



DELAWARE STATE UNIVERSITY



2002 - 2004
GRADUATE CATALOGUE

DELAWARE STATE UNIVERSITY

GRADUATE CATALOGUE 2002-2004

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Delaware State University is an Equal Educational and Employment Opportunity/Affirmative Action Institution.

The provisions of this publication are not be regarded as an irrevocable contract between the student and Delaware State University. The University reserves the right to revise any provision or regulation at any time within the student's term of enrollment, if it is deemed advisable. Advance notice of any changes is given whenever possible.

The University reserves the right to refuse admission or to revoke admission to any applicant.

ACCREDITATIONS AND INSTITUTIONAL MEMBERSHIPS

Delaware State University, chartered by the State of Delaware, is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Secondary Schools to award degrees at the baccalaureate and masters levels.

Credits earned at Delaware State University are accepted by other accredited institutions of higher education throughout the country for transfer credit, graduate study, professional placement and employment opportunities.

Specific academic program accreditations are listed below:

COLLEGE/UNIVERSITY ACCREDITATIONS

- American Association of Colleges and Universities
- American Association for Higher Education
- American Association of State Colleges and Universities
- The College Board
- Council for Undergraduate Research
- National Association for Equal Opportunities in Higher Education
- National Association of State Universities and Land Grant Colleges

AIRWAY SCIENCE

- Federal Aviation Administration

CHEMISTRY

- American Chemical Society

EDUCATION

- American Association of Colleges of Teacher Education
- National Council for Accreditation of Teacher Education
- Teacher Education - Delaware Department of Education

FAMILY AND CONSUMER SCIENCES

- American Dietetic Association

MANAGEMENT

- Accreditation of Commission for Programs in Hospitality Administration
- Association of Collegiate Business Schools and Programs

NURSING

- National League for Nursing Accreditation Commission

SOCIAL WORK

- Council on Social Work Education

The University also holds full membership in the following athletic organizations:

INTERCOLLEGIATE ATHLETIC ORGANIZATIONS

- Mid-Eastern Athletic Conference (MEAC)
- National Collegiate Athletic Association (NCAA)

TELEPHONE DIRECTORY

(302) 857 - xxxx

Executive Administration

President	6001
Provost and Office of Academic Affairs	6100
Vice President of Business and Finance	6200
Vice President of Enrollment Management and Student Affairs	6300
Vice President of University Advancement	6055

Deans

College of Agriculture and Related Sciences	6400
College of Arts and Sciences	6500
College of Education and Human Performance	6732
School of Graduate Studies and Research	6800
School of Management	6900
School of Professional Studies	6700

University Offices and Academic Departments

Admissions	6351
Alumni Affairs	6050
Assistant Academic Vice President for Instructional Support	7350
Assistant Vice President for Enrollment Management and Director of Admissions	6311
Assistant Vice President for Student and Academic Support Services	7201
Assistant Vice President for Student Affairs	6360
Associate Vice President for Business and Finance	6205
Associate Vice President for Academic Affairs and Director of Summer School	6306
Career Planning and Placement	6120
Counseling	7381
Director of Annual Fund	6057
Director of Corporate & Foundation Relations	6054
Financial Aid	6350
Martin Luther King, Jr. Student Center	6363

Public Relations	6060
Public Safety	6290
Registration and Records	6375
Sports Information	6065
Student Accounts	6240
Veteran Affairs	6376
William C. Jason Library	6191
<i>Residence Halls</i>	
Samuel L. Conwell Hall	6310
Medgar Evers Hall	6315
Lydia P. Laws Hall	6325
Meta V. Jenkins Hall	6320
Harriet Tubman Hall	6330
W. Richard Wynder Tower	6330
Warren-Franklin	6335
<i>Satellite Campuses</i>	
Sussex County Campus Georgetown, DE	856-5397
Market Street Campus 621 Market Street Wilmington, DE	254-5342
Montessori Program Wilmington, DE	254-5328

University administrative offices are open from 8:30 a.m. until 4:30 p.m.. Business may be transacted daily Monday through Friday with the exception of certain legal holidays. Interested persons should contact the Office of Public Relations at (302) 857-6060 for telephone numbers not listed above.

Delaware State University does not discriminate on the basis of race, color, national origin, sex, age or handicap in the administration of any of its educational programs and activities or with respect to admission and employment. Inquiries may be directed to the Section 504 Coordinator or the Title IX Coordinator located in the President's Office at (302) 857-6001.

Table of Contents

Correspondence	1
Academic Calendars	2
Delaware State University	
Mission	5
Philosophy	5
History	5
Accreditations	6
National Memberships and Associations	6
Board of Trustees	6
The Setting - Campus and Facilities	7
The Degree Programs of the Graduate School	9
Policies of the Graduate School	
Application Policies, Deadline and Procedures	10
Educational and Living Expenses	19
Definition of "Delaware Resident"	
Financial Aid	22
Support Services for Graduate Students	23
Graduate Programs & Course Descriptions	27
Trustees & Administration	112
Members of the Graduate Faculty	115
Index	118

Students at Delaware State University are responsible for knowing and complying with all requirements for their respective degrees as well as the policies and procedures governing graduate study as outlined in this document, the Delaware State University Student Handbook, the specific graduate program handbook..

Delaware State University reserves the right to make changes in the course offerings, degree requirements, charges and regulations, and procedures contained herein as educational and financial considerations require, subject to and consistent with established procedures and authorizations for making such changes.

The colors of the University are colonial blue and red.
The mascot is the hornet.

Correspondence

Please address all inquiries and correspondence concerning applications and admission to the School of Graduate Studies and Research, Delaware State University, 1200 N. DuPont Highway, Dover, Delaware 19901-2277; telephone (302) 857-6800; FAX (302) 857-6804.

Address requests for transcripts from Delaware State University to the Registrar, Delaware State University, 1200 N. DuPont Highway, Dover, Delaware 19901-2277; telephone (302) 857-6375; FAX (302) 857-6379.

Address requests for Summer Session, Winterim Session and Continuing Education information to the Office of the Associate Vice President for Academic Affairs and Director of Summer School, Delaware State University, 1200 N. DuPont Highway, Dover, Delaware 19901-2277; telephone (302) 857-6306; FAX (302) 857-6308.

Information on graduate programs at the University is also available on the World Wide Web on the University's web page at <http://www.dsc.edu>. Course offerings by term are available at the University's student services web site at <http://dsuweb.dsc.edu>.

The Graduate Catalogue will be produced biennially by the School of Graduate Studies and Research and Office of the Registrar. The information in the Graduate Catalogue was compiled by Dr. Hazell Reed, Dr. John Austin and Ms. Tylisha Jones.

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Angelia Simms-Peete, Cover Design

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Academic Calendar

WINTER 2002 SESSION

January 6 (Sunday) Residence Halls Open For Winter Session Participants Only
January 7- February 1 (Monday - Friday) Winter Session Classes

SPRING 2002

January 13 (Sunday) Residence Halls Open For New Students Only
January 14-18 (Monday-Friday) New Student Transition Week
January 15 (Tuesday) General Faculty Meeting
January 16 (Wednesday) Registration for New & Readmitted Students
January 17-18 (Thursday-Friday) On-Site Registration for Remaining Students
January 21 (Monday) Martin Luther King Day Observance (University Closed)
January 22 (Tuesday) Classes Begin
January 22 (Tuesday) Late Registration Begins
January 22 (Tuesday) Changes in Schedules Begin (Drop/Add)
February 5 (Tuesday) Last Day for Adding Classes
February 5 (Tuesday) Late Registration Ends
February 5 (Tuesday) Last Day to Change Courses to Audit Status
February 6 (Wednesday) Effective date for \$10 per drop processing fee
February 6 (Wednesday) Effective date for receiving a grade of "W"
for dropped course
February 12 (Tuesday) Last Day for Grade Changes
February 25-28 (Monday-Thursday) Mid-Term Evaluations Administered
March 4-8 (Monday-Friday) SPRING BREAK
March 12 (Tuesday) Mid-Term Grades Due in Chairs' Offices
March 12 (Tuesday) Last Day to Remove Incompletes
March 29 (Friday) - April 1 (Monday) Easter Recess
April 2-19 (Tuesday -Friday) Pre-Registration
for Summer School & Fall 2002
April 4 (Thursday) Last Day to Drop Classes
April 26 (Friday) Last Day to Withdraw from the University
May 2 (Thursday) Last Day of Classes
May 3 (Friday) Reading Day
May 6-9 (Monday-Thursday) Final Examinations
May 19 (Sunday) Commencement
May 21 (Tuesday) First Day of Summer School

FALL 2002

August 25 (Sunday) Residence Halls Open (New Students Only)
August 26-30 (Monday- Friday) New Student Transition Week
August 26-27 (Monday-Tuesday) Faculty and Staff Institute
August 28 (Wednesday) Registration for New & Readmitted Students
August 29-30 (Thursday-Friday) On-Site Registration for Remaining Students
September 2 (Monday) Labor Day Recess (University Closed)
September 3 (Tuesday) Classes Begin
September 3 (Tuesday) Late Registration Begins
September 3 (Tuesday) Changes in Class Schedule Begin (Drop/Add)
September 10(Tuesday) Opening Convocation
September 12(Thursday) General Faculty Meeting
September 17 (Tuesday) Last Day for Adding Classes
September 17 (Tuesday) Last Day to Change Courses to Audit Status
September 17 (Tuesday) Late Registration Ends
September 18 (Wednesday) Effective date for \$10 per drop processing fee
September 18 (Wednesday) Effective date for receiving a grade of "W"
for dropped courses
September 24 (Tuesday) Last Day for Grade Changes
October 15 (Tuesday) Deadline for Filing Application for Graduation
October 14-17 (Monday-Thursday) Mid-Term Evaluations Administered
October 15 (Tuesday) Last Day to Remove Incompletes
October 21 (Monday) Mid-Term Grades Due in Chairs' Offices
October 28 (Monday)- November 15 (Friday) Pre-Registration
November 2 (Saturday) Homecoming
November 9 (Saturday) Graduate Comprehensive Examination
November 12 (Tuesday) Last Day to Drop Classes
November 28 (Thursday) - December 1 (Sunday) Thanksgiving Recess
November 29 (Friday) Last Day to Withdraw from the University
December 5 (Thursday) Last Day of Classes
December 6 (Friday) Reading Day
December 9 -12 (Monday-Thursday) Final Examinations
December 13 (Friday) Christmas Recess Begins
December 16 (Monday) Final Grades Due in Chairs' Offices

SPRING 2003

January 12 (Sunday)	Residence Halls Open For New Students Only
January 13-17 (Monday-Friday)	New Student Transition Week
January 14 (Tuesday)	General Faculty Meeting
January 15 (Wednesday)	Registration for New & Readmitted Students
January 16-17 (Thursday-Friday)	On-Site Registration for Remaining Students
January 20 (Monday)	Martin Luther King Day Observance (University Closed)
January 21 (Tuesday)	Classes Begin
January 21 (Tuesday)	Late Registration Begins
January 21 (Tuesday)	Changes in Schedules Begin (Drop/Add)
February 4 (Tuesday)	Last Day for Adding Classes
February 4 (Tuesday)	Late Registration Ends
February 4 (Tuesday)	Last Day to Change Courses to Audit Status
February 5 (Wednesday)	Effective date for \$10 per drop processing fee
February 5 (Wednesday)	Effective date for receiving a grade of "W" for dropped course
February 11 (Tuesday)	Last Day for Grade Changes
February 24-27 (Monday-Thursday)	Mid-Term Evaluations Administered
March 3 (Monday)	Mid-Term Grades Due in Chairs' Offices
March 4 (Tuesday)	Last Day to Remove Incompletes
March 10-14 (Monday-Friday)	Spring Break
April 18 - 21 (Friday-Monday)	Easter Recess
April 3 (Thursday)	Last Day to Drop Classes
March 31 (Monday) - April 17 (Thursday)	Pre-Registration (for Summer School & Fall 2002)
April 25 (Friday)	Last Day to Withdraw from the University
April 26 (Saturday)	Graduate Comprehensive Examination
May 1 (Thursday)	Last Day of Classes
May 2 (Friday)	Reading Day
May 5-8 (Monday-Thursday)	Final Examinations
May 12 (Monday)	Final Exam Grades Due in Records Office
May 18 (Sunday)	Commencement
May 20 (Tuesday)	First Day of Summer School

During the 2001 Delaware State University Commencement, 90 graduate students received master degrees. Another 90 graduate students received master degrees in 2002.



Delaware State University

Mission

Delaware State University is a public, comprehensive, 1890 land-grant institution. The mission of Delaware State University is to provide for the people of Delaware and others who are admitted to the University meaningful and relevant education that emphasizes both the liberal and professional aspects of higher education.

Within this context, the University's mission is to provide educational opportunities to all qualified citizens of this and other states at a cost consistent with the economic status of the students as a whole.

While recognizing its historical heritage, the University seeks to serve a diverse student population with a broad range of programs in instruction, service, and research so that its graduates will become competent, productive, and contributing citizens.

Philosophy

Delaware State University, a progressive, 1890 land-grant, comprehensive, public-assisted institution, is committed, foremost, to academic excellence and intellectual competence. Freedom of expression and inquiry, the exchange of ideas, cultural activities, intensive classroom instruction, and numerous informal events of the university community combine to ensure that each student receives a thorough and marketable education.

The University recognizes that education is attained, in part, through the activities of the students themselves. It strives to provide and maintain a corps of scholars, lecturers, and educators dedicated to the enlightenment of mankind.

To this end, the University endeavors to:

- provide a well-rounded liberal arts education with a concentration in either the sciences, the humanities, or the professions.
- provide service to the citizens of

the state by increasing their ability to make practical application of knowledge.

- develop conceptual thinking ability and nurture the inquiring mind of each student.
- develop student skills in oral and written communication.
- encourage optimum physical development and the safeguarding of health.
- encourage students to serve their home, the community, the nation, and the world.

History

On May 15, 1891, the Fifty-Eighth General Assembly of the State of Delaware passed "An Act to Establish and Maintain a College for the Education of Colored Students in Agriculture and the Mechanic Arts" by virtue of the Second Morrill Act of Congress approved August 30, 1890. The Morrill Act of 1890 provided a permanent annual endowment of \$25,000 for each land-grant college established under the provision of the Morrill Act of 1862 and allowed a portion of the federal appropriation to be used for the endowment, support and maintenance of land-grant colleges for Negro youths in states which maintained separate educational facilities. This legislation provided for the establishment of Delaware State University.

Delaware State University has since developed into a 400-acre complex containing numerous modern buildings, the result of an intensive construction program inaugurated in 1960. The University provides special services to the State of Delaware and to neighboring states on an extended and increasing basis without regard to race, creed, color, age, sex, or physical handicap. The institution has undergone two name changes since its inception. The name was changed to Delaware State College in 1947 and to Delaware State University in 1993.

The University has had eight presidents. They include Wesley P. Webb (1891-1895); William C. Jason (1895-1923); Richard S. Grossley (1923-1942); Howard D. Gregg (1942-1949); Oscar J. Chapman (1949-1951); Jerome H. Holland (1953-1960); Luna I. Mishoe (1960-1987); and William B. DeLauder (1987-present). Maurice E. Thomasson served as acting president from 1951 to 1953.

Accreditations

Delaware State University, chartered by the State of Delaware, is nationally, regionally, and state accredited or certified by the following accrediting bodies:

National Accreditation

American Chemical Society
National League for Nursing
Federal Aviation Administration
Council on Social Work Education
Association of Collegiate Business
Schools and Programs

Regional Accreditation

Middle States Association of Colleges
and Secondary Schools

Teacher Education - Delaware State
Department of Education

The DSU Leadership: (l-r) Dr. Charles N. Smith, Vice President of Enrollment Management and Student Affairs; Mr. Ronald G. Parr, Vice President of Business and Finance, DSU President William B. DeLauder; Dr. Billie J. Hooker, Vice President of University Advancement, and Dr. Kenneth W. Bell, acting Provost and Vice President of Academic Affairs.



National Memberships and Associations
Delaware State University holds membership in the following professional, nationally and internationally prominent organizations:

Academic

American Association of Colleges of
Teacher Education (AACTE)
American Association of Colleges and
Universities (AAC&U)
American Association of State Colleges
and Universities (AASCU)
American Association for Higher
Education (AAHE)
The College Board
National Association for Equal
Opportunity in Higher Education
(NAFEO)
National Association of State
Universities and Land Grant Colleges
(NASULGC)

Intercollegiate Athletic

Mid-Eastern Athletic Conference (MEAC)
National Collegiate Athletic Association
(NCAA)

Board of Trustees

The Board of Trustees of Delaware State University is comprised of eleven members, six appointed by the Governor of Delaware and five elected by the trustees. The President of the University and the Governor of the State of Delaware serve as ex-officio members.

The Setting

The Campus and Facilities

Delaware State University is located in Dover, Delaware, in Kent County, 45 miles south of Wilmington on the Delmarva Peninsula. The campus is adjacent to U. S. Highway 13 which provides direct access to Norfolk, Virginia; Salisbury, Maryland; Wilmington, Delaware, Philadelphia, Pennsylvania; and Camden, New Jersey. Other connecting highways in the Dover area provide access to the Chesapeake Bay Bridge; Washington, D. C.; Baltimore, Maryland, and points west. The New York Metropolitan Area can be reached via the Delaware Memorial Bridge and the New Jersey Turnpike which intersect Highway 13 just south of Wilmington. The city of Dover is located on bus routes to major cities.

Dover, the capital of Delaware, is a community of approximately 36,000 people situated in the heart of the Eastern Shore within easy reach of the resort areas of Rehoboth Beach, Delaware; Ocean City, Maryland; and Cape May, New Jersey. Founded in 1703, the city of Dover features many colonial buildings and several historical sites, including the home of John Dickinson, signer of the Declaration of Independence and the Constitution of the United States.

The physical facilities of Delaware State University support the various university programs. Major administrative and academic facilities are listed below.

Arts Center/Gallery provides a venue for cultural enrichment with various exhibits during the academic year. The gallery, located on the north wing of the William C. Jason Library, traditionally features the works of critically acclaimed artists from the United States and abroad.

Alumni Stadium serves as the site for many university activities, including football, track,

field contests and commencement.

William W. W. Baker Center for Agriculture and Natural Resources houses classrooms, laboratories, workshops, and offices of the Department of Agriculture and Natural Resources and the Dean of the School of Agriculture, Natural Resources, Family and Consumer Sciences.

Conrad Hall is the University's primary dining facility but also serves as a site for various student support services.

Delaware Hall, renovated in 1987, houses classrooms and the departments of Psychology and Sociology.

Education and Humanities Center accommodates the departments of Visual and Performing Arts, English, Foreign Languages and Education. This facility also houses the Child Development Laboratory and the office of the Dean of the College of Arts and Sciences. It is also the site for the University's wide-ranging cultural enrichment programs.

ETV Building houses the Department of History, Political Science, and Philosophy and the Department of Mathematics. The University's Mass Communications program is also housed in this facility.

Grossley Hall houses the offices of the Provost and Vice President for Academic Affairs, the Vice President for Business and Finance, the Vice President for Enrollment Management and Student Affairs, the Assistant Vice President for Enrollment Management, the Assistant Vice President for Student and Academic Support Services, the Director of Admissions, the Director of Records and Registration, and the Director of Financial Aid. This facility also houses the University's Office of Human Resources, the

Administrative Computer Center, the Office of Strategic Planning and Institutional Research, and the Reprographics Center, which serves the printing needs of the University.

Herbarium houses the most extensive collection of plants that is indigenous to the Delmarva Peninsula.

William C. Jason Library and Comprehensive Learning Center is the academic hub of the University. It contains a collection of books, periodicals, microfilm, microfiche, and audio and video tapes. The Comprehensive Learning Center, which provides various academic support services to students, is also located in this building as well as the Office of the President of the University.

Martin Luther King, Jr. Student Center is the home for the Student Government Association, the Hornet (student newspaper), the Office of Career Planning and Placement and the University Bookstore. Extramural activities for students are also held in the facility.

Loockerman Hall, built circa 1720, is often referred to as "the birthplace of Delaware State University." Though it has undergone a massive renovation, its architectural integrity has been preserved. It is listed on the National Register of Historic Places.

MBNA America Building is equipped with state-of-the-art technology and houses the School of Management as well as the University's program in Hospitality and Tourism Management.

Memorial Hall houses the Department of Health and Human Performance and the Department of Intercollegiate Athletics. Among its many features are an indoor swimming pool, two gymnasias, a dance studio, racquetball and handball courts, faculty offices and classrooms, and laboratories.

Luna I. Mishoe Science Center houses offices, classrooms, and facilities for natural sciences and computer science.

John R. Price Building houses the Dean of the School of Professional Studies, the Department of Family and Consumer Sciences, the Department of Nursing, and the Department of Social Work are also housed in this facility.

Maurice Thomasson Center houses the Division of University Advancement, which includes the Office of the Vice President for University Advancement, the Office of Alumni Affairs, the Office of Major Gifts, Planned Giving, the Office of Corporate and Foundation Relations, the Office of Public Relations and the Office of Sports Information. The Office of the Assistant Academic Vice President for Instructional Support is also housed in this facility.

Ulysses S. Washington Cooperative Extension Center houses the University's outreach programs that include youth development, family life education, community resource development and agriculture education.



The Luna I. Mishoe Science Center is academic home of the Biology, Physics and Chemistry graduate degree programs.

The Degree Programs of the Graduate School

Mission Statement

The mission of the School of Graduate Studies and Research is to provide the environment for high quality graduate education by invigorating, stimulating and supporting intellectual and professional development of students and faculty, which is consistent with the University's mission. The graduate programs offered by Delaware State University are designed to serve the needs of individuals who wish to pursue scholarship and career development beyond the baccalaureate degree.

The goals of the graduate programs are:

- (1) to provide advanced study in certain academic disciplines, and
- (2) to promote inquiry that contributes toward the solution of social, economic, and educational problems and issues.

Vision for Graduate Education

The Graduate School envisions in the 21st century that graduate education will accommodate more part-time students, more working adults, more minorities, more women, and more individuals who will not fit the traditional model of full-time, residential students. There will be more demand for off-campus programs, programs addressing the needs of specific clienteles and courses via the Internet. The Graduate School also envisions offering additional academic programs at the masters level and the addition of doctoral programs.

The Graduate Council

The basic standards for all graduate programs are determined by the Graduate Council, chaired by the Dean of the School of Graduate Studies and Research. The Council is composed of the Dean of Graduate Studies and Research, Academic Deans, the Director of Libraries, the Registrar, the Chairpersons of departments offering degree programs, Directors of graduate programs, four faculty members not affiliated with graduate programs, a student representative from each graduate area, and Chairperson of the Faculty Senate, the Academic Affairs Committee, and Faculty Affairs Committee.

The School of Graduate Studies and Research offers the following programs:

MASTER OF ARTS

Education with concentrations in:
 Adult Literacy and Basic Education
 Curriculum and Instruction
 Science Education
 Special Education
 Historic Preservation

MASTER OF SCIENCE

Biology
 Biology Education
 Chemistry
 Applied Chemistry
 Mathematics
 Mathematics Education
 Natural Resources
 Physics
 Physics Teaching
 Plant Science

MASTER OF BUSINESS ADMINISTRATION

MASTER OF SOCIAL WORK

Policies of the Graduate School

APPLICATION AND ADMISSION POLICIES, DEADLINES AND PROCEDURES

Eligibility

For admission to graduate study, applicants must show evidence that they have earned the baccalaureate degree at a regionally accredited college or university and possess the ability to do graduate work of high quality. Two official transcripts of all previous undergraduate and graduate work must be submitted. Applicants for degree status should have a cumulative undergraduate grade point average of 2.50 (on a 4-point scale) and a scholastic average of 3.00 in their undergraduate major. They should have successfully completed specific courses on the undergraduate level in the field in which they plan to pursue a graduate degree and a minimum number of courses in a designated area approved by the specific department. For certain graduate programs, official scores on the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT), or the Miller Analogies Test (MAT) are required. The test scores must not be more than five years old. Applicants who have not taken the required test(s) must satisfy this requirement during the first year of graduate study.

Standardized Examinations

The schedules for standardized examinations such as the Graduate Record Examination (GRE), National Teacher's Examination (NTE), Graduate Management Admission Test (GMAT), and the Miller Analogies Test (MAT) will be announced and posted in the Office of Graduate Studies.

International Students

Non-English speaking international students

applying for admission to graduate study must demonstrate a satisfactory level of proficiency in the English language. This proficiency requirement may be satisfied by meeting the criteria in any one of the following categories:

1. Foreign applicants who hold the baccalaureate degree from a regionally accredited college or university within the United States are presumed to be proficient in the English language.
2. Foreign applicants who hold the baccalaureate degree or its equivalent from a foreign institution in which English is the language of instruction are presumed to be proficient in English.
3. Foreign applicants who do not meet the requirements outlined in 1 and 2 above must take the Test of English as a Foreign Language (TOEFL). Applicants should attain a score of at least 550 on the TOEFL.

Prior to acceptance, student must place an Affidavit of Support Form on file with the Director of Undergraduate Admissions.

Application Procedures

Application for admission should be made to: Dean of Graduate Studies and Research, Delaware State University, 1200 North DuPont Highway, Dover, Delaware 19901.

Application procedures and supporting credentials vary among the graduate programs. All applicants must submit an Application for Admission, available through the Office of Graduate Studies and Research. A non-refundable \$50.00 application fee must accompany all applications submitted.

Application procedures and supporting credentials vary among the graduate programs.

Degree-seeking applicants must also arrange to have three letters of recommendation by persons who are acquainted with their potential for graduate study in their discipline, two (2) official transcripts from every college or university attended forwarded to the Dean of Graduate Studies and Research.

Application Deadlines

June 30 is the deadline for submission of applications and all supporting credentials for fall enrollment in all programs. November 30 is the Spring term deadline and April 30 for the Summer Term. The Chairperson or the Director of the graduate program will inform applicants of the action taken on their application. **Only students who have applied for admission will be permitted to register for graduate courses, except in the case of undergraduate students enrolling in graduate courses.**

Retention of Applications

The application and credentials of applicants, including transcripts of their academic records from other institutions, are placed in a student's personnel file. They are not returned to the student.

In cases where application materials are incomplete with respect to required credentials, including test scores, an applicant has not been accepted for admission, or an applicant does not register for the term to which she/he has been admitted, the application and its accompanying credentials will be retained for two years by the University.

Classification

Applicants for the master's degree may be considered for admission and, if admitted, classified in one of three categories. Successful applicants are notified of their classification at the time of admission.

Unconditional Admission requires:

- a. The bachelor's degree from a fully

accredited four year college or university;

- b. At least 2.50 quality point average (on 4.00 point system of grading);
- c. An acceptable score on the General and Subject Tests of the Graduate Record Examination (GRE), the Graduate Management Admission Test (GMAT), or the Miller Analogies Test (MAT);
- d. Completion of all undergraduate prerequisites for the selected graduate program;
- e. Good standing in the last school attended;
- f. Acceptance in the program selected for graduate study.

Conditional Admission includes:

- a. Those who have a limited number of deficiencies in undergraduate course prerequisites. These deficiencies must be removed before enrollment in graduate courses of the same series;
- b. Graduate of a fully accredited college or university who have not taken the GRE, the GMAT, or the MAT before admission. Applicants admitted to degree programs must take the GRE, GMAT, or the MAT during the first semester of enrollment in courses for graduate credit;
- c. Graduates of recognized four-year colleges not fully accredited when the bachelor's degree was awarded. Such applicants must:
 1. Present a record of superior scholarship on the undergraduate level.
 2. Present unqualified recommendations from their undergraduate advisors, and
 3. Submit an official report of performance on the GRE (General Test), the GMAT, or the MAT;

d. Students who present a grade point average of less than a 2.50 must at the time of application submit GRE, GMAT, or MAT scores which qualify them for admission. To be considered for admission, those students are required to take nine (9) semester hours of course work specified by the Chairperson and/or Program Director. If a 3.00 quality point average is attained, the students are permitted to petition for a change of classification;

e. Applicants who hold baccalaureate degrees from accredited institutions but who have academic deficiencies may be admitted conditionally if they submit with their applications acceptable scores on the GRE, the GMAT, or the MAT. Successful applicant in this category who complete, with a 3.00 grade point average, nine (9) semester hours of course work specified by the Chairperson and/or Program Director may petition for reclassification.

Non-degree admission is granted to those who wish to enroll in courses but do not intend to qualify for a degree. The non-degree admission category includes those entering Graduate School for any of these purposes:

- To complete certification requirements;
- To earn thirty plus (30+) hours beyond the Master's degree;
- To enrich their professional development; or
- To transfer credits earned to degree program at another institution. Credits earned as non-degree students are not ordinarily requirements for degrees. If subsequently students classified as non-degree are accepted into a degree program, the students may petition to carry forward not more than nine (9) semester hours of credit earned as a non-degree student. Approval/authority rests with the Chairperson and/or Program Director of the degree program.

Change of Status

Conditionally admitted students and non-degree students may apply for a change of status upon satisfying all admission requirements. Application for change of status must be submitted to the Dean of Graduate Studies and Research in writing not later than June 30 for the change to become effective for the Fall Term, not later than December 1 for the Spring Term, and by May 1 for the Summer Term. The Chairperson and/or Program Director will determine acceptability. Graduate courses completed at the University with a grade of "B" or higher by special students within five years may be applied toward the master's degree upon change of status.

Transfer of Credit

Applicants admitted to the graduate programs may transfer a maximum of nine (9) graduate credits from another accredited institution toward the master's degree, provided they earned a grade of "B" or higher in the courses for which transfer credit is sought. Supporting documentation must be provided by the student with the request for transfer of credit. The Chairperson and/or Director of the respective graduate program must give prior approval of the transfer credits.

