

BLOOMSBURG UNIVERSITY



Graduate Catalog

1998 - 2000



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Bloomsburg

UNIVERSITY

*A Member of Pennsylvania's
State System of Higher Education*

About Bloomsburg University

An academy “to teach the youth the elements of a classical education” was established in Bloomsburg in 1839.

The academy continued with varied fortunes until 1856 when a charter was prepared and stock issued to reorganize as Bloomsburg Literary Institute. A building - now known as Carver Hall in memory of Henry Carver, principal at the time - was erected in 1867. Today, it is considered the university’s landmark.

Largely through the efforts of J. P. Wickersham, superintendent of public instruction, Bloomsburg Literary Institute became Bloomsburg Literary Institute and State Normal School in 1869. The school continued under this name and organization until 1916 when it was purchased by the Commonwealth of Pennsylvania and named Bloomsburg State Normal School.

The emphasis at the Normal School changed during the early ‘20s from secondary and college preparatory courses for special teachers to full-time teacher education. This new thrust in the curriculum led to the adoption of the designation Bloomsburg State Teachers College in May 1927. The institution was authorized to grant a Bachelor of Science in Education, a degree which prepared students for teaching careers in elementary and secondary schools.

Under the administration of Dr. Francis B. Haas (1927-1939), great progress was made in the teacher education program, including the addition of a new degree program in business education. Dr. Haas left Bloomsburg to accept an appointment as superintendent of public instruction for Pennsylvania, the same post he had held from 1925 to 1927 prior to coming to Bloomsburg. Dr. Harvey A.



Andruss, then dean of instruction and former director of the business education department, served as acting president from 1939 until January 1941, when the school’s trustees unanimously elected him president, a position he held until his retirement in 1969.

During World War II, the U.S. Navy V-12 Officer Training Program was conducted on the campus, a service now commemorated by the name of Navy Hall. In 1957, the Division of Special Education was instituted. Major expansions in facilities, faculty and student body followed. Full-time undergraduate enrollment rose from 1,743 in 1960 to nearly 6,800 in 1997.

In 1960, the school’s name was changed to Bloomsburg State College. Authorization was received shortly thereafter to grant a Bachelor of Arts for liberal arts programs in the humanities, social sciences and natural sciences and mathematics. Graduate study leading to a Master of Education also was inaugurated. In 1968, approval was received for a Master of Arts; in 1970, for a Master of

Science; in 1976, for a Master of Business Administration; and in 1982, for a Master of Science in Nursing. A doctoral program in elementary education was initiated in 1982 in conjunction with Indiana University of Pennsylvania.

Bloomsburg is a comprehensive institution offering curricula in the liberal arts, business, nursing, allied health sciences and teacher education. Degree programs are offered at the associate, bachelor's and master's levels, in addition to the cooperative doctoral program. The institution's current title, Bloomsburg University of Pennsylvania, was officially adopted when Commonwealth legislation established the 14-member State System of Higher Education on July 1, 1983. Dr. James H. McCormick, Bloomsburg's president at the time, became the State System's interim chancellor and later its first permanent chancellor.

In 1994, Dr. Jessica Sledge Kozloff was appointed the university's 18th president.

Bloomsburg University is located in Bloomsburg, a town of about 12,000 people, in north-central Pennsylvania. The university's 7,200 students can choose from among 64 undergraduate and 19 graduate programs in the liberal arts and sciences, business, education and health care. There are 11 supervisory certification programs for teachers.

About two out of every three students receive financial assistance, with the average amount of assistance being \$4,200. Within the first year, 85 percent of Bloomsburg graduates are placed in employment.

The university is within a one-hour drive from such cities as Hazleton, Williamsport, Wilkes-Barre, and Scranton; 1.5 hours from Harrisburg; 2.5 hours from Philadelphia; 3 hours from New York City and Baltimore; and four hours from Pittsburgh and Washington D.C.

If you are coming from...

East of Bloomsburg: Use I-80 west to Exit 35A.

West of Bloomsburg: Use I-80 east to Exit 35.

South of Bloomsburg: From Central Pennsylvania, take Routes 11 and 15 north; from southeast Pennsylvania, take Northeast Extension of the Pennsylvania Turnpike (I-476) to I-80 west to Exit 35A.

North of Bloomsburg: From the Scranton/Wilkes-Barre area, take I-81 south to I-80 west to Exit 35 south. From the Williamsport area, take I-180 south to I-80 east to Exit 35.

From Exit 35, take Route 487 south and follow signs to campus, approximately one mile.

The Graduate Catalog

Bloomsburg University of Pennsylvania

State System of Higher Education

Bloomsburg University of Pennsylvania is committed to providing equal educational and employment opportunities for all persons without regard to race, color, religion, sex, age, national origin, ancestry, life style, sexual orientation, disabilities, Vietnam era veteran status, or union membership. The university is additionally committed to affirmative action and will take positive steps to provide such educational and employment opportunities.

Produced by Marketing and Communication / University Advancement

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Bloomsburg University **400 E. Second Street**
Bloomsburg, PA 17815-1301
World Wide Web Address: **<http://www.bloomu.edu>**

Important Notices

The content of these web pages is for informational purposes only and not to be regarded as an irrevocable contract between the university and the student. Bloomsburg University reserves the right to amend any academic, administrative, or disciplinary policy or regulation (or fee) described here without prior notice to persons affected.

Requirements for graduation as well as curricula for degree programs, such as those requiring professional certification/licensure, may change throughout the student's matriculation. Such changes will not be retroactively required; however, the student will have the option to choose the new program or requirement, if desired.

Exceptions may be necessary when changes in professional certification or licensure standards mandate changes in academic requirements or in university programs.

Accreditation

Bloomsburg University is accredited by the Middle States Association of Colleges and Schools; the National Council for the Accreditation of Teacher Education; the National League for Nursing; the Council on Education of the Deaf; and the Council on Social Work Education. Programs of study have also been approved by the Pennsylvania State Board of Education and the State Board of Nursing. In addition, the bachelor of science program in chemistry offered by the Department of Chemistry is approved by the American Chemical Society.

Access to Educational Records

In accordance with the Family Educational Rights and Privacy Act, commonly known as the Buckley Amendment, students are provided with privacy safeguards of their educational records. The university, therefore, issues reports of progress including grades, written evaluations and letters of warning, directly to the student. A student may have access to all information pertaining to his or her educational records and academic status.

Parents may have access to information pertaining to their son's or daughter's educational records and academic status without prior written consent of their son or daughter if he or she is a dependent as defined under Section 152 of the IRS Code of 1954. If the student is not a dependent, as defined by the

IRS Code, then the university must receive prior written consent from the student in order to release such information to his or her parents.

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Academic Calendar

Fall 1998

Classes BeginMonday, Aug. 31
 Labor Day.....Monday, Sept. 7 - No Classes
 Mid-Term Reading DayFriday, Oct. 16 - No
 Classes
 Mid-TermWednesday, Oct. 21, 10 p.m.
 Thanksgiving Recess Begins:
Tuesday, Nov. 24, 10 p.m.
 Classes Resume.....Monday, Nov. 30, 8 a.m.
 Classes End.....Saturday, Dec. 12, 10 p.m.
 Reading DaySunday, Dec. 13
 Finals BeginMonday, Dec. 14
 Finals EndSaturday, Dec. 19
 Graduate CommencementFriday, Dec. 18

Spring 1999

Martin Luther King DayMonday, Jan. 18 - No
 Classes
 Classes BeginTuesday, Jan. 19
 Monday Classes Meet
Friday, Jan 22 (No evening classes)
 Mid-TermWednesday, March 3, 10 p.m.
 Spring Break Begins:
Saturday, March 6, 10 p.m.
 Classes ResumeMonday, March 15, 8 a.m.
 Spring Weekend Begins:
Thursday, April 1, 6 p.m.
 Classes Resume.....Monday, April 5, 8 a.m.
 Classes EndSaturday, May 8, 10 p.m.
 Reading DaySunday, May 9
 Finals BeginMonday, May 10
 Finals EndSaturday, May 15
 Graduate CommencementFriday, May 14

Fall 1999

Classes BeginMonday, Aug. 30
 Labor Day.....Monday, Sept. 6 - No Classes
 Mid-Term Reading DayFriday, Oct. 15 - No
 Classes
 Mid-TermWednesday, Oct. 20, 10 p.m.
 Thanksgiving Recess Begins
Tuesday, Nov. 23, 10 p.m.
 Classes Resume.....Monday, Nov. 29, 8 a.m.
 Classes End.....Saturday, Dec. 11, 10 p.m.
 Reading DaySunday, Dec. 12
 Finals BeginMonday, Dec. 13
 Finals EndSaturday, Dec. 18
 Graduate CommencementFriday, Dec. 17

Spring 2000

Martin Luther King DayMonday, Jan 17 - No
 Classes
 Classes BeginTuesday, Jan. 18
 Monday Classes Meet:
Friday, Jan 21 (No evening classes)
 Mid-TermWednesday, March 1, 10 p.m.
 Spring Break Begins:
Saturday, March 4, 10 p.m.
 Classes ResumeMonday, March 13, 8 a.m.
 Spring Weekend Begins:
Thursday, April 20, 6 p.m.
 Classes Resume.....Monday, April 4, 8 a.m.
 Classes EndSaturday, May 6, 10 p.m.
 Reading DaySunday, May 7
 Finals BeginMonday, May 8
 Finals EndSaturday, May 13
 Graduate CommencementFriday, May 12

Resources

Academic Affairs	Office of the Provost, Carver Hall.....	4308
Academic Internships	15 Ben Franklin Hall.....	4678
Academic Support		
Services	Luzerne Residence Hall	4199
ACT 101/EO Programs	14 Waller Administration Building	4492
Administration.....	Office of the Vice President for Administration	
.....	15 Waller Administration Building	4115
Alumni Affairs	Alumni House	4058
Arts and Sciences,	Office of the Dean	
College of	106 Waller Administration Building	4410
Business, College of	Office of the Dean, 221 Sutliff Hall	4019
Business Office	22 Waller Administration Building	4013/4407
Campus Child Center	Elwell Residence Hall	4547
Career Development Center	Kehr Union	4070
Community Activities	Kehr Union	4462
Continuing and Distance.....	Office of the Dean	
Education	Magee Center, 700 West Main Street	4420
Counseling/Human Dev.	17 Ben Franklin Hall	4255
Curriculum Materials Ctr.....	McCormick Center for Human Services	4035
Development Office.....	Development Center, 922 Lightstreet Road.....	4128
Financial Aid Office	19 Ben Franklin Hall	4279/4297
Graduate Studies,.....	Office of the Assistant Vice President and	
School of.....	Dean of Graduate Studies and Research	
.....	109 Waller Administration Building	4015
Health Center.....	Kehr Union	4451/4452
Information Desk	Kehr Union	3900
International Education	Lower Level, Luzerne Residence Hall	4830
Library, Andruss	General Information.....	4204
Marketing and Communication.....	104A Waller Administration Building	4411
Ministries	Catholic (784-3123); Protestant (389-4950)	
Police, University.....	Lower Level, University Store	4168
President's Office	Carver Hall	4526
Professional Studies,	Office of the Dean	
College of	3105 McCormick Center for Human Services	4005
Registrar's Office	6 Ben Franklin Hall	4263
Residence Life Office.....	Elwell Residence Hall	4089
Social Equity	103 Waller Administration Building	4528
University Advancement.....	Office of Vice President for University Advancement	
.....	115 Waller Administration Building	4524

General Information

Patrick J. Schloss, Dean, Graduate Studies and Research

Bloomsburg University's School of Graduate Studies offers 19 master's programs in the arts, business, science, and education, as well as 11 supervisory programs and a joint doctoral program in education in cooperation with Indiana University of Pennsylvania.

The School of Graduate Studies is committed to maintaining affordable, high-quality post-baccalaureate programs for qualified students of diverse backgrounds. These programs foster an academic environment that stresses critical thinking, scholarly activity, leadership, cultural diversity and technology. To achieve this mission the School of Graduate Studies seeks to:

- 1) Enhance financial resources for students and faculty by seeking grants, gifts, research awards and contributions.
- 2) Enhance recruitment of women, minorities and students of diverse cultural backgrounds.

3) Encourage and facilitate international exchange of graduate faculty and students.

4) Plan programs to meet the current and future needs of individuals and agencies within the university's service community.

5) Plan programs to incorporate current and future global and environmental issues.

6) Provide periodic review of programs to achieve and maintain high-quality programs.

7) Incorporate state-of-the-art information and decision-making technology in all aspects of academic activities.

Graduate classes taught during the academic year are usually scheduled in late afternoons, evenings and on Saturdays in order to provide opportunities for individuals engaged in other full-time occupations to further their education. Graduate courses are also offered during the summer session. The School of Graduate Studies is a member of the Council of Graduate Schools.

