights of parties who enter into contractual relationships with federal government or state agencies; contract formation and award protests; standards of conduct; government liability for authorized and unauthorized actions; remedies available under federal contract clauses, laws, and regulations. Prereq.: LPPC 304 or LPPC 214.

LPPC 414 Administrative Law (3)
Studies the government's methods of establishing policies and procedures in implementation of the laws by the issuance of directives and regulations; the opportunity for public input; limitations from inherent nature of agency functions; and effect of administrative acts on the economic and social structure. Prereq.: LPPC 214.

LPPC 415 Labor Law (3)
Studies the regulation of employment practices and the law of industrial relations. Survey of the history of

workers' associations; the doctrine of criminal conspiracy; the injunction as an anti-labor weapon; modern applications of the antitrust laws to limit union power; legal limitations on the right to strike; picketing as a coercive force and picketing as an example of free speech; secondary boycotts; the attempt to insure union democracy; the Fair Labor Standards Act and the Civil Rights Act. Prereq.: LPPC 214.

LPPC 417 The Law of Marketing (3)
Studies legal aspects in relation to quality, packaging, advertising, and pricing in the American marketplace; the "truth in" legislation. Prereq.: LPPC 214.

LPPC 418 Commercial Law (3)
Studies contracts, agency, negotiable instruments and sales; the legal variable encountered in business and commercial transactions; application to practical problems. Prereq.: LPPC 214.

LPPC 419 The Law and the Computer (3)
Studies legal aspects of management decisions concerning systems design, proprietary rights, computer abuse and error, privacy considerations, acquisition of computers and data, and the application of law to the computer environment. Prereq.: LPPC 214 and CISS 120.

LPPC 495 Independent Study (3)
A program designed to permit an intensive study of an area in procurement, public contracting, or business law under direction of a faculty member.

LATC 161 Legal Research and Writing I (3)
Introduces the major techniques of legal research, in which students complete assignments and solve problems using various primary and secondary authorities, including federal and state law reporters, statutes, legislative and administrative publications, digests, loose leaf services, and legal encyclopedia. Students gain a basic knowledge of Shepard's Citations and West's Digest and Key Number System. This course also introduces techniques in computerized legal research.

LATC 162 Legal Research and Writing II (3)
Applies skills acquired in legal research, in which students conduct advanced manual and automated legal research in the process of drafting legal correspondence, office and legal memoranda, pleadings, appellate briefs, and interrogatories. Prereq.: LATC 161.

LATC 171 Legal Process (3)
Introduces civil procedures and trial preparation with an examination of the Federal Rules of Civil Procedure. Emphasis is placed on document preparation, client interviewing, document control, pre- and post-trial procedures, including the first level of appeals. Prereq.: LATC 161 and LATC 18.

LATC 181 Introduction to Paralegalism (3)
Introduces the American legal system and the role of the paralegal within that system. This course exposes the student to rules of statutory and common law interpretation, techniques of case analysis, and the canons of legal ethics which apply to the conduct of paralegals, lawyers, and judges.

LATC 255 Labor Relations Law (3)
Examines the National Labor Relations Act, as amended, which governs labor-management relations in the private sector. Emphasis is on the structure, role, and function of the National Labor Relations Board and its procedures and operations in the context of bargaining rights and contract negotiation and administration, as well as the role of the courts.

LATC 256 Equal Employment Opportunity Law (3)
Provides an overview of the development of EEO law and study of applicable statutory and case law. This course examines the methodology of processing discrimination cases in the private and public sectors. Prereq.: LPPC 214, or LATC 181.

LATC 257 Wills and Trusts (3)
Studies the common law foundations and statutory law of wills, intestacy and the rules of trusts. Students draft model wills and examine probate procedures and the creation and administration of trusts. Prereq.: LATC 162.

LATC 263 Investigative Techniques and Evidence (3)
Provides an overview of the law of evidence and its relationship to criminal and civil litigation. Additionally, the course introduces the techniques of fact investigations and verification associated with trial preparation. Prereq.: LATC 162.

LATC 271 Real Estate Law and Practice (3)
Studies the forms of ownership of real property; various legal concepts; such as easements, restrictions and conveyance of title; title examination, real estate sales contracts, and closings.

LATC 274 Criminal Law for Legal Assistants (3)
Examines criminal law and procedure. This courses provides a constitutional perspective on the rights of the accused and an elemental approach to a selected variety of frequently committed criminal offenses. Prereq.: LATC 181 or LPPC 214.

LATC 276 Domestic Relations (3)
Studies family law in which instruction in given on the legal aspects of marriage, separation, annulment, alimony, child support and custody, visitation, property distribution, paternity, adoption, and related matters, such as tax consequences and spouse and child abuse. Prereq.: LATC 181 or LPPC 214.

LATC 278 Law Office Administration (3)
Examines the basic management principles of the law office, including organization and administrative operations, the paralegal's administrative role and responsibility for maintaining the library, supervising other administrative staff, time-keeping, billing and related systems. Ethics is emphasized. Prereq.: LATC 181.