The transfer credit must be directly related to the student's program of study, and must have been completed not more than five (5) years prior to the student's date of application. Students who have enrolled in the Master of Social Work Program have special transfer of credit regulations.

Readmission

An application for readmission, together with a \$50.00 non-refundable application fee, must be submitted to the Office of Graduate Studies and Research by students who wish to return after the elapse of three (3) consecutive terms between the last date of attendance and the next registration. Applicants for re-admission must update their credentials by providing information relevant to any courses taken at other institutions during their absence from the University.

ENROLLMENT POLICIES AND PROCEDURES

Health Record

The University requires that all students file a personal health and immunization record with the Health Services Center at the time of first enrollment. Appropriate forms are sent directly to newly enrolled students. They are also available at the Student Health Services Center.

Registration

Students may register for courses at the time specified on the Academic Calendar. After the schedule is approved by the advisor, a student may register on-line, by mail and/or within their academic departments. Course lists are published each semester by the Registrar's Office and are available for viewing at the student services web site at <http://dsuweb.dsc.edu>. Preregistration is encouraged for presently enrolled graduate students.

Students must consult with their academic advisor before using web registration. All charges for the ensuing semester must be paid, or otherwise provided for, before registration is official.

Students not officially registered for a course will not be permitted to attend the course and will not receive credit at the end of the semester.

For students who preregister by mail, tuition and applicable fees are payable in full on the due date specified on the bill. For students who register on-site, tuition and applicable fees are payable at the time of registration.

Delaware State University regularly mails schedule/bills to students, but cannot assume responsibility for their receipt. If students do not receive a bill on or before the beginning of each semester, it is the students' responsibility to contact the Office of Student Accounts or to go on-line to obtain information relative to their bill.

Graduate Course Levels

Courses which may apply towards a graduate

program are numbered 500 and above.

Course Loads

A full-time course load is a minimum of nine (9) semester hours. Students enrolled in less than nine (9) semester hours are considered part-time students.

Auditing Classes

Courses may be taken for audit with the permission of the instructor and the Chairperson or Director of the graduate program. No credits are earned for auditing courses. A grade of "AU" is entered on the student's record for the course. Tuition for the credit hours is charged as usual.

Add/Drops

Courses may be added or dropped online or by using a drop/add slip during the periods prescribed in the Academic Calendar. Courses may be added during the first two weeks of classes and dropped through the last day to drop classes. Appropriate drop/add forms are available in the academic departments. Faculty are not required to add students if the course is full. No adds or drops are permitted after the deadline date except in cases approved by the academic deans and/or Provost and Vice President for Academic Affairs.

Withdrawal from Courses

From the end of the late registration period through the last day to drop courses, students who wish to withdraw from a course must complete the drop/add form, consult with their advisor, and submit the form to the instructor for signature. The student is then responsible for delivering the form to the Registrar's Office no later than 4:00 p.m. of the Last Day to Drop Courses (as prescribed on the Academic Calendar). The student will be assigned a grade of "W" for the course by the Registrar's Office.

After the last day to drop courses, withdrawal requires students to petition the Provost and Vice President for Academic Affairs explaining that they are interested in

withdrawing from the course due to extenuating circumstances beyond their control. Such a petition must contain conclusive evidence, properly documented, of the situation which prevents completion of the course. Acceptable reasons do not include dissatisfaction with performance in a course or with an expected grade. If the petition is approved, the student will receive a grade of "WA" (Administrative Withdrawal) in the course.

Withdrawal from Graduate Program

A student who wishes to withdraw from the graduate program must obtain a Withdrawal Form for Graduate Students from the Graduate Dean's Office. Withdrawal from a graduate program is complete when all necessary signatures have been obtained. All withdrawals must be completed on or before the last day to withdraw from the University as indicated on the Academic Calendar for each term. All courses enrolled will be assigned a grade of "W".

Grading Policies

Students are issued grades at the end of each term. For each course in which the students were enrolled, either a letter grade or a symbol will be entered on the student's academic record. Only courses completed with a grade of "A," "B," or "C" can be used toward fulfilling the graduation requirements for a Master's degree.

The following letter designations are used to indicate the quality of achievement in a graduate course:

Grade	Interpretation	Quality Points
A	Excellent	4.0
B	Good	3.0
C	Fair	2.0
D	Poor	1.0
F	Failure	0.0

Symbols

I*	Incomplete
Q	Thesis Incomplete

W	Withdrew
AU	Audit
S/U	Field Experience (M.S.W. only)
WA	Administrative Withdrawal

*A "Q" will automatically be changed to an "F" if not removed within the first six (6) weeks of the following term in which the student is registered.

Dismissal

Any of the following situations will result in the academic dismissal of a student working toward the Master's degree:

- Receiving a grade of "D" or "F" in a graduate course;
- Failure to achieve a cumulative grade point average of 3.0 or greater while on academic probation
- Being placed on academic probation more than one term

Students who receive three (3) or more grades of "C" or lower will be dismissed from the graduate program.

Academic Probation

Degree students who do not achieve a cumulative grade point average of 3.0 or greater at the end of a semester are placed on academic probation for the following term. Students who do not earn a cumulative grade point average of 3.0 or greater the following semester will be dropped from the program.

Enrollment of Undergraduate Students in Graduate Courses

Undergraduate seniors in good academic standing at Delaware State University (a student who has successfully completed 90 semester hour credits) with an overall grade point average of 2.75 or higher, with a 3.00 in the major, will be permitted to register for graduate courses in the senior year with the approval of the Department Chairperson, the appropriate Program Director, and the Dean of Graduate Studies and Research.

The students may enroll in only one graduate course at each registration period. Over a 12-month period students may enroll in a maximum of six (6) hours in a graduate program requiring 36 hours or less for completion, or a maximum of nine (9) hours in a graduate program requiring more than 36 hours for completion.

Credits for these courses cannot count towards the requirements for the baccalaureate degree. No students may receive graduate credit for any course taken when the student has not formally applied for admission to the graduate school.

After conferral of the baccalaureate degree and change of status to graduate student, graduate credits may be included in the graduate record of the student if all the following criteria are met:
(1) the grade is A or B, (2) the course(s) is/are appropriate for the program, and the time-lapse has not exceeded the allotted time allowed by the program.

Veterans in Continuing Education Programs

All eligible persons desiring to receive educational assistance through the Veterans Administration are required to apply for admission to the University as a degree candidate.

Change of Major or Personal Data

Changes in major and personal data (address or telephone number) must be submitted on the appropriate forms in the Office of Records and Registration. Personal data may also be updated at <http://dsuweb.dsc.edu>.

Automobile Registration and Parking Regulations

Graduate students must register their automobiles promptly with the University Police Department in order to park on campus. Official car registration, proof of insurance and the appropriate parking fee are required at the time of registration. The cost per academic year is \$50.00 or \$25.00 per semester. Students will receive a parking decal that must be displayed

on their vehicle as directed at all times to avoid being towed or ticketed.

ACADEMIC POLICIES AND REGULATIONS

Academic Advisement

Students accepted into a graduate program are assigned a faculty advisor by their Chairperson or Program Director. The students should consult with the advisor in selection of courses, thesis option, degree requirements, and related matters

Admission to Candidacy

Application for admission to candidacy is to be made immediately after the student is admitted to a specific program, completes all prerequisites for the designated graduate program, and completes at least nine (9) hours of graduate course work with at least a "B" average. No student will be allowed to register for a course after completion of fifteen (15) fifteen hours at Delaware State University unless he/she has been admitted to candidacy.

Applications for admission to candidacy must be approved by the Dean of Graduate Studies and Research and the appropriate Chairperson and/or Program Director/Coordinator. Applications for Admission to Candidacy Forms must be submitted to the Office of the Dean of Graduate Studies and Research in duplicate, with the appropriate signatures no later than two semesters prior to graduation. It is the primary responsibility of the students to become familiar with the policies and procedures governing admission to candidacy.

Degree Requirements and Application for Graduation

In order to earn the master's degree, graduate students must satisfy all of the institutional requirements as well as the specified requirements of the program in which they are enrolled. Students who expect to graduate must file an Application for Graduation with the Office of Graduate Studies by January 15 of the year in which the degree is to be conferred.

The student must have a cumulative grade point average of 3.0 or higher (on a 4.0 scale) for all work taken on the graduate level.

Participation in Graduation Exercises

Students may participate in the annual graduation exercises in May only if they satisfy the following conditions:

- 1) File the application for graduation by January 15;
- 2) Enroll in all courses required to complete degree requirements;
- 3) Remain enrolled in those courses required to graduate; and
- 4) Satisfy all financial obligations to the University.

Submitting an Appeal

Appeals concerning denial of admission to a graduate program, dismissal from a graduate program, changing final course grade and instruction should be submitted as follows:

1. Students should file, in writing, the complaint or appeal to the appropriate Chairperson or Program Director for resolution. The Chairperson or Program Director shall reply to the students within 10 working days;
2. if the disposition is not favorable students may appeal to the Graduate Council through the Dean of Graduate Studies and Research;
3. the appeal will be presented to the Graduate Council at the next regularly scheduled meeting of the Graduate Council. The decision of the Graduate Council shall be transmitted to the students, in writing, within 10 working days of the decision;
4. in cases where the problems remain resolved, students have the right to appeal in writing to the Vice President for Academic Affairs within 5 working days from receipt of the decision of the Graduate Council.

Thesis

Students who elects or are required to complete a thesis should have a Thesis Committee approved by his/her Academic Advisor, Chairperson and/ or Program Director, and the Dean of Graduate Studies and Research. The Thesis Committee shall consist of four (4) members, at the rank of Assistant Professor or above, one of whom shall be the Dean of Graduate Studies and Research or a member designated by that office.

Students electing the thesis option should select a topic in consultation with the Advisor and the appropriate Chairperson or Program Director. The style manual to be used in writing the thesis will be designated by the respective department. Students must file for and receive approval of the Thesis Committee during the semester prior to beginning work on the thesis. The application for approval of the Thesis Committee is available in the Office of the Dean of Graduate Studies and Research, and should be completed and submitted to the Office of Graduate Studies in triplicate with original signatures. (Students who need more than one semester to complete the thesis will receive the symbol Q (Thesis incomplete) on their record until the thesis is satisfactorily completed.) Students who have previously registered for thesis may choose not to register for, or work on the thesis during any subsequent semester. The students electing this option must pay a sustaining Fee of \$20.00 for each semester they do not register for thesis. The semesters not registered for will count toward the time limit allotted to complete the degree. Students electing the thesis option must satisfactorily defend the thesis in an oral examination by the committee. The oral examination should be scheduled at least three (3) weeks in advance and may also cover related course material. The thesis defense must be taken during the last semester. All members of the committee shall be given a copy of the final draft of the thesis at least one week (7 days) prior to the examination.

Students who elected the thesis option must have the thesis completed and approved four (4) weeks prior to the end of the term in which he/she expects to graduate. For further information relative to the thesis, a copy of the Thesis Handbook may be requested from the Office of Graduate Studies and Research.

The thesis and all related procedures are to be completed by April 15 for those planning to graduate at the conclusion of the Spring Semester.

The finished thesis, which includes changes resulting from the oral examination along with an approval sheet available from the Office of Graduate Studies and Research, shall be distributed by the student in the following manner:

- 1) one bound original to the Chairperson and/or Program Director
- 2) one bound copy to the University Library
- 3) one bound copy to the Office of the Dean of Graduate Studies and Research
- 4) one copy to each committee member (binding not required)
- 5) one copy to the student (binding not required)

Change of Program

If admitted student wishes to change to a different program offered at DSU, a request must be made by the student, in writing, to the Dean of the School of Graduate Studies and Research. Upon receipt of the request, the student's file will be forwarded to the Chairperson of the desired program for review. If both the faculty of the desired program and the Dean of the Graduate School approve, the formal transfer of program is made in the Graduate School Office with notification to the former program chairperson, new program chairperson, the student, and the Registrar. The time limit for completion of the degree runs from the date of matriculation in the new program, with credit brought in subject to the appropriate transfer limitation.

Time Limitation

A maximum of seven years is permitted to complete the degree requirements. The Social Work Program allows only four years.

Advanced Standing, Master of Social Work Degree Program Students who have graduated from a Bachelor of Social Work Degree Program accredited by the Council on Social Work Education may be admitted to advanced standing. In the Master of Social Work Program a maximum of fifteen (15) credits may be granted. The faculty of the Master of Social Work Program will determine which course(s) the student may waive. This determination will be made on an individual basis. Only courses in which grades of B or above have been earned within the last six (6) years will be considered.

Summer and Winter Sessions

Some disciplines within the graduate school offer graduate courses during the summer and winter sessions for students who wish to accelerate their degree programs. Students presently enrolled at another college or university while attending summer or winter session at Delaware State University must present proof of enrollment from the other institution where they attend regularly.

Cellular Telephone and Pagers in the Classroom

The use of cellular telephones and pagers is expressly prohibited in academic classrooms and laboratories. All such telephone and pagers, which make noise, must be kept in the off position while attending classes. Students in non-compliance may be asked to leave the classroom. Exceptions to this policy may be approved only by the course instructor.

Notification of FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records: They are:

1. The right to inspect and review the student's education records within 45 days of the day the University receives a request for access.

Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading. Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, or assisting another school official performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his

or her professional responsibility. Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Delaware State University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U. S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-4605

Directory Information

The Family Educational Rights and Privacy Act permits the release of directory-type information to third parties outside the institution without written consent of the student provided the student has been given the opportunity to withhold such disclosure.

The University releases, upon inquiry to third parties outside the University directory information

without written consent of the student.

Directory information at Delaware State University includes:

Name
Address (including e-mail address)
Telephone number
College/school
Classification
Major field of study
Dates of attendance
Enrollment status
Honors
Degree(s) conferred (including dates)

Students who do not wish to have the above information released should fill out an information exclusion card at the Records Office.

Educational Expenses

The tuition and fees listed here are for 2001-2002 only and are subject to change in future years by the action of the Board of Trustees.

GRADUATE STUDENT FEES

Tuition

Rates for the 2001-2002 academic year are as follows: For Delaware residents, \$190.00 per credit hour; for nonresidents of Delaware, \$427 per credit hour.

Other Fees:

Application Fee	\$ 30.00
Activity Fees*	\$ 40.00
Technology Fee.	\$ 30.00
Residential Fee** (per term)	\$110.00
Registration Fee (per term)	\$ 50.00
Late Registration Fee (per term)	\$ 40.00
Sustaining Fee*** (per term)	\$ 20.00
Graduation Fee	\$ 90.00

- * Entitles full-time students to the same benefits as undergraduate students (except medical); entitles part-time students to receive a card for use of the library.
- ** Includes the activity fee and entitles graduate students residing on campus to all benefits as undergraduate students, including health services and insurance. Fee does not include regular room charges.
- *** Charged to graduate students who have completed all course work for the Master's degree except the thesis. All students in this category must register in sustaining status.

Housing and Living Expenses

Matriculating graduates students are offered an exclusive housing opportunity with the University Courtyard Apartments located within a mile of the main campus. Students interested in residing there must contact the manager of the complex directly at:

University Courtyard Apartments
Manager
430 College Road
Dover, Delaware 19901.

Rents for the 12 month apartment leases are paid directly to the Courtyard.

Graduate students may participate in a variety of meal plans through the University provided by Thompson Hospitality. Students may take their plans at a number of locations around campus. The Office of Student Accounts has information about the various meal plans.

Refund Policy/Bill Adjustment

Graduate students who wish to withdraw officially from a graduate course must complete a Withdrawal Form available in the office of the Chairperson or Director of each graduate program. Withdrawals are not permitted after the date indicated on the Academic Calendar for each term. An official withdrawal will result in a grade of "W." Failure to withdraw officially will result in a grade of "F."

Except for the Application Fee and the Advance Deposit, students withdrawing from a course or the University will be credited for the tuition and fees, if any, in accordance with the following schedule:

Period from the 1st Day of Instruction	Refundable Tuition
Prior to 1 st day	100%
Two weeks or less	80%
After two weeks	No Refund

After the first day of classes, all fees are non-refundable.

Withdrawal refunds for students receiving Title IV Loans will be prorated according to student Financial Aid Regulations. Funds will be returned to the grantor(s) proportionately, in accordance with these regulations.

Withdrawals

Students who voluntarily withdraw from the University will receive a refund in accordance with the refund policy outlined above. Date of withdrawal normally will be the date the withdrawal notice is received by the Registrar.

Drop Fee

Students may drop courses during the first eight (8) weeks of the current semester. Only in exceptional cases and with the permission of the Provost and Vice President for Academic Affairs will a student be permitted to drop a course later than the eight-week drop period. A Drop Fee of \$10.00 per course will be assessed to effect a change in registration. The change in registration is effective on the date the form is submitted to the Records Office.

Payment of Fees

All tuition and fees must be paid by July 10 for the fall semester and by December 10 for the spring term. Payments may be made by VISA, MasterCard, Discover Card, certified/cashier's check or money order payable to Delaware State University. Payments in cash must be made in person to the University cashier. **DO NOT SEND CASH IN THE MAIL.** Certified/cashier's checks or money orders should be made payable and mailed to:

Delaware State University
P. O. Box 820033
Philadelphia, Pa 19182-0033

All payments sent by mail should include the student's name and social security number. Checks drawn on out of state banks must be a cashier or certified check.

Correspondence or credit card payments should be mailed to:

Delaware State University
Attn: Cashier
1200 N. Dupont Highway
Dover, Delaware 19901-2277

All authorized third-party billings such as military tuition assistance, vocational rehabilitation, veteran's rehabilitation assistance, tuition exchange and other programs must be submitted and approved by the manager of the student accounts office.

Students are officially registered for courses only when they have complied with all of the procedures applying to registration, including full payment of tuition and fees, or satisfactory financial arrangements through the Office of Student Accounts and the validation of the student identification cards.

Student Health Insurance

All full-time registered students taking twelve (12) or more credit hours are automatically enrolled in a health insurance plan that covers sickness and injury.

Students must actively attend classes for at least the first thirty-one (31) days for coverage to be in effect.

Contact the Student Health Service for additional information on available services.

Deferred Payment Plan

Delaware State University offers a deferred payment plan through Tuition Management Systems (TMS). This plan offers payment choices that will help you afford your education expenses over the semester or year in your choice of 4 or 5, 10 or 12 interest-free monthly payments. Your only cost for the interest-free monthly payment option is a \$100 enrollment fee for both fall and spring or \$75 per semester. Education payment life insurance is included without additional charge.

Delaware State University understands that education expenses are easier to pay when spread over monthly payments. Our **Interest-Free Monthly Payment Option** is more affordable than one large semester payment and helps limit or eliminate borrowing.

The enrollment fee includes personal and professional service from Education Payment counselors, toll-free, six days a week, and automated account information 24 hours a day,

through web access. Enrolling makes you eligible for one of six annual \$1,000 Tuition Management Systems Scholarships.

An additional late charge of \$30 will be assessed after the five (5) day grace period for failing to pay any monthly installment in full when due. Late and/or missed payments will result in being ineligible for further participation in the plan.

All financial aid (excluding work study), approved bank loans and credit balances from prior semesters should be credited to the student's account before calculating the deferred payment amount.

Students on the deferred payment plan are required to have their first payment on file with TMS by July 10th for the fall semester and by December 10th for the spring term.

Monthly payments can be made by check or money order. To save postage, check writing, and avoid late payments, students may have their monthly payments automatically deducted from their checking or savings account at no additional cost. Checking or savings account information should be at hand when enrolling in the Automatic Payment Option over the telephone, or a student may mark the box on their enrollment form to receive Automatic Payment Option enrollment information.

To enroll by telephone, call TMS
1-800-722-4867

Or Enroll On Line At Web Site

www.afford.com

(Late Fees May Apply)

Credit Card Payments are also accepted.

Delinquent Accounts

Delaware State University will not issue a degree or transcript to any student who has a delinquent account. A student with a delinquent account will not be readmitted to the University until all balances are paid.

Students who have not paid all financial obligations by November for fall semester, and April for the spring semester will not be permitted to pre-register for classes for the next term.

Past due accounts will be referred to the State Division of Revenue, the University's collection agencies or attorneys and will be reported to the credit bureau.

Each account will be charged an additional amount that approximates the administrative costs incurred in collecting the past due amount, any attorney fees and reasonable collection costs.

Billings

The University will send monthly statements to students who have an outstanding balance or have activity on their accounts. The statement will show the balance from the prior month, detail activity of the current month, and the ending balance. These statements are mailed on the 25th of the month to the student at the mailing address on file with the Records Office.

Although the University regularly mails bills to students, it cannot assume responsibility for their receipt. Students are reminded that it is their responsibility to notify the Records Office of any change and/or correction to an address.

If a bill is not received on or before the beginning of each semester, it is the student's responsibility to obtain a copy of the bill from the Office of Student Accounts, Monday through Friday 9:00 a.m. - 4:00 p.m.

The first bill mailed prior to the beginning of the semester may not include deductions of grants, scholarships or loans.

Payments and financial aid awards applied to accounts will be listed in the credit column. Questions pertaining to bills should be directed to the Student Accounts Office (302) 857-6240/6241.

Questions pertaining to financial aid credits or adjustments on monthly statements should be directed to the Financial Aid Office at (302) 857-6250.

Cashier Services

The Cashier's Office is located on the first floor of the administration building. The hours of operation are 9:00 a.m. to 4:00 p.m.

Students may make payments on their accounts at the Cashiers's Office. The following

services are available to students currently enrolled at Delaware State University:

1. Payment can be made on a student account by check, money order, cash and credit card (Visa, Mastercard & Discover), and debit card (including MAC).
2. All student paychecks may be picked up from the cashier's office between the hours of 10:00 a.m. and 4:00 p.m. on payday.
3. Student refund checks will be released to students with valid student identification cards.

The University recommends that students use one of the local banks for their banking needs. Automatic teller machines (ATMs) are located on the campus in the Martin Luther King Student Center and the William C. Jason Library. Please note: Any check made payable to Delaware State University and the student must be applied to the student's account. Any amount that exceeds what the student owes may be refunded to the student by applying for a refund through the Office of Student Accounts.

Refunds of Credit Balances

Refunds for overpayments or credit balances as a result of dropping a course will be processed thirty (30) days after the end of late registration, or within fourteen (14) days during the semester. Refunds cannot be issued from credit card payments. Credit balances will be transferred back to the credit card. All charges and payments must be stated on the account before a refund will be processed. After the refund is processed, students are liable for any additional charges that may result from reductions in financial aid awards and/or other adjustments to tuition and fees.

Students who drop courses may do so online at <http://dsuweb.dsc.edu> or obtain a Drop Slip and return the completed form to the Office of Records. The effective date of the change in registration is the date the change was made online or that the drop slip(s) is filed in the Records Office.

Students due a refund will be eligible for a refund in accordance to the following policy:

Period from the 1st Day of Instruction	Refundable Tuition
Prior to 1 st day	100%
Two weeks or less	80%
After two weeks	No Refund

After the first day of classes, all fees are non-refundable.

Financial Aid

Delaware State University applicants for financial aid must use the Free Application for Federal Student Aid (FAFSA). The FAFSA is used to determine the need for financial assistance and as a mechanism for non-need based and need based loan certification. Further, all students applying for scholarships, grants and tuition fee waivers must file and complete the financial aid process before any form of aid can be applied to the students account.

Financial Aid at the University is made available for graduate students through tuition fee waivers, loans and part-time employment opportunities.

Students applying for Financial Aid must meet the United States Department of Education, as well as, the University's Satisfactory Progress requirements to be considered for and to continue to receive financial aid during their program of study.

Delaware State University requires a student to:

1. Complete at least 24 hours by the end of an academic year, including summer school.
2. Have at least a 1.70 cumulative GPA each academic year including summer school and by the end of the second academic year maintain a cumulative GPA of 2.0 until graduation.
3. For undergraduates, the program of study must not exceed 182 attempted credit hours.
4. Student (undergraduate and graduate) who attend as part-time (1-11) credit hours must complete each term respectively by maintaining the attempted enrollment status.

5. New transfer students who are accepted on probation must submit an appeal letter with a signed participation agreement with Academic Support Services.

Students who do not meet the criteria for Satisfactory Academic Progress may appeal in writing to the Director of Financial Aid for reconsideration of reinstatement. The student must provide documentation with the statement of appeal indicating any special circumstances (e.g. medical records, accident report, medical bills, change in program of study, etc.) which may have interfered with meeting eligibility.

Students cannot receive financial aid for audited classes.

Federal Family Educational Loan Program (FFELP)

Considered one form of self-help aid. Under the FFELP Loan Program students are able to borrow directly from choice lenders. Students may apply by completing the Free Application for Federal Student Aid (FAFSA) and ensuring that the results of the application (Student Aid Report) are submitted to the Financial Aid Office. The financial aid award will automatically include a loan offer based on the students' level of eligibility. FFELP loans are either subsidized or unsubsidized. A subsidized loan is awarded on the basis of financial need. The federal government pays the interest on the loan until the borrower begins repayment and/or during authorized periods of deferment.

A student can borrow an unsubsidized loan regardless of financial need. Interest will be charged from the time the loan is disbursed until it is paid in full. If the interest is allowed to accumulate, the interest will capitalize - that is, the interest will be added to the principal amount of the loan which will increase the amount of the borrower's outstanding balance.

A dependent undergraduate student with freshman status (0-29 earned credit hours), enrolled in an approved program of study for at least a full academic year, may borrow up to \$2625 per year. The student may borrow

\$3,500 per year with sophomore status (30-59 earned credit hours) and enrolled for a full academic year. Students with junior and senior status (59-120 earned credit hours) may borrow up to \$5,500.

An independent undergraduate student or dependent student whose parents are unable to get a PLUS (Parents) loan can borrow up to \$6,625 as a first-year student in a program of study for at least a full academic year (at least \$4,000 of this amount must be in unsubsidized loans) \$7,500 after completion of the first year of study (\$4000 of this amount must be unsubsidized) and \$10,500 if two years of study are completed (at least \$5,000 must be unsubsidized). Generally, graduate students may borrow up to \$18,500 each academic year. Only \$8500 of this amount can be in a subsidized Stafford loan. The total debt you can have outstanding from all Stafford loans combined as a graduate student is \$138,500. Only \$65,500 of this amount may be subsidized loans. Remember that the debt limit includes any Stafford loans received for undergraduate study.

PLUS Loans are available to the parents of dependent students. The parent may borrow up to the remaining cost of attendance.

To apply for a FFELP loan, students should submit a Free Application for Federal Student Aid to U.S. Department of Education by February 1 for the Fall Semester and by October 1 for the Spring Semester.

Federal guidelines stipulate that the University must determine that the student has maintained eligibility for the loan before each disbursement of loan proceeds. Reaffirmation of loan eligibility includes establishing that the student has maintained satisfactory academic progress; has at least half-time enrollment status and progressed to next classification level for increased annual borrowing amounts. Students who do not progress to the next classification level must borrow at the prior year level. For example, a student with 0-29 earned credit hours is classified as a freshman. A freshman may borrow \$2625 per year but may not borrow at

the next level (\$3500 per year) until he/she obtains Sophomore status (completion of 29 earned credit hours.

Federal Loans and Grants Federal College Work Study Program (FWS)

A work study job can be a source of valuable work experience as well as financial aid. Under the work study program, the employer pays a small part of the student's wages, and the government pays the rest. Work study positions are on campus. Students can work part-time while they are in school, and they can work full time during the summer and other vacation periods. The basic pay rate is usually the current minimum wage. This may vary, depending on the skill and experience needed for the job.

FEDERAL PERKINS LOAN PROGRAM

Under this program, students can borrow from the federal government through the university. Each participating institution receives a certain amount of loan funds. The financial aid administrator distributes these funds according to need . Depending on when you apply, your level of need and the funding level of the school you can borrow up to \$3000 for each year of undergraduate study and \$5000 for each year of graduate or professional study.

PROCEDURES FOR APPLYING FOR FINANCIAL AID

Candidates for admission to the university who wish to apply for financial aid should complete the Free Application for Federal Student Aid (FAFSA) no later than February 1st. FAFSA can be obtained from your high school guidance counselor, most public libraries or Office of Financial Aid, Delaware to ensure the results are received before March 1st.

Students currently enrolled should apply on or before January 30th for assistance during the succeeding year.

Applications filed later than the deadline indicated above will receive consideration for funds available.

Financial Aid applicants should note that FAFSA should be completed and mailed according to the instructions in January prior to the academic year the student expects to receive financial aid. Financial aid award announcements will begin in March for the Fall semester and continue as students apply for Spring semester.

Your financial aid application must be submitted to Delaware State University electronically. To ensure that we receive your application from the Department of Education, use our School Code 001428 in the section requesting the school's address and Title IV School Code.

**ALL FINANCIAL AID PROGRAMS ARE
MANAGED IN ACCORDANCE WITH
FEDERAL, STATE AND INSTITUTIONAL
REGULATORY REQUIREMENTS.**

UNIVERSITY RESIDENCY: IN-STATE STATUS REGULATIONS

The State of Delaware Legislature has established a lower rate of tuition for students who are Delaware residents. These regulations define eligibility requirements for in-state status classification. All students at Delaware State University shall be assigned in-state or out-of-state status classification consistent with these regulations. A Delaware domicile must be established for in-state status.

In-State Status Classification Rules

1. Domicile shall mean a person's true, fixed, and permanent home. It is the place at which one intends to remain indefinitely and to which one intends to return when absent.
2. As one element of domicile, a student must reside in Vermont continuously for one year prior to the semester for which in-state status is sought.