Graduate Programs

Master of Arts

Art Studio
Art History
Communication Studies

Master of Business Administration

Master of Education

Biology
Business Education
Curriculum and Instruction
Elementary Education
Reading

Master of Science

Accounting
Audiology
Biology
Early Childhood Education
Education of the Deaf/Hard of Hearing
Exercise Science and Adult Fitness

Instructional Technology
Nursing
Special Education
Speech-Language Pathology

Cooperative Doctoral Program in Education Supervisory Certificate Programs

Communication
Curriculum and Instruction
Early Childhood Education
Elementary Education
Foreign Language
Mathematics
Reading
School Health Services
Science
Social Studies
Special Education

Academic Services

Harvey A. Andruss Library

The new Harvey A. Andruss Library that opened in late May of 1998 provides access to more than 400,000 volumes and government documents, 1.9 million microforms, 1,700 current periodicals and 32 newspapers, and online bibliographic and full-text databases. The technologically designed building provides more than 900 study spaces, 200 having computer access to the library's and worldwide information resources. There are 22 group study rooms, word processing rooms, photocopying rooms, and a graduate student study. The new building also offers lounge and exhibit spaces and a new University Archives and Special Collections Reading Room.

Collections — The library's collections include a General Collection of more than 300,000 volumes, a Government Documents Collection, the University Archives, a Juvenile and Young Adult Collection, and Special Collections. The library is a United States Government Depository. Interlibrary loan agreements with most Pennsylvania libraries and document delivery contracts can provide almost any resources requested by students.

Reference Services — Library faculty at the second floor Reference Desk are available during most open hours to answer questions, assist students searching for information and resources, and advise students regarding research projects. Resources available in Andruss Library are readily located through the Endeavor Voyager on-line catalog, which boasts a unique relevancy feature. CD-ROM and Internet-accessed databases are available at computer workstations adjacent to the Reference Desk as well as computers throughout the building. These digital resources include both the Search Bank and FirstSearch data collections. Most data bases are available via the library's homepage on the World Wide Web.

Other Library Services — Self-serve photocopy services are available at six cents with a copy card or 10 cents cash. Microform copies cost 10 cents (paper) and 25 cents (microform). Printers are available for computer printouts.

For more information, please contact the Reference Desk at (717) 389-4204 or the Circulation Desk at (717) 389-4205.

Library Hours

Fall and Spring Semesters

Monday - Thursday	8 a.m. - 12 midnight
Friday	8 a.m. - 9 p.m.
Saturday	9 a.m. - 5 p.m.
Sunday	2 p.m. - 10 p.m.

Summer Hours

Monday - Thursday	8 a.m. - 10 p.m.
Friday	8 a.m. - 9 p.m.
Saturday	Closed
Sunday	2 p.m. - 10 p.m.

Extended Hours

Saturday	9 a.m. - 9 p.m.
Sunday	noon - midnight

Intercession Hours

Monday - Friday	8 a.m. - 4:30 p.m.
Saturday	Closed
Sunday	Closed

Academic Computing Facilities

Student computing facilities are located throughout the campus. There are over 500 computers and over 25 laser printers in labs, classrooms and general access work areas. Nearly all computers connect to the Internet.

All students have e-mail accounts, and all incoming students are automatically given an account upon entering the university. All students, both on and off campus can connect to their e-mail accounts using the phone line and a

computer modem. On-campus students dial 3200, while off-campus users call 389-3030 for the modem pool. Those students in Montour, Schuylkill, Montgomery Place and Elwell have the opportunity to connect their personal computer to the campus network and the Internet through a high-speed ethernet connection.

The major open-access computer work areas are in McCormick 1148, Kehr Games Room, Hartline lobby and the Library. Other work areas can be found in Sutliff and Bakeless. Most computer classrooms are open to students for general access between classes and on the weekends.

Most general lab areas are open seven days a week during the fall and spring semesters. The schedules of current open hours for labs and classrooms are posted at each location and can be found on the Academic Computing web site - <http://acwww.bloomu.edu>. Typically, the hours for the major work areas are: Monday - Thursday 8 a.m. to 11:45 p.m.; Friday 8 a.m. to 5 p.m.; Saturday noon to 5 p.m. and Sunday noon to 11:45 p.m. Work areas are monitored by student consultants who are available to help students with problems using the equipment and basic software. These PC and Macintosh computers have access to word processing, spreadsheet and other programs. In addition, these computers provide students with access to the library Voyager system, library databases and mainframe computer for scheduling.

Academic Computing offices are in 9 Benjamin Franklin Hall. The general office phone number is (717) 389-3072. Visit the Academic Computing web site at <http://acwww.bloomu.edu> for the most current information about academic computing on campus.

Institute for Comparative and International Management Studies

The Institute for Comparative and International Management Studies (ICIMS) fulfills Bloomsburg University's missions and goals through sponsorship and initiation of activities aimed at increased understanding of cross-cultural and comparative management issues.

The institute initiates, coordinates and administers joint programs with overseas universities in business administration; sponsors management

research projects within the United States and at overseas sites; provides consulting services and workshops in all areas of management; and develops and administers quality executive development and training programs as required by a particular country.

Curriculum Materials Center

The primary objective of the Curriculum Materials Center is to locate, acquire, catalog and make accessible curricular and instructional materials to preservice and inservice teachers. The resources housed in the center include elementary and secondary textbooks, a multicultural curriculum materials collection, curriculum guides, games, instructional materials kits, tests and computer software. A cluster of Macintosh microcomputers and a laser printer are also available.

Reading Clinic

The Reading Clinic offers free diagnostic evaluation of reading skills of school-age children and adults. Free remedial tutoring is provided (Saturday mornings) on a space-available basis. Consultation with the parents of school-age children is included in the evaluation process. The clinic's services are available September through August.

Speech, Hearing and Language Clinic

The Speech, Hearing and Language Clinic provides services to students, faculty, staff and the community. Available services include evaluation and therapy for speech, voice, language and fluency; speech reading and auditory training for the hearing impaired and parent counseling. Audiological assessment includes special site of lesion testing, hearing aid evaluations and fitting.

Institute for Interactive Technologies

The Institute for Interactive Technologies (IIT) provides research, training, education and entrepreneurial assistance to solve training and operational problems that occur in education and industry through the application of various interactive technologies. The IIT designs, develops and produces interactive technology-based applications that include computer-based interac-

tive videodisc and digital technologies such as CD-I, DVI and Quicktime. The IIT also provides workshops for interactive video training and opportunities for graduate assistantships in the Master of Science program in instructional technology.

Television and Radio Services

The Office of Television and Radio Programs and Services provides assistance with the production of instructional and other campus-oriented television production. While priority is given to academic endeavors, the office also has a strong commitment to community service through program production and other services. The office is also responsible for the administration of WBUQ 91.1 FM, the student-operated campus radio station.

The facility houses three television studios, ranging from a sophisticated multicamera studio for broadcast-level production, to a single-camera VHS studio where faculty and students can videotape projects in support of classroom assignments or evaluations. Portable equipment, several video editing rooms, an audio recording studio, a video copystand and a video paintbox device is also available.

The office is the university's resource center for satellite video-conferencing; provides on-location taping of lectures, presentations and other academic activities; and can record informational programs off-air and off-satellite. The office can copy videotapes (copyright permitting), and tapes recorded in incompatible overseas formats can be converted to the American television system.

The office also operates the campus video message center providing constantly updated information to television monitors located in sev-

eral public areas on campus, as well as over BUTV, the university's cable television channel, which can be seen throughout the Bloomsburg and Berwick areas. The message center is suitable for the posting of class schedule changes, campus events, non-profit group activities and general announcements, and can be accessed by calling 389-BUTV.

Audio Visual Resources

Audio Visual Resources (AVR) provides university faculty and staff with an array of audio visual equipment, materials and services. Available equipment includes video and 16mm film playback, audio equipment, 35mm and Polaroid cameras, flashes and accessories, slide projectors, overhead and opaque projectors, screens, easels and other items.

The staff can arrange for film delivery and setup in classrooms for faculty members as well as delivery of other audio visual equipment. There is also a repair center for university-owned audio visual equipment.

The facility houses an auto-tutorial lab where faculty may deposit audio visual materials for independent study by students. The lab accommodates the viewing of films, videos, slides, audio cassettes and records. There is also a photo copystand area where materials can be photographed for the creation of slides.

Additional resources include: transparency machines, dry presses, posterboard mounting materials and lamination services. The area houses a sign and poster-making unit that can instantly generate poster-size displays from letter-sized originals. If needed, the AVR staff can assist in the creation of an original document.

Student Services

Identification Cards

Every degree and non-degree student is required to have a university identification card. In addition to serving as a library card, it is used for general identification throughout the campus. An identification card is required for certain campus events (including those covered by the community activities fee) and for dining hall admission. This card can be obtained from the Office of Student Standards in Elwell Hall, 389-4734.

Health Services

The Student Health Center, on the 300 level of the Kehr Union Building, provides care for minor injuries and illnesses. Students requesting an appointment should call 389-4451 during posted hours. For answers to medical questions, or advice about health problems, call the Triage Nurse at 389-3800. In the event of an emergency and the health center is closed, students should report directly to The Bloomsburg Hospital Emergency Room. Students must show their current Bloomsburg University I.D. card to the emergency staff when seeking treatment at the hospital to have the emergency room fee waived.

The Student Health Center is staffed by registered nurses, nurse practitioners and part-time physicians. Nurses refer students to the nurse practitioner and part-time physicians as appropriate. Professional services received at the center are covered by the health service fee. Laboratory tests will be charged to insurance companies. Cost for medical services received at The Bloomsburg Hospital (with the exception of the emergency room fee) will be paid by the patient's insurance. As part of an effort to provide improved services for students, the Health Center announces any changes in the school newspaper and provides information in brochures.

Absence due to illness - A student who misses class because of an illness must contact his or her

professor as soon as possible in order that an understanding can be reached between professor and student. In cases of prolonged illness, for which strict bed rest and/or hospitalization is required, the Health Center will contact all concerned faculty.

Ambulance Service - Transportation to The Bloomsburg Hospital is paid for by the Student Health Center and is available to all students in the service area provided by The Bloomsburg Ambulance Association. (Dial 911 for ambulance service.) A student whose injury or accident is self-induced must pay for the ambulance service.

Family Planning - The Family Health Center, located in Bloomsburg, offers services for gynecological exams, contraception, pregnancy testing and counseling at a reduced fee through an agreement with the Student Health Center. Sexually transmitted disease screening and treatment is provided free through provisions from a state contract. All visits are scheduled by appointment and all services are confidential. Appointments can be obtained by contacting the Family Health Center, 2201 Fifth Street Hollow Road, Bloomsburg, from 9 a.m. to 5 p.m., Monday, Wednesday, Thursday and Friday, and from 9 a.m. to 9 p.m. on Tuesday, (717) 387-0236.

Insurance Coverage

In addition to the health service fee, all full-time students with nine or more credits and all international students are required to have appropriate accident and sickness insurance coverage. Students currently covered by a plan must provide the Health Center with complete insurance information including the name of the insurance company, complete address, and all policy and group numbers. Any change in insurance coverage should be reported immediately to the Health Center.

Students who do not have current insurance may purchase the student health insurance plan or another plan of their choice. The student

health insurance plan meets the needs of the individual at the least possible cost, balancing the necessary coverage with the student's ability to pay. Students should carefully review this plan to determine if it adequately meets their health care needs. Filing of claims is solely the responsibility of the student. All questions concerning claims should be referred directly to the insurance company. A toll-free number is provided by the company. An application is included along with registration materials or can be obtained at the Health Center.

Housing

Bloomsburg University provides limited on-campus housing for graduate students during the fall and spring semesters (more housing is available in the summer).

If you are interested in on-campus housing accommodations, you will need to contact the Office of Residence Life as early as possible. In addition, the university's Office of Residence Life maintains an off-campus housing directory. The local daily newspaper, *Press-Enterprise*, also has listings for rentals (*Press-Enterprise*, 3185 Lackawanna Avenue, Bloomsburg, PA 17815, (717) 784-2121).

For more information, contact the Director of Residence Life, Elwell Residence Hall, Bloomsburg University, 400 E. Second St., Bloomsburg, PA 17815-1301, (717) 389-4089.

Meal Plans

Meals are available at Scranton Commons, the university's dining facility, or the Kehr Union Building snack bar. Meals may be purchased individually or you may purchase a meal plan as follows:

- 19 meals per week -
\$702 (includes \$50 flex account)
- 14 meals per week -
\$674 (includes \$100 flex account)
- 10 meals per week -
\$575 (includes \$50 flex account)
- 7 meals per week -
\$498 (includes \$50 flex account)

For more information, contact the Food Service at 389-4484 or the Kehr Union Information Desk at 389-3900.

Motor Vehicle Registration

All motor vehicles must be registered with the University Police Department. Parking decals are issued when vehicles are registered and must be properly displayed on the vehicle according to the University Parking Policy. Parking decals are valid for one year beginning with the fall semester.