MKTG 304 Introduction to Marketing Management (3)
Provides a managerial approach to the study of marketing, including target market selection, product, price, promotion and distribution strategies. Consumer behavior and decision processes will be emphasized. Nonprofit and international marketing issues will also be included. Prereq.: ECON 202.

MKTG 305 Consumer Behavior (3)
Examine consumer and organizational buying behavior, incorporating concepts and findings from behavioral sciences. An integrated model of consumer behavior and the factors which influence the decision process will be studied. Prereq.: PSYC 201, MKTG 304

MKTG 306 Promotion Management (3)
Studies theories and processes relating to marketing communications focusing on planning and managing the communication mix: personal selling, advertising, sales promotion, and publicity. The approach will be to view promotion as a marketing tool coordinated with other elements of the marketing mix. Prereq.: MKTG 304.

MKTG 307 Retail Store Management (3)
Examines planning and managing retailing strategy, including evaluation of trading area, selection of retail store site, merchandising, inventory management, store layout, merchandise assortment, pricing, promotion, and customer service. Prereq.: MKTG 304.

MKTG 308 International Marketing (3)
Theories, concepts, and practices relating to international marketing management, focusing on the cultural, social, political and economic environments. Topics include strategic decisions about product, price, promotion, and distribution as well as emerging issues and institutions in global marketing. Prereq.: MKTG 304.

MKTG 310 Direct Marketing Management (3)
Examines the direct consumer/user marketing approach, including a review of the media of direct marketing, such as mailing lists, magazines, newspapers, broadcasts, and telephone. Techniques of creating direct mail packages, catalogs, production, and research as related to direct marketing. Prereq.: MKTG 304.

MKTG 312 Marketing of Services (3)
Studies and discusses the key elements of marketing of services, such as distinctive aspects of services marketing; developing a framework for services marketing; positioning of the service organization in the market place; managing the customer mix; managing demand; managing the service marketing system; and planning, organizing, and implementing the services marketing effort. Prereq.: MKTG 304.

MKTG 314 Principles of Transportation (3)
Studies the significance and role of transportation in society and its relationship to the economy and to the physical distribution concerns of the firm. Overview of modes and characteristics of carriers, inter-and intra-city transportation and the government's role in transportation. Prereq.: MKTG 304.

MKTG 403 Marketing Logistics (3)
Studies the management of the flow of goods through the distribution system, including inventory control, warehousing, and transportation using an analytical and quantitative approach. Information systems and international distribution issues will be emphasized. Prereq.: MKTG 304.

MKTG 404 Marketing Research (3)
Studies the fundamentals of scientific investigation used in solving marketing problems. Methodologies and processes used in marketing research will be examined; problem identification, the research design, sources of information and methods of information gathering, sample design, organization and control of field survey; tabulation, analysis, and interpretation of

data and the presentation of a research report. Prereq.: FINA 223, MKTG 304.

MKTG 405 Marketing Strategy (3)
Presents a capstone course for marketing majors. Designed to test the student's analytic skills in developing sound marketing policies and strategies. Project investigations of contemporary issues in the field of marketing. Prereq.: MKTG 404

MKTG 408 Advertising Management (3)
Studies advertising as a communication tool and its role in the marketing mix; advertising campaign and strategy planning: objectives, budgeting, media planning and creative strategy. Advertising agencies and their role will be also studied. Socioeconomic implications will be examined. Prereq.: MKTG 306.

MKTG 413 Channels of Distribution (3)
Studies the factors involved in designing and managing channels systems for the task of efficiently moving goods and services from the point of production to the point of consumption. The role of channel members and their behavior, conflicts, cooperation and motivation will be examined. Retailing, wholesaling, and physical distribution and their role and functions will be emphasized. Prereq.: MKTG 304 or MKTG 314.

MKTG 495 Independent Study (3)
Focuses on a program designed to provide selected students an opportunity to pursue an area of their interest in marketing not normally included in the prescribed curriculum.

CISS 120 Computer Applications in Business
Teaches how to use Office Suite applications in a business environment. Particular emphasis on integrating applications within the Suite; fundamental Internet concepts; World Wide Web browsing, searching, publishing, and advanced Internet productivity tools. Includes laboratory. Prereq.: None

CISS 205 COBOL Programming (4)
Examines the design and implementation of business programming using COBOL and writing programs to generate reports frm sequential data files. Topics also include report formatting and paging techniques: edited PIC clauses; control breaks, and sorting. Prereq.: CISS 220

CISS 220 BASIC for Business (4)
Provides overview of algorithms, programming, and problem solving for business applications using the BASIC Language. Prereq.: Computer Applications in Business (CISS 120 or equivalent.)

CISS 225 Problem Solving with Visual Basic (4)
Design and implementation of business programming with Visual Basic. Systematic definition of problems, solution formulation, and method validation in the Windows environment. Prereq.: CISS 120 or equivalent.

CISS 310 Microcomputer Applications in Business (3)
Provides instruction and experience in the use of modern business information systems and their integration. Lec. 3 hrs., Prereq.: CISS 120.