3. A residence established for the purpose of attending DSU shall not by itself constitute domicile.
4. An applicant becoming a student within one year of first moving to the State shall have created a refutable presumption that residency in Delaware is for the purpose of attending DSU and/or acquiring in-state status for tuition purposes.
5. A domicile or residency classification assigned by a public or private authority neither qualifies nor disqualifies a student for DSU in-state status. Such classification may be taken into consideration, however, in determining the student's status at DSU.
6. It shall be presumed that a student who has not reached the age of twenty-four (24) holds the domicile of his/her parents or legal guardian(s).
7. Receipt of financial support by a student from his/her family shall create a refutable presumption that the student domicile is with his/her family, regardless of whether the student has reached the age of 24.
8. A student who has not reached the age of 24 whose parents are legally separated or divorced shall be refutably presumed to hold the domicile of the parent with legal custody.
9. A student of parents legally separated or divorced may be granted in-state status if a non-custodial or joint custodial parent is domiciled in Delaware and has contributed more than 50 percent of financial support for at least one year prior to the semester for which in-state status is sought.
10. The burden of proof as to eligibility for in-state status rests with the student. Eligibility must be established by clear and convincing evidence.

In-State Status Classification Documentation

11. The student must submit with the applicant form all relevant information
12. The classification decision shall be based upon information furnished by the student, information requested of the student, and other relevant information available consistent with University policies and procedures and legal guidelines.
13. Testimony, written documents, affidavits, verifications, and/or other evidence may be requested.
14. The student's failure to produce information requested may adversely affect the decision for in-state status.
15. A student or other furnishing information may request the deletion from documents of irrelevant private data.

In-State Status Classification Appeals

16. The decision or others furnishing information may request the deletion from documents of irrelevant private data.

In-State Status Reclassification

17. A student who does not qualify for in-state status may reapply for such classification each subsequent semester.
18. In-state status classification becomes effective the first semester following the date of successful application.

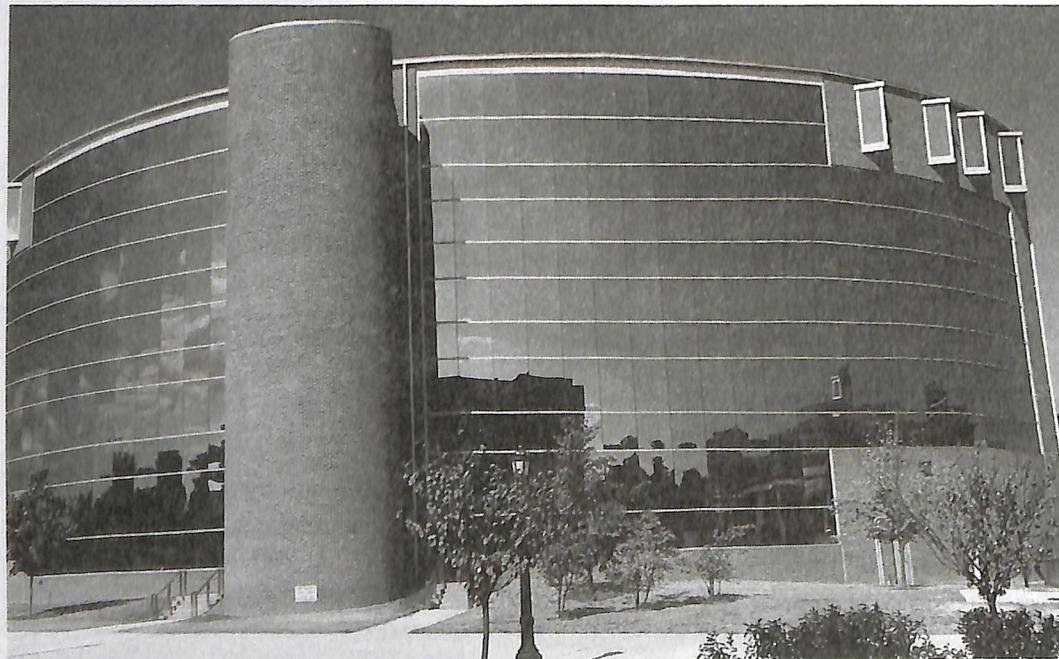
Re-Examination of Classification Status

19. Classification status may be re-examined upon the initiative of the Residency Officer in the exercise of sound discretion. Circumstances such as periodic enrollment may be cause for re-examination.

Adopted by the Board of Trustees, December 14, 1999.



Dr. William B. DeLauder, DSU president, and the 2001 Commencement keynote speaker, philanthropist and comedian Dr. Bill Cosby chat prior to the ceremony. Other recent commencement speakers have included attorney Johnny Cochran, author/educator Dr. Betrice Berry, and civil rights leader Dr. Dorothy Height.



The William C. Jason Library contains more than 209,000 printed volumes and more than 110,000 other resource materials. The library also contains the Office of the DSU President, the DSU Arts Center/Gallery, and a computer center.

GRADUATE PROGRAM IN PLANT SCIENCE

Professor

Edward R. Jones, Ph.D., The Pennsylvania State University

Hazell Reed, Ph.D., University of Arkansas

Research Professor

Arthur O. Tucker, Ph.D. Rutgers University

Associate Professors

Richard A. Barczewski, Ph.D. University of Maryland (Program Director)

Randel Peiffer, Ph.D. The Pennsylvania State University

Cyril Broderick, Ph.D., University of New Hampshire

OBJECTIVES:

The Department of Agriculture and Natural Resources Graduate Program prepares students for career opportunities and cooperative ventures with federal and state agencies, private industry, and nearby horticultural institutions. The program strives to generate research designed to solve problems encountered in the study, production and manipulation of plant species and in evaluating various aspects of the plant sciences including plant production, physiology, culture and taxonomy.

ADMISSION AND DEGREE REQUIREMENTS:

In addition to the general Graduate School Requirements, potential candidates must have an undergraduate degree in plant sciences or the equivalent, with (30) credits from the following list of courses: General Botany, Horticultural Plant Materials, Statistics/Biometrics, Organic Chemistry, Biochemistry, Field Crops, Forage Crops, Ecology, Plant Systematics, Soils, Entomology, Weed Science, Genetics, Plant Physiology, Molecular Biology, Plant Pathology and Plant Propagation.

Degree Requirements:

Master of Science Degree Program in Plant Science

The Masters Degree in Plant Science is designed to prepare students for advanced study in plant culture, physiology, management and/or systematics. The degree requires a supervised research program and a thesis. A total of 31 credit hours are required for the degree, including 22 hours of course work and 9 credit hours of research.

FACILITIES:

The Department of Agriculture and Natural Resources is housed in the W.W. Baker Building, which contains classrooms, offices, and laboratories that house the program. Other facilities include the Claude E. Phillips Herbarium and a 6,000 square foot Research Greenhouse. The Claude E. Phillips Herbarium contains the largest collection of preserved

plant specimens at any historically black institution and is the largest public herbarium east of the Mississippi River. A research greenhouse is located to the North side of the Baker building. Several fields and research plots are located on the campus grounds. Hickory Hill Farm, a forage research farm is located approximately 7 miles away in Cheswold, Delaware.

FACULTY:

The faculty in the Department of Agriculture and Natural Resources are dedicated to their fields of study and have a diverse background. Specific areas of research interest of the plant science faculty include plant systematics, plant physiology, tissue culture, forage production, forage utilization, and minor crop production. Active research programs exist within these areas and offer graduate students many opportunities for active learning and discovery

CURRICULUM

Core Courses (13 hours) All students within the major are required to take the following courses.

- 28-551 Experimental Design (3 hours)
- 28-572 Department Seminar (1 hour) attendance required each semester, credit given during the semester that the thesis research is presented.
- 28-560 Research Problem in area of Specialization (3 hours)
- 28-561 Thesis Research (6 hours)

Elective Courses by Advisement (18 hours) Other Graduate level courses by advisement

- 22-501 Organismal Biology (3 hours)
- 22-571 Population Biology (3 hours)
- 22-641 Evolution of Vascular Plants (3 hours)
- 22-642 Cell and Molecular Biology (3 hours)
- 22-611 Advanced Genetics (3 hours)
- 23-521 Biochemistry (3 hours)
- 28-541 Plant Anatomy and Morphology (3 hours)
- 28-581 Advanced Forage and Minor Crop Production and Utilization (3)
- 28-531 Crop Biochemistry, Physiology, Ecology (3)
- 28-511 Plant Breeding (3)

Plant Science graduate student George A. Jones III and Associate Professor Dr. Cyril E. Broderick inspect okra plants that the student is studying for his thesis.



COURSE DESCRIPTIONS

29-511 PLANT BREEDING.

An introduction to and application of plant breeding methodology and selection. Various methods utilized in plant breeding programs, and an understanding of heredity, hybridization and selection of various plant species will be discussed. Prerequisites: 3 credits in Crop Production. 3 credit hours.

28-531. CROP BIOCHEMISTRY, PHYSIOLOGY AND ECOLOGY.

An advanced study of the physiology and ecological factors affecting the productivity of crop plants and their response to environmental stress. Prerequisites: 3 credits in Crop Production and 3 credits in Plant Physiology. 3 credit hours.

29-541. PLANT ANATOMY AND MORPHOLOGY.

A study of the structure and function of major plant cells and tissues and the morphology of organs of vascular and nonvascular plants. Laboratories will focus upon comparisons among taxa and the characteristics of major plant groups. Prerequisite: General Biology 101 and 102 and Plant Physiology. 3 credit hours.

28-551. EXPERIMENTAL DESIGN.

A study of the use of advanced experimental designs in planning, analyzing and interpreting experimental data. Three one-hour class periods per week. Prerequisite: 3 credits in statistics/biometrics. 3 credit hours.

28-560. RESEARCH PROBLEM IN AREA OF SPECIALIZATION.

A special problems course designed to provide research training in the area of the students field of study and specifically related to the needs of their research program. 3 credit hours.

28-572. DEPARTMENT SEMINAR.

A seminar, meeting once per week with faculty and student presentations on their research and/or other relative scientific topics. 1 credit hour.

29-581. ADVANCED FORAGE AND MINOR CROP PRODUCTION AND UTILIZATION.

An advanced application of forage and minor crop production and utilization. The course will include visits to and analysis of various forage and minor crop operations in the Delmarva Area. Prerequisites: None. 3 credit hours.

GRADUATE PROGRAM IN NATURAL RESOURCES

Associate Professors

Richard A. Barczewski, Ph.D. University of Maryland (Program Director)
William Daniels, Ph.D. Mississippi State University
Michael A. Reiter, Ph.D. The University of Virginia
Kevina Vulinec, Ph.D. University of Florida

OBJECTIVES:

The Department of Agriculture and Natural Resources Natural Resource Master of Science program was developed to provide advanced studies in natural resources for students who wish to specialize in this area. To generate research designed to address local problems encountered in the study, management, or manipulation of natural resource areas. To provide opportunities for advanced study in disciplines in natural resource studies that are not readily available at other local colleges and universities. And to provide the opportunity for cooperative ventures with federal and state government agencies, private industry, and other interested organizations (i.e. grant proposals, internships, service learning relationships, etc.)

ADMISSION AND DEGREE REQUIREMENTS:

In addition to Graduate School requirements the candidate must have a bachelor's degree in some aspect of natural or applied field science (such as natural resources, wildlife management, fisheries, a field oriented biological science degree or similar), including thirty (30) credits from the following courses: Aquaculture, Biometrics, Botany, Dendrology, Ecology, Ecosystems, Environmental Law/Policy, Fisheries Science, Ichthyology, Forestry, Land Use Planning, Limnology/Aquatic Ecology, Mammology, Marine Biology, Ornithology, Population Biology, Resource Management, Soil & Water Management, Wetlands Biology, Wildlife Management, Zoology. Any deficiencies in course background identified by a student's advisory committee can be made up, although courses taken to fill deficiencies cannot be applied to the graduate program for credit.

Degree Requirements:

Master of Science Degree Program in Natural Resources

The Masters degree in Natural Resources is designed to prepare students for advanced study in the various disciplines in the field. The degree requires a supervised research program and a thesis. A total of 30 credit hours are required for the degree, including 24 credit hours of course work and 6 credit hours of research.

FACILITIES:

The Department of Agriculture and Natural Resources is housed in the W.W. Baker Building, which contains classrooms, offices, and laboratories that house the program. Other facilities include the Claude E. Phillips Herbarium. The Claude E. Phillips Herbarium contains the largest collection of preserved plant specimens at any historically black institution and is the largest public herbarium east of the Mississippi River. Several fields and forest lands and research plots are located on the campus grounds. An aquaculture facility with in excess of 30 ponds and an aquatic ecology laboratory. In addition, collaborative efforts with various state and federal parks and natural areas allow for a wide range of project activities throughout the state.

FACULTY:

The faculty in the Department of Agriculture and Natural Resources are dedicated to their fields of study and have a diverse background. Specific areas of research interest of the Natural Resource science faculty include wildlife management, wetland ecology, rainforest ecology and aquaculture. Active research programs exist within these areas and offer graduate students many opportunities for active learning and discovery.

CURRICULUM

Core Courses (20 hours)

- 30-502 Habitat Management and Restoration: Theory (3)
- 30-503 Habitat Management and Restoration: Practice (3)
- 23-504 Population Biology (3)
- 29-551 Experimental Design (3)
- 29-572 Department Seminar (2) attendance required each semester, credit given during semester that thesis research is presented.
- 28-560 Thesis Research (6)

Additional graduate courses in supporting subjects (approximately 3-4 courses) such as Advanced Wildlife Biology, Wetlands Biology, etc. shall be determined and approved by the candidate's advisory committee, in consultation with the student, based on area of specialization and career goals.

New courses include, Advanced Aquaculture, Aquatic Animal Physiology, Special Problems in Natural Resources.

COURSE DESCRIPTIONS

30-502 HABITAT MANAGEMENT AND RESTORATION: THEORY.

An exploration of advanced theory and methodology for the establishment, maintenance and restoration of aquatic and terrestrial habitats. 3 credit hours.

30-503 HABITAT MANAGEMENT AND RESTORATION: PRACTICE.

Application of theory and methodology presented in the theory course to field projects involving data collection and interpretation. 3 credit hours.

29-504 ADVANCED AQUACULTURE.

Advanced aquaculture will include environmental, social and legal considerations; various culture systems; water quality management (as related to organism cultured and system type); feeds and nutrition; health management; and economics and marketing. The course will include literature research and research projects as well as assigned laboratory work. Three hours lecture and one two hour laboratory per week. 4 credit hours.

29-505 AQUATIC ANIMAL PHYSIOLOGY.

A study of the basic physiological systems in fishes and crustaceans and their relationships to development, growth and reproduction. Three hours lecture and one two hour laboratory per week. 4 credit hours.

29-506. EXPERIMENTAL DESIGN.

A study of the use of advanced experimental designs in planning, analyzing and interpreting experimental data. Three one-hour class periods per week. Prerequisite: 3 credits in statistics/biometrics. 3 credit hours.

29-507. RESEARCH PROBLEM IN AREA OF SPECIALIZATION.

A special problems course designed to provide research training in the area of the students field of study and specifically related to the needs of their research program. 3 credit hours.

29-508. DEPARTMENT SEMINAR.

A seminar, meeting once per week with faculty and student presentations on their research and/or other relative scientific topics. 1 credit hour.

29-642. ADVANCED WILDLIFE BIOLOGY.

Advanced study of wildlife populations including the application of computers to field data analysis and theoretical models. Research techniques of project planning, record keeping, wildlife literature review, and scientific writing. Environmental management using remote sensing and reconnaissance field mapping, habitat analysis and evaluation, sustained yield, and wildlife damage control. Prerequisite 30-403. 3 credit hours.

29-643. MARINE BIOLOGY.

A broad overview of the biota of marine environments, examining the ecological structure and function of oceanic, coastal, and estuarine habitats. Aspects of physical, chemical, and

geological oceanography will also be covered pertinent to biological communities and adaptations. Lectures, demonstrations, laboratories and two-weekend field trips. Prerequisites: Ecology 205 or consent of instructor. 3 credit hours.

29-644. WETLANDS BIOLOGY.

A broad overview of the ecological structure and function of wetlands environments, emphasizing comparisons of different wetland types in terms of hydrology, soils, biogeochemistry, biota, and ecological processes. Human interactions with wetlands will be examined in terms of wetlands values and functions, delineation, classification, inventory, regulations, mitigation, compensation, and management. Lectures, demonstrations, laboratories, and two weekend field trips. Prerequisites: Ecology 205 or consent of instructor. 3 credit hours.



Associate Professor Dr. Michael Reiter and Natural Resources graduate student Brendan Brock discuss possible thesis options at the St. Jones Nature Reserve, southeast of Dover.

GRADUATE PROGRAM IN BIOLOGY

Professors:

Fatma Helmy, Ph.D., Tulane; Cell Biology, Lipid Metabolism, Histochemistry
Gustav Ofosu, Ph.D., Michigan State; Cell Biology, Cytochemistry (Program Director)
Arthur Tucker, Ph.D., Rutgers; Botany

Associate Professors:

Leonard Davis, University of Illinois Medical School; Molecular Neuroscience
Stan Ivey, Ph.D., University of Denver, Molecular Biology
Andrew Lloyd, Ph.D., Virginia, Microbiology
Robert MacBride, Ph.D., Case Western Reserve, Developmental Biology
Charlie Dean Wilson, Ph.D., Delaware; Molecular Biology

Assistant Professors:

Teresa Singleton, Ph.D., University of Maryland at Baltimore; Molecular Genetics

OBJECTIVES:

The Department of Biological Sciences prepares students for career opportunities in state and federal agencies, health care, private industry, research, and teaching. The program strives to develop a clear and unbiased method of thinking, an appreciation and understanding of the natural world, and a knowledge of biological principles needed to make intelligent and effective judgments. Many graduates continue their studies in doctoral programs.

ADMISSION AND DEGREE REQUIREMENTS:

For admission to the Master of Science Degree Program applicants must have a bachelor's degree in Biological Science or a related field from an accredited college or university. Applicants must have earned a cumulative grade point average of at least 2.75 with 3.00 minimum in the major. Official scores on the Graduate Record Examination (General Test and Biology Test) must be submitted. Test scores must not be more than five years old.

Degree Requirements:

A. *Master of Science Degree Program in Biology*

The Master's Degree Program in Biology is designed to prepare students for further advanced study in Biology, to expand the scientific backgrounds and competencies of secondary school teachers, and to advance the careers of persons in industry, government agencies, and other related positions. The degree requirements include and emphasize a research thesis based on individual laboratory or field study in Biology. The program requires 30 credits and is designed to allow completion over a three-year period on a part-time basis.

B. *Master of Science Degree Program in Biology Education*

The Master's Degree Program in Biology Education is designed for secondary or middle school teachers who desire a course of study which is strongly based in Biology, yet includes coverage of current areas of significance in Science Education. The program requires 36 credits and is designed to allow completion over a three-year period on a part-time basis. It does not certify the student to teach.

FACILITIES:

The Department of Biological Sciences is housed in the Mishoe Science Center which contains laboratory classrooms, prep rooms, faculty offices, and well equipped research laboratories, animal rooms, a research greenhouse. In addition, the department is a cosponsor of the Claude E. Phillips Herbarium. The herbarium is the largest collection of preserved plant materials at any historically black institution in the country and the only such collection on the Delmarva Peninsula. These facilities provide strong support capabilities in teaching and research areas of modern Biology.

FACULTY:

The Department of Biological Science has a dedicated and well-prepared faculty with diverse backgrounds and areas of specialization. All faculty have published in their respective fields, and they maintain active research involvement. The faculty are serious and talented teachers. The small class size insures that students interact closely with faculty in the learning experience. Scholarly involvement in research keeps the faculty current and able to offer exciting research opportunities to the students in a variety of areas.



Kimberly Dyer, who does her graduate studies research in the DSU Biotechnology Lab, separates DNA from water.

CURRICULUM FOR MASTER OF SCIENCE IN BIOLOGY

First Year

First Semester

23-501 Organismal Biology	3
23-504 Population Biology	3

Second Semester

23-502 Cell & Molecular Biology	3
24-521 or Biochemistry	3
24-510 Environmental Chemistry	3

Second Year

Statistics or Computer Science	3
Biology Elective	3
Biology Elective	3
Biology Elective	3
Biology Elective	3

Third Year

23-690 Thesis Research	3
23-691 Thesis Research	3

TOTAL HOURS	36	(minimum)
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CURRICULUM FOR MASTERS OF SCIENCE IN BIOLOGY EDUCATION

First Year

First Semester

Organismal Biology	3
Population Biology	3

Second Semester

Cell & Molecular Biology	3
Analysis of Research on Teaching	3

Summer Semester

Field Experience for Science Teachers or Statistics	3
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Second Year

Biology Elective	3
Laboratory and Field Teaching Methods	3

Computers in Science Education	3
Biology Elective	3

Third Year

Biology Elective	3
Biology Elective	3

Biology Elective	3
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TOTAL HOURS	36	(minimum)
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COURSE DESCRIPTIONS

All courses require that students have, as minimal prerequisites, one year of Biology courses on the undergraduate level. Additional prerequisites are noted in each course description. While a degree in Biological Sciences or its equivalent is an admission requirement for the graduate degree programs in Biology, not all courses require this extensive background. Certain courses will thus also be appropriate for graduate students in other fields who may not have undergraduate degrees in Biology.

501. ORGANISMAL BIOLOGY.

The morphology, physiology, genetics, development, and behavior of selected plants and animals. Two lectures and one two-hour laboratory per week. Credit, three hours.

502. CELL AND MOLECULAR BIOLOGY.

A study of cellular and subcellular biology with emphasis on biochemistry, molecular biology, molecular genetics, and development. Two lectures and one two-hour laboratory per week. Credit, three hours.

504. POPULATION BIOLOGY.

A study of Biology above the level of the individual with emphasis on ecology and evolution. Two hours lecture and one two-hour laboratory. Credit, three hours.

505. STATISTICS FOR BIOLOGY.

A survey of statistical methods used in biological research. Topics include parametric and nonparametric statistics, aspects of experimental design, and use of the computer in statistical analysis. Two lectures and one two-hour laboratory per week. Credit, three hours.

507. LABORATORY/FIELD TEACHING METHODS IN BIOLOGY.

A practical experience in planning, developing, organizing and conducting laboratory and field activities in the life sciences. Two two-hour class periods. Credit, three hours.

510. INTERPRETING THE NATURAL ENVIRONMENT.

An introduction to interpretive natural history, including the design and preparation of trails, exhibits, and interpretive literature. Two lectures and one two-hour laboratory period per week. Credit, three hours.

552. ENVIRONMENTAL EDUCATION WORKSHOP.

Opportunity for practical experience in development and implementation of environmental education concepts from pre school to adult. May be elected whenever offered. Credit, three hours per semester.

553/554. PEOPLE AND THE PLANET.

A series of lectures and seminars designed to help the general student to understand the relationships between man and his environment, with emphasis on planning for the future through democratic decision making processes. Credit, three hours per semester.

555. POPULATION-ENVIRONMENT CURRICULUM, K-12.

The integration of a conceptual framework for population-environmental studies in school curriculum as a part of a program in environmental studies. Prerequisites: consent of instructor. Credit, three hours.

601. CELL ULTRASTRUCTURE.

Principles and techniques used to study the morphological changes in various organ systems at the ultrastructural level taking the cell as the basic unit. Prerequisite: Cell Biology. Four hours of lecture and laboratory. Credit, three hours.

602. RADIATION BIOLOGY.

An introduction to the physical basis of radioactivity and its effects on biological matter. Special emphasis is given to genetic effects of radiation. Two lectures and one two-hour laboratory period per week. Prerequisites: 23-101/102 and 24-101-102. Credit, three hours.

605. CELL MORPHOGENESIS.

Current topics related to basic processes of molecular aspects of differentiation and development in living cells. Prerequisite: Cell Biology. Two hours lecture, two hours lab. Credit, three hours.

611. ADVANCED GENETICS.

An in depth exploration of principles of modern genetics as they apply to plants, animals, and micro-organisms ranging from the molecular to the population level. Prerequisite: A course in Genetics or permission of the instructor. Four hours lecture/laboratory. Credit, three hours.

615. HUMAN GENETICS.

A study of the principles of genetics as they apply to humans. Two lectures and one two-hour laboratory per week. Prerequisite: a course in genetics or permission of the instructor. Credit, 3 hours.

621. ADVANCED MICROBIOLOGY.

The course will emphasize the role of micro-organisms in the diseases of man. The history of microbiology, and the anatomy, physiology, ecology, and applications of bacteria will be emphasized. Two one hour lectures, one two-hour lab. Prerequisite: Microbiology/Bacteriology or consent of the instructor. Credit, three hours.

625. IMMUNOLOGY.

A study of cellular, humoral, and molecular aspects of immune reactions. There will be an introduction to immunobiology and immunochemistry. The use of antigen-antibody reactions will be emphasized. Prerequisite: (Microbiology or Bacteriology). Four hours of lecture and laboratory each week.

631. CELL BIOCHEMISTRY/HISTOCHEMISTRY.

A comparative and correlative study of cellular chemistry as related to the physiological functions and metabolism of various tissues and organs from a diverse range of vertebrates. Some human biomedical correlations will be included. Demonstrations and laboratory exercises. Two lectures and one two-hour laboratory per week. Prerequisites: Histology and organic chemistry or biochemistry, or the consent of the instructor. Credit, three hours.

635. METHODS IN EXPERIMENTAL BIOLOGY.

An introduction to the history, development, theory and practical application of a variety of techniques (simple and sophisticated) in quantitative and qualitative biochemical analysis. In depth emphasis will be given to techniques such as chromatography, densitometry, and in situ and in vitro enzymology. This course is intended to provide laboratory experience in selective aspects of modern biotechnology and their applications in bioassays. Prerequisites: consent of the instructor. Four hours of lectures/laboratory per week. Credit, three hours.

641. EVOLUTION OF VASCULAR PLANTS.

Advanced study of the evolution and classification of Tracheophyta, including traditional and experimental evidence for phylogenetic diversity. Two lectures and one two-hour laboratory per week. Credit, three hours.

642. ADVANCED WILDLIFE BIOLOGY.

Advanced study of wildlife populations including the application of computers to field data analysis and theoretical models. Research techniques of project planning, record keeping, wildlife literature review, and scientific writing. Environmental management using remote sensing and reconnaissance field mapping, habitat analysis and evaluation, sustained yield, and wildlife damage and control. Prerequisite 30-403. Credit, three hours.

643. MARINE BIOLOGY.

A broad overview of the biota of marine environments, examining the ecological structure and function of oceanic, coastal, and estuarine habitats. Aspects of physical, chemical, and geological oceanography will also be covered pertinent to biological communities and adaptations. Lectures, demonstrations, laboratories and two week-end field trips. Prerequisite: Ecology 205 or consent of instructor. Offered in alternate years. Credit, three hours.

644. WETLANDS BIOLOGY.

A broad overview of the ecological structure and function of wetlands environments, emphasizing comparisons of different wetland types in terms of hydrology, soils, biogeochemistry, biota, and ecological processes. Human interactions with wetlands will be examined in terms of wetlands values and functions, delineation, classification, inventory,

regulations, mitigation, compensation, and management. Lectures, demonstrations, laboratories, and two weekend field trips. Prerequisite: Ecology 205 or consent of instructor. Offered in alternate years. Credit, three hours.

645. BIOGEOGRAPHY.

Study of the spatial distribution of organisms and the role of limiting factors in the development of world biomes. Discussion includes genetic, anthropologic, and social implications of the loss of habitats and biotic diversity. Four hours of lecture, discussions, and laboratory per week. Course includes required week-end field trips. Credit, 3 hours.

646. TOXICOLOGY.

A course to integrate biology and chemistry into a useful approach to poisons and pollutants and their control. Methods are developed to express and measure toxicity, predict risks, and illustrate how laws and regulations are developed to communicate risks and control hazards. The student will learn to express the complex mechanics of statistics and to reduce pharmacodynamics to simple graphic representations. Lectures, demonstrations, laboratories, and weekend field trips. Prerequisite: 24-101/102 and Ecology. Credit, three hours.

649. ECOLOGICAL LAND USE PLANNING.

Theory and application of environmental planning from the standpoints of public and private interests. Major topics include terrain analysis and natural and social environments. These serve as the framework upon which the results of change are analyzed and, provide suitable foci for the examination of case studies which are examined. Lectures, demonstrations, laboratories and weekend field trips. Prerequisite: Ecology 205 and Soils 208. Offered in alternate years. Credit, three hours.

651. PROTEINS: STRUCTURES AND MOLECULAR PROPERTIES.

This course will examine the chronological events in the life of a protein. These events include protein composition, biosynthesis, and molecular dynamics. Evolutionary aspects of ancestral proteins will be used to explore the origins of contemporary primary structures. A laboratory will be included to examine the various protein separation schema that are currently used in modern molecular labs. Background in genetics, molecular and cell biology required. Credit, three hours.

666. BIOTECHNOLOGY.

A series of lecture presentations featuring speakers from academics and industry in the expanding field of Biotechnology. An extensive research paper will be required of each student. Credit, 2 hours.

690, 691. THESIS RESEARCH

An in-depth individualized investigation of a research problem conducted under close supervision of the thesis advisor. Includes training in experimental techniques, problem design, testing, data collection, data analysis, and preparation of thesis. University and departmental guidelines are to be followed in preparing and defending the thesis. It is expected that the research will be of sufficient quality to be published as a scholarly paper coauthored by the thesis advisor in an appropriate refereed journal. Three credits each.