Students must present their vehicle registration card, proof of insurance, driver's license and student identification card to obtain a parking decal. Bloomsburg commuter students who are not permanent residents of Bloomsburg must show some form of identification with name and current local address.

The areas available for student parking are: the Bloomsburg Hospital parking lot on Light-street Road, the lot adjacent to Centennial Gym off Second Street, the lot next to the tennis courts, the tri-level garage located near Carver Hall, and the lot in front of Sutliff Hall.

You may park on campus in the designated areas during the following times:

Monday through Friday -

- 6 a.m. to 2 a.m. in the commuter areas
- 5 p.m. to 2 a.m. anywhere on campus except areas reserved for handicapped or loading zones

Friday through Sunday

- 5 p.m. on Friday until 2 a.m. on Sunday anywhere on campus except areas reserved for handicapped or loading areas

If you must be on campus after 2 a.m. on Sunday through Thursday, you must have permission from University Police. Call them in advance with your vehicle's location and purpose for staying on campus.

For complete rules and regulations on vehicle registration and parking, please contact the University Police at 389-4168 or 389-4170.

Visitor Parking

Visitors who park on campus Monday through Friday before 5 p.m. must park in a visitor space and obtain the necessary parking pass. Visitors may park anywhere during the weekend open parking times, except in areas reserved for handicapped or loading zones.

University Store

The University Store sells textbooks, supplies, clothing, stationery, food, gift items, sundry items and general reading materials.

Used books are available at 30 percent off the list price. You may return new textbooks with the receipt and your I.D. during the first two weeks of each semester for the full value (if in the same condition when purchased). A course withdrawal form signed by your instructor must accompany any book returned after the first two weeks of each semester. No refunds are made on non-text paperback books.

At the end of each semester, the university store holds a book buyback. The store also offers a special book order service. Other services include: advanced deposit charge accounts, class rings, consignment merchandise, dry cleaning, gift wrapping, laminating, lay-away, gift certificates, newspapers and magazines, photograph services, UPS shipping, US postage stamps and post cards, a Western Union paying agency, photocopying services, money orders and phone cards.

Store hours:

Fall and spring semesters

Monday & Tuesday.....	8 a.m. - 8 p.m.
Wednesday & Thursday.....	8 a.m. - 8 p.m.
Friday.....	8 a.m. - 4:30 p.m.
Saturday	10:30 a.m. - 2:30 p.m.

Summer sessions

Monday through Friday.....	8 a.m. - 4:30 p.m.
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The University Store can be reached at the following telephone numbers: (717) 389-4175, 389-4176, 389-4180 or 389-4102.

Banking

Commonwealth Bank and Trust has a full-service branch in the lobby of the University Store. The bank is open from 10 a.m. to 2 p.m. Monday through Friday. If you do not have an account with Commonwealth Bank, you will be charged a minimal check cashing fee.

Two automated teller machines are located on campus: one on the ground floor in the Kehr Union Building and one outside the University Store.

Career Development Center

The Career Development Center provides career counseling and planning assistance to students and alumni. In addition to individual career counseling, an up-to-date career library is available. It contains occupational information, job search guides, employer/school district directories, corporate literature, and various graduate and law school catalogues.

The center sponsors job search workshops, seminars and job fair programs throughout the year, maintains credential files for interested students and alumni, and hosts employers wishing to interview graduating students for positions within their organizations. A vacancy list is prepared bi-weekly (weekly during summer months) listing employment opportunities received by the center from various employers. This list can be mailed to individuals unable to visit the center.

SIGI-PLUS, a computer-based career guidance system, is available (by appointment) to further assist students with the career decision-making process.

The center is located in Room 101 of the Kehr Union Building. For information, call (717) 389-4070.

Student Recreation Center

The Student Recreation Center is located on Swisher Circle across from the tennis courts. Major features include an exercise room with step machines, rowing machines, Cybex equipment and treadmills.

The main area has four intramural-size basketball courts that can be used for volleyball and tennis. The room is circled by a one-eighth mile long jogging track that goes by the south wall of eight-foot high panels of glass with a view of Catawissa Mountain and surrounding areas. The north wall hosts a 55' x 8.5' climbing wall. Also in the center are the free-weight rooms with mirrors on the north wall, multipurpose room for aerobics and dance, and four glass-backed racquetball courts that are adaptable for wallyball.

The center covers 56,000 square feet and is fully funded through a self-assessed student recreation fee.

Center for Counseling and Human Development

The Center for Counseling and Human Development provides individual counseling and workshops in a variety of areas including study skills, assertiveness, effective communication, racism, sexism, human sexuality, drug and alcohol abuse, eating disorders (anorexia and bulimia), stress reduction and relaxation, time management and many other areas relating to daily living. In addition to individual counseling, group seminar workshops are conducted in classes and resident halls. The center also provides support groups for non-traditional students.

All services are confidential. Information is released only with the verbal and written consent of the student. The Center for Counseling and Human Development is located on the top floor of Ben Franklin Hall in Room 17. Office hours are 8 a.m. to 4:30 p.m., Monday through Friday. Special appointments are available weekends and/or evenings. Twenty-four hour coverage is available by calling (717) 389-4255. Adult students are encouraged to take advantage of the center's many services.

Multicultural Center

The Multicultural Center, located in the Kehr Union Building, provides an additional forum for the education of Bloomsburg University's campus community. The center sponsors and co-sponsors programs and activities that focus on the contributions of those Americans who represent diverse cultures at Bloomsburg University. The center also coordinates programming.

Child Care Center

The Campus Child Center, located on the lower level of Elwell Hall, operates as a preschool/daycare facility for the children of university students, faculty, staff and alumni.

Licensed by the state of Pennsylvania, the center is directed by Judy Coleman Brinich, a certified teacher with 17 years of experience, master's degrees in education and exceptionalities and a bachelor of science in early childhood education. Kathy Johnson, assistant director, has eight years of experience, a master of science in early child-

hood education and a bachelor of arts in sociology.

The child center is open from 7:45 a.m. to 5 p.m., Monday through Friday. Children between the ages of 18 months to 12 years are eligible. There is a fee and advanced registration is required. The center operates on the same schedule as the university calendar.

Throughout the academic year, the center operates separate classrooms for toddlers, three-year-olds, and four- and five-year-olds. Children may enjoy learning stations, circle time, stories and music. In the summer, the center provides a school-age program with a day camp atmosphere and many activities and field trips.

For further information, call (717) 389-4547.

Accommodative Services

The Office of Accommodative Services, located in Ben Franklin Hall, offers a wide range of activities designed to support and enhance the performance of students with disabilities. Services include, but are not limited to: provision of accommodative testing, note takers, scribes, interpreters, readers, auxiliary aides, adaptive equipment. The office also serves as a liaison between students and faculty in classroom accommodation.

Accommodative Services also stands as an advocate for students regarding issues of accommodation beyond the classroom and acts as a liaison with other campus offices. The office is in routine contact with state vocational rehabilitation and visual services to ensure that the student is receiving adequate support from both the university and other agencies.

In some instances, documentation of the disability may be required; all candidates are strongly encouraged to contact Peter B. Walters, director of Accommodative Services, at (717) 389-4491 (VTDD). A comprehensive discussion of anticipated needs is a critical process in the formation of a plan for accommodative support.

Graduate Student Council

The Graduate Student Council is officially recognized by Bloomsburg University's Community Government Association as the executive branch of the graduate student body. The council serves

as an intermediary between the graduate student body, the assistant vice president and dean of graduate studies and research, graduate faculty, administrators and student representatives who make recommendations on curriculum and policy for the university's graduate program.

Kehr Union

The Kehr Union Building is a predominantly student-governed and operated facility serving as a forum for programs presented by student, academic and outside organizations. The union provides facilities for many services including a large food court and snack bar, and houses the Office of Student Life, the Health Center and the Career Development and Placement Center. Also located in the union are the Information Center, Community Activities Office, Student Activities Office, as well as many student offices.

Kehr Union Information Center

The Kehr Union Information Center, located inside the main entrance to the Kehr Union Building, provides an information exchange for the entire university community. Open seven days a week during the semesters, the center is staffed by student employees and one full-time coordinator. Student organization mailboxes are located at the center.

The following is available from the center: phone numbers for students, faculty and staff; frequently requested local phone numbers; event and activity announcements; and ticket sales and registrations for Community Government Association events, Program Board activities, Celebrity Artist Series student tickets, concerts, and various other trips and programs.

With the exchange of your identification card, you can borrow the following from the center: current magazines and newspapers, TTD telephone aid and conference room keys. Call (717) 389-3900 for additional details about services provided.

Community Activities Office

The Community Activities Office handles collection of the community activities fee for graduate students and administers emergency loans for graduate students who have purchased a commu-

nity activities sticker. Graduate students are not required to pay the fee, but must do so if they desire to utilize campus athletic facilities or attend events at a reduced or no fee. If you do pay the fee, you may wish to purchase a community activities card for your family, which entitles them to some of the same privileges it affords you.

The community activities fee is paid separately from your tuition bill. The fee (payable to "Community Activities") must be paid directly to the Community Activities Office, Kehr Union Building, Bloomsburg University, 400 E. Second Street, Bloomsburg, PA 17815-1301. Do not include this fee with the fees payable to the business office.

Current community activities fees for graduate students (paid at one time) are as follows:

- One person (one semester): \$20
- One person (two semesters): \$35
- Two persons (one semester): \$32.50
- Two persons (two semesters): \$60
- Additional persons (one semester): \$6
- Additional persons (two semesters): \$8
- Summer fee: \$2 per week

Some work-study positions for graduate students may be available in the Student Activities Office. Contact the Community Activities Office for more information at (717) 389-4463.

Some special privileges covered by the community activities fee:

- Free admission for one person to home football games, basketball games and wrestling matches; movies; dances; university theater productions; Community Arts Council cultural events (limited seats available); musical events; Centennial and Nelson pools; and Bloomsburg's town pool (in summer, one visit per day).
- Reduced rates for Concert Committee-sponsored events, Travel Service-sponsored trips, and Bloomsburg Theatre Ensemble performances (provided you arrive one hour before the performance and seats are available).

Celebrity Artist Series

Numerous cultural attractions are brought to the university each year. The Celebrity Artist Series features notable performing artists and groups - symphony orchestras, musical troupes, dance companies and popular personalities. The series is sponsored by the Community Arts Coun-

cil, which is comprised equally of faculty members, students and community representatives. Faculty, staff and students who have paid a community activities fee are provided seating on a limited basis. A subscription plan is available for preferred seating and may be obtained from the Office of Academic Support Services located in lower Luzerne Hall.

Provost's Lecture Series

The Provost's Lecture Series provides a public forum for the university, as well as surrounding communities, to share the fruits of learning. Scholars, executives, journalists and professionals from all various walks of life are invited to campus to speak about academic issues and special topics of interest. Faculty members often encourage students to attend events related to their discipline. The events are free and open to the public.

Academic Policies

Admission to Bloomsburg University is determined by the applicant's academic and personal qualifications. Decisions are reached without regard to race, color, religion, sex, age, national origin, ancestry, life style, sexual orientation, disabilities, Vietnam era veteran status, or union membership.

Applicants must be graduates of, or seniors in, accredited bachelors programs at four-year colleges or universities or have the equivalent of a bachelors degree from a foreign institution.

Acceptance to a graduate program is determined by the assistant vice president and dean of graduate studies and research upon recommendation of the graduate program coordinator.

Acceptances are tentative if based on evaluations of transcripts that show work in progress; final action is taken after complete transcripts have been received and evaluated.

Procedures

Application materials and instructions for applications may be secured by contacting the assistant vice president and dean of graduate studies and research (Office of Graduate Studies and Research, 109 Waller Administration Building, Bloomsburg University, 400 E. Second Street, Bloomsburg, PA 17815-1301; telephone (717) 389-4015; fax (717) 389-3054; e-mail: carnold@bloomu.edu

To be eligible for admission:

1. Complete and submit an official application to the Office of Graduate Studies.
2. Arrange for an official transcript of undergraduate grades be sent to the Office of Graduate Studies.
3. Provide other materials as required by the program to which application is made.

Consideration of an application will not occur until all required materials are received.

The non-refundable \$25 application fee must be paid prior to consideration of the application.

Entrance requirements to graduate studies at Bloomsburg University vary according to program. Minimum requirements for applicants for graduate study include a baccalaureate degree from an accredited college or university or the equivalent degree from a foreign institution and a minimum undergraduate quality point average (Q.P.A.) of at least 2.5 on a 4.0 scale. Most applicants will be required to take either the Graduate Record Exam, Miller Analogies Test, National Teacher Examination, or Graduate Management Admissions Test as required by the program. Any testing fees must be paid by the student.

Special Categories

Foreign Students - Individuals from foreign countries must complete a separate Graduate Admissions Application for International Students. This application form is available from the Office of Graduate Studies, 109 Waller Administration Building, Bloomsburg University, 400 E. Second Street, Bloomsburg, PA 17815-1301, U.S.A. International applicants must have the results from the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE), if available in the country of residence, submitted directly to the Office of Graduate Studies from the Educational Testing Service, P. O. Box 6151, Princeton, NJ 08541-6151, U.S.A.