CISS 311 Microcomputer Applications in Business Lab (1)
Laboratory accompanying CISS 310, Lab 2 hrs., Co-req.: CISS 310.

CISS 330 Internet Programming (4)
Examine website programming using HTML, scripts, and web authoring tools; objects, methods, functions, events, and interactive forms; and use of database, spreadsheet, and graphic objects for business applications. Prereq.: CISS 225.

CISS 340 Linux for Business (4)
Provides hands-on approach to installing and using Linux along with common business applications. Some Linux Programming. Prereq.: CISS 225 or equivalent.

CISS 390 Co-op in Computer Information Systems (3)
Provides on-the-job training as a programmer or a systems analyst. Skills learned in the classroom will be utilized. A term paper specifying the work experience is required. Prereq.: CISS 120.

CISS 401 Business Systems Analysis and Design
Examines principles of data systems analysis. Systems evaluation, planning, and implementation. Prereq.: CISS 120 and 220.

CISS 402 Management Information Systems (3)
Examines advanced problems involving management information systems. Emphasis on management information systems planning, information processing, techniques of documentation, and written procedure. Lec. 3 hrs., Prereq.: Senior Standing in Business.

CISS 403 File Management Techniques (3)
Reviews file processing techniques, including index sequential files, direct access, and linked lists. Projects will include the construction and manipulation of files. Lec. 3 hrs., Prereq.: CISS 205.

CISS 404 Advanced Applications of Micro-computers (3)
Examines the visual and object-oriented programming paradigms as they are used to develop business and other applications on microcomputer platforms. Lec. 3 hrs., Prereq.: CISS 220.

CISS 405 Introduction to Telecommunications (3)
Reviews terms and concepts applied to data communications and teleprocessing, and Network structures, knowledge of hardware and software systems used in teleprocessing.
Prereq.: Senior standing in Computer Information Systems.

CISS 409 Computer Analysis for Management (3)
Surveys of quantitative techniques used for managerial decision-making. Reviews mathematical formulation of deterministic models and the use of standard computer software packages to solve the models and to interpret the results. Prereq.: FINA 223 and CISS 120.

CISS 411 Decision Support Systems (3)
Examines the role of information systems technology in support of decision making in organizations. Focus is on expert systems, groupware and executive information systems. Prereq.: Knowledge of spreadsheets and conceptual understanding of databases. Senior Standing in CIS.

CISS 413 Managerial Modeling with Computers (3)
Business applications of operations research techniques. Development of and solutions to mathematical stochastic models. Analysis and interpretation of results. Decision theory and applications. Includes laboratory. Lec. 3 hrs., Prereq.: CISS 409.

CISS 420 Database Programming (4)
Examines the fundamentals of database design, file organization, and access methods, as well as the relational, network, and hierarchical views of databases, including the appropriate query languages and implementations, client-server planning, testing, and installation. Parsing and optimization of queries, reliability, security and integrity of databases. Several programming projects will be required. Rereq.: CISS 225

CISS 459 Advanced Information Technology Applications (3)
Provides hands-on exploration of the various applications of information technology in business. This will include applications in accounting, marketing, and other select areas. Prereq.: Knowledge of basic business application software, such as word processing, spreadsheet, and databases. Prerequisite: Senior Standing in CIS.

CISS 490 Practicum in Computer and Information Science (3)
Parallel study and work assignments under the direction of a faculty member.

CISS 495 Independent Study (3)
An individualized course designed to allow the student to do research in the computer and information systems area under the supervision of a faculty member. Prereq.: CISS 402.

GRADUATE PROGRAM IN BUSINESS ADMINISTRATION

The Master of Business Administration (M.B.A.) Program is designed to prepare graduate students for leadership roles in business and industry. Though the emphasis is on providing a broad understanding of business concepts, the curriculum is designed to allow modest specialization in an area of emphasis.

As a professional degree program, the M.B.A. program aims to develop in the participants a background and working level of skills, knowledge, and attitudes that will prepare them for responsibilities as leaders and managers. The program addresses the professional development needs of students with baccalaureate degrees in diverse fields such as liberal arts, sciences, engineering, or other areas, as well as those having an undergraduate major in business.

MASTER OF BUSINESS ADMINISTRATION

Admission Requirements
To be admitted to the graduate program, a student must show promise of success as determined by various measurements, which include the following:

1. A minimum of 2.5 grade point average
2. An indication of potential for satisfactory work at the graduate level.
3. An indication of potential for leadership as indicated by experience, attitude, and aspiration.
4. An official report of the Graduate Management Admission Test (GMAT) scores.

Degree Requirements
The MBA degree is earned by the completion of a program of study consisting of prerequisites, core courses, and area of emphasis requirements. The pre-requisites are foundation courses which are waived if the student has successfully completed similar courses in the undergraduate program or prior to the submission of a graduate application.