GRADUATE PROGRAM IN BUSINESS ADMINISTRATION

Professors

Patrick R. Liverpool, D.B.A., Kent State University, Dean
Yaw A. Badu, Ph.D., University of South Carolina
Winston K. Awadzi, Ph.D., Louisiana State University
Richard F. Bieker, Ph.D., University of Kentucky

Associate Professors

Constant Beugre, Ph.D., Rensselaer Polytechnic Institute
Jan E. Christopher, Ph.D., Howard University
Daeryong Kim, Ph.D., University of Mississippi
Wei Guan, Ph.D., University of Oklahoma
Inam Hussain, Ph.D., CPA, University of Missouri
Young-Sik Kwak, Ph.D., University of Mississippi
Nanda Viswanathan, Ph.D., Ohio State University

OBJECTIVES

The Master of Business Administration (MBA) Degree Program is designed for working professionals and aspiring managers from a wide range of backgrounds who wish to advance their careers or acquire the knowledge and skills necessary to succeed as managers and leaders in the new economy. Candidates integrate and apply business and organizational concepts and techniques in the functional areas of organizational management. The program is flexible enough to accommodate both full-time and part-time (professional and accelerated) students. MBA candidates interested in pursuing full-time accelerated program can complete the degree in 12 months by taking three courses (9 credit hours) per term*. Regular full-time students can complete the program within an 18-month period by taking two courses per term. MBA classes are offered during the evening hours and weekends. Those interested in part-time study can complete the degree requirements within two years by attending, at least, one summer session.

(*MBA classes are offered in 8-week terms whereby classes meet twice a week from Monday through Thursday; Weekend classes will meet once on Saturdays).

ADMISSION AND DEGREE REQUIREMENTS

Requirements for Unconditional Admission

For admission to the MBA Program, applicants must have earned a baccalaureate degree from an accredited college or university and possess the ability to do graduate work of high quality. For unconditional admission, candidates must have earned a minimum cumulative undergraduate grade-point-average of 2.75 (on a 4.00 point scale) and achieve a total score of at least 900 points (based on the following formula: 200 times the overall undergraduate grade-point-average plus the Graduate Management Admission Test (GMAT) score, except that the minimum acceptable GMAT score must be 350. In addition applicants must have completed the common body of knowledge (CBK) requirements.

Requirements for Conditional Admission

Applicants not meeting the unconditional requirements may be admitted conditionally if (1) they have a minimum cumulative undergraduate grade-point-average (GPA) of 2.50 and earn a minimum of 400 on the GMAT; (2) have an overall undergraduate GPA of 3.00 or at least 3.25 upper-division GPA and have not completed the GMAT; or (3) have completed all other requirements except the CBK. A candidate admitted conditionally must complete a total of three MBA core or elective courses (nine credits) and earn a cumulative grade-point average of at least 3.00, with no grades of "C" or lower. The candidate must then petition, before registering for the fourth course, for unconditional admission (refer to the MBA Handbook for the procedure). Candidates conditionally admitted must complete the CBK requirements and the GMAT before registering for their fourth course. A copy of the GMAT scores needs to be on file.

Requirements for Non-Traditional Applicants

Applicants may apply for admission as non-traditional students if they have: (1) higher or professional degree beyond the baccalaureate degree; (2) significant relevant work experience; or (3) national or regional certification in a professional field. Applicants may petition for the GPA, GMAT, and CBK requirements to be waived. All requests for waivers must undergo a review and certification by the Director of the MBA Program (refer to the MBA Handbook for further information).

Basic Skills Expectations of New MBA Students

In addition to meeting the admission criteria listed above, MBA students are expected to have the following skills to ensure success in the program.

1. *Quantitative Skills.* A knowledge of mathematical concepts, including algebra and calculus.
2. *Verbal & Written Skills.* The ability to collect relevant information, organize thoughts and communicate them clearly.
3. *Computer Skills.* Knowledge of word processing and ability to use spreadsheets.

Proficiency in these skills will be assessed by the Director of the MBA Program and the graduate faculty. Recommendations for review courses and additional training will be made based on a review of undergraduate course work, advanced degree or course work, professional experience and certification.

Common Body of Knowledge (CBK) Requirements:

Incoming MBA students who lack a solid foundation in business must complete some or all of the CBK courses in selected areas of study. Prerequisites or foundation courses may be required in statistics, accounting, microcomputer applications, economics, marketing, management and finance. The non-credit foundation courses may be taken on line in self-paced learning modules prior to or in the first semester. The CBK must be completed prior

to enrolling in courses for which any of them serve as a prerequisite. No MBA candidate may enroll in an MBA core or elective course until he or she fulfills the CBK prerequisite(s) for that course. All CBK courses must be reviewed and approved by the Director of the MBA Program (refer to the MBA Handbook for additional information).

The CBK Modules are Statistical and Math Concepts, Accounting Concepts, Economics Concepts, Finance Concepts, Management Concepts, and Marketing Concepts. Applicants must earn a grade of "C" or better in the CBK courses. Applicants with CBK deficiencies must complete them before being unconditionally admitted. Any or all of the CBK prerequisites may be waived based on: (1) applicant's work experience, (2) applicant's formal education, (3) professional certification upon review and certification by the Director of the MBA Program. The self-paced learning modules may be provided in the School of Management. Students have the option of taking undergraduate courses that meet the CBK requirements.

Degree Requirements:

To earn the MBA degree, students must complete 24 hours of the MBA core courses, one capstone course and nine semester hours of MBA elective courses. Students may pursue the general MBA in Management or select a concentration in Finance or Information Systems/E-Commerce.

The candidate must complete the 36 hours of core, elective, and capstone courses with a minimum cumulative grade-point-average of 3.00 and no more than six credit hours of lower than "B" and no grade lower than "C." There is a five-year time limit for completing the MBA Program, beginning in the first term that a student begins to take graduate classes. The School of Management reserves the right to substitute courses.

REQUIRED (CORE) COURSES (24 credit hours):

Information and Technology Management (MBA 600)
Economics for Managerial Decision-making (MBA 601)
Marketing Management (MBA 602)
Accounting for Decision-Making (MBA 603)
Financial Management (MBA 604)
Organizational Leadership & Behavior (MBA 605)
Quantitative Methods for Decision Making (MBA 606)
International Management (MBA 625)

CAPSTONE COURSES (3 CREDIT HOURS REQUIRED):

Applied Strategic Management (MBA 616)

A. *MBA (Management Emphasis)*

The General MBA with Management emphasis requires nine semester hours of elective courses in addition to the 24 credit hours of core courses and the three credit hour capstone course.

- B. *Finance Concentration Courses* (9 credit hours from the following electives are required):
 Financial Statement Analysis (MBA 617)
 Investments and Portfolio Management (MBA 641)
 Derivative Securities and Risk Management (MBA 642)
 Domestic & Global Financial Markets and Institutions (MBA 643)
 Economic and Financial Environment of Business (MBA 645)
- C. *Information Systems/E-Commerce Concentration Courses* (9 credit hours of electives from the following are required)
 Management Information Systems (MBA 611)
 Strategic Information Systems (MBA 631)
 Managing Electronic Commerce (MBA 632)
 Topics in Information Systems (MBA 633)
 Supply Chain Management (MBA 651)

CURRICULUM

General MBA Electives

- Quantitative Research Methods (MBA 610)
 Legal & Regulatory Environment of the Organization (MBA 612)
 Accounting Information Systems (MBA 618)
 Human Resource Management (MBA 626)
 Organizational Change and Development (MBA 627)
 International Marketing (MBA 650)
 MBA Case Project (MBA 680)



Graduate teaching assistant Parnella Baul assists a student in the School of Management Computer Lab.

SUGGESTED COURSE OF STUDY

	<u>12 Month Program*</u>	<u>18 Month Program*</u>
	Credit Hours	Credit Hours
Term 1 (8-week courses)		
Information and Technology Management	3	3
Accounting for Decision Making	3	3
Elective	3	
Term 2 (8-week courses)		
Quantitative Methods	3	3
Organizational Leadership & Behavior	3	3
Elective	3	
Term 3 (8-week courses)		
Marketing Management	3	3
Economics for Managerial Decision Making	3	3
**Strategic Management (<u>12 Month</u>)	3	
Term 4 (8-week courses)		
Financial Management	3	3
International Management	3	3
Elective	3	
Term 5		
Elective		3
**Strategic Management (<u>18 Month</u>)		3
Term 6		
Elective		3
Elective	—	3
Total Hours to Complete Degree	36	36

* Under the 12-month Program a student will take three courses (9 credit hours) per week term, including a Saturday class. Under the 18-month Program a student will take two courses per 8-week term. Classes will meet twice a week for the 8-week period from Monday through Thursday.

** Applied Strategic Management is a 16-week course (that meets once a week) covering Terms 3 and 4 for the 12-month course of study or Terms 5 and 6 for the 18-month course of study. Applied Strategic Management can also be taken over the summer.

COURSE DESCRIPTIONS

600. INFORMATION AND TECHNOLOGY MANAGEMENT.

This course introduces the students to the uses, trends, and applications of information technologies in organizations. The course will expose the students to computer hardware, computer software, telecommunications, network technology, Internet, World Wide Web, multimedia, and other topics in information technology. Credit, three hours.

601. ECONOMICS FOR MANAGERIAL DECISION MAKING.

This course examines the applied micro-economic theory of the firm. Economics concepts covered include demand analysis, production and cost analysis, linear programming applications, pricing policies, and government regulation of the firm. This course also provides an analysis of macro-economic factors influencing business activity and their implications for strategic management and business policy. Credit, three hours.

602. MARKETING MANAGEMENT.

This course examines the strategic marketing planning process. Emphasis is placed on the development of product lines, sales promotion, and distribution strategies. Prerequisite: CBK requirements in Principles of Economics and Marketing. Credit, three hours.

603. ACCOUNTING FOR DECISION-MAKING .

This course emphasizes the study of accounting as it relates to internal reporting, managerial decision-making, planning, and control. Topics covered include the following: cost-volume-profit analysis; budgeting; responsibility accounting; product costing; cost behavior; and variance analysis. Prerequisite: CBK requirement in Accounting. Credit, three hours.

604. FINANCIAL MANAGEMENT.

This course addresses the principles of financial management. Topics covered include the following: capital acquisition; working capital management; capital budgeting; valuation theories; and dividend and long-term financial policies. Prerequisite: CBK requirements in Economics, Finance, and Accounting. Credit, three hours.

605. ORGANIZATIONAL LEADERSHIP & BEHAVIOR .

This course concentrates on the behavior of individuals in small, informal groups and formal organizations. It examines the following topics: leadership, in the context of group behavior; job satisfaction; supervision; planning; and conflict resolution. Prerequisite: CBK requirement in Management.

606. QUANTITATIVE METHODS FOR DECISION MAKING.

This course considers the use of quantitative techniques in business. Topics covered include the following: forecasting techniques; inventory control models; linear and dynamic programming; transportation and assignment problems; statistical quality control; decision theory; and computer applications in the areas of accounting, finance, marketing, and

production. Prerequisite: CBK requirements in Math and Statistical Concepts. Credit, three hours.

610. QUANTITATIVE RESEARCH METHODS .

This course is devoted to study of methods and techniques in business research. Topics covered include the following: problem identification and definition; hypotheses formulation and testing; literature review; and data collection and analysis. Prerequisite: Business 606. Credit, three hours.

611. MANAGEMENT INFORMATION SYSTEMS.

This course addresses the needs of information and information technology in the organization in today's competitive business environment. The course will explore the information function within the organization, the nature and characteristics of computerized information systems, usage of information systems and technology to change the organizational structure, work process, and culture. Information system analysis and design are also discussed. Prerequisite: MBA 600. Credit, three hours.

612. LEGAL AND REGULATORY ENVIRONMENT OF THE ORGANIZATION.

This course addresses the impact of legal and ethical factors pertinent to the effective management of business organizations. Legal considerations, both common law and regulatory, are a constant concern for management executives in terms of decision making. Contracts, consumer protections, secured transactions and credit, employment and other currently relevant areas will be examined, in depth, from the perspective of the decision maker, the company, applicable regulatory bodies if any, and the consumer. Students will consider the ethical and legal implications inherent in each of these areas, from each of the four perspectives. Credit, three hours.

616. APPLIED STRATEGIC MANAGEMENT.

This course is a study of policy formulation and implementation by middle- and senior-level management. This course integrates previous course work in the other core courses. This capstone (integrated management course) is intended to apply theoretical concepts to a variety of organizational situations from a top-management perspective. The concepts and techniques of strategic management in organizations will be the focus of this course. Topics include developing a strategic vision, setting objectives and crafting a strategy. Students will be expected to develop a competitive analysis portfolio; match strategy to an organization's situation; build resource capabilities, support systems, budgets, align culture and strategy; and structure the organization to implement the organization's strategic vision in a dynamic global marketplace. Prerequisite: Completion of all other core course requirements. Credit, three hours.

617. FINANCIAL STATEMENT ANALYSIS.

This course provides the fundamentals managers need to analyze financial statements in making non-routine decisions, as well as in discharging their day-to-day operating responsibilities. Accordingly, it addresses the following issues: (1) basic accounting and

applications in the context of financial statement analysis; (2) analyses of financial position, results of operations, and cash flows; (3) intercorporate investments; (4) financial statement data issues, including "other financial data" and information economics; and (5) financial statement audit opinions. Prerequisite: MBA 603. Credit, three hours.

618. ACCOUNTING INFORMATION SYSTEMS.

This course addresses the analysis, design, and installation of accounting systems, including understanding the control procedures required (with emphasis on computer-based systems). Prerequisite: MBA 603. Credit, three hours.

625. INTERNATIONAL MANAGEMENT.

An exploration of the issues which face a manager operating in an international environment. The course will expose students to the constraints and opportunities in the global economy to provide an understanding strategic and functional aspects of international business management. Topics include: an overview of global management, cultural, legal, and political influences on international management; international trade and investment; transnational operations and marketing; international human resource management; cross-cultural communication and decision-making; international strategies; and organizing international enterprises. Credit, three hours.

626. HUMAN RESOURCE MANAGEMENT.

An advanced study of the human resource management function and its importance in organizations. Discussion topics include human resource planning, selection, training and development, performance appraisal, compensation, equal employment opportunity, safety and health, and employee labor relations. The impact of laws and business trends on the human resource function is presented. The manager's role in dealing with the challenges presented by human resources is emphasized.

627. ORGANIZATIONAL CHANGE AND DEVELOPMENT.

A study of the models, intervention strategies, processes, and techniques for planned organizational change and development. Focus will be on system-wide change and development in complex organizations and the application of behavioral science knowledge to the planned creation and reinforcement of organizational structures, strategies, and cultures for improving organizational effectiveness. Prerequisite: MBA 605. Credit, three hours.

631. STRATEGIC INFORMATION SYSTEMS.

This course examines the use of information technology to achieve competitive advantage, effective decision-making, and efficient operations. The course will explore the usage of many kinds of information systems and technology in organizations and analyze their role, functions, and effects on competitive strategy and organizational operations. Prerequisite: MBA 600. Credit, three hours.

632. MANAGING ELECTRONIC COMMERCE.

With an emphasis on managing electronic organizations, this course examines electronic commerce infrastructures, various types of electronic commerce, issues in designing and managing on-line business, electronic payments as receivables and payables and Internet security issues. Additional topics such as database marketing will be discussed. Prerequisite: MBA 600. Credit, three hours.

633. TOPICS IN INFORMATION SYSTEMS.

Information technology is continuously evolving as so is the usage of information systems in the ever-changing business environment. Managers need to adapt operations and processes to the latest trends in information systems and technology. This course will deal with various topics and problems in many functional areas, such as marketing, accounting, production, human resources, and management information systems with information systems and technology. Case studies and lectures will reinforce lectures.

641. INVESTMENTS AND PORTFOLIO MANAGEMENT.

This course addresses principles in determining investment vehicles for individual and institutional investors. It focuses on investment information sources, features of various securities instruments, as well as strategies and techniques for portfolio construction, management and protection. Prerequisite: MBA 604. Credit, three hours.

642. DERIVATIVE SECURITIES AND RISK MANAGEMENT.

This course examines the fundamental issues in risk management by utilizing futures, options, swaps, and various other derivative securities. Other topics include hedging techniques, mergers and acquisitions, and financial engineering. Prerequisite: MBA 641. Credit, three hours.

643. DOMESTIC AND GLOBAL FINANCIAL MARKETS AND INSTITUTIONS.

This course examines structures and functions of international and domestic financial markets such as stock, bond, mortgage, and money markets. It also addresses financial management aspects of different financial institutions including banks, savings and loans association, investment companies, and pension funds. Theories of comparative advantage, foreign exchange markets, financial risk management, and funds transfer and investments will be discussed. Prerequisite: MBA 604. Credit, three hours.

645. ECONOMIC AND FINANCIAL ENVIRONMENT OF THE ORGANIZATION.

This course examines the macroeconomic and financial environment within which the organization operates. The course focuses on identifying and assessing the macroeconomic and financial factors affecting the organization and on developing strategies to deal with changes in the macro environment. Prerequisites: MBA 604. Credit, three hours.

650. INTERNATIONAL MARKETING.

This course explores the globalizations of markets and the challenges presented to business managers. The course will examine the impacts of international market segmentation,

product attributes, cultural differences, economics differences, differences in product and technical standards, global advertising, and international pricing, etc. on transnational business operations. Credit, three hours.

651. SUPPLY CHAIN MANAGEMENT.

This course considers the components of modern-day distribution systems, with emphasis on facility location, transportation, warehousing, inventory control, and communication. Students will develop a conceptual understanding of issues relating to designing, planning, control, product design, information systems, inventory management, quality control and warehousing. Prerequisite: MBA 602. Credit, three hours.

680. MBA CASE PROJECT.

The MBA Case Project tests the student's strategic thinking and analytic skills. There are three different approaches to the Case Project:

- 1) Students will be provided with the income statement and balance sheet, annual reports, and other pertinent information to make recommendations on a broad range of strategic issues facing a company.
- 2) Students will be provided with a portfolio and other pertinent information to make trades on investments and then maximize their portfolios.
- 3) Students will be given a series of general management cases that cover a broad range of strategic issues facing companies.

The students will submit a final presentation discussing their analysis and recommendations of the company or real-world cases they have investigated. A Project Thesis is required. Credit, three hours.

The state-of-the-art MBNA America Building, one of the newer edifices on campus, houses the School of Management.



GRADUATE PROGRAM IN CHEMISTRY

Professors:

Andrew Goudy, Ph.D., University of Pittsburgh; Physical Chemistry,
Program Director Wayne Miles, Ph.D., Temple University; Analytical Chemistry and
Physical Chemistry (Adjunct)

Sadiq H. Wasfi, Ph.D., Georgetown University; Inorganic Chemistry

Kraig Wheeler, Ph.D., Brandeis University; Organic Chemistry

Emil Sammak, Ph.D., New York Polytechnic University of New York;
Polymer Chemistry (Adjunct)

Associate Professors:

Peter R. DiMaria, Ph.D., Temple University; Biochemistry

H. Preston Hayward, Ph.D., Temple University; Physical Chemistry

Assistant Professors:

Bizuneh Workie, Ph.D., Tufts University; Analytical Chemistry

OBJECTIVES:

A. *Master of Science Degree Program in Chemistry*

The conventional Master's Degree Program in Chemistry is designed to prepare students for further advanced study in Chemistry, to expand the chemical knowledge and skills of secondary school and junior college teachers, and to advance the careers of persons in industry, government service, and other fields of endeavor.

B. *Master of Science Degree Program in Applied Chemistry*

The Master of Science Degree Program in Applied Chemistry is a specific degree program designed to provide the student with a broader understanding of the areas of chemical laboratory practices and advanced concepts for the educator. Courses will enhance the student's professional skills and capabilities for dealing with the complex laboratory hardware common to the chemical industry. Additionally, the student will be informed of recent trends in research, industrial, and environmental chemistry. Students involved in teaching will be exposed to the latest innovations in computer technology as related to laboratory practices and safety. This program is designed for individuals employed in industrial or educational positions, as well as those planning to enter such positions.

ADMISSION AND DEGREE REQUIREMENTS:

A. *Master of Science Degree in Chemistry*

For admission to this program applicants must have a B.S. degree or its equivalent in Chemistry from an accredited college or university, with a minimum 2.5 overall grade point average. Applicants should have at least twenty-four (24) credit hours in Chemistry including two Semesters in Organic Chemistry, two Semesters in Physical Chemistry eight (8) hours in Physics, and six (6) hours in Mathematics. Official

scores on the Graduate Record Examination, or its equivalent, a Diagnostic Entrance Examination, will be required during matriculation. Students not meeting the minimum requirements may be accepted into the program with provisional status upon departmental approval.

B. *Master of Science Degree in Applied Chemistry*

For admission to this program applicants must have a B.S., B.A., or B.T. in a science area (Biology, Mathematics, Physics, Chemistry, Science Education, etc.) with a minimum 2.5 overall grade point average. Applicants should have at least twenty-four (24) credit hours in Chemistry including two semesters in Organic Chemistry, eight (8) hours in Physics, and six (6) hours in Mathematics. Students not meeting the minimum requirements may be accepted into the program with provisional status upon departmental approval.

Degree Requirements:

Both the Master's Degree in Chemistry and the Master's Degree in Applied Chemistry Programs require the completion of thirty (30) credit hours. Thesis Research (6 credit hours) is required in the Master of Science in Chemistry Program and is an elective in the Master of Science in Applied Chemistry Program. Specific course requirements are available upon request.

FACILITIES:

During the 1995 Fall Semester, the department obtained approximately 19,000 ft² of additional space of a new science facility shared with the departments of biology and physics. The new chemistry area includes six (6) spacious research laboratories, three (3) advanced instructional laboratories, a 900 ft² instrument laboratory, computer laboratory, work room with a refrigerated walk-in laboratory, seminar and chemistry resource rooms, six faculty offices and a department suite offices. The department has a wide selection of modern instruments and equipment to support teaching and research. Available equipment include numerous gas chromatographs with a variety of detectors, a head space auto sampler for gas chromatograph, a gas chromatograph /mass selective detector/infrared detector/computer system; three (3) nuclear magnetic resonance spectrometer (60mHz and two (2) 90mHz); and instrumentation for flame and flameless atomic absorption, dispersion infrared and FTIR (3), and several ultraviolet-visible spectrophotometers; capillary electrophoresis unit, microwave digestion/extraction system, high performance liquid chromatograph with data collection system; electroanalytical system and X-ray single crystal diffraction unit.

COURSE DESCRIPTIONS

501. ADVANCED LABORATORY TECHNIQUES.

Advanced techniques and sophisticated equipment used in the preparation and/or purification of chemical compounds. Two lectures and one 150-minute laboratory period per week. Prerequisites: Chemistry 301-302, 306 and 308 or equivalent courses. Credit, three hours.

502. PHYSICAL METHODS IN INORGANIC CHEMISTRY.

Advanced methods in inorganic preparations and compound analyses via physical methods. Two lectures and one 150-minute laboratory period per week. Prerequisites: Chemistry 301-302, 303-304, 306 and 308 or equivalent courses. Credit, three hours.

503. PHYSICAL METHODS IN BIOCHEMISTRY.

Advanced methods in the study of biochemical molecules and the use of physical methods in their investigations. Two lectures and one 150-minute laboratory period per week. Prerequisites: Chemistry 301-302, 303-304, 306 and 403 or equivalent courses. Credit, three hours.

504. PHYSICAL METHODS IN ORGANIC CHEMISTRY.

Advanced studies in organic preparations and reactions, and chemical analyses via physical methods. Two lectures and one 150-minute laboratory period per week. Prerequisites: Chemistry 301-302, 303-304, and 306 or equivalent courses. Credit, three hours.

505. INORGANIC SOLUTION CHEMISTRY.

A study of the chemical kinetics of chemical forces and their effects on structure and reactivity of coordination compounds. Two 75-minute lectures per week. Prerequisite: Chemistry 308 or equivalent. Credit, three hours.

506. STRUCTURAL INORGANIC CHEMISTRY.

Detailed discussions of the nature of chemical forces and their effects on structure and reactivity of coordination compounds. One 150-minute lecture per week. Prerequisite: Chemistry 308 or equivalent. Credit, three hours.

507. THEORY AND APPLICATIONS OF SPECTROSCOPY.

A presentation of molecular spectra and structure correlations demonstrating the use of IR, Visible UV, NMR, and AA. One 150-minute lecture per week. Credit, three hours.

508. THEORY AND APPLICATIONS OF CHROMATOGRAPHY.

Investigations of the separation and identification of substances via packed and capillary column gas chromatography. HPLC and GLC using various detectors. One 150-minute lecture per week. Prerequisite: Chemistry 306 or equivalent. Credit, three hours.

509. THE CHEMICAL BOND.

The study of electronics in atoms, molecular orbitals bonding in organic compounds, and "d" valence orbitals. One 150-minute lecture per week. Prerequisite: Chemistry 308 or equivalent. Credit, three hours.

510. ENVIRONMENTAL CHEMISTRY.

The analyses of water, soil, plant and animal tissues for various parameters including traces organics and metals using classical and instrumental methods of analysis. One lectures 150-minute per week. Credit, three hours.

511. SELECTED TOPICS IN CHEMISTRY.

Advanced topics in the various fields of chemistry. Topics may vary from year to year. One 150-minute lecture per week. Credit, three hours.

516. QUANTUM CHEMISTRY.

The wave equation and approximate treatments of the hydrogen molecular ion, the hydrogen molecule, diatomic molecules, and polyatomic molecules. Two 75-minute lectures per week. Prerequisite: Chemistry 303, 301 or equivalent courses. Credit, three hours.

518. MOLECULAR SPECTROSCOPY.

The use of molecular symmetry and group theory to study rotational, vibrational, and electronic spectra of molecules. One 150-minute lecture per week. Prerequisite: Chemistry 301-302 or equivalent. Credit, three hours.

519. APPLICATIONS OF SPECTROSCOPY.

An introduction to chemical research. The use of spectroscopy as a research tool and a review of the literature in this area will be conducted. Projects may be assigned. Two 75-minute lectures per week. Prerequisite: Chemistry 507 or equivalent. Credit, three hours.

520. ADVANCED ORGANIC CHEMISTRY.

An advanced study of reaction mechanisms, stereochemistry, and organic chemical bonding. One 150-minute lecture per week. Prerequisite: 301-302. Credit, three hours.

521. BIOCHEMISTRY.

An advanced study of biochemical reactions and reaction mechanisms. One 150-minute lecture per week. Prerequisite: Chemistry 403 or equivalent. Credit, three hours.

540. ADVANCED METHODS OF TEACHING CHEMISTRY.

Discussions and problem solving sessions concerning improved techniques of teaching high school chemistry. Two 75-minute lectures per week. Credit, three hours.

552. TECHNIQUES IN PHYSICAL CHEMISTRY.

A study of the use of physical measurements in determining composition, structures, and properties of matter. Two lectures and one 150-minute laboratory per week. Credit, three hours.

556-557. SEMINAR.

Presentation of current topics and/or research by faculty and students. One lecture per week. Credit, one hour.

560. CHEMICAL LITERATURE.

Use of the chemistry library, chemical journals, reference works, other technical publications, assembling and data use, and computer-assisted literature searches. One lecture per week. Credit, one hour.

562. CHEMICAL TOXICOLOGY.

A study of the adverse effects of chemical substances. Course includes the general principles of toxicology, the toxicology of systems, toxic agents, environmental toxicology, forensic toxicology, applications toxicology and the effect of toxic substances on reproduction and the body. One lecture per week. Credit, one hour.

569. POLYMER CHEMISTRY.

An introduction to the chemistry of macromolecules including biologically molecules, plastics, and other important classes of industrial polymers. One 150-minute lecture per week. Prerequisites: Chemistry 301-302. Credit, three hours.

573. ADVANCED PHYSICAL CHEMISTRY.

An introduction to the thermodynamics of large molecular collections and the quantum statistics of these systems. One 150-minute lecture per week. Prerequisites: Chemistry 303-304. Credit, three hours.

590-591. RESEARCH AND THESIS.

Publishable research work by students and the writing and defense of a thesis. Credit, three hours each.

Mr. Hopkins also serves as a graduate assistant who provides supplemental instruction to undergraduate chemistry students.



GRADUATE PROGRAM IN EDUCATION

Professors:

Dr. Cynthia Jackson-Hammond, Dean

Gholam Kibria, Ph.D. Indiana University, Ph.D., Southern Illinois University;

Higher Education and Special Education

William J. McIntosh, Ed.D., Temple University; Science Education

Associate Professors:

Anaradha Dujari Ed.D. Wilmington College (Educational Innovation and Leadership)

Joseph Falodun, Ph.D., University of Pennsylvania; Reading, Writing, Literacy Education

Robert Rahamin, Ed.D. The George Washington University (Special Education/Curriculum)

Robert Oesterling, Ed.D., Temple University, (Educational Administration) (Program Director)

C.G. Mussington, Ph.D., Ohio State University (Curriculum and Instruction)

Rayton Sianjina, Ph.D., University of Mississippi (Educational Administration/Technology)

Assistant Professors:

Chandra Aleong, Ph.D., University of Pennsylvania (Business Education)

Everard Cornwall, Ph.D., University of Minnesota, Vocational Technical Education

Anuradha Dujari, Ed. D., Wilmington College; Educational Innovation and Leadership

Billie Friedland, Ph.D., West Virginia University, Special Education

Yanghee Kim, PhD., University of Maryland, (Curriculum and Instruction)

Mike Ruffini, Ed.D. Widener University, (Technology and Curriculum)

Ruth Steinbrunner, Ph.D., George Mason University (Early Childhood Education)

Visiting Professor:

Adjai Robinson, Ph.D., Columbia University, (Early Field Experience)

PROGRAM PHILOSOPHY

Purpose:

Students are prepared to successfully interact within the society they will enter upon termination of their formal schooling. Human and physical resources are provided to insure a deep understanding about important facts and issues and to develop higher order thinking skills in an environment that promotes cooperation and tolerance. Students are prepared to enter the work force with adequate communication skills. Minimal training for this work force will be required.

ADMISSION AND DEGREE REQUIREMENTS

All applicants for the Master Degree in Curriculum and Instruction, Special Education, or Adult Literacy and Basic Education must submit a completed application, two (2) official transcripts of all previous academic work and three (3) letters of recommendation to the Office of the Dean of Graduate Studies, Research and Continuing Education.