A minimum score of 550 on the TOEFL, taken within two years prior to the date submitted, is required. All international applicants must have their applications complete at least four months prior to the start of the semester for which they are applying.

Non-Degree - Persons who desire graduate-level university instruction, but do not intend to earn a master's degree, may be admitted as non-degree students provided they present official transcripts denoting graduation from an accredited undergraduate college or university. This is the category for students who are auditing a course,

enrolling in the supervisory certificate program, or in the process of applying for regular classes but have not completed the regular admissions process prior to taking classes.

Non-degree students may apply to the Graduate School for transfer to provisional or regular status. However, no more than 12 semester hours earned as a non-degree student may be later applied toward a master's degree, except when special permission is granted by the assistant vice president and dean of graduate studies and research.

Provisional - A student may be admitted as provisional in a degree program when the student possesses a baccalaureate degree but does not meet the criteria for regular admission as specified by the program. The reasons for a student's provisional status will be specified in the letter of admission. When these conditions are attained, transfer to regular student status is automatic upon certification by the student's adviser. If not attained, the student may be dismissed.

Transfers - The criteria and procedures described under admissions apply to transfer students. Students may transfer up to nine hours, in which a grade of B or higher is earned, taken at another college or university, with the approval of their graduate program coordinator and the assistant vice president and dean of graduate studies and research. Transfer credits must be capable of counting toward a degree at the institution at which they were taken. Further, they must meet the Bloomsburg University standard of 15 contact hours per semester hour (credit hour) and no more than one semester hour completed per week. All courses, whether taken at Bloomsburg University or at other institutions, counting toward a graduate degree must be completed within six years. For additional information on transfer credits, see "Transfer of Credits" under Academic Policies.

Readmission

If a graduate student has not enrolled in any graduate course for a two-year period, the student's record is marked "withdrawn" and placed in the inactive files. A new application and \$25 fee must then be submitted for reactivation.

Graduate Courses in the Senior Year

Current Bloomsburg University undergraduates may register for graduate courses under certain conditions. First, they can only take a graduate course during the semester they will complete their undergraduate degree, and they must need less than a full load of classes to graduate. Second, a recommendation from their undergraduate adviser is required. These students must follow the regular graduate application process.

Audits

Courses may be audited for self-improvement. Students must follow the regular graduate application process, pay all the required fees, and obtain the approval of the assistant vice president and dean of graduate studies and research. Students auditing a course are not required to take tests. Upon completion of an audited course, a grade of V is recorded on the student's transcript.

Off-Campus Courses

Bloomsburg often offers graduate courses at other locations in the Commonwealth. These graduate courses are open to students who are not enrolled in a master's program at Bloomsburg University; however, these students must obtain approval from the assistant vice president and dean of graduate studies and research to enroll in these classes and must complete an application for admission to Graduate Studies prior to the completion of the semester in which they are enrolled. Also, enrollment prior to applying to the Graduate School is limited to 3 credits.

Refunds

All withdrawals require the approval of the assistant vice president and dean of graduate studies and research. Immediately after withdrawal, a letter requesting a refund must be directed to the Business Office, Bloomsburg University.

Depending on the time of withdrawal, a partial refund of fees is possible. Except for minimum forfeit of advanced deposits, refunds for tuition will be based on the following schedule (subject to change) if applicable after the first full class day of each semester:

Tuition and Fees

Graduate tuition and fees for the 1997-98 academic year are subject to change by appropriate governing boards. (Fees are generally reviewed and revised in mid-summer, with changes effective in the fall semester). Prices shown are per semester

	Pennsylvania Resident	Out-of-State Resident
Tuition (9-15 hours, full time)	\$1,734	\$3,118
Tuition (per hour)	\$193	\$346

Student Union Fee

One to four semester hours	15	15
Five to eight semester hours	30	30
Nine or more semester hours	60	60

Student Health Service

Nine or more semester hours (obligatory)	37	37
Eight or less semester hours	Not required	Not required

Academic Equipment Fee

One to eleven semester hours	11.50/ hour	11.50/hour
Twelve or more semester hours	136 /semester	136/ semester

Student Union Operation Fee

One to eleven semester hours	2.25 /hour	2.25 /hour
Twelve or more	26.75 /semester	26.75 /semester

Recreation Fee

Twelve or more	72.50	72.50
One to eleven semester hours	6.25/hour	6.25/hour

Graduation and Diploma Fee

<i>(does not cover academic regalia)</i>	10	10
Late Registration Fee	10	10
Late Payment Fee	25	25

All students taking nine or more semester hours and all international students are required to have health insurance. Students may also enroll in the university's student health plan. For information, contact the Health Center at (717) 389-4451 or (717) 389-4452.

First through second week	90%
Third through fourth week	50%
Fifth through eighth week	25%
After the eighth week	0%

A student who does not attend class for which he or she has been properly scheduled and does not submit a request to add/drop/withdraw courses by the appropriate dates is liable for billing and will not be eligible for a refund.

Financial Help/Assistantships

Bloomsburg University provides several options to help graduate students financially. Graduate assistantships are available for students pursuing a master's degree. The number of assistantships in any particular program or department can vary. Stipends are awarded by the assistant vice president and dean of graduate studies and research upon the recommendation of departments that have graduate programs. Stipends are available during the academic year and the summer sessions. Most students are granted assistantships for one semester at a time. Some graduate students, however, are granted assistantships under a two-semester contract. Graduate students who have had an assistantship in one program are not eligible for an assistantship in a second program.

Assistantships are either "half-time" which require 20 hours of work each week or "quarter-time" which require 10 hours of work each week. Both types of assistantships carry a partial tuition waiver. In addition, half-time graduate assistants receive a stipend of \$2,118 for the semester, while quarter-time graduate assistants receive a \$1,059 stipend for the semester. Summer stipends are \$825.

Applications for graduate assistantships are available at the Office of Graduate Studies and should be submitted to the department or program to which the student is applying. Upon award of a graduate assistantship, the document, "Criteria for Graduate Assistantship" will be provided by the Office of Graduate Studies. This document describes Graduate School policies for the administration of assistantships.

Other Forms of Aid

Some federal fellowships may be offered in selected fields of study. Program coordinators should be contacted regarding availability. In addition, the Pennsylvania Higher Education Assistance Agency Loan Program is available, as well as the student work-study program. For more information regarding these forms of financial aid, contact the Office of Financial Aid, Benjamin Franklin Hall, Bloomsburg University, 400 E. Second Street, Bloomsburg, PA 17815-1301, (717) 389-4279 or (717) 389-4297.

Academic Policies

Responsibilities of a graduate student at Bloomsburg University include:

- Each student will take the initiative to be aware of all university policies as described in this catalog and in class schedules.
- Each student will take responsibility for satisfying requirements for graduation in his or her field.
- While graduate advisers and staff will assist students, decisions on courses and other matters rest with the student.
- Each student should identify any undergraduate weakness or deficiency and discuss them with graduate advisers. (Such weaknesses might include, but are not limited to, not having proper undergraduate prerequisites for the desired graduate program.)
- Students are expected to attend all classes and take all examinations. Absences from graduate classes are granted only for urgent and verifiable reasons; students granted an absence from class can expect assistance from professors in making up work or examinations.

Advisers

Students who are provisional, regular or candidates for a degree, along with students enrolled in the supervisory certificate programs, are assigned graduate advisers. The duties of the adviser are:

- to serve as a consultant in planning the student's program
- to help students choose courses
- to certify the courses students do choose are part of their degree program
- to endorse the student's application for degree candidacy and graduation (if appropriate to your program)
- and to arrange for a comprehensive examination (if required by the graduate program selected).

Upon acceptance into a program of study, the program coordinator is usually assigned as a temporary adviser. A permanent adviser is selected by the student and temporary adviser, taking into account the student's research and career interests. If this individual accepts the student as advisee, she/he is formally appointed permanent adviser by the assistant vice president and dean of graduate studies and research upon recommendation of the department involved.

Non-degree students are not assigned advisers. They may regard the assistant vice president and dean of graduate studies and research as their adviser for choosing courses and interpreting academic regulations.

Scheduling, Registration, and Course Information

Students register for graduate courses through their department or the Registrar's Office, except for students in non-degree status who submit their registration materials directly to the Office of Graduate Studies.

Any graduate student who does not attend class for which he or she has been properly scheduled and does not submit a request for add/drop/withdraw courses by the appropriate dates is liable for billing and will not be eligible for a refund.

The course load each semester for a full-time student is 12 semester hours (for financial aid purposes, full time is 9 credits and over). For students employed full time, however, the maximum course load each semester is 6 semester hours. For half-time graduate assistants, the course load is 6 to 9 semester hours; for quarter-time graduate assistants, 9 to 12 semester hours.

For summer sessions, the maximum course load is 1 semester hour per week of full-time course work. (For example, if the summer session is six full weeks, the maximum course load during that session is 6 semester hours).

Credit is measured in terms of semester hours, at the rate of 1 semester hour for 15 hours of lecture/discussion work plus final examinations.

Courses numbered 500 or higher in this catalog (the last three digits of the course number) are graduate courses. Courses numbered lower than 500 that are listed in this catalog are open to both graduate students and advanced undergraduates. Graduate students may apply only 12 semester hours of courses numbered 400 to 500 that are listed in this catalog toward a master's degree

Transfer of Credits

No more than 12 credits earned, with a grade of B or higher, outside of a degree program may be applied to the program in which the student is matriculating. Students may transfer up to nine hours, in which a grade of B or higher is earned, taken at another college or university, with the approval of their graduate program director and the assistant vice president and dean of graduate studies and research. Credits applied to an undergraduate degree cannot be applied to a graduate degree. Credits not applying to an earned degree, such as credits earned in non-degree status or credits earned in a program from which the student has withdrawn, may apply to a degree program. Internal transfers are limited to 12 credits of courses, which must be relevant to the degree program the student is pursuing, and must be approved by the graduate program coordinator and the assistant vice president and dean of graduate studies and research. Transferred courses taken at Bloomsburg University will contribute to the student's QPA when determining academic standing. Graduate courses taken at Bloomsburg University but not transferred into a degree program do not contribute to the student's QPA when determining academic standing. A request for transfer of credits must be submitted on an application form available in the Office of Graduate Studies.

After formal admission to the School of Graduate Studies, all requests to take and transfer graduate credits must be pre-approved by the program coordinator. Students must have taken the course(s) in residence and the content of the course(s) must match the required areas of study in the student's master's program at Bloomsburg. Transfer credit must be capable of counting toward a graduate degree at the institution at which the course was taken. Also, students must have earned a grade of B or higher. Credit for a pass/fail grade is not transferable. In general, workshop format courses are not acceptable in transfer; however, if the workshop fulfills the following requirements, it may be considered for transfer to Bloomsburg University:

- The course should consist of 45 contact hours (15 contact hours per semester hour) for a 3-semester hour course;
- The course must include exposure to the disciplinary research literature appropriate to the course;
- The course must include the opportunity for outside work such as term or research papers or other major assignments appropriate to a graduate course; and
- The course must be taught as part of a master's degree curriculum of the university at which the course was taken. Professional development workshops are not acceptable.
- The course duration should be over one week for each credit (e.g., 3 weeks for a 3 credit course).

Under certain conditions, credits applying to an earned degree may apply to a subsequent degree. Courses transferred must be relevant to the program in which the student is matriculating. The transfer must be approved by the graduate program coordinator and assistant vice president and dean of Graduate Studies and Research. Transferred credits must not reduce the number of credits earned in the program below 24. Credits transferred in this manner do not contribute to the QPA when determining academic standing.

Repeat of Courses

A maximum of one course in which a grade of less than C has been recorded or a maximum of

two courses in which a grade less than B and greater than C- has been recorded (totaling not more than 6 semester hours) may be repeated upon application to the assistant vice president and dean of graduate studies and research. The application shall be approved upon request in writing by the student's graduate program coordinator and department chairperson.

The initial grade remains on the transcript as part of the student's permanent record. The grade of the repeated course is part of the permanent record and is used to calculate the student's quality point average. A course may be repeated only once. A course taken at Bloomsburg University in which a grade of below C (below 2.0 quality points) has been earned must be repeated at Bloomsburg University. Although this is a general graduate school policy, individual departments or graduate programs may implement more stringent requirements.

Academic Grievance Procedure

Alleged academic injustices relating to grades or professional conduct should be resolved informally, if possible. The student should first discuss the matter with the concerned faculty member, appropriate chairperson, and college dean or the assistant vice president and dean of graduate studies and research. In order for the matter to be resolved expeditiously, the consultation(s) should take place as soon as possible after the alleged incident has occurred. If informal attempts to resolve the matter are unsuccessful, the student should consult with the assistant vice president and dean of graduate studies and research who will inform the student of procedures for initiating a formal grievance with the academic grievance coordinator for a hearing before the Academic Grievance Board.