Prerequisites
The following courses, or their equivalent, fulfill the prerequisite requirement:

ACCT	201	Principles of Accounting I	3
		or	
ACCT	204	Accounting Methods	3
FINA	314	Business Finance	3
LPPC	214	Legal Environment of Business	3
FINA	220	Business Statistics	3
BMGT	414	Production and Operations Management	3
BMGT	304	Introduction to Management	3
BSOA	304	Introduction to Marketing Management	3
ECON	201	Principles of Macro-economics	3
ECON	202	Principles of Micro-economics	3

International students applying to the MBA program with bachelor's degrees in business from abroad are required to complete the following under-graduate courses before registering for MBA courses:

FINA 314 Business Finance
LPPC 214 Legal Environment of Business

Candidacy Status
Admission to graduate study is not equivalent to acceptance as a candidate for the degree. A graduate who has completed the study of 18 graduate credit hours in which a minimum grade of "B" has been earned may become a degree candidate by filing an application with the Department Chairperson.

Comprehensive Examination
Each candidate is required to pass a written comprehensive examination which is normally taken during the final semester of the student's degree program. The last date for submission is October 15 for the examination to be administered in the Fall Semester and March 15 for the examination to be given in the Spring Semester.

Writing Proficiency Examination
The Graduate Writing Proficiency Examination is required of all graduate students in the first semester of enrollment.

Thesis Option
The submission of an acceptable thesis, in lieu of six credit hours of course work, may be approved where the particular objectives make such an option appropriate.

Transfer of Credits
A maximum of nine credit hours may be granted for courses completed satisfactorily within the prior five years with grades of "B" or better at an accredited college or university. Transfer credits cannot be a part of a previously-earned degree.

Program Description
The MBA degree is earned after the completion of a program consisting of 36 credit hours approved by the candidate's advisor. The program consists of courses in the core area and courses in a selected area of emphasis. The course of study can be completed normally by a full-time student in three semesters if the undergraduate degree was earned in business administration. The time for completion may extend to approximately two-and-one-half years if the undergraduate degree was earned in a field other than business administration. In that case, certain foundation courses in business administration are required.

Core Courses: Required of all MBA candidates

ACCT	504	Accounting for Management Functions	3
MKTG	503	Business Research Methods	3
CISS	507	Management Information Systems	3
FINA	526	Quantitative Business Methods	3
BMGT	506	Management Theory and Practice	3
		or	
BMGT	508	Organization Development and Behavior	3
MKTG	504	Marketing Management	3
FINA	504	Financial Management	3

FINA 505 Managerial Economics 3
BMGT 519 Policy Formulation 3

Area of Emphasis: One area of emphasis should be selected from the following list. The requirements for each area appear below:

Accounting - Select nine (9) credit hours from the following:

ACCT 505 Accounting Reporting, Theory and Practice 3
ACCT 506 Cost Analysis and Control 3
ACCT 507 Contemporary Issues in Accounting 3
ACCT 508 Government and Not-for-Profit Organization Accounting 3

Business Finance - Select nine (9) credit hours from the following:
FINA 506 Advanced Finance and Fiscal Policy 3
FINA 514 Investment Management 3
FINA 515 Money and Capital Markets 3
FINA 509 Advanced Business Forecasting . . . 3
FINA 517 International Economics and Finance 3

Business Management - Select nine (9) credit hours from the following:
BMGT 506 Management Theory and Practice 3
BMGT 509 The Systems Approach and Project Management 3
BMGT 514 Production Management 3
BMGT 515 Minority Enterprises: Problems and Opportunities 3
BMGT 516 International Business Management 3
BMGT 518 Personnel Administration and Industrial Relations 3

International Business
MKTG 514 International Marketing Management 3
MKTG 516 International Business Management 3
FINA 517 International Economics and Finance 3

Marketing - Select nine (9) credit hours from the following:
MKTG 507 Marketing Strategy 3
MKTG 508 Buyer Behavior 3
MKTG 509 Marketing Seminar (Marketing Functions) 3
MKTG 514 International Marketing Management 3

Computer Information Systems - Select nine (9) credit hours form the following:
CISS 501 Business Computer Systems 3
CISS 505 Analysis and Design of Information Systems 3
CISS 506 Computer Analysis for Management 3
CISS 508 Managerial Modeling with Computers 3
CISS 510 Teleprocessing and Networks 3
CISS 515 Electronic Commerce 3

Thesis: The number of semester credit hours to be completed in the area of emphasis is reduced to three if the thesis option is selected.

Summary of Degree Requirements:

Non-Thesis Option:	Number of Courses	Semester Credits
Core	**9**	**27**
Area of Emphasis	**3**	**9**
Total	**12**	**36**
Thesis Option:	**Number of Courses**	**Semester Credits**
Core	**9**	**27**
Area of Emphasis	**1**	**3**
Thesis	**2**	**6**
Total	**12**	**36**

GRADUATE PROGRAM IN PUBLIC ADMINISTRATION

The Master of Public Administration Program is designed to prepare graduate students for careers as public managers, planning specialists, and policy analysts in governmental, as well as non-profit organizations. It also provides mid-career employees an opportunity to enhance, improve, and acquire new

concepts and perspectives for the advancement of their careers.

In addition to the required core courses, students choose one of the following areas of emphasis: Public Management, Labor Studies/Human Resources Management, or Computer Information Systems.