All applicants must have earned a Bachelor's degree from an accredited college or university. For applicants who wish to pursue a graduate degree in education, it is necessary to have earned a Bachelor's degree in education or to have completed prerequisite courses designated by the Department of Education. The quality of academic performance in undergraduate and graduate studies will be considered in evaluating applicants for admission to a graduate program in education at Delaware State University. All admission criteria must be satisfied before an application for candidacy.

Applicants are required to take the general test of the Graduate Records Examination (GRE). Test administration schedule information is available in the Department of Education and the Office of Testing.

Comprehensive Examination:

Graduate students seeking a Master of Arts Degree in education are required to receive a passing score on a comprehensive examination. The comprehensive examination is designed to provide graduate students an opportunity to demonstrate mastery of advanced knowledge and skill characteristic of a Masters of Arts Degree in Education. The comprehensive examination tests students knowledge in two core courses and one required and two elective courses for the initial test, students must take the entire battery of questions for all five courses. Students will be allowed to respond to a partial battery of questions only during re-take tests. Preparation for the examination should be a continuous process in which students make certain that in each course taken knowledge is acquired in the following areas: (1) historical and contemporary trends and issues related to the specific content studied; (2) related theories and supporting research; (3) research trends and directions; (4) the major contributions of scholars in the field and (5) application of the information gained to the schooling process.

Students seeking the Masters degree should apply to take the comprehensive examination after successfully completing twenty-four (24) semester hours of course work. To be eligible to take the comprehensive examination the following conditions must be met:

1. Formal application
2. Grade point average of 3.0 on a 4.0 scale
3. Admission to candidacy

MASTER OF ARTS DEGREE IN EDUCATION
Concentrating in:

CURRICULUM AND INSTRUCTION

Purpose:

The purpose of the Curriculum and Instruction Graduate Program is to increase the knowledge and competence of educators. More specific purposes are to prepare educators to assume leadership role in the following areas: 1) Development of Curriculum and instruction at all levels of educational system, 2) Improvement in design of instruction for exceptional students and students from diverse cultural backgrounds, 3) research and publish in topics related to Curriculum and Instruction technology. In addition, the program will require students to conduct research in their specialty area contributing to the knowledge base and to apply research to practice. This program will provide opportunities for students to develop knowledge, skills and attitudes enabling them to understand the educational needs of people with differing economic, social, racial, ethnic, religious backgrounds, and handicapping conditions. The Curriculum and Instruction program provides a course of advanced study; it does not lead to an initial teaching certificate.

GOALS AND OBJECTIVES:

Master of Arts Degree in Education with a Concentration in Curriculum and Instruction.
The goals of this program are to:

1. Provide opportunities for advanced study in the area of Curriculum and Instruction.
2. Prepare educators to assume leadership roles in improving the curriculum and the design of instruction at all levels of schooling and types of schools (elementary, secondary, and post-secondary; public and private, trade and professional schools, colleges and universities).
3. Prepare educators to assume leadership roles in improving the design of classroom instruction for special populations of students (i.e., exceptional children, minorities, low income, etc.).

Thesis:

A thesis option is available to students as part of their graduate studies. Students selecting the thesis option must satisfactorily defend the thesis in an oral defense before the student's graduate committee. For further information relative to the thesis, please consult the Thesis Handbook which may be obtained from the School of Graduate Studies and Research.

Global Comprehensive Evaluation:

This option requires a scholarly research paper defended by using a multi-media presentation. Students must prepare their paper and presentation under the supervision of their assigned graduate advisor. For more detailed information, please consult the Graduate Student Handbook available from your advisor.

COURSE DESCRIPTIONS

Core Courses:

603. HISTORY AND PHILOSOPHY OF AMERICAN EDUCATION.

Systematically explores the history of American Education from Colonial times to the present. Examines selected educational theories and philosophies, with particular emphasis on their application to instruction. Reviews the effect of historical and philosophical movements upon education in the United States. Credit, three hours.

612. RESEARCH METHODS IN EDUCATION.

Historical, descriptive, and experimental methods of research. Methods for locating, evaluating, interpreting and reporting data. Each student prepares a research prospectus. Credit, three hours.

640. MULTICULTURAL EDUCATION.

Explores the use of knowledge about culture in the schooling process. Presents specific teaching strategies, classroom management techniques, and communication strategies that have proven to be effective with culturally diverse student populations. Explores ways to identify and alleviate negative bias and prejudice in teaching materials, assessment instruments, school practices and school organization. Credit, three hours.

614. HUMAN GROWTH AND DEVELOPMENT.

Educational implications of human development throughout life span. Surveys research with special attention to applications to teaching and development of school programs. Credit, three hours.

615. EDUCATIONAL MEASUREMENT AND STATISTICS.

Nature of measurement and types of scales, units, scores, norms, sampling, item analysis, barriers and profiles. Principles of reliability and validity and the use of test scores in decision making. Descriptive and inferential statistics and the design of educational research. Suggested to be taken before 12-612. Required in the Curriculum and Instruction Program. Credit, three hours.

Required Courses:

604. THEORIES & METHODS OF INSTRUCTION.

A study of educational theories as applied to curriculum and instruction with emphasis on current trends and the identification of the instructional process, organizing operations and skills for teaching. Credit, three hours.

605. CURRICULUM ORGANIZATION & DESIGN.

Analyzes the historical, philosophical, sociological, epistemological, and pedagogical bases of curriculum patterns with emphasis on relationship to contemporary designs. Explores models of curriculum organization by which to affect curriculum change. Credit, three hours.

Elective Courses:

501. FIRST YEAR TEACHER SEMINAR - ELEMENTARY.

Beginning teachers will have the support of a faculty member to assist in analysis of the process and application of diagnostic and prescriptive teaching; the analysis of ways to improve classroom management; and the identification of ways to increase effectiveness as a team member within a school or school district. Credit, three hours.

502. FIRST YEAR TEACHER SEMINAR - SECONDARY.

Beginning teachers will have the support of a faculty member to assist in analysis of the process and application of diagnostic and prescriptive teaching; the analysis of ways to improve classroom management; and the identification of ways to increase effectiveness as a team member within a school or school district. Credit, three hours.

601. CONTEMPORARY ISSUES IN AMERICAN EDUCATION.

Analysis of current trends, problems and theories based upon examination of recent educational literature. Provides a critical exploration of topics related to the formulation of curriculum, instructional policy, and methodology in education.

602. IDENTIFICATION AND INSTRUCTION OF THE DISADVANTAGED.

Identifies the school population classified as disadvantaged. Explores the classroom problems affecting instruction of the rural and urban disadvantaged. Presents techniques of classroom instruction that have been successful locally and nationally. Credit, three hours.

606. CAREER EDUCATION IN THE ELEMENTARY & SECONDARY CURRICULUM.

Presents resources for career information; instruments for assessing career awareness curricula, programs, and centers; and the application of techniques for career counseling. Credit, three hours.

607/633. THEORIES AND PRACTICES OF CLASSROOM MANAGEMENT.

Application of theories, practices and identification of management skills using dynamics of interpersonal relations in planning and facilitating classroom instruction. Credit, three hours.

608. DIAGNOSTIC TEACHING OF READING.

Analysis of the diagnostic teaching of reading; a review of current research and opinion; evaluation of materials, techniques, and programs for assessment and prescription of reading techniques. Practicum in implementing and evaluating a diagnostic-prescriptive reading program. Credit, three hours.

609. IDENTIFICATION AND INSTRUCTION OF THE GIFTED.

Identifies characteristics of the gifted and talented. Analyzes national and state programs for the gifted and talented. Explores techniques of instruction to meet the educational needs of the gifted and talented student. Credit, three hours.

610. DEVELOPMENT OF INSTRUCTIONAL MATERIALS.

Review of the theory and practice in the selection and use of educational media, equipment and materials. Review of the research literature concerned with effective use of instructional materials. Each student will complete an individualized instructional materials package to be presented to the class related to his/her area of specialization. Credit, three hours.

611. THEORIES AND PRACTICES IN EXCEPTIONALITIES.

This course is designed to identify exceptional learners and provide an understanding of their educational needs. Specific teaching techniques will be explored as well as principles and practices of program development. Credit, three hours.

627. SURVEY OF PRE-COLLEGE SCIENCE INSTRUCTION.

An overview of contemporary issues and trends in science instruction that explores the methodologies and philosophies of the teaching of science, and identifies various interdisciplinary characteristics of science instruction. Credit, three hours.

641. THE SUPERVISION OF CURRICULUM & INSTRUCTION FOR ELEMENTARY & SECONDARY SCHOOLS.

Presents theory and practice of supervision in elementary and secondary schools. Emphasis is on the role of the supervisor in the improvement of instruction and curriculum development. Students practice techniques for improving supervisory skills through role playing, videotaping, case studies, and analysis of teaching. Attention given to creating programs for continuous professional growth of elementary and secondary school teachers, paraprofessionals, and leadership personnel. Credit, three hours.

699. THESIS OPTION (6 Credit Hours).

Students seeking the Master of Arts Degree in Curriculum and Instruction at Delaware State University shall complete one of the following options: (1) an approved program consisting of thirty-six (36) semester hours of credit, or (2) a thesis plus an approved program consisting of thirty (30) semester hours of credit. The thesis must be prepared in accordance with the specifications outlined by the Department of Education. A preliminary application must be submitted to the Program Director in the semester prior to registration for thesis credit.

MASTER OF ARTS DEGREE IN EDUCATION
Concentrating in

SPECIAL EDUCATION

Purpose:

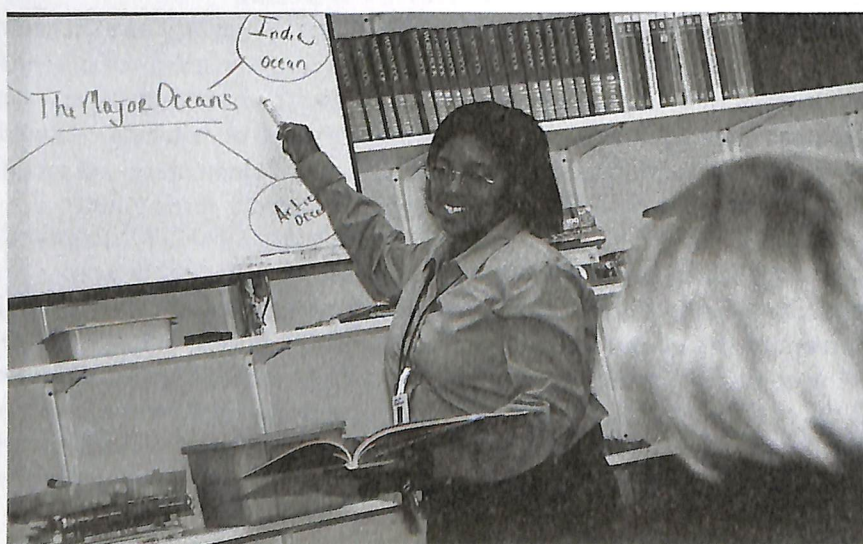
The purpose of the Special Education Graduate is Program is to increase the knowledge and competence of educators in this specialized field. More specific purposes are to prepare educators for specialization in educating exceptional children of differing economic, social, racial, ethnic, religious backgrounds, and handicapping conditions; for leadership roles in educational special education sectors, in developing specialized curricula and materials, in behavioral and management strategies; and , for inquiry in the specialty area contributing to the knowledge base and to apply research to practice. This program provides a course of advanced study; it does not lead to an initial teaching certificate.

GOALS AND OBJECTIVES:

Master of Arts Degree with A Concentration in Special Education The goals of this program are to:

1. Prepare educators to engage in the responsibilities of leadership in both general and specific areas of Special Education in the public and private sectors at various levels of service including elementary, secondary, vocational and postsecondary schools, as well as, in colleges, universities and agencies and departments of government.
2. Prepare educators to employ problem diagnosis and problem solving skills as they relate to working in Special Education settings.
3. Prepare educators to take leadership roles in developing and/or implementing state of the art methods, materials, behavioral and management strategies related to their Special Education.

Anita Bernard, who teaches at the St. Jones Center for Behavior Health, pursues a Master of Arts Degree in Education during her free time. She is pursuing a graduate degree with dual concentrations in special education and curriculum/instruction.



COURSE DESCRIPTIONS

Core Courses:

611. THEORIES AND PRACTICES IN EXCEPTIONALITIES.

This course is designed to identify exceptional learners and provide an understanding of their educational needs. Specific teaching techniques will be explored as well as principles and practices of program development. Three credits

625. INTRODUCTION TO STATISTICS AND RESEARCH.

This course covers application of basic statistical techniques and research methodologies employed in qualitative and quantitative research in education. Students will be introduced to descriptive and inferential statistics and the design of research. The focus of the course will be primarily on action research. Credit, three hours.

640. MULTICULTURAL EDUCATION.

Explores the use of knowledge about culture in the schooling process. Presents specific teaching strategies, classroom management techniques, and communication strategies that have proven to be effective with culturally diverse student populations. Explores ways to identify and alleviate negative bias and prejudice in teaching materials, assessment instruments, school practices and school organization. Credit, three hours.

644. TECHNOLOGY IN TEACHING.

This course presents current technological trends that will assist teachers in classroom instruction. Special emphasis is placed on the integration of multimedia software and the Internet. Students will plan and produce a multimedia/Internet project in their content area using a systems approach. Credit, three hours.

648. THEORIES OF INSTRUCTION AND CURRICULUM DESIGN.

The course design provides an opportunity for graduate students to supplement their theoretical knowledge of curriculum and instruction by developing courses or unit in step-by-step fashion. Participants design an actual course with asset of guidelines and theoretical base. The combination of theory and the process of actually designing a course provide the classroom teacher with a unique approach to learning curriculum development skills. Credit, three hours.

Required Courses:

621. TECHNOLOGY IN SPECIAL EDUCATION.

This course examines the application of special education technology in the general education and special education classroom. Comparative analyses of special education technology utilized in the United States and other countries will be explored. Human factors to be utilized in the selection, adaptation and modification of technological devices for meeting the unique needs of individuals with exceptionalities will be analyzed and implemented. Credit, three hours. Prerequisite: 12-611 Theories and Practices in Exceptionalities.

629. ASSESSMENT OF EXCEPTIONAL CHILDREN AND YOUTH.

This course will provide training in the administration and interpretation of formal and informal assessment instruments. Evaluation reports will be written based on assessment data received, and case studies will be used for making placement decisions and writing prescriptive programs. Credit, three hours.

630. CURRICULUM METHODS AND MATERIALS IN SPECIAL EDUCATION.

This course is designed to develop competence in curriculum development and specific teaching techniques used in educating mildly handicapped children and youth. Demonstration and practice will be provided in the use of commercial materials which are currently available. Credit, three hours.

633/607. CLASSROOM MANAGEMENT TECHNIQUES FOR TEACHERS OF SPECIAL EDUCATION.

Study of techniques for managing the special education classroom. Behavioral and humanistic approaches are examined and evaluated in relation to managing both the instructional program and student behavior. Individual and group management techniques will be explored, and consideration will be given to age level and behavioral learning characteristics. Credit, three hours.

Elective Courses:

602. IDENTIFICATION AND INSTRUCTION OF THE DISADVANTAGED.

Identifies the school population classified as disadvantaged. Explores the classroom problems affecting instruction of the rural and urban disadvantaged. Presents techniques of classroom instruction that have been successful locally and nationally. Credit, three hours.

608. DIAGNOSTIC TEACHING OF READING.

Analysis of the diagnostic teaching of reading; a review of current research and opinion; evaluation of materials, techniques, and programs for assessment and prescription of reading techniques. Practicum in implementing and evaluating a diagnostic-prescriptive reading program. Credit, three hours.

609. IDENTIFICATION AND INSTRUCTION OF THE GIFTED.

Identifies characteristics of the gifted and talented. Analyzes national and state programs for the gifted and talented. Explores techniques of instruction to meet the educational needs of the gifted and talented student. Credit, three hours.

631. REVIEW OF RESEARCH AND EDUCATIONAL TECHNOLOGY IN SPECIAL EDUCATION.

The design of research projects in special education and the critical analysis and interpretation of special education research as reported in the professional literature will be covered. The student will have hands-on experiences in the use of the computer in instructional methodology and data management in special education. Credit, three hours.

632. ADMINISTRATION AND SUPERVISION FOR EXCEPTIONAL CHILDREN & YOUTH.

The areas of program planning, project development and budgeting for special education programs utilizing state, federal and local funding sources, developing in-service programs, evaluation of special education, supervision of special education and related services personnel will be covered. Included also will be the topics of interagency program delivery, working with parents and advocacy groups, and the relationships between regular, special and vocational education in programming for exceptional children and youth. Credit, three hours.

634. CONTEMPORARY ISSUES IN SPECIAL EDUCATION.

An intensive study, and educational implications, of the current issues that involve mildly handicapped students, such as, main-streaming, attitudinal and life adjustment. An in-depth study of a problem is required. Credit, three hours.

635. COUNSELING AND GUIDANCE OF EXCEPTIONAL CHILDREN AND YOUTH, AND THEIR FAMILIES.

A course designed for teachers, including research, methods and techniques of counseling with students, individually, in the classroom and with the family; the identification of and programming for students with social and emotional maladjustments, using group dynamics in structuring classroom activities for social awareness and knowledge of available community mental health resources. Credit, three hours.

636. LEGISLATION, LITIGATION AND FINANCE IN SPECIAL EDUCATION.

Examines the litigation and legislation that have provided the basis for special education programs, the role of professionals, parents, and state and federal government is examined and explored historically. Reviews how special education has been and is being financed at the local, state, and federal levels. Credit, three hours.

637. ISSUES IN SECONDARY TRANSITION & VOCATIONAL ED.

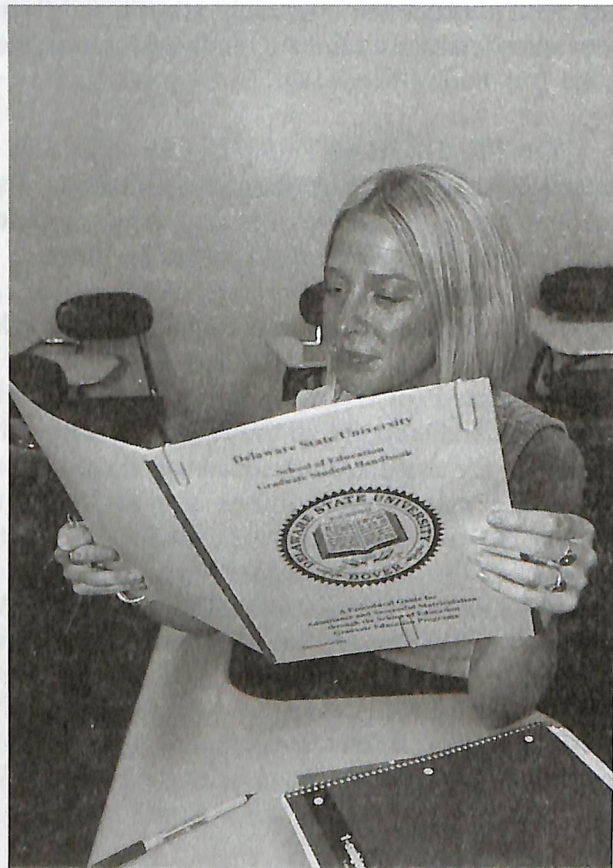
Curriculum development, implementation, materials and instructional strategies and technologies, community resource to meet the life skills and world of work competencies necessary for functional adulthood for the handicapped. Credit, three hours.

638. SEMINAR IN SPECIAL EDUCATION (1-3 Credit Hours).

Comprehensive study of specific topics in the education of exceptional children and youth will be announced and offered periodically through graduate seminars. Permission of the instructor or department chair must be secured prior to enrollment. Credit, three hours.

699. THESIS OPTION (6 Credit Hours).

Students seeking the Master of Arts Degree in Special Education at Delaware State University shall complete one of the following options: (1) an approved program consisting of thirty-six (36) semester hours of credit, or (2) a thesis plus an approved program consisting of thirty (30) semester hours of credit. The thesis must be prepared in accordance with the specifications outlined by the Department of Education. A preliminary application must be submitted to the Program Director in the semester prior to registration for thesis credit.



Barbara Crosley, a local teacher and education graduate student, reads through the *School of Education Graduate Student Handbook*. The DSU Graduate Program in Education has advanced numerous Delaware teachers in their careers and offers late afternoon and evening graduate curricula that accommodates normal teaching schedules.

MASTER OF ARTS DEGREE IN EDUCATION
Concentrating in

ADULT LITERACY AND BASIC EDUCATION

Purpose:

The purpose of the Adult Literacy and Basic Education Graduate Program is to increase the knowledge and competence of those who are working or will work with adult learners and lack a high school credential. The courses are designed to prepare highly qualified adult educators who will in a variety of settings such as business or industry, community recreation organizations, correctional facilities, religious education organizations, human service organizations, public schools and community-based programs. The program of study leads to certification in Adult Education.

GOALS AND OBJECTIVES:

The goals of this program are to facilitate an understanding of the philosophy, theory and successful practices needed for productive teaching and administration in adult basic, adult secondary, and ESL education. The goals of this program are to:

1. provide a balanced curriculum of theory, practice, research and issues that will improve adult education delivery system and the teaching-learning process.
2. provide self-directed learning experiences that prepare participants to assist adult learners with special needs and manage problems affecting learning.
3. complete the Delaware Department of Education requirements for certification in Adult Education.

COURSE DESCRIPTIONS

Core Courses:

612. RESEARCH METHODS IN EDUCATION.

Historical, descriptive, and experimental methods of research. Methods for locating evaluation, interpreting and reporting of data. Each student prepares a research prospectus. Credit, three hours.

615. EDUCATIONAL MEASUREMENTS AND STATISTICS.

Nature of measurements and types of scales, units, scores, norms sampling, item analysis, barriers and profiles. Principles of reliability and validity and the use of test scores in decision making. Description and inferential statistics and design educational research. Suggested to be taken before 612. Required in the Curriculum and Instruction Program. Credit, three hours.

640. MULTI CULTURAL EDUCATION.

Explores the use of knowledge about culture in the schooling process. Presents specific teaching strategies, classroom management techniques, and communication strategies that have proven to be effective with culturally diverse student populations. Explores ways to identify and alleviate negative bias and prejudice in teaching materials, assessment instruments, school practices and school organization. Credit, three hours.

658. UTILIZING TECHNOLOGY IN ADULT EDUCATION.

This course will examine current trends in the use of technology to assist in adult instruction and programming. The major emphasis will be on computers and computer software packages. An exploration of multi-media and supplemental audio-visual techniques will be included. Students will be required to submit lesson plans with an emphasis on using technology. Credit, three hours.

655. PHILOSOPHICAL FOUNDATIONS OF ADULT EDUCATION.

The unique philosophical foundations/principles of adult basic/secondary education will be discussed. The reasons for Delaware's model James H. Groves Adult High School will be explored, as well as the current federal attitude toward adult literacy/education. Credit, three hours.

Other Required Courses:

659. ADULT LEARNING CHARACTERISTICS & ALTERNATIVE DELIVERY SYSTEMS.

This course is designed to describe and analyze three broad dimensions of adult learning: motivation, cognition and socio-cultural content. Teaching approaches that address these areas will be explored. Teachers will learn how to plan lessons that apply these three dimensions of adult learning. Credit, three hours.

657. COUNSELING THE ADULT LEARNER.

This course will explore developmental characteristics through adulthood and relate those characteristics to adult students who are educationally at-risk. Counseling theories that are appropriate in the classroom with adult learners will be considered. Specific behaviors that help the teacher identify adult students with problems will be identified and used to help determine when, and to who a student should be referred. Credit, three hours.

Elective Courses:

660. INSTRUCTIONAL STRATEGIES IN ADULT BASIC EDUCATION.

This course will explore the process of helping adults learn basic academic and life skills. Topics covered will include: enhancing learning; assessing learner needs to set instructional objectives; choosing and implementing effective learning activities; building supportive and active learning environments; and strategies for improving instruction. Credit, three hours.

661. APPROACHES TO ADULT ENGLISH FOR SECOND LANGUAGE(ESL INSTRUCTION).

This courses will consider the appropriate use of both structural and communicative ESL. ESL materials will be provided and reviewed. Model lessons (video) will be observed and analyzed. A variety of teaching strategies will be presented. Credit, three hours.

651. OUTCOME-BASED CURRICULUM DESIGN IN ADULT EDUCATION.

This course will look at outcome-based instruction not just as a current trend, but as an efficient way to meet educational goals and to promote student interest. Participants will learn to look critically at classroom goals to determine educational and real-life relevancy. They will learn to develop appropriate goals that become outcomes of the educational process. Credit, three hours.

662. DEVELOPING HIGHER LEVEL THINKING/READING SKILLS IN ADULTS.

This course will cover such areas as analyzing written materials to determine what higher-order thinking/reading skills would be required to complete a task. The thinking/reading skills tested on the GED will receive special emphasis. Strategies for teaching and reinforcing these skills will be presented. Credit, three hours.

663. ORGANIZATION, ADMINISTRATION, AND SUPERVISION OF ADULT EDUCATION PROGRAMS.

This course will identify the current adult education programs, from the Secondary Initiative Alternative School and the unique James H. Groves Adult High School, to Literacy Volunteers, Adult Basic Education(ABE) and work place ESL programs. Planning supervising and the complex administration of these and other nontraditional education programs will be discussed and explored. Credit, three hours.

652. PROGRAM EVALUATION AND OUTCOMES IN ADULT EDUCATION.

This course focuses on theoretical background and practical application of program evaluation in Adult Basic Education. Program providers will design and apply evaluation techniques and strategies to program management or teaching adults who are educationally disadvantaged. Participants will learn to determine the extent of program outcomes, quality and impact on success in ABE programs. Credit, three hours.

653. PRACTICUM IN ADULT EDUCATION EVALUATION.

This course provides an opportunity for students who have taken 652 to apply their learning, in depth, by evaluating a part or an entire adult education program from start to finish. Students design instruments, conduct interviews, analyze and report the information collected. This authentic experience is designed to consolidate and extend their learning from the previous course.

699. THESIS OPTION (6 CREDITS).

student seeking the Masters of Arts Degree in Education with Concentration in Non-Traditional Adult Education at Delaware State University shall complete one of the following options: an approved program consisting of thirty-six (36) semester hours of credit; or a thesis plus an approved program consisting of thirty (30) semester hours of credit.

GRADUATE PROGRAM IN SCIENCE EDUCATION

Purpose:

Our purpose is to prepare students to successfully interact within the society they will enter upon termination of their formal schooling. This purpose is served by offering the human and physical resources required to support the opportunity to acquire deep understandings about important facts and issues. Higher order thinking skills are provided in an environment that promotes cooperation and tolerance. Students are prepared to enter the work force with adequate communication skills. Minimal training for the work force will be required.

GOALS AND OBJECTIVES:

The Science Education Master's Degree program is designed to provide middle and senior high school science teachers with additional training in at least two science disciplines, as well as, in the methodologies and techniques appropriate to the teaching experience. The goals of this program are:

1. to provide an exemplary program for the education of science teachers.
2. to provide a contemporary methodological foundation in science education.
3. to provide an opportunity for science teachers to broaden their understanding of concepts and issues related to their major discipline.
4. to provide an interdisciplinary perspective of the relationship between science, technology, and society.
5. to provide an opportunity to participate in the rigors of research and to appreciate its implications in classroom situations.

ADMISSION AND DEGREE REQUIREMENTS:

For admission to the *Master of Arts Degree Program in Science Education*, applicants should have graduated from an accredited college or university with a minimum grade point of 3.00 in their major, and 2.50 overall, on a 4.00 scale. In addition, a minimum of thirty-three (33) credit hours of Science should have been completed. Official scores on the Graduate Record Examination are also required. Test scores should not be more than five (5) years old. Applicants not meeting the above requirements at the time of application may apply for admittance on a provisional basis.

CURRICULUM

This program requires the successful completion (3.0 grade point average) of thirty-six (36) semester hours of graduate level courses including fifteen (15) hours of Science Education core courses, fifteen (15) hours of Science electives, and six (6) hours of Science Education electives.

Core Courses

626. SCIENCE, TECHNOLOGY, AND SOCIETY.

This course is designed to investigate the linkages that exist among science, technology, and society. An interdisciplinary approach will be assumed to convey the interrelationships that exist among science, technology and the humanities, with a focus on various historic, current and ongoing ethical issues in science and social policy. Credit, three hours.

627. RESEARCH EXPERIENCES IN SCIENCE

This course will provide a field experience for science teachers that is designed to present science as a dynamic problem-solving endeavor. Students will work towards the resolution of a problem with a practicing scientist in his or her discipline. Credit, three hours.

or,

628. ANALYSIS OF RESEARCH ON TEACHING SCIENCE.

This course provides the student with the means by which they may systematically evaluate current classroom teaching practices, and analyze the dynamics of student-teacher interactions. Methods of educational research in naturalistic settings will be examined. This course will consist of classroom instruction, field work in various school settings, and laboratory work on the SPSS-X computer system at the college. Credit, three hours.

629. CONTEMPORARY METHODS OF SCIENCE TEACHING.

A survey of methodologies will be presented that research has indicated are most effective for teaching science. Methods will be presented from a constructivist perspective. Contemporary curriculum and assessment philosophies and materials will also be discussed. Credit, three hours.

630. INTERDISCIPLINARY SCIENCE.

This is an interdisciplinary approach to the study of scientific principles. Common concepts and themes such as atomic theory, systems and energy will be studied in a context that relates the concept to multiple scientific disciplines. Credit, three hours.

615. EDUCATIONAL MEASUREMENT AND STATISTICS.

The nature of measurement and types of scales, units, scores, norms, sampling, item analysis, batteries and profiles will be explored. Principles of reliability and validity and the use of test scores in decision making as well as descriptive and inferential statistics and the design of educational research are course topics. Credit, three hours.