Academic Probation

A graduate student not maintaining satisfactory academic progress may be placed in academic probationary status. Enrollment is limited to a maximum of 9 semester hours for the grading period in probationary status. A student on academic probation is not eligible to hold a graduate assistantship. To be removed from academic probation, a graduate student with a quality point

average deficiency must attain the minimum overall quality point average of 3.0 as required by the School of Graduate Studies for regular graduate students and degree candidates. A student who attains a 3.0 QPA or higher for the first grading period in academic probationary status, but does not attain the required overall QPA, may be recommended by his or her academic adviser, the graduate program coordinator and the department chairperson to the assistant vice president and dean of graduate studies and research for continuation on probation for one additional grading period.

Graduate students who fail to meet the minimal standards for satisfactory progress will be notified by the assistant vice president and dean of graduate studies and research. Failure to request academic probation will result in academic dismissal. Such students may submit a request in writing to their academic advisers to be granted academic probation. Upon recommendation of the academic adviser, graduate program coordinator, and department chairperson, and approval by the assistant vice president and dean of graduate studies and research, probationary status will be granted. Exceptions to these procedures under extraordinary circumstances will be by written request to the assistant vice president and dean of graduate studies and research.

Academic Dismissal

A graduate student not maintaining satisfactory progress, who is not permitted to enroll in probationary status, is excluded from registration, and the student's academic record is marked "academic dismissal."

Dismissal is automatic if the overall QPA is below the minimum after two grading periods in probationary status or after failing to pass the Comprehensive Examination two times while in probationary status. Dismissal is also automatic upon receipt of grades below a C in two graduate courses. A graduate student under academic dismissal is not eligible to attend courses offered in the School of Graduate Studies for a period of at least one calendar year.

A dismissed graduate student may, after a period of one year, reapply to the School of Graduate Studies in order to undertake studies in a new

degree program or to further their studies in non-degree status. A graduate student is not permitted to register for any courses in a program from which he or she was dismissed.

Under exceptional circumstances and with the approval of the assistant vice president and dean for Graduate Studies and Research, a program may readmit a dismissed student. In the latter instance, the normal six-year limitation for expired courses shall be applied. Graduate students dismissed for academic reasons may appeal their dismissal within one year, in writing, to the Graduate Council. The decision of the council is final.

Examinations

As part of the master's degree requirement, a comprehensive examination is likely to be required. Also, an examination in defense of a master's thesis is required of students who choose to write a thesis.

Master's Thesis or Departmental Paper

Normally, the master's thesis consists of an independent scholarly investigation which includes the experience of collecting, assembling, interpreting and presenting a body of information to solve a formal research problem in the student's academic or professional field. Alternatively, it can include the preparation and exhibition or presentation of creative works in certain programs. The School of Graduate Studies requires that a thesis be a minimum of 6 semester hours. If the thesis is greater than 6 hours, only 6 semester hours may be counted toward degree requirements.

If a master's thesis is included in the student's program, a committee is appointed by the assistant vice president and dean of graduate studies and research from individuals nominated by the student's adviser. A "Form for the Appointment of a Thesis Committee" is available for this purpose from the Office of Graduate Studies. The committee guides the study, approves the thesis in both form and content, arranges for the defense, certifies satisfactory completion of the thesis, and determines the grade. Final copies of every thesis

must utilize the format as presented in "Master's Thesis: Procedures," and must be printed on 100 percent cotton paper suitable for archiving such as that available at the University Store.

Some master's degree requirements include a departmental paper. Such a paper is interpreted as one that grows out of a course and therefore does not require special registration or carry its own credit. Completion of a departmental paper must be certified by your faculty adviser as part of the application for graduation.

Information about master's thesis procedures and departmental paper procedures is available from the Office of Graduate Studies and should be read by all graduate students prior to beginning a thesis or departmental paper project.

Human or Animal Research

In cases where a student's research requires the use of any human or animal subjects, the student must seek appropriate approvals through the Institutional Review Board for Human Subjects and/or the Institutional Animal Care and Use Committee. Students should discuss the application process with their faculty adviser and obtain the appropriate approval application forms from the Office of Research and Sponsored Programs in Waller Administration Building.

Admission to Candidacy

Candidacy requirements, when relevant, are described under each program. Not all programs have candidacy requirements.

Time Limitation

Each student is expected to complete the requirements for a master's degree within six calendar years. This includes courses accepted by transfer. Bloomsburg University will grant extensions for sufficient reason, upon application to the assistant vice president and dean of graduate studies and research and with the approval of the student's adviser. This extension must be requested before the six-year period ends.

Graduation Requirements

Students who are completing degree programs must apply for graduation at the Office of the Registrar, Benjamin Franklin Hall, telephone

(717) 389-4263, and pay the graduation fees prior to the deadline listed in the university calendar. Each program that leads to a master's degree at Bloomsburg University requires at least 30 semester hours of graduate credit. Courses with grades below C earn no credit toward a master's degree and any course with a grade below C must be repeated.

Students must have a cumulative QPA of 3.0 or higher to graduate with a master's degree from Bloomsburg University. The graduate calendar gives deadlines for applying for graduation, completion of thesis and departmental papers, comprehensive examinations, etc. These are deadlines, but students should plan to complete each segment before the due date, whenever possible.

Graduate Transcripts

Students may request a graduate transcript through the Registrar's Office. This may be done by letter, or by filling out a form available from the Registrar's Office. The cost per transcript is \$3.

Grades

Grades and their commensurate quality points are as follows:

A = 4.00

A- = 3.67

B+ = 3.33

B = 3.00

B- = 2.67

C+ = 2.33

C = 2.00

C- = 1.67

D+ = 1.33

D = 1.00

E = 0.00

P = Passing grade in thesis/research

F = Failing grade in thesis/research

R = Research in progress

The grades given to each student for academic credit at Bloomsburg University are assigned by those faculty who are responsible for the course in which the student is enrolled.

I - Incomplete; work must be completed within four months unless the assistant vice president and dean of graduate studies and research

extends the period for adequate reason. If the work is not made up, the grade is changed to F, and the student is denied further opportunity to complete the work.

W - Withdrawn with approval of the assistant vice president and dean of graduate studies and research. The graduate student must apply to the assistant vice president and dean of graduate studies and research for permission to be withdrawn. If this permission is required before midpoint of the semester, the grade is W. If the withdrawal is after the midpoint of the semester, the grade is W, providing the student is passing the course, and E otherwise. The Registrar establishes the semester's midpoint.

V - Audit

X - No grade reported. This temporary notation is recorded until an official grade is received.

CR - This notation appears when a course has been repeated. A course may be repeated only once.

To calculate your QPA, follow this process:

- Multiply the number of quality points for each grade by the number of semester hours for that course.

- Add these points

- Divide the total by the sum of the semester hours for all grades used in the computation. When a course has been repeated, use only the last entry.

Academic Programs

Art History, Art Studio (M.A.)

Administered By: Department of Art
 Campus Address: 213 Old Science Hall
 Bloomsburg University
 400 E. Second Street
 Bloomsburg, PA 17815-1301
 Telephone Number: (717) 389-4646
 Fax Number: (717) 389-4946
 Coordinator: Vera L. Viditz-Ward, M.F.A.
 Degree Awarded: Master of Arts

Departmental Faculty

Professors: Stewart L. Nagel, Gary F. Clark, Barbara J. Strohmman
 Associate Professors: Karl A. Beamer, Carol B. Burns, Christine M. Sperling, Vera L. Viditz-Ward, Charles T. Walters
 Assistant Professors: Vincent Hron, Andrea Pearson

About Art History

The Master of Arts program in art history develops an advanced knowledge base, writing proficiency and research skills enabling the student to pursue a variety of professional options. A minimum of 30 semester hours is required including a thesis based on the student's area of interest. In conjunction with the student's committee, an individualized program of study is designed. Opportunities for interdisciplinary and off-campus experiences are available.

About Art Studio

The Master of Arts program in art studio emphasizes the development of creative and scholarly competencies in one or more of the following studio areas: drawing, crafts, ceramics, graphics, painting, photography or sculpture, with concurrent or parallel work in the areas of art history, philosophy and psychology of art, and visual aesthetics for a minimum of 30 semester hours. Opportunities for off-campus experiences are available.

Admission. In addition to meeting the general admission requirements for the School of Graduate Studies, applicants must also include a one-page statement of their objectives and philosophy. Applicants to art history must include a writing sample. Those choosing the master's degree in art studio need to submit an 8" x 10" plastic sleeve of slides representative of their creative work. Upon acceptance, students are required to appear for a personal interview with the department chairperson, program coordinator and an adviser in their major field. At this time, any deficiencies in the applicant's background will be noted and an appropriate course of study outlined. A thesis and an exhibition of creative work are required for art studio majors. A thesis and presented paper are required for art history majors.

Retention and Candidacy. Requirements of this program are outlined in the graduate catalog.

Graduation. Art studio majors will choose an area of concentration consisting of four levels of the selected specialization along with selected elective courses as suggested by their committee. Art history majors will specialize in an area of study along with advanced general studies. A minimum of 30 semester hours is required; this number may be exceeded depending on the student's program. All other graduation requirements for this program are the same as for the School of Graduate Studies.

Gallery, Permanent Art and Slide Collections. The department operates the Haas Gallery of Art, which features monthly exhibitions of varied art forms. A special exhibition of student art work is held annually, and an exhibition organized and planned by students in the art gallery course is held in the spring of each year. The department of art maintains an extensive permanent art collection of more than 400 pieces with works displayed throughout the campus. The department's slide collection numbers more than 50,000 units.

Required Courses

Graduate courses in art studio:

- 32.500, 01, 02, 03 Advanced Ceramics I, II, III, IV
 32.510, 11, 12, 13 Advanced Drawing I, II, III, IV
 32.520, 21, 22, 23 Advanced Crafts I, II, III, IV
 32.530, 31, 32, 33 Advanced Graphics I, II, III, IV
 32.540, 41, 42, 43 Advanced Painting I, II, III, IV
 32.550, 51, 52, 53 Advanced Sculpture I, II, III, IV
 32.580, 81, 82, 83 Advanced Photography I, II, III, IV
 32.595 Directed Study in the Studio Arts

Graduate Courses in Art History include:

- 31.560 Readings and Research in Contemporary Art History
 31.565 Readings and Research in American Art History
 31.570 Readings and Research in European Art History
 31.575 Readings and Research in Oriental Art History
 31.580 Readings and Research in Architectural Art History
 31.585 Art and Culture of France
 31.592 Readings and Research in Advanced Visual Aesthetics
 31.595 Directed Study in Art History
 30.590 Current Theories in Art and Art Education
 30.591 Visual Arts of the Exceptional Child
 30.595 Master's Thesis

The preceding courses in art studio and art history carry 3 semester hours of credit, except for 31.595 and 32.595 (Directed Study) which carry variable credit and 30.595 Master's Thesis which carries 3 to 6 semester hours.

Faculty Research Interests

- Karl A. Beamer, M.F.A., associate professor - ceramics and sculpture
 Carol B. Burns, M.F.A., associate professor - crafts
 Gary F. Clark, M.A., associate professor - computer and video technology, drawing
 Vince Hron, M.F.A., assistant professor - painting, drawing
 Stewart L. Nagel, M.F.A., professor - graphics
 Andrea Pearson, Ph.D., assistant professor - northern renaissance art, museum studies
 Christine M. Sperling, Ph.D., associate professor - Renaissance art history
 Barbara J. Strohman, M.F.A., associate professor - drawing
 Vera L. Viditz-Ward, M.F.A., associate professor - photography, history of photography
 Charles T. Walters, Ph.D., associate professor - American and Oriental art history

Communication Studies (M.A.)

Administered By: Department of Communication Studies and Theatre Arts

Campus Address: 1102 McCormick Center for Human Services

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4184

Coordinator: Timothy B. Rumbough, Ph.D.

Department E-mail Address: rumbough@plan-etx.bloomu.edu

Degree Awarded: Master of Arts

Departmental Faculty

Professors: Mary Kenny Badami, Dale A. Bertelsen, Howard N. Schreier

Associate Professors: James E. Tomlinson

Assistant Professors: Janet Reynolds Bodenman, Timothy B. Rumbough, Kara Shultz

About the Program

Note: the program is undergoing curriculum review. As such, no applications for admission are being accepted at this time (April 1, 1998). For updated information on the status of the program, contact Dr. Timothy B. Rumbough, program coordinator.

The purpose of this program is to enhance the understanding of the philosophy, theory and practice of the means by which human beings exchange information, ideas and values through personal or mediated interaction. Using a variety of research tools, students discover the role communication plays in interpersonal, small group, public and organizational situations. A master's degree in communication prepares graduates for doctoral study in communication and for careers in a number of areas including business, law, medicine, education, government, media, public relations, advertising, arts and entertainment, social and human services, high technology industries, and international relations and negotiations.