THE MASTER OF PUBLIC ADMINISTRATION

Admission Requirements

General requirements for admission are:

1. A baccalaureate degree conferred by an accredited institution.
2. A minimum of 2.5 grade point average on a scale of 4.0.
3. Two letters of recommendation.
4. Potential for leadership as indicated by experience or personal interviews.
5. Scores on the Graduate Management Admission Test (GMAT) or Graduate Records Examination (GRE).

Candidacy Status
Admission to graduate study in public administration is not equivalent to candidacy for the degree. The applicant who has completed the study of 18 graduate credits in which a minimum grade of "B" has been earned may become a degree candidate by filing an application with the chairperson of the Department.

Comprehensive Examination
Students are required to pass a written comprehensive examination which is normally taken during the final semester of the program of study. The last date for submission of application is October 15 for the examination administered in the Fall Semester and March 15 for the examination given in the Spring Semester.

Writing Proficiency Examination
The Graduate Writing Proficiency Examination is required of all graduate students. Students must take the writing proficiency examination in the first semester of enrollment. Students must register to take the examination, which is administered only once each semester.

Thesis Option
The submission of an acceptable thesis, in lieu of six semester credits of course work, may be approved where the particular objectives make such an option appropriate.

Transfer Credit
A maximum of nine (9) semester credits may be granted for courses completed satisfactorily within the prior five years with grades of "B" or better at an accredited college or university. Transfer credits cannot be a part of a previously earned degree.

Program Description
The MPA is earned after the completion of a program consisting of 36 semester credits. Eighteen credits are devoted to the core, which must be taken by all students. Twelve credits are taken in the selected area of emphasis and six credits are required for thesis or electives. The course of study can be completed by full-time students in four regular semesters.

Core Courses: Required of all MPA candidates

PMGT	524	Planning in Government	3
PMGT	514	Management of Government Organizations	3
PMGT	519	Public Policy Development and Implementation	3
PMGT	509	Public Management Research	3
PMGT	529	Public Finance and the Budgetary Process	3
LBST	508	Quantitative Methods for Public Administration	3

Area of Emphasis: One area of emphasis should be selected from the following list. The requirements for each area appear below.

Public Management

PMGT	507	Intergovernmental Relations	3
PMGT	506	Government and Business Relations	3
PMGT	504	Advanced Public Personnel Management	3
BMGT	508	Organizational Development and Behavior	3
		Two electives or a thesis in the general area of government management	6
Total (including core)			**36**

Human Resources Management

PMGT 504	Advanced Public Personnel Management	3
LBST 523	Collective Bargaining	3
LBST 576	Quality of Work Life and Productivity	3
LBST 568	Arbitration and Dispute Settlement	3
	Two electives or a thesis	6
Total (including core)		**36**

Computer Information Systems:

CISS 501	Business Computer Systems	3
CISS 505	Analysis and Design of Information Systems	3
CISS 506	Computer Analysis for Management	3
CISS 508	Managerial Modeling with Computers	3
CISS 510	Teleprocessing and Networks	3
CISS 515	Electronic Commerce	3
Total (including core):		**36**

Summary of Degree Requirements:

Non-Thesis Option:	Number of Courses	Semester Credits
Core	**6**	**18**
Area of Emphasis	**4**	**12**
Elective	**2**	**6**
Total	**12**	**36**
Thesis Option:		
Core	**6**	**18**
Area of Emphasis	**4**	**12**
Thesis	**2**	**6**
Total	**12**	**36**

GRADUATE COURSE DESCRIPTIONS

ACCT 504 Accounting for the Management Function (3)
Provides an understanding of the reporting, control, and analytical context in which accounting functions; pre-planning and analyzing financial statements; cost/volume/profit relationships; capital budgeting. Prereq.: Graduate business standing.

ACCT 505 Accounting Reporting, Theory and Practice (3)
Studies the theory, logic, and actual practice of corporate financial reporting; develops an understanding of the strengths and weaknesses of financial reporting from the manager's point of view. Problem-oriented with current readings and case studies. Prereq.: ACCT 504.

ACCT 506 Cost Analysis and Controls (3)
Concentrates on the major areas of interest in management accounting and control: Budgetary planning, capital expenditure analysis, control through standards, variable costing, cost/volume/profit relationships, and responsibility accounting. Problem-oriented with readings and case studies in cost analysis and control. Prereq.: ACCT 504.

ACCT 508 Government and Not-for-Profit Organization Accounting (3)
Covers operation of government entities and educational, medical, social, and other not-for-profit organization. The course concentrates on application of fund theory of accounting and budgeting process, achieving objectives through financial planning and control. Prereq.: ACCT 504.

BMGT 506 Management Theory and Practice (3)
Studies concepts of management, the application of management principles, comparative management practices in different types of organizations, and the impact of modern computer technology. Prereq.: Graduate business standing.

BMGT 508 Organizational Development and Behavior (3)
Studies traditional and modern theories of organization, the behavioral consequences of alternative organization designs, and internal organization elements, such as goals, structures, roles, power, authority, communications, and control. Prereq.: Graduate standing in business or public management.