Science Education Electives

625. MATHEMATICS FOR SCIENCE TEACHERS.

This is a predominantly methods-based course in which various means of presenting mathematical concepts are developed/devised/researched. Application of math principles to science topics will be stressed. The concepts to be dealt with will include, but not be limited to: factor-label (unit analysis), metrics, proportionalities, triangulation, graphing, data analysis, etc. The integration of NCTM standards with science instruction will be addressed. Credit, three hours.

631. SELECTED TOPICS IN SCIENCE EDUCATION.

This course is designed to allow flexibility in the selection of specific educational topics to meet student needs and interests, as well as professor expertise. Topics will be posted prior to the first class meetings. Credit, one hour.

632. SELECTED TOPICS IN SCIENCE EDUCATION.

As per above. Credit, two hours.

633. SELECTED TOPICS IN SCIENCE EDUCATION.

As per above. Credit, three hours.

634. COMPUTERS AND OTHER TECHNOLOGIES IN SCIENCE TEACHING.

This course is an introduction to the use of the computer and other technologies in interactive modes in the science classroom and laboratory. Emphasis will be placed upon the construction of inexpensive equipment and review of currently available software to accompany the equipment. Credit, three hours.

636. THE SCIENCE OLYMPIAD AND OTHER COMPETITIONS.

This course is designed to give science teachers background information needed to prepare an Olympiad team for competition within the individual classroom, school, state or nation. It consists of an overview of the activities, with emphasis upon specific curricular topics that will help the teacher better prepare their team. Credit, three hours.

614. HUMAN GROWTH AND DEVELOPMENT.

This course focuses upon the educational implications of human development throughout the life span. Students will survey research giving special attention to applications to teaching and development of school programs. Credit, three hours.

611. THEORIES AND PRACTICES IN EXCEPTIONALITIES.

This course is designed to identify exceptional learners and provide an understanding of their educational needs. Specific teaching techniques will be explored as well as principles and practices of program development. Credit, three hours.

699. THESIS OPTION. Credit, six hours.

ADMINISTRATION AND SUPERVISION CERTIFICATION ONLY

Purpose:

The purpose of the Administration and Supervision Certification Option is to provide advanced courses of study for preparing supervisors of instruction, principals and school superintendents. More specific purposes are to prepare educators to be leaders in curriculum and instruction, to understand the dynamics of groups and interpersonal skills, to understand the role of school law and schools society, to understand the business aspects of managing schools and to understand research, theory, principles and practices of effective administration. A Master's degree in any field of study, and the following courses are needed for certification (18 hours).

605. CURRICULUM ORGANIZATION AND DESIGN.

Analyzes the historical, philosophical, sociological, epistemological, and pedagogical bases of curriculum patterns with emphasis on relationship to contemporary designs. Explores models of curriculum organization by which to affect curriculum change. Credit, three hours.

639. HUMAN RELATIONS FOR SCHOOL ADMINISTRATORS.

A study of the components and dynamics of human systems at the individual, group organization, and global levels. Emphasis on management theory of all categories of organizations. Activities focus administrative skill development. Credit, three hours.

641. SUPERVISION OF CURRICULUM AND INSTRUCTION.

This course is designed to acquaint graduate students with supervision for instructional improvement. It will review the supervisor's role in curriculum development that includes selection of curriculum models, curriculum committees, and parent participation in curriculum and other factors in creating a positive educational change. This course will examine the major educational curricular philosophies, both historical and current, and their implications for the development of curriculum in contemporary settings. The focus of the course is on the differences between supervision and instruction; recent findings as successful methods of teacher evaluation; and rationale techniques and models for evaluating curriculum. Credit, three hours.

643. SCHOOL LAW.

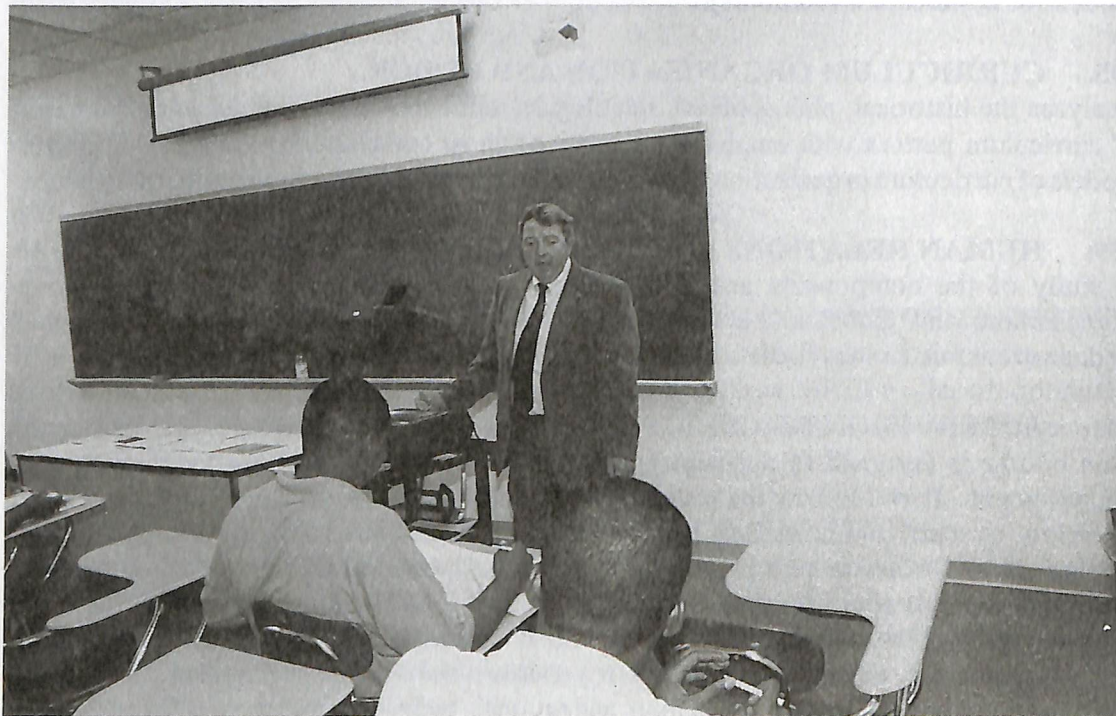
An analysis of policies, rules, laws, precedents and practices that impact students and adults in the educational settings. Emphasis on true and accurate accounts of case studies on the impact of the legal system on public education. Group work and discussions on briefs of precedent-settings cases and recently decided cases that change school policy. Credit, three hours.

645. SCHOOL BUSINESS MANAGEMENT.

A study of the acquisition, distribution, and expenditure of financial resources at the state, local, and building level. Emphasis on budget preparation, ground business practices, contemporary issues that impact school finance. Credit, three hours.

650. ADMINISTRATION OF ELEMENTARY, MIDDLE, AND SECONDARY SCHOOLS.

An introduction of theories, concepts, principles, and practices of effective public school administrators. The principle as the educational leader is emphasized. Critical readings, group work, discussions with practicing administrations, and written work integrate theory and practice. Credit, three hours.



Dr. Robert Oesterling, Associate Professor of education graduate studies, teaches a graduate course on *Theories and Methods of Instruction*.

GRADUATE PROGRAM IN HISTORIC PRESERVATION

Full-Time Faculty

Bradley Skelcher, Director
Ph.D., Southern Illinois University at Carbondale
Sam Hoff, Professor and Chair of Department
Ph.D., S.U.N.Y. at Stony Brook
Akwasi Osei, Associate Professor
Ph.D., Howard University
Yohuru Williams, Assistant Professor
Ph.D., Howard University
Steve Taylor, Assistant Professor
M.A., University of Maryland at College Park
John Gardner, Associate Professor
Ph.D., St. Johns University

Adjunct Faculty

Robin Bodo, M.A., University of Northern Colorado
Robin Hubbel, M.A., University of Georgia
Michael Best, J.D., Boston University

OBJECTIVES:

The Master of Arts degree program in Historic Preservation has an emphasis in broadening knowledge in America's heritage. Through a concentration in either Museum Studies or African American Heritage Preservation, the program seeks to provide students with the necessary training and preparation for professional employment in their related chosen fields.

ADMISSION AND DEGREE REQUIREMENTS:

To be admitted into the M.A. Program in Historic Preservation, students must (1) hold a bachelor's degree in History, Art History, Architectural History, Architecture, Folk Studies, Black Studies, Historical Archaeology, Urban Studies, Community Development, or related area from an accredited college or university; (2) submit results from the Graduate Record Examination (G.R.E.); (3) present an official transcript of all previous college work with a minimum grade point average of 3.00 in the major field and 2.50 overall grade point average on a 4.00 grade scale at the undergraduate level; (4) and submit three letters of recommendation.

Admission into Candidacy

Students must complete nine (9) hours of graduate level course work with a minimum of a B average or 3.00 and complete the admission process into the Graduate School and the

M.A. Program in Historic Preservation. Students may not enroll in any of the last 15 hours of the M.A. Program with candidacy approval.

Degree Requirements:

The Master of Arts Degree in Historic Preservation requires a minimum of thirty-six (36) credit hours. Mandatory within the thirty-six credit hours of course work will be eighteen hours of core courses and nine (9) hours of internship following the completion of twenty-seven (27) hours of required course work in the Historic Preservation program. Students will complete nine (9) hours of course in a either Museum Studies or African American Heritage Preservation concentrations.

COURSE DESCRIPTIONS

(34)

CORE COURSES

600. AMERICAN ARCHITECTURAL HISTORY.

This course covers the rich history of the development of architectural styles in America through the mid-twentieth century. Prerequisites: None. Credit, three hours.

601. AMERICAN HISTORIC CONTEXTS TO 1865.

This course focuses on the historic context of the American built environment and cultural heritage of the Colonial Era and Early America during the eighteenth century through the first half of the nineteenth century. Emphasis will be placed on the heritage of Delaware. Prerequisites: None. Credit, three hours.

602. AMERICAN HISTORIC CONTEXTS SINCE 1865.

This course focuses on the historic context of the built environment and cultural heritage of America from the second half of the nineteenth century through the first half of the twentieth century. Emphasis will be on the development of cultural examples in Delaware. Prerequisites: None. Credit, three hours.

603. INTRODUCTION TO HISTORIC PRESERVATION AND MUSEUM STUDIES.

This course will introduce graduate students in their first year to the fields of historic preservation and museum studies. Students will investigate the history of each field and how they relate to each other such as historic house preservation and historic house museums or historic villages and museum interpretations. Students will develop solid foundations for further study in their selection concentrations in either Museum Studies or African American Heritage Preservation. Prerequisites: None. Credit, three hours.

604. HISTORIC PRESERVATION LAW AND PRESERVATION POLICY.

This course covers important legal precedents through the history of court cases associated with historic preservation and is also designed for students who wish to enter Public

administration. In part it focuses on zoning laws and issues, the economics of historic preservation, the politics of historic preservation, and the shaping of policy.

Prerequisites: None. Credit, three hours.

606. RESEARCH METHODS IN HISTORY.

Prerequisites: None. Credit, three hours.

Option I: Museum Studies

609. MUSEUM STUDIES: MUSEUM CURATORIAL ROLE.

This will show the student acquisition, maintenance and utilization of collections. Curators also sometimes are involved with educational programming and research for exhibit design.

Prerequisites: None. Credit, three hours.

610. MUSEUM STUDIES: MUSEUM HISTORIANS AND EXHIBITORS ROLE.

This course will establish the role of a Historian in the museum by establishing character and nature of a museum and its development. It also will take the student through transformation of a concept into visual representation for public education.

Prerequisites: None. Credit, three hours.

611. MUSEUM STUDIES: MUSEUM MANAGEMENT.

This course is a comprehensive study of museum management. This course will also define the museum, the role of administrator, fund raising, budget control and all aspects of museum management. It will cover the administration of museums including educational programming, volunteer management, staff management, exhibit development, fundraising such as grant writing, and other facets of museum management.

Prerequisites: None. Credit, three hours.

Option II: African American Heritage Preservation Emphasis

631. AFRICAN-AMERICAN HISTORIC CONTEXTS TO 1865.

This course focuses on the historic context of the African American architectural environment and cultural heritage of the colonial era and early national period during the eighteenth through the first half of the nineteenth century. Emphasis will be placed on the rich heritage of the Mid- Atlantic region. Prerequisites: None. Credit, three hours.

632. AFRICAN-AMERICAN HISTORIC CONTEXTS SINCE 1865

This course focuses on the historic context of the African American material culture and cultural heritage from the second half of the nineteenth through the first half of the twentieth century. Particular attention will be given to the presence of African-American examples in the Mid- Atlantic region. Prerequisites: None. Credit, three hours.

633. SURVEY AND EVALUATION OF AFRICAN-AMERICAN HISTORIC RESOURCES.

Students will learn how to survey historic resources of the African-American built environment and cultural heritage and then evaluate them for historical aesthetic, and cultural significance. Prerequisites: None. Credit, three hours.

Internship

608. HISTORIC PRESERVATION INTERNSHIP.

Students in the graduate program in historic preservation must complete an internship experience with a private historical group or a local, state, or federal government agency with the approval of the director of the graduate program and the chair of the department. Students must work closely with director to ensure all requirements are met. All students must complete a portfolio of information derived from the internship experience along with a mid-semester report and a concluding report with a satisfactory evaluation from the immediate supervisor from the private organization or government agency. The portfolio and pertinent reports will be submitted to the Graduate Committee for final approval consisting of the director of the graduate program, chair of the department, and three faculty members from the department and the Dean or representative of the Graduate School. Prerequisites: Completion of twenty-seven (27) hours of graduate level course work. Credit nine hours.



Nathaniel Delesline already does historic preservation work for the Delaware Department of Transportation. He is pursuing a Masters of Science Degree in Historic Preservation, which he expects will expand his career options.

CURRICULUM

Core Courses

YEAR I

First Semester

34-603	Introduction to Historic Preservation & Museum Studies	3*
34-601	American Historical Contexts to 1865	3*
34-606	Research Methods	<u>3*</u>
		9

Second Semester

34-602	American Historical Contexts since 1865	3*
34-600	American Architectural History	3*
34-604	Historic Preservation Law & Policy	<u>3*</u>
		9

YEAR II

First Semester

34-6**	Area of Emphasis	3**
34-6**	Area of Emphasis	3**
34-6**	Area of Emphasis	<u>3**</u>
		9

Second Semester

34-608	Historic Preservation Internship	<u>9***</u>
		9

*	Core Courses
**	Area of Emphasis
***	Internship

YEAR I

First Semester

34-603	Introduction to Historic Preservation & Museum Studies	3*
34-601	American Historical Contexts to 1865	3*
34-606	Research Methods	<u>3*</u>
		9

Second Semester

34-602	American Historical Contexts since 1865	3*
34-600	American Architectural History	3*
34-604	Historic Preservation Law & Policy	<u>3*</u>
		9

YEAR II

First Semester

34-610	Museum Studies: Museum Historians and Exhibitors Role	3**
34-609	Museum Studies: Role of the Curator	3**
34-611	Museum Studies: Museum Management	<u>3**</u>
		9

Second Semester

34-608	Historic Preservation Internship	<u>9***</u>
		9

* Core Courses
 ** Emphasis
 *** Internship

CURRICULUM

Option II African American Heritage Preservation Emphasis

YEAR I

First Semester

34-603	Introduction to Historic Preservation & Museum Studies	3*
34-601	American Historical Contexts to 1865	3*
34-606	Research Methods	<u>3*</u>
		9

Second Semester

34-602	American Historical Contexts since 1865	3*
34-600	American Architectural History	3*
34-604	Historic Preservation Law & Policy	<u>3*</u>
		9

YEAR II

First Semester

34-632	African-American Historic Contexts since 1865	3**
34-631	African-American Historic Contexts to 1865	3**
34-633	Survey and Evaluation of African-American History Resources	<u>3**</u>
		9

Second Semester

34-608	Historic Preservation Internship	<u>9***</u>
		9

* Core Courses
 ** Emphasis Courses
 *** Internship

GRADUATE PROGRAM IN MATHEMATICS

Professors:

Hanson Umoh (Program Director), Ph.D., Howard University
Nagaiah R. Nandakumar, Ph.D., University of Illinois at Urbana-Champaign
Mazen Shahin, Ph.D., Lvov State University, USSR

Associate Professors:

Eric Frankl, Ph.D., University of Illinois
Fengshan Liu, Ph.D., University of Delaware
Rodney E. McNair, Ph.D., University of Delaware

Assistant Professor:

Paul F. Gibson, M.S., University of Arkansas

OBJECTIVES:

This program is designed to fit the needs of students in two different areas--pure mathematics and applied mathematics. The Pure Mathematics Program is designed for students who are interested in either further graduate study in mathematics and related areas or college teaching. The Applied Mathematics Program is intended for students who wish to learn the applications of mathematics, in particular with a goal of working in industry, government and special programs.

ADMISSION AND DEGREE REQUIREMENTS:

All applicants must submit their Graduate Record Examination scores and two letters of recommendation to the Director of Graduate Program, Delaware State University, Dover, DE 19901. All applicants seeking direct admission should have completed a baccalaureate degree program in mathematics comparable to that offered at this university or a baccalaureate degree in a related field with at least a minimum overall G.P.A. of 3.0 and a G.P.A. of 3.0 in mathematics courses on a 4.0 scale. Depending on the background and career interests of the applicants, the Graduate Committee may recommend candidates with GPAs between 2.5 and 3.0 in Mathematics for direct admission. Applicants who are deficient in the core requirements shall receive only provisional admission for one year at the end of which the Graduate Committee will re-evaluate their applications. Each applicant will be considered by the departmental graduate committee and recommended for admission on the basis of all evidence applicable to the student's admission.

Students who desire to enter this program from baccalaureate degrees must demonstrate competence in the following courses either by successful undergraduate completion, by examination or by successfully completing the undergraduate courses: Advanced Calculus I, Linear Algebra, Differential Equations, Statistics, Probability, and Algebraic Structures I. The plan of study for this scenario will be agreed upon by the student, his/her advisor, and the Graduate Program Committee. Depending upon the students educational background, some students may also be requested to take six to nine credits of undergraduate mathematics courses.

RESEARCH OR TEACHING ASSISTANTSHIP OR FELLOWSHIP

A limited number of graduate research or teaching assistantships or fellowships are available. Detailed information and application forms may be obtained from the Department of Mathematics or the Graduate Office.

CURRICULUM

A. *Master of Science Degree Program in Mathematics*

The masters programs in mathematical sciences are flexible enough to accommodate students with diversified background training. In consultation with the Graduate Committee, each student develops a course of study in mathematics areas most relevant to his or her professional and career objectives. Each student must take 15 credit hours of the core courses, and complete an additional 18 hours either in the Thesis Option or the Non-Thesis Option.

Core Courses

All of these five courses:

M500 Foundations of Mathematics	3 Hours
M511 Introduction to Abstract Algebra	3 Hours
M561 Real Analysis I	3 Hours
M562 Real Analysis II	3 Hours
M571 Complex Analysis	3 Hours

Select one of the following two courses:

M541 Advanced Probability Theory	3 Hours
M521 General Topology	3 Hours

Total: 18 Hours

I. Thesis Option

a. Pure Mathematics

(i) Electives of 6 credit hours from the Pure Mathematics Courses:

M504 Modern Geometry	3 Hours
M505 Logic	3 Hours
M531 Number Theory	3 Hours
M521 or M541	3 Hours
M611 Topics in Pure Mathematics	3 Hours
M621 Introduction to Functional Analysis	3 Hours

(ii) M699 Thesis or Directed Project 6 Hours

(iii) Electives from Pure Mathematics and/or Applied Mathematics and/or Other Graduate Level Courses with the approval of the student's advisor.

3 Hours

Total: 15 Hours

b. Applied Mathematics

(i) Electives of 6 credit hours from the Applied Mathematics Courses:

M651 Partial Differential Equations	3 Hours
M661 Numerical Analysis	3 Hours
M551 Ordinary Differential Equations	3 Hours
M643 Statistics	3 Hours
M641 Combinatorics	3 Hours
M631 Operations Research	3 Hours
M663 Topics in Applied Mathematics	3 Hours

(ii) M699 Thesis 6 Hours

(iii) Electives from Pure Mathematics and/or Applied Mathematics and/or Other Graduate Level Courses with the approval of the student's advisor.

3 Hours

Total: 15 Hours

The students who select thesis option must defend their thesis before the Departmental Graduate Committee. A student may choose a three credit hours expository thesis or write a six hour research thesis.

II. Non-thesis

The students who select either one of the following non-thesis options must pass a written examination within two attempts.

The student's advisor together with the Departmental Graduate Committee determines the eligibility, date and time for taking the comprehensive examinations. This written examination is administered in February. A second and final attempt is permitted in the following August. The exam is based on both 25-561 and 25-562 for Analysis, 25-511 for Algebra, and (or 25-651 and 25-643 for Applied Mathematics. Another topic, such as Ordinary Differential Equations, Partial Differential Equations, or Statistics, may be substituted for one of the above by petition to the graduate committee based on two graduate level courses and supported by a faculty member.

Pure Mathematics

1. Electives from the Pure Mathematics Courses 9 Hours

2. Electives from Pure Mathematics and/or Applied Mathematics and/or Other Graduate Level Courses with the approval of the student's advisor.

6 Hours

Total: 15 Hours

Applied Mathematics

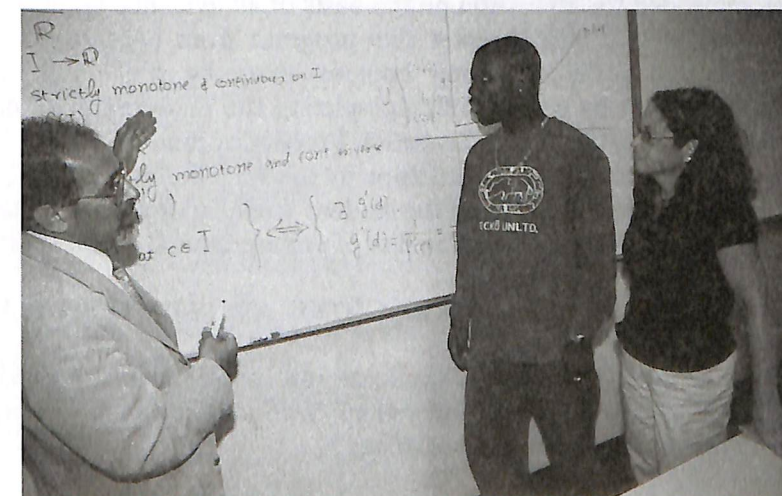
1. Electives from the applied Mathematics Courses 9 Hours

2. Electives from Pure Mathematics and/or Applied Mathematics and/or Other Graduate Level Courses with the approval of the student's advisor.

6 Hours

Total: 15 Hours

Dr. Mazen Shahin, Professor of mathematics, explains an equation to graduate students George P. Kelley and Ellen E. Carr.



OBJECTIVES:

This program is designed to fit the needs of graduate students in Mathematics Education teaching certification is connected to this program.. This program seeks to enhance teaching skills in mathematics by extending graduate mathematical study into areas applicable to middle and secondary school as well as the community college and to provide weighty consideration of some of the major concerns associated with middle and secondary school mathematics education. Programmatic emphasis is placed upon mathematical content, curriculum, and teaching methods as well as the teaching profession and epistemological, pedagogical, social, psychological, effective teaching, classroom management, technological, and cultural concerns.

ADMISSION AND DEGREE REQUIREMENTS:

All applicants must submit their Graduate Record Examination scores and two letters of recommendation to the Director of Graduate Program, Delaware State University, Dover, DE 19901. All applicants seeking direct admission should have completed a baccalaureate degree program in mathematics comparable to that offered at this university or a baccalaureate degree in a related field with at least a minimum overall G.P.A. of 3.0 and a G.P.A. of 3.0 in mathematics courses on a 4.0 scale.

Depending on the background and career interests of the applicants, the Graduate Committee may recommend candidates with GPAs between 2.5 and 3.0 in Mathematics for direct admission. Applicants who are deficient in the core requirements shall receive only provisional admission for one year at the end of which the Graduate Committee will re-evaluate their applications.

Each applicant will be considered by the departmental graduate committee and recommended for admission on the basis of all evidence applicable to the student's admission. Students who desire to enter this program from baccalaureate degrees must demonstrate competence in the following courses either by successful undergraduate completion, by examination or by successfully completing the undergraduate courses: Advanced Calculus I, Linear Algebra, Geometry, Statistics, Probability, and Algebraic Structures I. The plan of study for this scenario will be agreed upon by the student, his/her advisor, and the Graduate Program Committee. Depending upon the student's educational background, some students may also be requested to take six to nine credits of undergraduate mathematics courses.

RESEARCH AND TEACHING ASSISTANTSHIP AND FELLOWSHIP

A limited number of graduate research or teaching assistantships or fellowships are available. Detailed information and application forms may be obtained from the Department of Mathematics or the Graduate Office.

CURRICULUM

B. *Master of Science Degree Program in Mathematics Education*

The masters program in Mathematics Education is flexible enough to accommodate students with diversified background training. In consultation with the Graduate Committee, each student develops a course of study in mathematics areas most relevant to his or her professional and career objectives. Each student must take 36 credit hours of course work as depicted below.

Core Courses

Required Mathematics Education Courses --

25-503 Mathematics Teaching Methods I	9 Credits
25-603 Mathematics Teaching Methods II	3 Hours
25-691 History and Philosophy of Mathematics/Mathematics Education	3 Hours

Required Mathematics Content Courses --

These three courses:

25-500 Foundations of Mathematics	12 Credits
25-504 Modern Geometry	3 Hours
25-511 Introduction to Abstract Algebra	3 Hours

And One of these two courses:

25-513 Discrete Mathematics	3 Hours
25-531 Number Theory	3 Hours

Required Computers and Technology Course

25-507 Computers and Technology in Mathematics	3 Credits
	3 Hours

Required Education Courses -- 6 Credits

12-604 Theories and Methods of Instruction	3 Hours
12-XXX One Course from the Following:	3 Hours
12-605 Curriculum Organization and Design	
12-610 Development of Instructional Materials	
12-614 Human Growth and Development	
12-607/633 Theories and Practices of Classroom Management	

RESEARCH - 6 Credits -- Students must Complete One of the Following Options

Option I Take the following two courses:

25-697 Research Methods in Mathematics Education	3 Hours
25-699 Thesis or Directed Project	3 Hours

Option II Take two additional graduate courses:

25-5XX/6XX One of the following:

25-521	General Topology	3 Hours
25-525	Logic	3 Hours
25-531	Number Theory	3 Hours
25-541	Advanced Probability Theory	3 Hours
25-551	Ordinary Differential Equations	3 Hours
25-561	Real Analysis I	3 Hours
25-562	Real Analysis II	3 Hours
25-571	Complex Analysis	3 Hours
25-581	Operations Research	3 Hours
25-611	Topics in Pure Mathematics	3 Hours
25-621	Introduction to Functional Analysis	3 Hours
25-641	Combinatorics	3 Hours
25-643	Statistics	3 Hours
25-651	Partial Differential Equations	3 Hours
25-661	Numerical Analysis	3 Hours
25-663	Topics in Applied Mathematics	3 Hours
12/5XX/6XX	A graduate education course as agreed upon by student, advisor, and graduate committee.	

Option III - For students considering the future pursuits of a PhD in Mathematics Education 9 Credits.

25-697	Research Methods in Mathematics Education	3 Hours
25-699	Thesis or Directed Project	6 Hours

If this option is selected, the student will be required to take only 3 credits, rather than 6 credits, from the Education Courses listed above.

Laurie Davis, math graduate student, works in the DSU Math Computer Lab. Ms. Davis, who earned her Bachelor of Science Degree in Mathematics at DSU in 2001, enrolled in the DSU Mathematics Graduate Studies Program upon its first year of inception. She plans to be among the first graduates of the new program.



COURSE DESCRIPTIONS

MATHEMATICS (25)

500. FOUNDATION OF MATHEMATICS.

This course is specifically designed to bridge undergraduate and graduate study in mathematics. This is an introduction to abstract ideas, proofs, set theory, relations, and number systems and their connections. Prerequisites: Undergraduate Calculus II and College Geometry. Credit: 3 hours.

503. MATHEMATICS TEACHING METHODS I.

This course is the first of a two part sequence designed to provide weighty consideration of some of the major topics in middle and secondary school mathematics education. This course covers advanced topics in methods of teaching mathematics. Typical content covered in the course will include current issues in teaching and learning mathematics, philosophy of mathematics and mathematics learning, learning theories, curriculum design, assessment, and multi cultural education. Prerequisite: Undergraduate Calculus II, Linear Algebra, Probability, Statistics, and College Geometry. Credit: 3 hours.

504. MODERN GEOMETRY.

This course covers Menelaus and Ceva's Theorems, Cross Ratio, Elementary Transformations, Euclidean Constructions, and Non-Euclidean Geometry. Prerequisite: College Geometry with Minimum Grade of C. Credit: 3 hours.

507. COMPUTERS AND TECHNOLOGY IN MATHEMATICS.

This course considers the utilization of computers and technology within mathematics and the teaching of mathematics. Topics include: programming languages, the sophistication and limitations of computers, LOGO, computer graphing, software evaluation, mathematics and math processing software, problem-solving through programming, spreadsheets and databases, matrices, and computer equipment and networking. This course will be project oriented and will be individualized to meet the needs of graduate students from pure and applied mathematics and mathematics education. Prerequisites: Undergraduate Calculus II, Linear Algebra, Probability, and College Geometry. Credit: 3 hours.

511. INTRODUCTION TO ABSTRACT ALGEBRA.

This course is concerned with the basic theory of some of the important algebraic systems such as groups, rings and fields with emphasis on homomorphism, isomorphism, integral domain, extension fields and Galois groups. Prerequisite: Undergraduate Algebraic Structures. Credit: 3 hours.