Admission. In addition to meeting the general admission requirements for the School of Graduate Studies, applicants for the Master of Arts in Communication program must submit:

- Graduate Record Examination scores (a minimum combined score of 950 on the verbal and quantitative tests).

- Three letters of recommendation from individuals who have the knowledge to comment on the applicant's potential to successfully complete a graduate program.

- Evidence of completion of two to three basic communication studies courses including, but not limited to, public speaking, interpersonal communication, persuasion and business communication. Applicants without such preparation will be expected to enroll as auditors in 25.104 Interpersonal Communication and/or other course(s) as determined by the Graduate Committee.

- A one-page statement describing the applicant's objectives, goals and direction for enrolling in the program.

Applicants who do not meet all of the requirements may request an interview with program faculty to discuss special circumstances or may petition, in writing, for a waiver of select entrance requirements.

Retention. In addition to meeting the general retention requirements for the School of Graduate Studies, a graduate student in communication must earn a minimum grade of B in each of the four core courses to remain in good academic standing. Students may be given the opportunity to retake a course after review of special circumstances by program faculty.

Graduation. A minimum of 30 semester hours in graduate-level courses is required for graduation.

Required Courses

Core Courses (12 semester hours)

- 23.501 Nature of Communication
- 23.502 Interpersonal Communication
- 25.445 Organizational Communication
- 25.501 Introduction to Communication Research

Elective Courses (18 semester hours)

A minimum of three courses offered by the Department of Communication Studies and Theatre Arts must be selected as electives.

- 25.502 Rhetorical Criticism
- 25.585 Special Topics in Communication
- 25.586 Special Topics in Communication
- 25.587 Special Topics in Communication

Special Topics courses include interviewing, communication and conflict, evaluating communication, communication in the family, community leadership, corporate communication and computer applications for professional communicators.

Up to 9 semester hours offered in other departments may be elected as approved by the student's adviser. Examples of such courses are:

- 45.500 Sociology of Mass Communication
- 46.440 Language and Culture
- 48.451 Laboratory Training in Group Processes
- 48.453 Organizational Psychology
- 57.572 Hypermedia Programming
- 93.583 Human Resources Development

A 6-credit thesis or a departmental research paper is optional but strongly recommended for those seeking advanced study beyond the master's degree.

Faculty Research Interests

Mary Kenny Badami, Ph.D., professor - intercultural communication with a focus on orienta-

tion programs; training and interviewing in organizational settings; gender and race as communication variables

Dale A. Bertelsen, Ph.D., professor - media studies/criticism, political communication and rhetorical theory and criticism

Janet Reynolds Bodenman, Ph.D., assistant professor - interpersonal and small group processes within organizations

Timothy B. Rumbough, Ph.D., assistant professor - computer-mediated communication, communication apprehension; and communication education

Howard N. Schreier, Ph.D., professor - contemporary rhetorical theory and criticism; persuasion in the popular culture; and communication pedagogy

Kara Shultz, Ph.D., assistant professor - rhetorical criticism with a focus on cultural studies, feminist discourse and social movement protest

James E. Tomlinson, M.A., associate professor - organizational and political communication, and the impact of communication technology on society

Business Administration (MBA)

Administered By: College of Business
 Campus Address: Sutliff Hall
 Bloomsburg University
 400 E. Second Street
 Bloomsburg, PA 17815-1301
 Telephone Number: (717) 389-4762
 Program Coordinator: David G. Martin, Ph.D.
 Degree Awarded: Master of Business Administration
 Enrollment: 90

About the Program

The MBA curriculum blends accounting, finance, the legal environment, management, management information systems, marketing and international business courses to prepare students for a globally dynamic and competitive business environment. MBA programs provide theoretical, analytical and operational skills required to meet the problem-solving and decision-making challenges in managing business resources. Since its inception in 1930, Bloomsburg University's College of Business programs have grown to a current status of serving 1,500 undergraduate and 100 graduate students.

The graduate faculty employ a variety of instructional techniques, case studies, applied research, and group projects to develop and augment theoretical and practical knowledge. The graduate faculty in the College of Business are highly trained and actively involved in research. Interdisciplinary graduate faculty teach a variety of subjects in the MBA program. International exchange programs and a diverse group of faculty and students tremendously enhance the learning experience.

Admission. The MBA graduate faculty admit students based on an analysis of a number of qualitative and quantitative criteria which include past academic achievement, aptitude for business studies, professional accomplishments, and moti-

vation. Applicants to the MBA program should provide documents indicating the following:

- Official transcripts from all academic institutions indicating an earned baccalaureate degree from an accredited institution with a GPA of 2.50 or greater. Degrees earned from non-United States universities will be judged independently.
- Graduate Management Admissions Test (GMAT) scores.
- Test of English as a Foreign Language (TOEFL) for international applicants whose native language is not English.
- Three letters of recommendation.
- A resume.

Retention. For special requirements for the MBA program other than those for the School of Graduate Studies, please contact the office of MBA Program Coordinator, (717) 389-4762.

- Graduation.** The MBA program consists of:
- 3 hours of undergraduate calculus (waivable if taken and passed)
 - 12 hours of skills courses designed to equip students with the analytical tools and functional principles to succeed in the MBA program. Appropriate previous academic work can be transferred based upon academic record and GMAT scores.

- 40.512 Economic Theory
- 91.504 Introduction to Financial Accounting
- 91.501 Managerial Principles
- 93.511 Statistical Analysis and Design
- 24 hours of required courses:
 - 91.524 Managerial Accounting
 - 92.554 Management Information Systems
 - 93.558 Social Responsibility and Business Ethics
 - 93.560 Operations Management
 - 93.566 Organization Behavior
 - 93.581 Strategic Management
 - 96.535 Financial Management
 - 97.551 Marketing Management
 - 12 hours of electives

Elective tracks available in Accounting, International Business and Management.

Part time students have six years to finish the above program in a logical sequence. Specific course offerings are detailed in the catalog for the departments of Accounting, Computer and Information Systems, Finance/Business Law, Marketing, and Management.

Special topic courses are available in each discipline. Other graduate electives may be taken with the permission of the MBA coordinator.

Students must complete all requirements for graduation with a 3.00 minimum GPA. No more than two C grades are allowed in the graduate courses taken at Bloomsburg University. Please contact the MBA program coordinator's office for further information or other special requirements.

Graduate Faculty

Accounting

Richard L. Baker, Ph.D.
 Michael C. Blue, Ph.D.
 Nancy Coulmas, Ph.D.
 Gene Gullede, Ph.D.
 Dennis B. Hwang, Ph.D.
 John Rude, Ph.D.
 Michael Shapeero, Ph.D.

Computer & Information Systems

Patricia Boyne, M.S.
 Carl Chimi, Ph.D.
 Frank F. Davis, Ph.D.
 James S. Dutt, Ph.D.
 Harold K. Frey, M.S.
 Gene Gordon, Ed.D.
 Charles J. Hoppel, Ph.D.

Finance and Business Law

Karen Elwell, J.D.
 David G. Heskell, Ph.D.
 David Martin, Ph.D.
 Bruce L. Rockwood, Ph.D.
 William Steven Smith, Ph.D.

Management

Mainuddin Afza, Ph.D.
 M. Ruhul Amin, Ph.D.
 Victor Berardi, Ph.D.
 Charles Chapman, M.A.
 Howard J. Kinslinger, Ph.D.
 Mark Larson, Ph.D.

Stephen Markell, Ph.D.
 Minoo Tehrani, Ph.D.
 Peter B. Venuto, Ph.D.
 Pamela Wynn, Ph.D.

Marketing

Stephen Batory, D.B.A.
 Mary K. Ericksen, Ph.D.
 Morry Gingham, Ph.D.
 Hank Laskey, Ph.D.
 Salim Qureshi, Ph.D.
 Robert N. Watts, Ph.D.

Biology (M.Ed.)

Administered By: Department of Biological &
Allied Health Sciences

Campus Address: Hartline Science Center

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4780

Coordinator: Margaret L. Till, Ph.D.

Department E-mail Address: till@bloomu.edu

Degree Awarded: Master of Education

Departmental Faculty

Professors: James E. Cole, Judith P. Downing,

Philip A. Farber, Frederick C. Hill, Thomas S.

Klinger, Mark S. Melnychuk, Lynne C. Miller,

Louis V. Mingrone, James E. Parsons, Cynthia

A. Surmacz, Margaret L. Till

Associate Professors: Joseph P. Ardizzi, George P.

Chamuris, Judith Kipe-Nolt

Assistant Professors: George T. Davis, Jeanne W.

Lawless, Casey A. Shonis, Marianna D. Wood

About the Program

The Master of Education program in biology is intended to enhance the competence of secondary school teachers of biology by extending their scholarship in content and method through formal courses, independent study and research.

Admission. A baccalaureate degree in biology, or its equivalent, with Level I Certification is required for admission to the program. Undergraduate deficiencies must be rectified prior to admission to the program or during the first semester with the permission of the program coordinator. Deficiencies may be addressed by undergraduate course work without credit earned toward the degree, by graduate course work when suitable, or by outside readings. The method of addressing deficiencies is decided by the departmental graduate committee in consultation with the graduate program coordinator. Two letters of recommendation from previous science faculty

are required. At least one letter should be from a faculty member who instructed the applicant in an upper-level (junior or senior) biology course. Applicants with research experience should submit one letter from the research advisor. Others may submit a letter from any professor with the ability to evaluate the applicant's laboratory abilities.

Candidacy. To be admitted to candidacy, every biology graduate student must pass an oral candidacy examination. The purpose of the examination is to assess the breadth of the student's background in biology. The examination will cover general principles and concepts of biology.

The oral candidacy examination must be scheduled before completing 6 credit hours of graduate coursework and be taken before scheduling beyond 12 hours, provided the student has a 3.0 or higher QPA. The examination will consist of six oral questions addressed to the student by the examination committee. Each question be will given 10 minutes of the examination.

The examination committee is composed of 1) the student's permanent academic adviser and tentative thesis committee (thesis option) or the student's tentative reading committee (nonthesis option), 2) at least three-fourths of the departmental graduate committee and 3) any other departmental faculty member in attendance.

Outcome of the candidacy examination will be determined by a simple majority vote by the examination committee. One of three outcomes is possible:

Unconditional pass - The student may proceed with the program. The application for candidacy and for transfer credit should be made immediately following successful completion of the oral candidacy exam.

Conditional pass - The examination committee decides that the student has an adequate background in all but one or two key areas. Conditions may include an oral re-test of problem areas, a

written test in problem areas, and/or remedial actions. The student will be informed of the conditions decided upon by the committee. If after reevaluation, the examination committee decides the student has not met the conditions set forth by the committee, he or she will be required to retake the entire examination according to the stipulations outlined below under "fail." If the student fails the examination at this retake, he or she will be dismissed from the program.

Fail - The student must retake the entire examination at a later date to continue with the master's program. The student has one more chance to pass. In order to continue with the program, the student must pass the examination unconditionally on the second attempt.

Graduation. A minimum of 30 semester hours in graduate-level courses is required. A minimum of 18 semester hours must be taken from 500-level courses (see list below), including two required education courses: 60.501 Major Philosophies of Education and 79.591 Research in Education. Either 50.591 Directed Study in Biology or 50.592 Master of Education Thesis is required to fulfill the research component. An oral defense of the research component is required. A written and/or comprehensive examination may also be required.

Required Courses

There are no required biology courses; all are considered elective courses. Courses are selected in conjunction with the student's adviser and advisory committee.

50.411 Radiation Biology
 50.432 Microbial Genetics
 50.441 Cytogenetics
 50.455 Environmental Microbiology
 50.457 Entomology
 50.462 Plant Anatomy
 50.463 Biological Photographic Techniques
 50.530 Evolution
 50.531 Developmental Biology
 50.532 Molecular Genetics
 50.550 Mycology
 50.551 Conservation Biology
 50.559 Ornithology
 50.560 Population Biology
 50.561 Animal Behavior

50.570 Medical Parasitology
 50.571 Endocrinology
 50.572 Comparative Animal Physiology
 50.573 Systemic Physiology
 50.575 Cell Physiology
 50.576 Neuromuscular Physiology
 50.590 Current Topics in Biology
 50.591 Directed Study in Biology
 50.592 Master of Education Thesis

The following courses are offered at the Marine Science Center, Wallops Island, Va.