BMGT 509 The System Approach and Project Management (3)
Examines management and the systems concept, matrix management; project planning, organization, staffing, direction, and control; project management authority; project budgeting and cost analysis; project implementation and evaluation. Prereq.: BMGT 506 or BMGT 508.

BMGT 514 Production Management (3)
Examines integration of management principles and concepts, with emphasis on the production and operations functions of manufacturing, service, and governmental organizations. Production control, quality control, materials handling, and value analysis are explored. Prereq.: BMGT 506 or BMGT 508.

BMGT 515 Minority Enterprises: Problems and Opportunities
Examines status of minority-owned business in today's economy, processes of planning and managing growing companies, opportunities and challenges facing minority business, and problem-solving strategies.

BMGT 516 International Business Management (3)
Examines the dimensions of international business; types of international business operations; organization of multinational firm; policy formulation; personnel selection, and control methods in overseas subsidiaries. The impact of the foreign and domestic investment climates on decision-making in multinational firms, and the impact of foreign investment on domestic investment and employment. Prereq.: BMGT 506 or BMGT 508.

BMGT 518 Personnel Administration and Industrial Relations (3)
Studies the basic personnel functions to build and work with an effective and satisfied work force. Attention is focused on tasks of procuring, developing, maintaining, and utilizing a work force and on topics such as specifying job and manpower requirements; attracting, screening, interviewing, and testing people, employee training and development; merit evaluation; compensation and employee service programs; and collective bargaining. Prereq.: BMGT 506 or BMGT 508.

BMGT 519 Policy Formulation (3)
Utilizes the knowledge and competence developed in other courses. Actual business situations are simulated through cases and team competition. Major problems relating to the total operations of the business, including social responsibilities, business ethics, etc., are explored as a basis for the determination of appropriate business policies and plans. Prereq.: Course is taken by MBA students in the last term before graduation.

CISS 501 Business Computer Systems (3)
Provides an overview of software programs used in computer and business applications. Hands-on experience with software packages is provided. Focus is on concepts, features, and business applications. Prereq.: None.

CISS 505 Analysis and Design of Information Systems (3)
Reviews of the principles of computer systems analysis and design and the application of these principles. Included are the types of documentation and their preparation and use within the system. The students will prepare the necessary documentation as a result of their analysis of a case study and the design that results from this analysis.

CISS 506 Computer Analysis for Management (3)
Surveys quantitative techniques used for managerial decision-making, mathematical formulation of deterministic models, and use of standard computer software packages to solve the models and to interpret the results. Includes laboratory.

CISS 507 Management Information Systems (3)
Discusses management information systems as developed in a computer environment, including the impact of these systems on managerial decision-making.

CISS 508 Managerial Modeling with Computers (3)
Discusses business applications of operations research techniques, development of solutions to mathematical Stochastic models, and analysis and interpretation of results.

CISS 510 Teleprocessing and Networks (3)
Introduces students to modern telecommunications and networking technologies. Covers concepts in communications, such as components of data communication, data transmission, Open System Interconnection (OSI) model, TCP/IP model, data link layer, network layer, local area networks, wide area networks, and network design and management. It focuses on introducing technical aspects of telecommunications and networking that managers should know. An overall objective is to prepare managers to better manage technology.

CISS 515 Electronic Commerce (3)
Provides overview of electronic commerce applications in the retail, government, and health sectors. These applications will illustrate consumer-business, business-business, and intra-organizational electronic commerce. Electronic commerce applications will be highlighted and discussed from both an operational and strategic perspective.

FINA 504 Financial Management (3)
Reviews actual cases from the world of business and finance that are used to expose the student to problems typically encountered in financial management. Students work out cases in short-term asset management, financial analysis and control, planning, capital, budgeting, and the cost of capital and growth through consolidation and merger. Prereq.: Graduate business standing.

FINA 505 Managerial Economics (3)
Covers the fundamental analytical tools of economics and their application to decision-making in the firm; theory of demand, production, and distribution; market structure and performance; and problems facing management in use of resources and pricing. Prereq.: Graduate business standing.

FINA 506 Advanced Finance and Fiscal Policy (3)
Examines determinants of national income aggregate demand and their impact on business decisions.

FINA 509 Advanced Business Forecasting (3)
Studies business forecasting techniques used in managerial planning, and evaluation of short-term and long-term forecasting methods currently employed to indicate trends in national economic activity and in the economic activity of various industries. Prereq.: FINA 504.

FINA 514 Investment Management (3)
Studies methods of evaluating investment risk and estimation of return, and techniques of security analysis; analysis of investment in common stocks, bonds, real estate, mortgages, municipal bonds, commodities, options, and investment companies. Prereq.: FINA 504.

FINA 515 Money and Capital Markets (3)
Studies the nature and functions of money and capital markets. Topics include sources and uses of funds, stock prices, interest rates, financial intermediaries, markets for U.S. government securities, corporate equities, and municipal bonds. Prereq.: FINA 504.