513. DISCRETE MATHEMATICS.

This course is an advanced treatment of Boolean Algebras, Proofs, Algorithms, Combinatorics and models of computation. Prerequisite: Undergraduate Calculus II. Credit: 3 hours.

521. GENERAL TOPOLOGY.

The purpose of this course is to give the students the basic concepts of point-set topology, topological spaces, continuity, connectedness, metric spaces, compactness and lead them to further topics in topology. This course also presents as a related discipline to the proper understanding of various branches of analysis and geometry. The students should become familiar also with fundamental groups and homotopy theory. Prerequisite: Advanced Calculus. Credit: 3 hours.

525. LOGIC.

This course examines the scope and logical foundations of mathematics. Formal systems are shown to model real life relationships, and these formal systems are studied and analyzed using advanced mathematical methods and rigor. The results of this study show both the inherent limitation of deductive reasoning and at the same time the richness of what can be expressed and proven. Prerequisites: Calculus I and Linear Algebra. Credit: 3 hours.

531. NUMBER THEORY.

The course, Number Theory is an introduction to the study of basic properties of integers which allows one to demonstrate how various areas of mathematics play a role in the study of properties of natural numbers, such as divisibility, congruencies, arithmetic functions, diophantine equations and quadratic residues. This course is flexible and fundamental enough to be taken by Mathematics and Mathematics Education Majors. Prerequisite: Undergraduate Algebraic Structures. Credit: 3 hours.

541. ADVANCED PROBABILITY THEORY.

This course is to provide students with knowledge of probability theory and its applications. Topics covered in the course may include probability spaces, discrete and continuous random variables, expectations, joint distributions and stochastic processes. Prerequisites: Probability and Calculus III. Prerequisite: Calculus III with a Minimum Grade of C. Credit: 3 hours.

551. ORDINARY DIFFERENTIAL EQUATIONS.

The purpose of this course is to present techniques of solving ordinary differential equations. The students should become familiar with Boundary Value Problems, Systems of Ordinary Differential Equations, Phase Diagrams and Stability. Prerequisite: Calculus III. Credit: 3 hours.

561. REAL ANALYSIS I.

To provide the students with the background in those parts of modern mathematics which have their roots in the classical theory of functions of a real variable. These include the classical theory of functions of a real variable, Riemann-Stieltjes integration. Prerequisite: Advanced Calculus I. Credit: 3 hours.

562. REAL ANALYSIS II.

To provide the students with a continuation of the background in those parts of modern mathematics which have their roots in the classical theory of functions of a real variable. These include Lebesgue measure and integration, absolute continuity and functions of bounded variation, and L^p -spaces. Prerequisite: Math 561. Credit: 3 hours.

571. COMPLEX ANALYSIS.

This is a first course concerned with the basic theory of a complex variables, analytic functions, Cauchy's Theorem, Cauchy integral formula, Taylor and Laurent series, residues, conformal mapping and contour integration. The rigorous approach adopted herein will set a firm foundation for leading the students to the next level of Complex Analysis. Prerequisites: Math 561 and Undergraduate Complex Analysis. Credit: 3 hours.

581. OPERATIONS RESEARCH.

This course is designed to expose students to linear, nonlinear and integer programming, simplex method, duality theorem, transport and other application problems, different optimization methods and techniques. Prerequisites: Undergraduate Linear Algebra, Computer Programming I and II. Credit: 3 hours.

603. MATHEMATICS TEACHING METHODS II.

This course continues to development of advanced topics in methods of teaching mathematics that begins in 503. Typical content covered in the course will include historical and current issues in teaching and learning mathematics, philosophy of mathematics and mathematics learning, learning theories, curriculum design, assessment and evaluation, and multi cultural education. Prerequisite: Math 503. Credit: 3 hours.

611. TOPICS IN PURE MATHEMATICS.

This course leads students into mathematics research. The course description will be given by the instructor. Prerequisite: Given by the Instructor. Credit: 3 hours.

621. FUNCTIONAL ANALYSIS.

This is a study of Metric Spaces, Hilbert Spaces and Banach Spaces with emphasis on Hilbert Spaces. Prerequisites: Math 561 and Math 562. Credit: 3 hours.

631. DIFFERENTIAL GEOMETRY.

This course is to provide to students the notion of a differentiable manifold and Calculus on a differentiable manifold. Topics covered in the course may include differentiable manifolds and submanifolds, vector fields on manifolds, tensor and differential forms and integration on manifolds. Prerequisites: Advanced Calculus and Math 521. Credit: 3 hours.

641. COMBINATORICS.

From this course, the students will learn Recurrence relations, Graph Theory and Network Algorithms. Prerequisite: Math 513. Credit: 3 hours.

643. STATISTICS.

This course is to provide students with the fundamental theory of statistics including both descriptive and inferential statistical methods, theory and applications. Topics to be covered may include basic concepts of probability theory, sampling and sampling distributions, the Central Limit Theorem, point and interval estimations, testing of hypothesis on one or several means and variances and nonparametric methods. Prerequisite: Math 541. Credit: 3 hours.

651. PARTIAL DIFFERENTIAL EQUATIONS.

This course is an introduction to Partial Differential equations. The course covers Fourier Series and Integrals, Heat equations, Wave equations and Laplace's equations. Prerequisite: Math 621. Credit: 3 hours.

661. NUMERICAL ANALYSIS.

This course covers numerical methods of solving large linear systems, Least Square problems, and Eigenvalue Problems, and Interactive Methods. Prerequisite: Undergraduate Numerical Analysis. Credit: 3 hours.

663. TOPICS IN APPLIED MATHEMATICS.

This course leads students into mathematics applications and research in applied mathematics. The course description will be given by the instructor. Prerequisite: Given by the Instructor. Credit: 3 hours.

691. HISTORY AND PHILOSOPHY OF MATHEMATICS/MATHEMATICS EDUCATION.

This course uses the historic development of mathematics to develop deeper understandings of the structure of mathematics, the process of mathematical development, and applications of mathematics. Typical course content will include the historic development of algebra, calculus, geometry, and probability. Prerequisites: Undergraduate Calculus II and College Geometry. Credit: 3 hours.

697. RESEARCH METHODS IN MATHEMATICS EDUCATION.

This course will introduce the student to past and present research methods used in the study of mathematics teaching and learning. The course will cover methods like process-product research, ethnographic research, survey, case studies, interview, and teachers as researchers. The course will also discuss the limitations of and uses of mathematics education research. Prerequisites: 15 credits of Graduate Study. Credit: 3 hours.

699. THESIS OR DIRECTED PROJECT.

This course will provide faculty support and guidance to students preparing and completing either their thesis or directed project in mathematics or mathematics education. Theses will be prepared in accordance with the specifications outlined in the Delaware State University Thesis Handbook. Directed projects will be selected and agreed upon by the students and graduate faculty. Prerequisites: 15 credits of Graduate Study. Credit: 6 hours.

GRADUATE PROGRAM IN PHYSICS

Professors:

Patrick F. Gleeson, Ph.D., University of Delaware; Low Temperature Physics
Gabriel D. Gwanmesia, Ph.D., SUNY at Stony Brook; Geophysics, Mineral Physics
Ehsan M. Helmy, Ph.D., University of California at Los Angeles;
Atomic and Nuclear Physics (Program Director)

Al-Sameen Khan, Ph.D., University of Delaware; Semiconductor Materials & Devices
Noureddine Melikechi, D.Phil., University of Sussex, England; Optical Physics, Laser Spectroscopy

Arthur E. Purdy, Ph.D., University of Delaware; Solid State Physics

Assistant Professor:

Essaid Zerrad, Ph.D., University of Connecticut; Theoretical Physics

OBJECTIVES:

The Master of Science Program in Physics seeks to provide each student with a thorough understanding of the discipline in preparation for employment in research and development programs, or to prepare for advanced degree (Ph.D.) academic programs.

The Master of Science Program in Physics Teaching is designed to provide a deeper understanding of physics principles and applications, as well as to stimulate creative classroom pedagogical techniques for the professional high school educator.

ADMISSION AND DEGREE REQUIREMENTS:

The Department of Physics and Pre-Engineering offers graduate study leading to the Master of Science in Physics and the Master of Science in Physics Teaching.

A. *Master of Science Degree Program in Physics*

To be eligible for admission to the Physics Graduate Program, an applicant must have received a Bachelor's Degree in Physics or related area from an accredited college or university. The Graduate Record Examination (GRE) is required. Entering graduate students are expected to have a sound background in intermediate level mechanics, electricity and magnetism, thermal physics and mathematical methods of physics. Any student found deficient in any of these areas may be required to take appropriate courses to remove that deficiency.

The requirement for a **Master of Science Degree in Physics** is thirty (30) credit hours of course work with a minimum average grade of "B". Twenty-four (24) of these must be in graduate physics courses at the 600 level. A sequence of courses required by all candidates includes the following: 26-652, 26-665, 26-667, 26-671, 26-672, 26-675. A maximum of six (6) credit hours of graduate credit may be granted for physics courses in the 500 level (above 500), or other graduate level courses in the sciences with the approval of the Physics Dept. For those students electing the Master's Thesis option, a maximum of six (6) credit hours towards a degree can be given for thesis work.

B. **Master of Science Degree Program in Physics Teaching**

Admission to **the Master of Science in Physics Teaching Program** requires a baccalaureate degree from an accredited institution and a working knowledge of topics classically addressed by the discipline of physics. This level of proficiency is typically achieved through successful completion of a baccalaureate program in physics, physics education, or a related field, or through experience obtained by teaching physics or related courses at the secondary level.

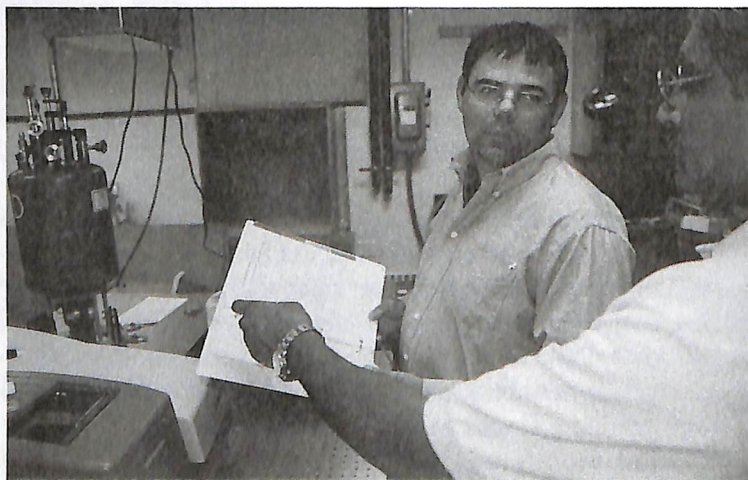
The degree, **Master of Science in Physics Teaching**, requires passing thirty-six (36) credit hours of courses as listed below, with a minimum average grade of "B". No more than nine (9) credit hours may be transferred from other institutions.

Course Requirements:

- a. A maximum of six (6) credit hours of graduate level education courses.
- b. A minimum of twenty-four (24) credit hours of graduate level physics courses.
- c. A maximum of six (6) graduate level credits in other sciences with departmental approval.

Typically, most, if not all, of the physics courses will be taken from the 26- 501 through 26-549 offerings. 26-695 is not available to participants of this program.

A unique feature of the department is the harmonious cooperation of its members, faculty and staff towards one goal: the best education for the students. The performance of the majors has been tested by their success in prestigious graduate schools nationwide. This is complemented with a large inventory of laboratory and research grade equipment. In addition, the department has a network of PC's with modern hardware and software including word processors. These are used for computer-assisted instruction, data collection and analysis, and graphics.



Physics graduate student Scott Polack and Dr. Al Sameen Khan, Professor of Engineering, discusses the optical characterization of semi-conductor material.

COURSE DESCRIPTIONS

PHYSICS (26)

501-502. ELECTRICITY AND MAGNETISM.

An introductory course in the theory and applications of electricity and magnetism. Basic integral calculus is used throughout. Topics covered include electric fields and potentials, DC circuits, magnetic fields and magnetic materials. Three credit hours each.

505-506. MATHEMATICAL METHODS I, II.

An introductory course in the applications of mathematics to the description of physical systems. Specific physical situations from the areas of mechanics, electricity and magnetism, optics and thermodynamics are analyzed using the techniques of differential and integral calculus and vector analysis. Three credit hours each.

511-512. MECHANICS.

Problems in statics, kinematics and dynamics; the study of equilibrium of forces, rectilinear and curvilinear motion, central forces, constrained motion, energy and momentum methods and rotational motion. Three credit hours each.

516. INTRODUCTION TO OPTICS AND LASERS.

A study of geometric and physical optics with particular application to optical instruments and an introduction to lasers and holography. Three credit hours.

523. MODERN PHYSICS.

Important contributions to atomic and nuclear physics since 1900, including electrical discharges in gases, atomic spectra, Bohr's atom, Schroedinger's equation, natural radioactivity, and elementary relativity. Three credit hours.

525. THERMODYNAMICS AND KINETIC THEORY.

Study of first and second laws of thermodynamics, general thermodynamic formulas with application to matter, kinetic theory of gases and Maxwell-Boltzmann statistics. Three credit hours.

531. ENERGY SYSTEMS.

Physical and chemical principles of energy conversion and their application to potential sources of power, fossil fuels, fission and fusion, fuel cells, photovoltaics, photothermal systems. Three credit hours.

535-536. METHODS OF EXPERIMENTAL PHYSICS.

Designed to acquaint students with the principles of basic experiments in all major branches of physics, stressing design of apparatus, procedures and analysis of projects involving mechanical, optical, electronic and thermal techniques, with microcomputers employed to collect and analyze experimental data. Three credit hours each.

563. MATHEMATICAL METHODS III.

An intermediate course in applied mathematics. Topics covered include the solution of differential equations, vector calculus, Fourier series and Laplace transforms. Three credit hours.

565. THERMAL PHYSICS.

Statistical inference is used to deduce the fundamental principles of thermodynamics and kinetic theory. These principles are applied to ideal and real gases, solids, closed and open systems, and black body radiation. Three credit hours.

567-568. INTERMEDIATE ELECTRICITY AND MAGNETISM.

A treatment of electro-statics, dielectric theory, magnetic phenomena, magnetic media, AC circuits and Maxwell's equations. Vector calculus is used throughout. Three credit hours each.

652. CLASSICAL MECHANICS.

Lagrangian formulation, the Kepler problem, Rutherford scattering, rotating coordinate systems, rigid body motion, small oscillations, stability problems, and Hamiltonian formulation. Three credit hours.

655. COMPUTATIONAL METHODS.

Designed to familiarize students with the use of computers in pursuing theoretical research. Numerical analysis techniques and computational methods employed in the study of physical models will be studied. Three credit hours.

657. ADVANCED EXPERIMENTAL METHODS.

A laboratory course designed to acquaint the graduate student with methods and techniques of modern experimental physics. Three credit hours.

661. SOLID STATE PHYSICS.

An introductory study of the structure and physical properties of crystalline solids. Included are topics in crystal structure, lattice vibrations, thermal properties of solids, x-ray diffraction, free electron theory and energy based theory. Three credit hours.

665. STATISTICAL MECHANICS.

Laws of thermodynamics, Boltzmann and quantum statistical distributions, with applications to properties of gases, specific heats of solids, paramagnetism, black body radiation and Bose-Einstein condensation. Three credit hours.

667. MATHEMATICAL METHODS IV.

An advanced treatment of mathematical topics including operators, matrix mathematics, complex variables and eigenvalue problems. Three credit hours.

671-672. ADVANCED ELECTROMAGNETIC THEORY.

Treatment of boundary value problems of electrostatics and magnetostatics, electromagnetic radiation, radiating systems, wave guides, resonating systems and multiple fields. Three credit hours each.

675-676. QUANTUM MECHANICS.

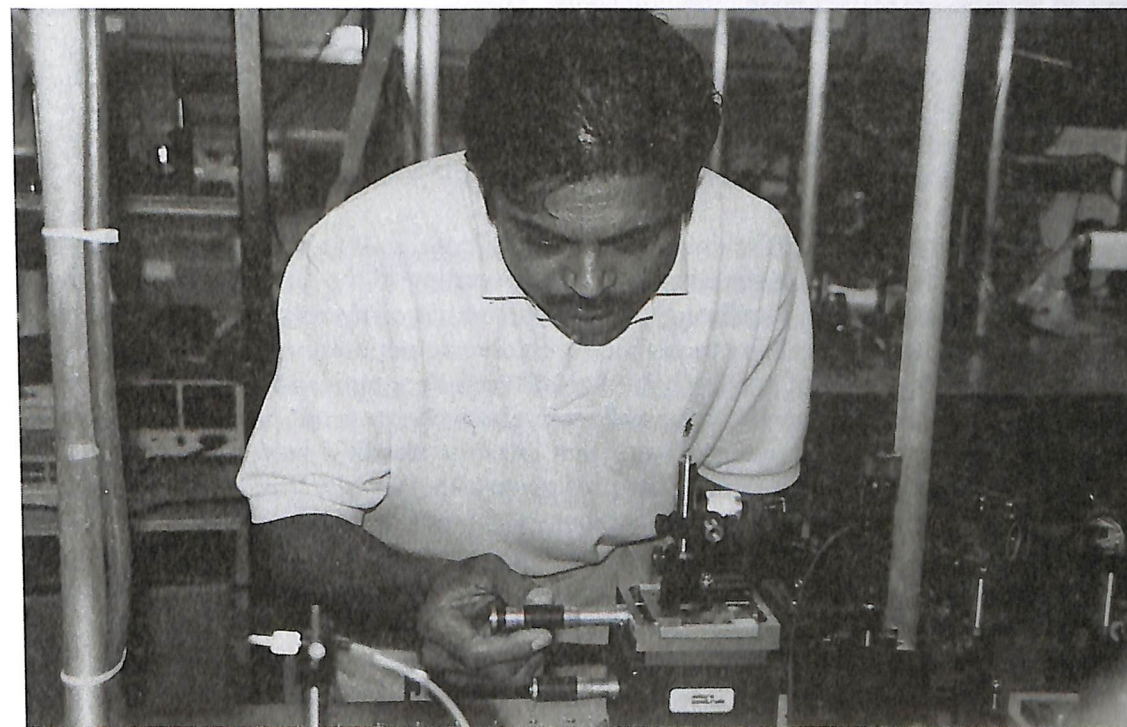
A study of the Schroedinger wave equation, operators and matrices, perturbation theory, collision and scattering problems, classification of atomic states and introduction to field quantization. Three credit hours.

691-692. RESEARCH.

Designed to give qualified students an opportunity to conduct study or laboratory work in a specialized field of interest. One to three credit hours each.

695. MASTER'S THESIS.

A research problem in a selected topic of physics resulting in a written thesis. One to six credit hours.



Physics graduate student Saoud Khan prepares applied optics equipment for a research experiment. The DSU Applied Optics Center, established in 1997, provides research opportunities for both undergraduate and graduate physics students.

GRADUATE PROGRAM IN SOCIAL WORK

Professor:

John N. Austin, Ph.D., Virginia Commonwealth University, Chair

Elijah Mickel, D.S.W., Howard University

Kul Bhushan Suri, Ph.D., University of Maryland

Associate Professor:

Maria Carroll, Ph.D., University of Maryland

Jacquelyne Gorum, D.S.W., Howard University

Bruce Hobler, Ph.D., University of Maryland

George Johnson, Ph.D., University of Pittsburgh

Dolores Finger Wright, D.S.W., Howard University

Assistant Professor

Ernestine Brittingham-Browne, M.S.W., Ohio State University

Ozie Hammond, D.S.W., Yeshiva University

Marlene Saunders, D.S.W., University of Pennsylvania

Diane Metzendorf, D.S.W., University of Pennsylvania

Shirley I. Wilson, D.S.W., Howard University

GOALS AND OBJECTIVES:

The primary goal of the Graduate Social Work Program is to prepare professional social workers capable of practicing at the advanced level according to the generalist perspective with, and on behalf of individuals, families, groups, communities, and organizations. Students are expected to demonstrate the ability to practice with diverse populations in diverse settings.

A primary objective of the Graduate Social Work Program is to increase the number of professional social workers employed in public, private, and non-profit human service agencies. By so doing, the program helps to insure that persons needing help with complex social problems receive intervention reflecting the profession's knowledge, values and skills.

Another primary objective of the program is to prepare social workers who are able to employ practice strategies that are consonant with the organizing frameworks of the graduate social work curriculum. These frameworks include the generalist perspective to social work practice, empowerment and the Black perspective.

ADMISSION AND DEGREE REQUIREMENTS:

The curriculum of the Graduate Program in Social Work is designed to prepare individuals to offer professional social work intervention at an advanced level on behalf of the residents of the State of Delaware and the nation. Graduates are enabled to provide intervention and preventive services to individuals, families, groups, organizations and communities in a range of traditional and non-traditional public and private social welfare settings. Foundation courses (first year courses) present the generalist perspective to social work practice. In addition, they present foundation content in the following areas: values and ethics, human behavior and the social environment, social welfare policy and services, social work practice, research, diversity, populations-at-risk and social and economic justice and field education. Building on

foundation content, the advanced curriculum imparts an advanced body of knowledge, practice principles, and skills consistent with the programs concentration advanced generalist practice and a field of practice. The graduate program offers two fields of practice: Advanced Practice with Families, Children and Youth and Advanced Practice in Mental Health. These options, combined with methods electives, allow students to gain in-depth knowledge pertaining to practice in a specific field and within the context of advanced generalist practice.

The Graduate Social Work Program was fully accredited by the Council on Social Work Education (CSWECACouncil@) in 1990. The Departments MSW and BSW programs continue to be accredited by the Council.

Degree Requirements:

For admission to the Graduate Program in Social Work, applicants must show evidence that they have earned the baccalaureate degree at an accredited college or university (or its equivalent for foreign students). In addition, applicants must demonstrate the capacity to meet the Programs academic standards in the classroom and the field practicum. Two official transcripts of all previous undergraduate and graduate work must be submitted.

1. Academic Requirements:

- A. The applicant must have an undergraduate Liberal Arts foundation as defined by the Graduate Social Work Program. A background in the social and behavioral sciences is preferred.
- B. The applicant's undergraduate transcript must reflect a Cumulative Grade Point Average (GPA) of 2.75 or above on a 4.00 point scale (4.00 = A). A "B" average in the major field of study is required. High scholastic achievement is strongly preferred.
- C. Official scores on the Graduate Record Examination (GRE) are required. The test scores must not be more than five (5) years old. Scores do not determine admission to the program.

4. Personal Attributes:

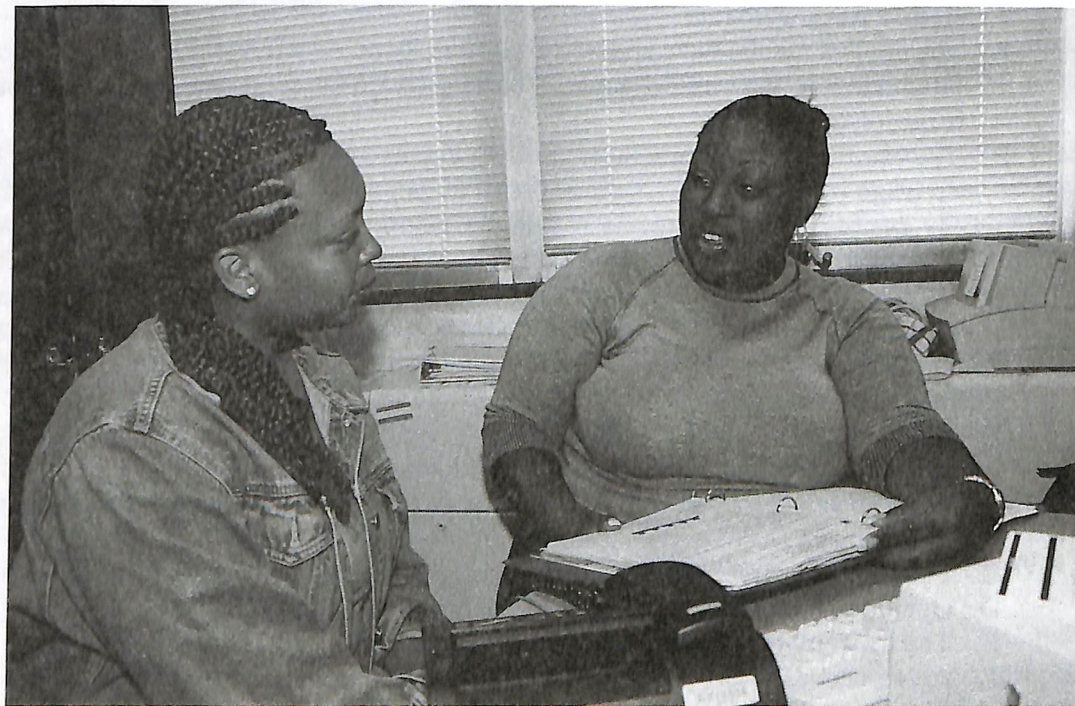
- A. The motivation necessary to successfully complete a rigorous curriculum designed to prepare students for advanced level practice;
- B. The capacity to function as a creative, responsible independent, and accountable practitioner;
- C. The ability to deal with sexual, racial, ethnic, physical, social, and cultural diversity;
- D. Openness to self-introspection and a willingness to change;
- E. The capacity to deal with individual differences;
- F. An earnest desire to work for social change in order to create a just society.
- G. The ability to utilize research methods to influence, formulate and advocate for constructive social welfare policies and effective social work practice interventions, and
- H. Readiness to identify with the social work profession and to apply social work values and ethics as defined by the National Association of Social Workers

9. Type of Admission:

- A. Full-time status- (Curriculum requirements are completed in two years).
- B. Full-time modified (Curriculum requirements are completed in four (4) years).

- C. Advanced standing status (Individuals granted this status complete the program in a summer and one (1) academic year).
- D. Advanced standing credits or transfer credits. Applicants may be awarded up to fifteen (15) credits for courses taken in an accredited BSW program).
- E. Typically, as students are admitted they will receive a "Regular Status". Students may also receive admission in a "Provisional Status". For "Regular Status", the applicant must have a GPA of 2.75 or better on a 4.00 scale with a "B" average in the major field of study. "Provisional Status" may be offered to applicants with a GPA less than 2.75. The GPA should not be less than a 2.5 on a 4.00 scale. The MSW Program offers a "Success Workshop" to help strengthen the academic performance of students admitted in this category.

Application deadline is April 30th for Advanced Standing and May 30th for other admissions.



Tamika Brown (right) works with an undergraduate student in the DSU Academic Support Services Office as part of her social work graduate studies internship requirement.

CURRICULUM REQUIREMENTS:

In order to complete the program and earn the M.S.W. degree, students must take and pass sixty (60) credit hours of graduate courses with a grade point average of 3.00 or above on a 4.00 scale. The curriculum consists of twenty-four (24) hours of foundation courses, twelve (12) credit hours of concentration courses, six (6) credit hours of field of practice courses, six credit (6) hours of methods electives and twelve (12) credit hours of field instruction courses.

Residency Requirements:

According to standards established by the CSWE and defined by the Graduate Program, students must complete their residency requirement in two consecutive semesters at Delaware State University during the first year of admission as a fully admitted graduate student.

Medical Statement:

After admission, each student is required to submit a health history and a recent physical examination, which must include a Serology Test. A licensed physician stating that the student is physically capable of completing curriculum requirements and is free of contagion must sign the report. Students who do not submit a complete medical statement as described above by the end of the first two weeks of the semester for which they are admitted may be subject to dismissal.

Practice Liability Insurance Requirement:

All students are required to purchase or show proof of social work practice liability insurance prior to placement in any field instruction course. This may be purchased through the National Association of Social Workers (NASW) Insurance Trust (Trust). Membership to the NASW is required when insurance is purchased from the Trust.

COURSE DESCRIPTIONS

Prerequisite:

522. ELEMENTARY STATISTICS FOR SOCIAL WORK

Emphasizes the logical structure and application of statistics and statistical thinking in the collection, analysis and interpretation of data generated by micro, mezzo and macro social work practice. Based on the generalist perspective to social work practice, the course examines descriptive inferential statistics in treating data germane to social work practice and problem solving methodologies. Three credits.

FOUNDATION REQUIREMENTS (24 Credit Hours)

601. POLICIES AND SERVICES IN SOCIAL WELFARE I.

Explores and identifies the social, political, legal, economic, historical and philosophical foundation of social welfare policy and services in the United States. Reviews major historical themes such as systematic oppression and discrimination of groups such as African Americans, women, and Native Americans. Structures, such as managed care, which restrict the level of service intervention, are also examined. Introduces models of policy analysis and reviews the development of the social work profession. Three credits.

602. POLICIES AND SERVICES IN SOCIAL WELFARE II.

Focuses attention on major social welfare programs and social policy issues associated with various areas of practice and social problems, e.g, child welfare, unemployment. Various approaches to policy analysis as well as planning and implementation processes necessary to deliver services are considered. Emphasizes social policies related to special groups such as African Americans, women the elderly and disabled. Prerequisite: 601 Policies and Services in Social Welfare I. Three credits.

603. HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT I.

Introduces the various influences on human behavior within a social context. Identifies cognitive, psychological and developmental theories pertaining to human growth and development. Examines the interplay of psychosocial, biological and institutional factors from conception through adolescence so that students have a basis for understanding and assessing behavior. Considers the relevance of such factors as ethnicity, gender, race, sexual preference, and mental and physical challenges on human functioning in society. Three credits.

604. HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT II.

Focuses on the life span from young adulthood through late adulthood. Addresses milestones in life, such as death and dying. Normal and abnormal behavior are considered. Prerequisite: 603 Human Behavior and the Social Environment I. Three credits.