55.431 Ecology of Marine Plankton
 55.464 Biological Oceanography
 55.432 Marine Evolutionary Ecology
 55.490 Marine Aquaculture
 55.491 Coral Reef Ecology
 55.492 Marine Mammals
 55.500 Problems in Marine Science
 55.540 Environmental Science Education
 55.541 Biology of Mollusca
 55.570 Research Cruise-Biology
 55.593 Behavior Ecology

Faculty Research Interests

Joseph P. Ardizzi, Ph.D., associate professor — fungal genetics, microbiology and cell biology. E-mail: jardiz@planetx.bloomu.edu
 George P. Chamuris, Ph.D., associate professor — biology of wood-inhabiting and bark-inhabiting fungi. E-mail: chamuris@planetx.bloomu.edu
 James E. Cole, Ph.D., professor — vertebrate ethology and allied health. E-mail: cole@planetx.bloomu.edu
 George T. Davis, Ph.D., assistant professor - plant molecular genetics, genetic engineering and maize genetics. E-mail: gdavis@bloomu.edu
 Judith P. Downing, Ph.D., professor — immunology and infectious diseases caused by bacteria. E-mail: jpdownd@planetx.bloomu.edu
 Philip A. Farber, Ph.D., professor — cytogenetics
 George J. Gellos, Ph.D., associate professor — developmental plant morphology
 Frederick C. Hill, Ph.D., professor — vertebrate zoology and neotropical biology. E-mail: fhill@planetx.bloomu.edu
 Judith Kipe-Nolt, Ph.D., assistant professor — biology of soil composting and microbiology. E-mail: kipeholt@planetx.bloomu.edu

- Thomas S. Klinger, Ph.D., associate professor — marine biology, physiological ecology, behavioral ecology and biometry. E-mail: klin@planetx.bloomu.edu
- Jeanne W. Lawless, Ph.D., assistant professor — maternal and child nutrition, diet, and ethnicity and health. E-mail: jlawle@planetx.bloomu.edu
- Mark S. Melnychuk, Ph.D., professor — nutrition, reproductive physiology, and seasonal weather changes and pollutant levels in fishing creeks. E-mail: mmelny@planetx.bloomu.edu
- Lynne C. Miller, Ph.D., professor — medical parasitology, parasite immunology and physiology, experimental pharmacology and toxicology. E-mail: lcmill@planetx.bloomu.edu
- Louis V. Mingrone, Ph.D., professor — phytochemical systematics and floristics. E-mail: lmingron@planetx.bloomu.edu
- James E. Parsons, Ph.D., associate professor — clinical microbiology and medical mycology. E-mail: parsons@planetx.bloomu.edu
- Casey A. Shonis, Ph.D., assistant professor — neurophysiology, genetic hypertension and neuroanatomy. E-mail: cshonis@bloomu.edu
- Cynthia A. Surmacz, Ph.D., professor — cell physiology, and cholesterol metabolism in exercise and aging. E-mail: surmacz@planetx.bloomu.edu
- Margaret L. Till, Ph.D., professor — endocrinology and cholesterol metabolism in women. E-mail: till@bloomu.edu
- Marianna D. Wood, Ph.D., assistant professor — forest ecology and animal behavior. E-mail: wood@bloomu.edu

Business Education (M.Ed.)

Administered By: College of Business
 Campus Address: 217 Sutliff Hall
 Bloomsburg University
 400 E. Second Street
 Bloomsburg, PA 17815-1301
 Telephone Number: (717) 389-4109/4121
 Coordinator: Donna Cochrane, Ed.D.
 E-mail Address: dcochrane@bloomu.edu
 Department Web Page:
<http://www.bloomu.edu/departments/beois/beois.htm>
 Degree Awarded: Master of Education
 Enrollment: 17

Departmental Faculty

Professors: Donna J. Cochrane, John J. Olivo Jr.
 Associate Professors: Nancy A. Dittman, Dennis
 O. Gehris,
 Assistant Professors: Janice C. Keil

About the Program

The Master of Education in Business Education program is designed to prepare students in the design, implementation and management of office systems in a business environment. The program offers practical and realistic learning activities, hands-on instruction in new information technology and field-based research projects. Admission to the program does not require evidence of a valid teaching certificate, but the program may lead to certification in business education with the completion of additional coursework. For information regarding certification, please contact the program coordinator.

Admission. Applicants must satisfy the general admission requirements for the School of Graduate Studies as well as the following requirements for the Master of Education in Business Education:

- Official undergraduate transcript with a recommended minimum QPA of 2.5 on a 4.0 scale

- Graduate Record Examination results on the general knowledge test with a recommended minimum score of 1300

- Current resume to include professional background, education and other experiences

- Letter of intent stating rationale for seeking admission to the program

- Two letters of recommendation from persons who have knowledge of the applicant's academic and professional background.

- Test of English as a Foreign Language (TOEFL) for international applicants whose native language is not English, with a recommended minimum score of 550

Retention. Requirements for this program are the same as those for the School of Graduate Studies.

Graduation. A minimum of 30 semester hours in graduate-level courses is required. The program consists of one required core course, two elective courses, and an office information systems emphasis consisting of seven courses.

Required Courses

Core Course (3 semester hours)

79.591 Foundations of Educational Research

Graduate Electives (6 semester hours)

Graduate-level courses to fulfill the elective requirements will be chosen by the student and the program coordinator based on career needs.

Office Systems Emphasis (21 semester hours)

90.581 Seminar in Business Education

94.500 Office Systems Information and Technology

94.510 Office Systems Applications

94.520 Administrative Communications

94.530 Telecommunications

94.540 Training and Development in Office Systems

94.550 Integrated Office Systems

(Students should enroll in 94.550 Integrated

Office Systems during the last semester of the degree program or obtain instructor's permission.)

Certification. Students who wish to receive a Level I Professional Teaching Certificate in business education (accounting, data processing, marketing, and office technologies) from the Pennsylvania Department of Education must fulfill the following requirements in addition to the M.Ed. in Business Education:

Additional coursework in the areas of education and business as determined by the program coordinator after a review of transcripts;

Completion of the requirements for admission to teacher education; and

Passing the National Teacher Examination core battery and the specialty area(s) for business education.

Faculty Research Interests

Ellen M. Clemens, D.Ed., associate professor - methodology and business education. E-mail: eclemens@bloomu.edu

Donna J. Cochrane, Ed.D., professor - training and development, business teaching methodology, office technologies. E-mail: dcochrane@bloomu.edu

Nancy A. Dittman, Ed.D., associate professor - business communications, international communications. E-mail: ndittman@bloomu.edu

Roger W. Ellis, Ed.D., associate professor - records and informations. E-mail: rellis@bloomu.edu

Dennis O. Gehris, Ed.D., associate professor - work attitude assessment, business teaching methodology, software applications in business. E-mail: dgehris@bloomu.edu

Janice C. Keil, Ed.D., assistant professor - business teaching methodology. E-mail: jkeil@bloomu.edu

John J. Olivo Jr., Ph.D., professor - ergonomics, impact of technology on organizations' policy and procedures, telecommunications, analyzing and improving workflow, end-user computing. E-mail: jolivo@bloomu.edu

Curriculum and Instruction (M.Ed.)

Administered By: Department of Curriculum
and Foundations
Campus Address: 3213 McCormick Center for
Human Services
Bloomsburg University
400 E. Second Street
Bloomsburg, PA 17815-1301
Telephone Number: (717) 389-4030
Coordinator: John R. Hranitz, Ed.D.
Department E-mail Address:
hranitz@bloomu.edu
Degree Awarded: Master of Education
Enrollment: 50

Departmental Faculty

Any graduate faculty member from the Bloomsburg University liberal arts and sciences or education departments may participate in this program.

About the Program

The program is field-based and designed to enhance the professional curricular and instructional competencies of individuals who work with children, youth and adults. The program's field-based approach ensures the needs of school-based faculty are continually addressed through faculty involvement in the following areas:

Planning and implementation of the core courses

Advisement of theses

Development of research projects

Improvement of instruction

Development of curriculum

Continuous evaluation of the degree program

Implementation of theory into the classroom

The program offers a Level I Instructional Certificate in elementary education, K-6; and areas of specializations in technology; and guidance and counseling.

The field-based core curriculum of this program will permit unique and interesting applica-

tions of theory and research to each classroom. Individuals motivated to improve the quality of instruction will find a format that will enable them to expand (1) their knowledge of the subject they are teaching, (2) their knowledge of the curriculum and its applicable methodology, (3) their skills in individualization through diagnosis and prescription, and (4) their skills in communicating with students, parents and educational professionals.

The liberal arts core of 6 semester hours will increase the depth of the knowledge base and skills of each graduate student. Knowledge from several disciplines will be combined into a course that will permit the graduate student to develop new and often unique educational perspectives. The individualized curriculum enables each graduate student to pursue 12 semester hours of graduate study within an area of concentration such as English, social sciences, mathematics and computer science, physical and life sciences, elementary, early childhood, reading and humanities. Completion of the individualized curriculum may require that students enroll and pursue courses offered by other universities.

Admission. Applicants must satisfy the general admission requirements for the School of Graduate Studies. A teaching certificate is not required for admission. The following additional criteria are also required:

- Meet with program coordinator to clarify requirements, review academic records, discuss transfer of any courses and initiate planning for any research projects and the thesis.

- Attain a score of 30 or higher on the Miller Analogies Test

Retention. Graduate students must take a minimum of 9 semester hours per calendar year and a QPA of 3.0 or higher must be maintained. Students not taking a minimum of 9 semester hours per calendar year will be considered inactive after two years.

Only courses with a minimum grade of B are considered applicable to this program. Students must repeat all courses in which the grade of B- or lower is earned.

Transfer Credits. Up to nine semester hours from accredited institutions, other than Bloomsburg University may, upon approval, be accepted toward completing the degree requirements of this program. Students enrolled at the Dixon Center may transfer in 18 semester hours of graduate work as per special agreement. However, no courses will be transferred in which a grade less than a B was earned. B- is not acceptable.

Graduation. Graduate students complete 30 semester hours of approved course work, complete 6 semester hours for the thesis and apply for graduation. All deficiencies, monetary and academic, must be satisfied before the degree can be granted.

Required Courses

The following courses constitute the 36-hour master's degree program in curriculum and instruction (other courses may be substituted by the program coordinator based upon the graduate student's needs):

Core Curriculum (12 semester hours)

79.593 Studies in Human Diversity

48.576 Theories of Human Learning

60.584 Curriculum and Instructional Theory,
Design and Development

79.591 Research in Education

Liberal Arts Curriculum (6 semester hours)

The Individualized Curriculum - Area of Con-
centration (12 semester hours)

79.599 Thesis (6 semester hours)

OR a meta-analytical department paper and 6
semester hours of coursework.

Elementary Education (M.Ed.)

Administered By: Department of Curriculum
and Foundations

Campus Address: 3213 McCormick Center for
Human Services

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: 389-4030

Coordinator: John K. Hranitz, Ed.D.

Degree Awarded: Master of Education

Enrollment: 81

Departmental Faculty

Professors: Nancy G. Gilgannon, John R.

Hranitz, Gorman L. Miller, William S. O'Bru-
ba, Edward J. Poostay, Lorraine A. Shanoski,
David E. Washburn

Associate Professors: Chris A. Cherrington,

Henry D. Dobson, Gary J. Doby, Bonita B.

Franks, Mary Harris, Frank L. Misiti, Donald
L. Pratt, Bonnie L. Williams

Assistant Professors: C. Meade Beers, Neil L.

Brown, Robert L. Clarke, M. Hussein

Fereshteh, Robert E. Gates, Frank W. Keating,

Jane McPherson, Gilda M. Oran, Egerton O.

Osunde, Raymond S. Pastone, Rosemary T.

Radziewich, Shelley C. Randall, Viola C.

Supon, Mary Alice Wheeler, Patricia K. Wolf

About the Program

The master of education in elementary education program enhances the professional competence of an individual as a teacher and a leader through its emphasis on integrated learning experiences in the study of the child. Areas of study include elementary school curriculum and its trends, new techniques, current research and opportunities for study in the teacher's academic field of interest.

Admission. Applicants must satisfy the general admission requirements for the School of Gradu-

ate Studies as well as the following additional requirements:

Possess the Instructor Level I Certification for teaching in the elementary schools of Pennsylvania

Meet with the program coordinator to clarify program requirements, review academic records and outline a plan for completing degree work

Students must take the Miller Analogies Test (minimum score of 30)

Graduation. A minimum of 30 semester hours is required to complete this master's program.

Required Courses

Core Courses (15 semester hours)

60.501 Major Philosophies of Education

60.502 School and Society

60.506 Urban Education

60.514 Home, School and Community Relations

79.591 Research in Education (or adviser-
approved alternative)

Also required are 6 to 12 semester hours of coursework related to an area of professional interest, e.g., early childhood education, reading, or an academic discipline.

Electives. The remaining courses needed to complete the degree program may be selected, with an adviser's approval, from those listed in the graduate catalog. Acceptable courses are listed under the following areas: elementary and early childhood education, educational foundations, secondary education, reading or those offered by other academic departments.

All students seeking an M.Ed. in Elementary Education are required to demonstrate competency in writing skills by completing an in-depth research paper. This may take the form of a departmental paper or a thesis. The research paper must follow the style format of the Publication Manual of the American Psychological Association.

Departmental papers must be read and approved by the student's adviser and one other member of the graduate faculty. A thesis must meet the requirements of the School of Graduate Studies.