FINA 517 International Economics and Finance (3)
Studies international monetary and financial theories, as well as institutions and practices of the international economy. Topics include balance of payments problems, international flow of funds, exchange controls, and conflicts between international and domestic objectives. Prereq.: FINA 504.

FINA 526 Quantitative Business Methods (3)
Provides a survey of quantitative techniques used in solving management problems. Potential and limitations of analytical methods and their application to modern problems. Topics included are probabilistic and deterministic models, linear programming, decision theory. PERT and CPM, and Markov analysis. Prereq.: Graduate business standing.

MKTG 503 Business Research Methods (3)
Covers principles and techniques of research methodology, including identification of problems. Standard statistical designs are studied. Organization and presentation of research data and the evaluation and application of research are emphasized. Prereq.: Graduate business standing.

MKTG 504 Marketing Management (3)
Covers nature and scope of marketing management, market structure, consumer behavior, and marketing channels. Approaches to the analyses of demand, cost and profit are emphasized, as are functional problems, policies, selling, advertising, and pricing. Prereq.: Graduate business standing.

MKTG 507 Marketing Strategy (3)
Utilizes case problems incorporating concepts and techniques covered in previous courses. The overall problems of managing the functions of business are covered. Prereq.: MKTG 504.

MKTG 508 Buyer Behavior (3)
Explores the concepts and the practical implications of the various processes and facets of consumer motivation and behavior. Prereq.: MKTG 504.

MKTG 509 Marketing Seminar (Marketing Functions) (3)
Studies in-depth a selected functional area in marketing, with emphasis on prevailing marketing practices. Promotion management, marketing channels, and physical distribution management are offered on a rotating basis, only one of the three being covered in a given semester. Prereq.: MKTG 504.

MKTG 514 International Marketing Management (3)
Studies the systematic treatment of marketing on a global scale. Areas of international marketing and global marketing strategies are explained. Deals with each element of the marketing mix. Prereq.: MKTG 504.

MBAT 595 Independent Study (3)
Studies a particular problem in an area relating to business administration under the direction of a faculty member.

MBAT 596 Thesis Seminar (3-6)
A study of the processes involved in presenting a systematic written presentation of the results of a research project, study, or investigation.

PMGT 504 Advanced Public Personnel Management (3)
Covers management of human resources in public agencies, changing conditions affecting employment policies, selection procedures, and promotions. Examines the issues relating to testing and selection, productivity, incentives, union-management relations, supervisory relationships, political participation, minority employment, upward mobility, affirmative action, employee development, and training. Prereq: PMGT 514.

PMGT 506 Government and Business Relations (3)
Examines policy issues of government regulation of business. Examines the public concern for environmental-related issues, the subsequent development of government regulations, and controls and their impact upon private enterprise. The impact of regulation and deregulation on business activity will be explored. Prereq: Graduate standing in business or public management.

PMGT 507 Intergovernmental Relations (3)
Studies the dynamics of relations among governmental units, including the movement towards regionalization and councils of government. Study of the impact of federal government policies and programs on state and local resources, issues, and problems. Prereq: PMGT 514.

PMGT 509 Public Management Research (3)
Studies research methods for public management, including the development of research design, problem definition and evaluation and reporting on research findings. Students will work individually or jointly on public management-oriented research projects. Prereq.: PMGT 514.

PMGT 514 Management of Government Organizations (3)
Studies government organizations; management practices and problems; and the management of relationships between major agencies, the legislature, and clientele. Reviews the process of planning, controlling, and decision-making in governmental organizations.

PMGT 519 Public Policy Development and Implementation (3)
Examines the dynamics of public policy development and implementation, the process of translation of issues into public policy through legislative enactment and executive implementation, and the analysis and evaluation of public policies. Prereq.: Graduate standing in Public Administration.

PMGT 525 Management of Metropolitan Governments (3)
Covers management issues and practices as they apply to urban and metropolitan governments, including program management and fiscal issues. Prereq.: Graduate standing.

PMGT 529 Public Finance and the Budgetary Process (3)
Analyses public fiscal policies, the interaction of such policies and their impact on government programs, operations and services, and the interrelationship between government fiscal policies and the budgetary process. Prereq.: PMGT 514.

PMGT 536 Thesis Seminar (3-6)
Studies the processes involved in presenting a systematic written presentation of the results of a research project, case study, or investigation. Prereq.: PMGT 509.

PMGT 538 Independent Study in Public Administration (3)
Engages in intensive study of a particular problem in an area relating to governmental administration under the direction of a faculty member. Prior approval of the Department Chair is required.

LBST 508 Quantitative Methods for Public Administration (3)
Covers inferential statistics, simple and multiple regression, time series, index numbers, and graphic and tabular presentation. Prereq: Undergraduate course in Descriptive Statistics.

LBST 523 Collective Bargaining (3)
Studies collective bargaining with emphases on structure, process, and content of negotiations. The legal and substantive issues and trends in public and private sectors are also examined. Prereq.: PMGT 514.

LBST 568 Arbitration and Dispute Settlement (3)
Examines conflict resolution in private and public sector labor relations. A study of the development of arbitration, mediation, and strikes--their basis, the steps in the processes, and their use and misuse. Prereq.: Graduate standing.