605. GENERALIST PRACTICE I.

Presents foundation knowledge in social work practice in the generalist perspective, including the problem-solving approach to social work practice, systems theory, the person-in-environment construct and an ecological perspective for practice. Reviews the difference between entry level and advanced level skills in activities/transactions with individuals, groups, families, organizations, and communities. Utilization of practice exercises that allow students to role-play practice situations is a standard teaching technique. This and other teaching methods facilitate skill development in the use of the problem solving model to assist client systems and advanced level integration of empowerment, the generalist perspective and the Black Perspective in practice. Highlights integration social work values and human diversity in practice. Three credits. Note: The grade "B" must be earned in this course. Students enrolled in this course must also be enrolled in the appropriate first year field instruction course.

606. GENERALIST PRACTICE II.

Builds on the knowledge acquired in Generalist Practice I. Provides in-depth knowledge and skills in practice with individuals, groups, families, organizations and communities. Students are expected to begin developing their own conceptual framework for advanced practice in the generalist perspective reflecting the generalist perspective to social work practice, empowerment and the Black Perspective. Prerequisite: 605 Generalist Practice I. Three credits. Note: The grade "B" must be earned in this course. Students enrolled in this course must also be enrolled in the appropriate first year field instruction course.

607. RESEARCH AND EVALUATION METHODS IN SOCIAL WORK I.

Introduces students to the qualitative and quantitative methods of inquiry within the context of social work practice in the generalist perspective. Students are introduced to various research designs practitioners can use to build knowledge for practice. Focuses on framing hypothesis, collecting data, analyzing data, developing conclusions from data and extracting implications for practice based on data collected. Three credits.

608. RESEARCH AND EVALUATION METHODS OF SOCIAL WORK II.

Builds on the knowledge acquired in Research Methods I and Statistics. The student is expected to engage in conducting empirical inquiry through the use of qualitative and/or quantitative methods. The course utilized statistical procedures in the analysis of data. Students are expected to complete a research proposal. Prerequisite: 607 Research and Evaluation Methods in Social Work. Three credits.

633-634. FIELD PRACTICUM.

This is a two-semester course taken by first year students who are enrolled in the program on a full-time basis. It gives students the opportunity to integrate the values, knowledge and skills learned in the class in actual practice situations in an agency setting with individuals, families, communities groups and organizations. Students are placed in a human service agency under the supervision of a field instructor who has earned the M.S.W. degree. Four credits. (Two credits for each course). Note: The grade "B" must be earned in this course. Students enrolled in these courses must also be enrolled in Generalist Practice I and Generalist II as required by the curriculum. All students in the field are required to have liability insurance before entering the field placement agency. See additional description of this course under "Field Practicum" below.

CONCENTRATION REQUIRED COURSES (12 Credit Hours)

A student must successfully complete all foundation courses according to prevailing curriculum and academic policies of the Graduate Social Work Program and the Graduate School prior to enrolling in any concentration course. The concentration, Advanced Practice in the Generalist Perspective, includes four required class-based courses. These courses are described below.

610. ADMINISTRATION MANAGEMENT AND SUPERVISION FOR SOCIAL WORK PRACTICE.

Examines social work practice theories and concepts for administration, management and supervision. Particular emphasis is placed on duties and responsibilities of social work administrators as they pertain to political, economic and bureaucratic realities that restrict delivery of needed services to client systems and to workers' mission as agents for change. Provides a framework for action for the worker/supervisor/administrator as a "change agent" in the social welfare system. Content on management in not-for-profit settings is addressed. Prerequisite: Second year status. Three credits.

611. ETHICAL, ETHNIC AND CULTURAL CONSIDERATIONS IN SOCIAL WORK.

Explores ethnicity, culture, values and ethics as central concepts in advanced social work practice in all human service settings with individuals, communities and organizations. The manner by which these realities are critical to social work practice in America is considered. Examines cross-cultural differences with emphasis on social work principles, concepts and values. Special emphasis is placed on the meaning of diversity for practice when empowerment and the Black Perspective are central elements for advanced level practice. Examines the transactions among and between the client and the worker within the context of ethnicity, culture, values and ethics. Prerequisite: Second year status. Three credits.

646. ADVANCED GENERALIST PRACTICE I.

First course of a second year, two-semester course sequence. Integrates the students values, knowledge, and skills across the foundation content areas of graduate social work education human behavior and the social environment, policy, research, diversity, social work practice, populations-at-risk and social and economic justice, and field education. Emphasizes the integration of advanced generalist practice with the objective to provide knowledge, values and skills that will enable the student to practice at the advanced level according to a practice philosophy steeped in empowerment, the generalist perspective to social work practice and the Black perspective. Course content is geared to developing practice competence at the micro and mezzo at the levels of practice with individuals, groups and families. Students articulate their conceptual framework for advanced practice with individuals and families in the form of a major paper. Prerequisite: Second year status. Three hours. Note: The grade "B" must be earned in this course. Students enrolled in this course must also be enrolled in the appropriate second year field instruction course.

647. ADVANCED GENERALIST PRACTICE II.

Second course of a second year, two-semester course. Integrates the students values, knowledge, and skills across the foundation content areas of graduate social work education (HBSE, policy, research, diversity, social work practice populations-at-risk and social and economic justice, and field education). Emphasizes the integration of advanced generalist practice with the objective to provide knowledge, values and skills that will enable the student to practice at the advanced level according to a practice philosophy steeped in empowerment, the generalist perspective to social work practice and the Black perspective. Students complete the development of their conceptual framework for advanced practice with communities and organizations in the form of

a major paper. Prerequisite: 646 Advanced Generalist Practice I. Three hours. Note: The grade "B" must be earned in this class. Students enrolled in this course must also be enrolled in the appropriate second year field instruction course.

FIELD OF PRACTICE COURSES (6 Credits).

A student must successfully complete all foundation courses according to prevailing curriculum and academic policies of the Graduate Social Work Program and the Graduate School prior to enrolling in any field of practice course. The field of practice courses must be taken in sequence. Thus, for example, Advanced Social Work Practice in Mental Health I is taken followed by Advanced Social Work Practice in Mental Health II. Both sequential courses representing a field of practice must be taken. Therefore, Advanced Social Work Practice in Mental Health I (taken in the Fall semester) cannot be followed by Advanced Social Work Practice with Families, Children and Youth II, which is offered in the Spring semester. Students enrolled in a field of practice course must also be enrolled in the appropriate second year field instruction course.

654-655 ADVANCED SOCIAL WORK PRACTICE IN MENTAL HEALTH I & II.

This is a two-semester course that presents an in-depth study of the field of mental health. Emphasis is placed on mental illness as a social problem. Advanced practice, behavioral and research theories are presented, along with policy and service issues. Prerequisite: Second year status. Six credits (Three credits for each course). Note: The grade ABC must be earned in this class. Students enrolled in this course must also be enrolled in the appropriate second year field instruction course.

658-659 ADVANCED SOCIAL WORK PRACTICE WITH FAMILIES, CHILDREN AND YOUTH I & II.

Examines utilization of the scientific method and the definition of the family, its history, its members, and functions, as well, as various family structures. Addresses family issues of gender, ethnicity, empowerment, Euro-centric, Afro-centric, mono-cultural and multi-cultural. Investigates intervention strategies for correcting maladaptive family patterns. Helps students identify and develop an understanding of some of the major conceptual frameworks in social work with families and children. Reviews the historical perspective on the development of society's perception of children's needs. The course will go beyond the traditional definitions of child welfare as an institution and encompass a social welfare system for children that would include an analysis of family policy, advocacy and program evaluation. Prerequisite: Second year status. Six credits (Three credits for each course). Note: The grade "B" must be earned in this class. Students enrolled in this course must also be enrolled in the appropriate second year field instruction course.

FIELD PRACTICUM 633 (2), 634 (2), 635 (4), 636 (4), 800 (2), 802 (2), 804 (6), 806 (3)
Provides students with opportunities to employ the knowledge, values, skills and conceptual frameworks that undergird advanced practice in the generalist perspective in agency settings while under the supervision of an approved field instructor. Students are enabled to develop and refine the skills necessary for effective advanced practice and to integrate the concepts and philosophy of empowerment, the generalist perspective to social work practice and the Black

Perspective in the helping process with all client systems. Credit: Twelve credits. (All students must take twelve (12) credit hours of field instruction. Note: The grade "B" must be earned in all practice classes. Students enrolled in field practicum must also be enrolled in the appropriate practice course. Students must consult with their academic advisor to: (1) determine the appropriate field practice course to take, and (2) to select the appropriate practice course(s).

Field Instruction.

Students are assigned a field placement that runs concurrently with academic course work. First and second year placements are based on the learning opportunities of the placement site and the student's learning needs. Students who are employed in a human service agency may utilize their place of employment as a field placement site provided that the Director of Field Instruction, Program Faculty, the Agency, and the Student/Employee are in agreement regarding placement arrangements. No diminution of curriculum requirements established by the Program for Field Practicum courses is permitted. Placements in the student's work place are not considered until all other placement options are fully reviewed. Placement in the students place of employment must be educationally focused rather than centered on agency services. Employment-related field placements are carefully evaluated for appropriateness and specific learning experiences and the work settings ability to provide educationally directed field instruction by an individual who possesses the M.S.W. degree. This individual cannot be the student's supervisor. A written statement of learning objectives, which clearly differentiates employment duties from learning assignments, is required before such placements are approved.

METHOD ELECTIVES (6 Credits).

All students are required to take two methods electives in addition to the two required fields of practice courses and the two advanced generalist practice courses. Full-time modified students may take one methods elective per semester while enrolled in foundation year social work practice and field practicum courses. Full-time modified students may not take method elective courses if they are not enrolled in first year social work practice or field practicum courses.

609. SOCIAL WORK WITH FAMILIES.

Examines the family, its members, and the functional and dysfunctional aspects of family behavior. Considers issues of ethnicity, Euro-centric versus Afro-centric world views, and investigates intervention strategies for correcting dysfunctional family patterns. Examines traditional family theorists and attendant theories as a way of: (1) broadening the student's repertoire of perspectives regarding family functioning and (2) obtaining a framework for comparing and contrasting family theories and their appropriateness for treatment intervention. Three credits.

614. SOCIAL WORK AND THE LAW.

Examines the legal base of organized social welfare and social work practice through the study of social legislation, judicial decisions, the legislative process, development of administrative regulation and court organization. Presents an overview of legal principles for application to social work practice. Special attention is given to laws pertaining to the family, the field of mental health and child welfare, malpractice, and courtroom testimony. Three credits.

616. COMPUTER USE FOR SOCIAL WORKERS.

Introduces the use of computer technology for social work practice in human service settings. Utilizes SPSSPC to teach students data analysis as a means of improving practice and adding to the professions knowledge base. Prerequisite: Elementary Statistics, 607 & 608 Research and Evaluation Methods in Social Work, or equivalent. Three credits.

617. REVIEW OF RESEARCH IN SOCIAL WORK.

Provides the opportunity for an independent in-depth study of a social problem/issue. Individual topics of interest will be explored with designated mentors in an effort to explore a students special interest, e.g. de-institutionalization, foster care, elder abuse and neglect. Registration is by permission of the Program Director and the member of the faculty during the second semester of the second year. Three credits.

622. INSTITUTIONAL RACISM.

Examines institutional racism in the United States from a historical and contemporary perspective. Analyzes racist ideology and racist behavior and their meaning for advanced practice with individuals, families, groups, organizations and communities. Examines the effects of institutional racism on the social, psychological, and economic experience of ethnic groups living in America, especially African Americans. Strategies social workers can employ to combat racism in society and human services settings are examined. Three credits.

624. OCCUPATIONAL SOCIAL WORK.

Introduces student to social work practice with, and on behalf of employees. Reviews occupational social work practice modalities including, but not limited to, employee assistance counseling, organizational development and staff development. Major special emphasis is placed on women, minority groups that encounter discrimination in the workplace, e.g., the elderly, homosexuals, gay and lesbian persons, individuals with disabilities and persons who are HIV positive. Three credits.

625. SOCIAL WORK WITH GROUPS.

Focuses on various group theories, approaches and techniques, including a systems approach to understanding on-going group process. Examines several kinds of working groups including the task group, the social and therapeutic group, and the special interest group. Practice methods for engaging groups are considered. Structured format for experiential learning is used heavily as a teaching method. Prerequisites: 603-604 Human Behavior and the Social Environment I and II. Three credits.

626. FAMILY THERAPY.

Examines major conceptual frameworks engaging families via family therapy. Exposes the student to the process of family therapy, including guidelines for intervention as well as the therapeutic use of self by the worker. Explores utilization of family therapy with families of color. Prerequisites: 605-606 Generalist Practice I and II; 646 Advanced Generalist Practice I, 654 Advanced Practice in Mental Health I, 658 Advanced Practice with Families, Children and Youth I, and corresponding field practicum courses. Three credits.

627. SOCIAL WORK WITH CHILDREN AND ADOLESCENTS.

Begins with an historical perspective, and goes beyond the traditional definitions of child welfare to include family policy, advocacy and socialization programs. Examines the treatment principles and skills dealing with children, including play techniques, reality treatment, behavior modification, communication skills, parent-child relationships, day care, foster care and adoption, groups and institutional settings, teen suicide and depression, teen pregnancy and addictive behavior among adolescents. Three credits.

640. SUPERVISION FOR SOCIAL WELFARE.

Explores in-depth, management functions within human service organizations. Examines the diversified roles of the social worker in a supervisory capacity. Prepares social workers for assuming a pro-active position in creating effective service delivery systems. Examines leadership styles, management principles and theories, accountability standards and staff training and staff development. Explores the ways in which effective intervention creates and maintains organizational climate to improve internal functioning. Three credits.

641. ADVANCED GENERALIST PRACTICE WITH THE OLDER ADULT.

Provides an overview of the field of gerontology and social work with and on behalf of older persons. Studies developmental stages of older persons and presents aging as a normative aspect of the life cycle. Studies theories of aging and adaptation as well as effects of the social environment upon older persons. Explores interventions particularly suited to practice with and on behalf of older persons at the individual, family, group, community, and policy levels. Explores issues of the elderly who are poor; elderly females individuals who are members of ethnic groups and elderly persons who reside in rural communities. Examines policies, programs and services for the elderly. Three credits.

642. SOCIAL WORK WITH SEX-RELATED ISSUES.

Explores the nature and varieties of human sexual expression, the reasons and effect of societal and changing definitions of normal sexual behavior. Stresses the application of social work services to problems associated with human sexuality, treatment and prevention. Encourages an open understanding of human sexual expression and of problems in sexual functioning as a means to providing sex education and developing technical skills in dealing with individuals, couples and small groups around problems related to sexuality. Three credits.

643. THEORIES OF PERSONALITY AND PSYCHOPATHOLOGY.

Presents course content to expand students' knowledge base and skill in diagnosing and treating client systems experiencing problems that are psychological and psychiatric in nature. Explores the historical background and the development of the field of psychopathology. Stresses the use of the DSM IV-TR and case materials as tools for developing skill for clinical diagnosis in multi-faceted problems-laden systems. Examines and focuses on observable behavior in childhood, adolescence (including developmental disorders, learning disorders, developmental delays, and mental retardation), as well as stage appropriate and symptomatic behavior in adults. Examines the cultural, social, and biological differences and commonalities in human systems with a particular emphasis on issues affecting women, physically disabled, and minorities of color. Three credits.

644. SOCIAL WORK WITH JUVENILE AND ADULT OFFENDERS.

Analyzes the historical development of the American criminal justice system within the context of Western Judeo Christian and Eastern societal ideologies. Examines fields of practice and uses a systems perspective to comprehensively examine various role functions and practice interventions at the individual, family, small group, organizational and community levels. Examines the adult criminal and the juvenile justice system through the stages of: arrest; charging; adjudication; sentencing and incarceration as rehabilitation. Role of entities that comprise the legal system, i.e, police, prosecution, courts and corrections are addressed. Examines ethical issues related to criminal and juvenile justice policies, procedures and practices. Addresses the social and economic dimensions of crime in America within the context of causality. Emphasizes the implications of research for social work practice for the criminal justice field of practice. Three credits.

645. SOCIAL CHANGE AND ADVOCACY.

Explores different styles of decision making in human service agencies and how these styles influence the outcome of change efforts. Presents different models for achieving change inside and outside the agency. Reviews specific tactics, such as legislative advocacy, to achieve change inside human service organizations and in society. Three credits.

648. SOCIAL WORK AND CHEMICAL DEPENDENCIES.

Prepares the practitioner for professional practice with chemically dependent persons and their co-dependents and others who are challenged by individuals who abuse drugs. Examines stages of dependency. Explores practice methodology theories and issues in treatment. Explores treatment of individuals who are members of ethnic groups and the special considerations that must be taken into account when intervening on behalf of such individuals. Three credit hours.

649. HUMAN RESOURCE MANAGEMENT.

Introduces the fundamental concepts of human resource management. Prepares students for management assignments. Emphasizes principles which: 1) create and maximize worker potential; 2) maintain the achievement of effective work objectives; and 3) focus on responding to change imperatives in an efficient and rational manner. Stresses a knowledge base of current approaches to managing human resources. Three credits.

650. ADULT CHILDREN OF ALCOHOLIC AND OTHER CHEMICALLY DEPENDENT PERSONS.

Introduces the development syndrome affecting the lives of co-dependent individuals. Examines stages of co-dependency, and its impact on personality development. Explores collateral issues that often result from co-dependency. Three credits.

651. PRACTICE AND PROGRAM EVALUATION FOR THE ADVANCED GENERALIST PRACTITIONER.

Focuses on the knowledge, skills, and procedures used for practice and program evaluation. Practice evaluation emphasizes the integration of research and practice by utilizing single subject/case design methodology. Focuses on analysis of evaluation studies concerned with special populations. Values and ethics of the social work profession in relation to research

methods used in evaluation are addressed. Prerequisites: 607 & 608 Research and Evaluation Methods I & II, or an equivalent course. Three credits.

655-656. ADVANCED SOCIAL WORK PRACTICE IN GERONTOLOGY I & II.

This is a two-semester course that presents an in-depth study of the field of gerontology. Demographics of aging in a cultural and value laden context are presented, along with the biological, sociological and psychological theories of aging. Research issues confronting this population are presented along with policy issues and practice methods. Six credits.(Three credits for each course).

CURRICULUM PLAN FOR ADVANCED STANDING STATUS FOR GRADUATE SOCIAL WORK PROGRAM ADVANCED STANDING STATUS:

The program of study for students who are admitted into Advanced Standing. Students must enroll and successfully complete the Advanced Standing Seminar during the summer preceding the commencement of the Fall semester. This Seminar is a six (6) credit hour seminar. After successful completion of the Advanced Standing Seminar, the student is then admitted to the second year of the graduate social work curriculum on a full-time basis.

FULL-TIME GRADUATE SOCIAL WORK CURRICULUM YEAR ONE

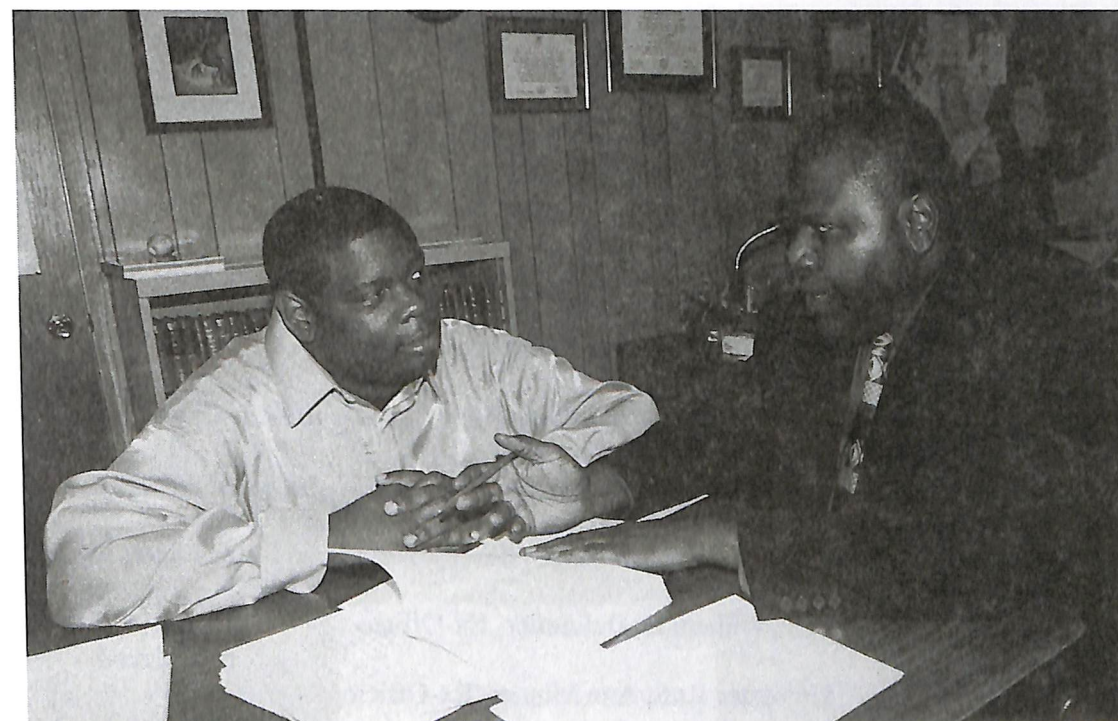
39-601-60	Social Welfare Policies & Programs I	3
39-602-60	Social Welfare Policies & Programs II	3
39-603-60	Human Behavior & Social Environment I	3
39-604-60	Human Behavior & Social Environment II	3
39-605-60	Social Work Practice I	3
39-606-60	Social Work Practice II	3
39-607-60	Research and Evaluation Methods I	3
39-608-60	Research and Evaluation Methods II	3
39-633-60	Social Work Field I	2
39-634-60	Social Work Field II	2
		<u>28</u>

YEAR TWO

Semester 1		
39-611-60	Ethical, Ethnic & Cultural Considerations in Social Work Practice	3
39-646-60	Advanced Generalist Practice I	3
	Methods Elective	3
	Field of Practice Elective	3
39-635-60	Field Practicum III	4
		<u>16</u>

Semester 2

39-610-60	Administration, Management & Supervision for Social Work Practice	3
39-647-60	Advanced Generalist Practice II	3
	Methods Elective	3
	Field of Practice Elective	3
39-647-60	Field Practicum	4
		<u>16</u>



Social work Assistant Professor Dr. Ozzie Hammond (right) shares information about the MSW Program with an undergraduate senior who is interested in continuing his social work major at the graduate studies level.

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Andrew Lloyd, Ph.D., University of Virginia; Microbiology

Robert MacBride, Ph.D., Case Western Reserve; Developmental Biology

Mildred Ofosu, Ph.D., Howard University; Immunology, Microbiology Immunogenetics

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Charlie Wilson, Ph.D., University of Delaware; Molecular Biology

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Daeryong Kim, Ph.D., University of Mississippi

Young-Sik Kwak, Ph.D., University of Mississippi; Finance

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Wei Guan, Ph.D., University of Oklahoma

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Sadiq Wasfi, Ph.D., Georgetown University; Inorganic Chemistry

Donald Wilkinson, Ph.D., University of Delaware; Analytical and Environmental Chemistry

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Robert Rahamin, Ed.D., The George Washington University; Special Education/Curriculum
Rayton Sianjina, Ph.D., University of Mississippi; Educational Administration/ Technology

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John Gardner, Ph.D., St. Johns University

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Rodney E. McNair, Ph.D., University of Delaware

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Gabriel D. Gwanmesia, Ph.D., S.U.N.Y. at Stony Brook; Geophysics, Mineral Physics
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Al-Sameen Khan, Ph.D., University of Delaware, Semiconductor Materials & Devices
Noureddine Melikechi, D.Phil., University of Sussex, England;

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INDEX

Academic Probation	14	Financial Aid	22
Academic Calendar	2	Procedures for Applying for Fin. Aid	24
Accreditations	6	Federal Perkins Loan Program	24
Add/Drop Courses	13	Federal College Work Study Program (FWS)	24
Administration	114	Federal Loans and Grants	24
Admission		Federal Family Educational Loan Program (FFELP)	23
Candidacy	15	Grading Policies	14
Conditional	11	Graduate Programs	
Non-degree	12	Biology	34
Readmission	12	Biology Education	35
Unconditional	11	Business Administration	41
Advisement, Academic	15	Applied Chemistry	52
Appeal, Submitting an	16	Chemistry	51
Application		Education with concentrations in:	
Deadlines	11	Adult Literacy & Basic Education	67
Procedures	10	Administration and Supervision Certification Only	73
Retention	11	Curriculum and Instruction	58
Auditing Courses	13	Science Education	70
Billings	21	Special Education	62
Board of Trustees	6	Historic Preservation	75
Campus and Facilities	7	Mathematics	82
Cashier Services	21	Mathematics Education	87
Cellular and Pager Information	17	Natural Resources	30
Change of Status	12	Physics	93
Classification	11	Physics Teaching	94
Correspondence	1	Plant Science	27
Course Levels	13	Social Work	98
Course Loads	13	Graduation	15
Credit Balances, Refunds of	22	Health Insurance, Student	20
Deferred Payment Plan	20	Health Record	13
Degree Programs	9	History, University	5
Degree Requirements	15	International Students	10
Delinquent Accounts	21	Major, Change of	15
Directory Information	18	Mission, University	5
Dismissal	14	National Membership & Associations	6
Drop Fee	20	Parking Regulations	15
Eligibility	10		
Expenses, Housing and Living	19		
Faculty, Graduate	115		
Fees and Expenses, List of	19		
FERPA, Notification of	17		

Payment of Fees	20
Personal Data, Change of	15
Philosophy, University	5
Policies, Graduate School	10
Program, Change of	17
Refund Policy	19
Registration	13
Residency Requirements (State)	24
Standardized Examinations	10
Summer and Winter Sessions	17
Thesis	16
Time Limitation	17
Transfer of Credit	12
Tuition	19
Undergraduate Students in Graduate Courses, Enrollment of	14
Veterans	15
Withdrawal from Courses	13
Withdrawals	20

Notes

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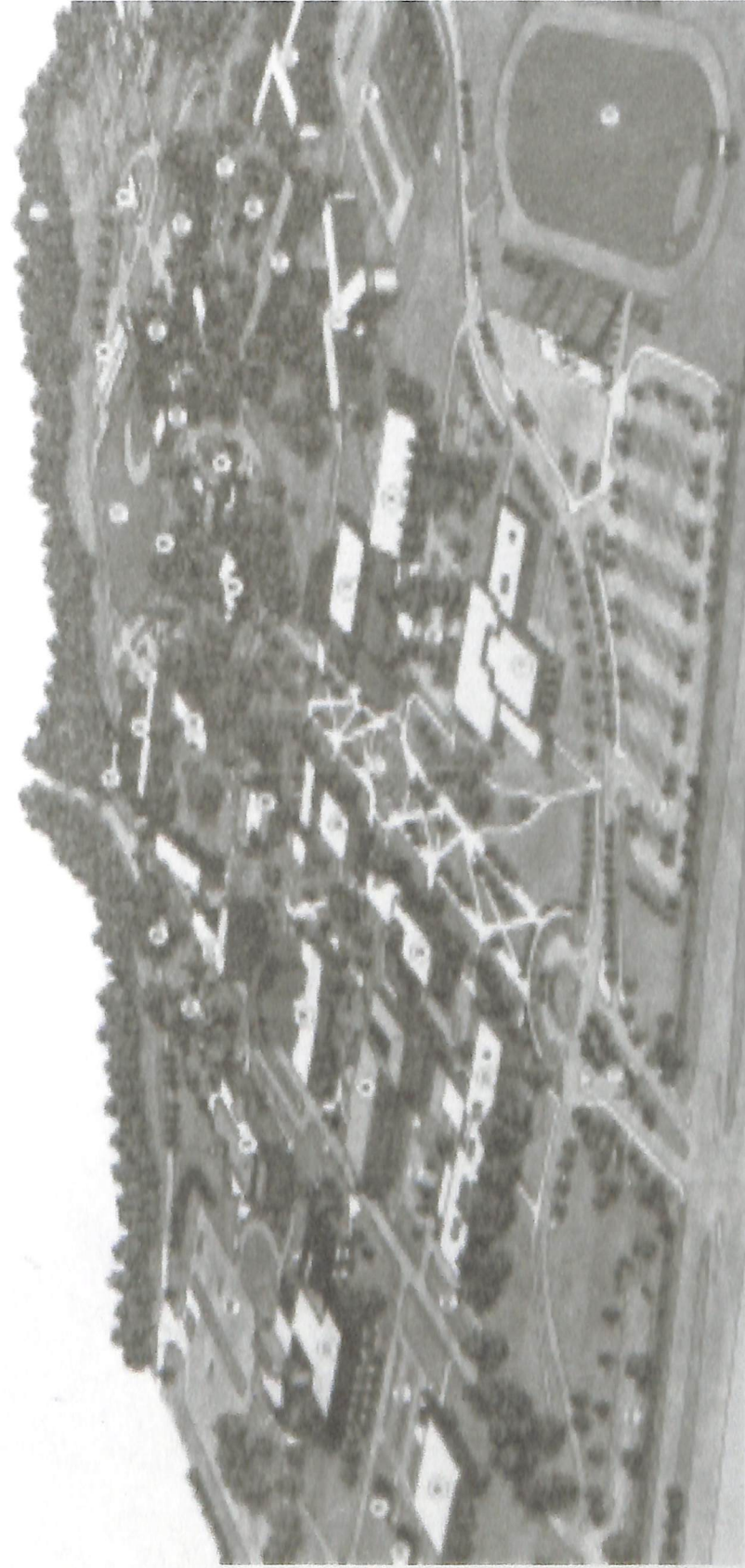
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