LBST 569 Pensions and Fringe Benefits (3)
Deals with the rules imposed by court and statute on operation of pension plans. Actuarial considerations, functions, vesting, public purpose funds, and role of insurance companies are studied. Other fringes are covered. Prereq.: Graduate Standing

LBST 573 Labor Relations and Federal Personnel Administration (3)
Studies the Federal budget process: its implications for wage determination and bargaining are examined. A study of the statutes that set wages for white and blue collar workers. A review of the Pay Council and pay comparability surveys. Prereq.: Graduate Standing

LBST 576 Quality of Work Life and Productivity (3)
Covers personnel policies and practices, including communications, involvement, development and training that enhance the quality of working life, commitment, advancement and productivity of the employee. Includes union and non-union settings and relevant employment and labor relations law and court decisions. Prereq.: Graduate Standing

LBST 587 Labor Relations in State and Local Government (3)
Studies statutory and administrative bargaining, unions, and the merit system, the right to strike, and union security. State agencies that enforce new laws are also examined. Prereq.: Graduate standing.

UDC DAVID A. CLARKE SCHOOL OF LAW (UDC-DCSL)

THE HISTORY

UDC-DCSL is a new law school with a proud history and distinguished alumni. From its founding as Antioch School of Law in 1972, it has had as its mission to recruit and enroll students from groups underrepresented at the bar, provide a well-rounded theoretical and practical legal education that will enable students to be effective and ethical advocates, and to represent the legal needs of low-income residents through the School's legal clinics. Antioch pioneered a comprehensive clinical curriculum which became a model for other law schools, and which continues to educate UDC students to be knowledgeable, effective, compassionate advocates, from their first year in law school.

When Antioch found it necessary to close more than two dozen of its branches in 1986, the District of Columbia City Council established the independent District of Columbia School of Law, retaining the core of Antioch's mission, curriculum, and personnel. In 1996, the School of Law became part of the University of the District of Columbia, the only public university in Washington, D.C. The University has been designated as an Historically Black College and University by the federal government, a status which carries prestige and brings special resources.

In 1999, the University of the District of Columbia School of Law was named for David A. Clarke, whose life exemplified the qualities of service and commitment that the School helps to develop in its students, and whose efforts established UDC-DCSL as Washington, D.C.'s public law school.

As a new law school, UDC-DCSL is provisionally accredited by the American Bar Association. At this writing, the American Bar Association Accreditation Committee voted in favor of recommending full accreditation for the School of Law. The Accreditation Committee's recommendation will be forwarded to the Council on Legal Education for consideration at its June 2003 meeting. The House of Delegates will render a final ruling at its August 2003 meeting.

STUDENTS, FACULTY AND ALUMNI

The University of the District of Columbia David A. Clarke School of Law is a community distinguished by its small size, by its singular commitment to public

interest, public service, and public policy, and by its diversity, its pragmatism, and its activism.

There are fewer than 300 faculty, students, and administrators on campus. The Dean, the Associate Deans, and the faculty know every student, and students know each other. Although students are, on average, older, have more professional experience, and are more diverse racially and ethnically than other law school student bodies, the experiences and the sense of purpose that brings them to UDC-DCSL creates an uncommon bond among these students.

The UDC-DCSL and Antioch School of Law alumni are also important members of the community, sharing a commitment to public service and a perspective of the real value of the clinical education they received. Many of these alums live and work in the Washington D.C. area. Many alumni participate in career services and student recruiting activities and programs. They also serve as mentors to students in the School's Mentor Program. They are a resource, formally and informally, to current students.

Overview of
UDC-DCSL Student Body

Women	57%
African American	46%
Asian	3%
Caucasian	39%
Chicano	1%
Hispanic	6%
Puerto Rican	2%
Other	3%

The age range in the student body is from 21 to 66 years old; the mean age is 30. Current students have come to law school from a wide variety of careers, including teaching, community activism, business, arts administration, the ministry, medicine, law enforcement, social work, the military, government, and engineering.

STUDYING LAW AT THE UNIVERSITY OF THE DISTRICT OF COLUMBIA DAVID A. CLARKE SCHOOL OF LAW

UDC-DCSL'S curriculum integrates traditional coursework with extensive clinical education for every student. All students participate in community service, and many participate in internships during the school year or summer. Students, under close faculty supervision in the legal clinics, represent women and children with AIDS; children with special education needs; seniors; tenants fighting illegal rent increases and tenant organizations seeking to purchase their own buildings; and individuals working to start small businesses. More than a thousand of the District's most vulnerable residents are served each year. The curriculum focuses especially on the ethical issues that arise in public interest practice. This combination of traditional academic preparation, extensive clinical education, and direct service provides students with broad-based knowledge, with the fundamental skills of effective advocacy, and with a compassionate understanding of those in whose interest they will work.

UNIVERSITY OF THE DISTRICT OF COLUMBIA

FACULTY

COLLEGE OF ARTS AND SCIENCES
DIVISION OF ARTS AND EDUCATION

DEPARTMENT OF EDUCATION

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