Faculty Research Interests

C. Meade Beers, D.Ed., assistant professor — foundations, administration, curriculum and supervision

Neil L. Brown, Ed.D., assistant professor — social studies, early childhood education

Chris A. Cherrington, Ph.D., associate professor — reading

Robert L. Clarke, Ed.D., assistant professor — supervision

Henry D. Dobson, Ph.D., associate professor — computing and supervision

Gary J. Doby, Ph.D., associate professor — English and supervision

M. Hussein Fereshteh, Ph.D., assistant professor — foundations of education

Bonita B. Franks, Ph.D., associate professor — reading

Robert E. Gates, Ed.D., assistant professor — supervision and administration

Nancy G. Gilgannon, D.Ed., professor — measurement of education

Mary Harris, Ed.D., associate professor — foundations of education

John R. Hranitz, Ed.D., professor — early childhood education and supervision

Frank W. Keating, Ph.D., assistant professor — administration and language arts

Jane McPherson, Ph.D., assistant professor — early childhood education

Gorman L. Miller, Ed.D., professor — mathematics and supervision

Frank L. Misiū, Ph.D., associate professor — science education

William S. O'Bruba, Ed.D., professor — reading, early childhood education and supervision

Gilda M. Oran, Ed.D., assistant professor — supervision, early childhood education and foreign languages

Egerton O. Osunde, Ph.D., assistant professor — social studies and supervision

Raymond S. Pastore, Ph.D., assistant professor — instructional technology and design

Edward J. Poostay, Ph.D., professor — reading

Donald L. Pratt, Ph.D., associate professor — computing and supervision

Rosemary T. Radzевич, Ed.D., assistant professor — reading and supervision

Shelley C. Randall, Ph.D., assistant professor — guidance and counseling, and educational leadership

Lorraine A. Shanowski, Ed.D., professor — early childhood education

Viola C. Supon, Ed.D., assistant professor — elementary education

David E. Washburn, Ph.D., professor — foundations of education

Mary Alice Wheeler, Ph.D., assistant professor — supervision

Bonnie L. Williams, Ed.D., associate professor — mathematics and supervision

Reading (M.Ed.)

Administered By: Department of Curriculum
and Foundations

Campus Address: 104 Navy Hall

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717)389-4092

Department Chair: Edward J. Poostay, Ph.D.

Degree Awarded: Master of Education

Enrollment: 86

Departmental Faculty

Professors: Edward J. Poostay

Associate Professors: Chris A. Cherrington

About the Program

This program provides an opportunity for professionals to earn a Master of Education in Reading and/or certification as a K-12 reading specialist in the Commonwealth of Pennsylvania. The program emphasizes a knowledge base in current research, diagnosing and remediating reading difficulties, and improving the instructional practices of classroom teachers, reading specialists and resource room teachers.

All graduate-level reading programs are coordinated through the Bloomsburg University Reading Clinic, which is part of the Department of Curriculum and Foundations within the School of Education and the College of Professional Studies. The clinic was established in 1957 and provides free diagnostic and tutorial services for children and adults. Graduate assistantships are available on a competitive basis. Assistantships provide a partial tuition waiver and a stipend, and require working 10 to 20 hours per week in the Reading Clinic.

Admission. Applicants must satisfy the general admission requirements for the School of Graduate Studies.

An interview with the program coordinator to clarify program requirements, discuss goals, eval-

uate academic records and outline a long-range program. The quality of the applicant's undergraduate record and professional experience will be a major part of the pre-admission evaluation process. The program coordinator's recommendations must be forwarded to the assistant vice president for graduate studies and research before a student is admitted to the program.

Retention. Students must maintain a QPA of 3.0 to remain in the program.

Transfer Credits. A maximum of nine semester hours of graduate-level coursework may be transferred from an accredited institution; a maximum of 12 semester hours may be transferred from courses completed at Bloomsburg University. Transfer courses must carry a grade of B or higher and must be completed no more than six years from the date of graduation. Transfer credits may be requested or submitted at any time during the student's six-year program, but require prior approval from the student's adviser and the assistant vice president and dean of graduate studies.

Graduation and Certification. Students seeking an M.Ed. in Reading must complete 36 semester hours with a QPA of 3.0.

Required Courses

The parentheses indicate the semesters the courses are offered:

- 63.540 Introduction to the Teaching of Reading (spring, summer)
- 63.541 Diagnosis and Prescription in Reading (fall, summer)
- 63.543 Clinical Practicum I (fall, spring)
- 63.544 Clinical Practicum II (summer)
- 63.545 Organization and Administration of Reading Programs (summer)
- 63.546 Reading in the Content Areas (fall, spring)
- 63.548 Reading Instruction for the At-Risk Learner (spring)

63.550 Literature, Literacy and Culture (fall, spring)

60.501 Major Philosophies of Education (fall, summer)

79.591 Research in Education (fall, summer)

The reading specialist certification program consists of 24 semester hours; 12 additional semester hours are required for the M.Ed. in reading.

All requirements must be completed within six years from the date of admission into the program. Students must reenroll for all courses which exceed the six-year program completion deadline outlined in the Graduate Catalog.

Level I Certification Requirements

Students seeking certification as a Reading Specialist must possess a Level I teaching certificate and complete 24 semester hours with a QPA of 3.0 and must successfully complete the Praxis specialty area test for reading specialists with a minimum score (currently 570) required by the Commonwealth of Pennsylvania. Persons who do not possess a Level I teaching certificate must also complete the core battery tests of the Praxis series in addition to the specialty area test for reading specialists

Faculty Research Interests

Edward J. Poostay, Ph.D., professor — diagnosis, remediation, parent involvement

Chris A. Cherrington, Ph.D, associate professor — language arts and children's literature

Accounting (M.S.)

Administered By: Department of Accounting
 Campus Address: 219 Sutliff Hall
 Bloomsburg University
 400 E. Second Street
 Bloomsburg, PA 17815-1301
 Telephone Number: (717) 389-4561
 Coordinator: Nancy Coulmas, Ph.D.
 Degree Awarded: Master of Science

Departmental Faculty

Professors: Richard L. Baker, Dennis B. K.

Hwang

Associate Professors: Michael C. Blue, Martin Billet, Nancy Coulmas, Eugene Gullede, John Rude, Michael Shapeero

About the Program

The Master of Science in Accounting is designed for the individual who possesses a comprehensive undergraduate education in accounting and wishes to pursue applied graduate work in the discipline. Although the primary emphasis of the curriculum is in the area of advanced accounting theory, students will also spend time developing written and oral communication skills.

The course of study, which involves completion of 30 semester hours, can be accomplished in one year or the student can elect to complete the program at their own pace.

Admission. Applicants to the Master of Science in Accounting must provide the School of Graduate Studies with the following:

- Official Graduate Management Admission Test (GMAT) or Graduate Record Examination scores
- An official copy of all academic transcripts
- Three letters of recommendation from individuals who have the knowledge to comment on the applicant's potential to successfully complete a graduate level course of study

- Completion of the prerequisites listed under "Minimum Prerequisite Course Work"
- Additional requirements as stipulated by the School of Graduate Studies

Individuals who have not completed all admissions requirements may take up to 12 approved semester hours of graduate courses at Bloomsburg which may be applied toward the degree upon successful admission to the graduate program.

Prerequisite Course Work. A baccalaureate degree with an emphasis in accounting from an accredited college or university, or a baccalaureate degree from an accredited college or university and the following:

a. Prerequisite general business and related topics courses including: principles of economics, statistics, computer information systems, business law, finance, management, marketing, calculus and ethics

b. Prerequisite accounting courses including: principles of accounting, managerial accounting, intermediate accounting, tax auditing and cost advanced accounting

Prerequisite Work Experience. Practical work experience in the field of accounting or an undergraduate accounting internship.

Retention and Graduation. Graduation will be conferred upon successful completion of a minimum of 30 semester hours of graduate-level course work fulfilling all program requirements. Students must complete all required course work for graduation while maintaining a minimum overall GPA of 3.0. No more than two courses with a grade of C will be counted toward graduation. A grade lower than C will not be viewed as satisfactory progress toward graduation, although it will be included in the students GPA.

Required Courses

Fall Semester

91.501 Financial Accounting

91.523 Advanced Tax Accounting
 91.551 International Accounting
 93.511 Statistical Analysis
Spring Semester
 91.521 Advanced Cost Accounting
 91.522 Advanced Audit Theory
 91.553 Special Topics in Accounting
 96.535 Financial Management
Summer Session
 91.552 Controllership
 Graduate elective

Faculty Research Interests

Richard L. Baker, Ph.D., CPA, CMA, CIA, professor — financial, governmental and managerial accounting
 Michael C. Blue, Ph.D., CPA, associate professor — cost, managerial and behavioral accounting

Nancy Coulmas, Ph.D., associate professor — strategic cost management, managerial accounting and financial accounting
 Dennis B. Hwang, Ph.D., CPA, CMA, professor — international, financial and managerial accounting, and international economics
 Eugene Gullledge, associate professor - financial accounting, cost accounting
 John Rude, associate professor - financial accounting, intermediate accounting
 Michael Shapeero, associate professor, financial accounting, managerial accounting, auditing

Audiology (M.S.)

Administered By: Department of Audiology and
Speech Pathology

Campus Address: 101C Navy Hall
Bloomsburg University
400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4436 or 389-4119

Coordinator: G. Donald Miller, Ph.D.

Department E-mail Address:

gdmiller@planetx.bloomu.edu

Degree Awarded: Master of Science

Enrollment: 8 per year

Departmental Faculty

Professors: Richard M. Angelo, G. Donald Miller
Associate Professor: Vishakha W. Rawool

About the Program

The purpose of the training program in audiology is to prepare graduates to provide diagnostic and habilitative audiological services in a variety of job settings. The program is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (ASHLA) and is designed to afford its graduates the academic and clinical practicum requirements necessary to receive the Certificate of Clinical Competence in Audiology (CCC-A) issued by ASHLA as well as to meet the requirements for an audiology license as issued by the Commonwealth of Pennsylvania.

Graduates of the program obtain employment in hospitals and medical centers, clinics, physicians offices, schools, industries and in private practice settings. Students receive broad-based academic training and obtain practicum experience in a variety of practical settings including on campus and externship sites. Student's academic experiences include evaluating and conducting research in the discipline. Students may be accepted into the graduate audiology program with any undergraduate degree, but individuals

without an acceptable undergraduate program in speech and hearing will, by advisement, be required to take prerequisite coursework and practicum as a part of their graduate audiology degree program.

Admission. The applicant is required to submit a one-page, typed letter of intent stating professional background, experience and rationale for wanting to be admitted to audiology.

The applicant is required to submit three letters of recommendation with the names, addresses, positions and telephone numbers of the references who have knowledge of the applicant's academic and clinical background.

The applicant should arrange for an interview with the program coordinator.

An applicant must have a baccalaureate degree from an accredited institution, with a minimum grade point average of 2.8. Students who do not have an undergraduate major in the area of communication disorders will be required to satisfactorily complete certain academic and practicum deficiencies as prescribed by the faculty following individual transcript analysis.

The Graduate Record Examination is required of all applicants. Typically, successful students have had scores of at least 470 on the verbal, 520 on the quantitative and 570 on the analytical portions of the exam.

Applicants who fail to satisfy the program's requirements may be admitted on a provisional basis. In such cases, the terms of the conditional admission will be specified for the individual applicant. Deadline for submission of application materials is March 1.

Retention. The student must maintain a QPA of 3.0 with a maximum of two Cs throughout the graduate program. A grade of C in any clinical experience will necessitate repeating the course to achieve a grade of B or higher.

Candidacy. Students must apply for admission to candidacy once they have completed 9 to 12 semester hours of coursework.

Graduation. A minimum of 54 semester hours is required to complete the master's program.

Required Courses

Undergraduate Courses

72.200 Introduction to Audiology

72.300 Auditory Training and Speech Reading

Graduate Courses

72.500 Measurement of Hearing Loss

72.502 Physiological Methods in Audiology

72.504 Hearing Aids and Auditory Training

72.506 Externship: Clinical Practicum in Audiology I

72.508 Externship: Clinical Practicum in Audiology II

72.510 Research in Audiology

72.512 Seminar in Audiology: Special Problems

72.514 Seminar in Audiology: Industrial and Public Health Audiology

72.516 Seminar in Audiology: Auditory Problems in Children

72.518 Seminar in Audiology: Theoretical and Clinical Masking

72.520 Educational Audiology

72.522 Aural Rehabilitation: Theory and Practice

72.524 Clinical Methods and Practicum in Audiology I

72.525 Clinical Methods and Practicum in Audiology II

72.526 Clinical Methods and Practicum in Audiology III

72.527 Clinical Methods and Practicum in Audiology IV

72.532 Electronics and Instrumentation in Audiology

Elective Courses

72.528 Clinical Methods and Practicum in Audiology

72.590 Independent Study and Research

72.591 Independent Study and Research

72.599 Master's Thesis

74.568 Advanced American Sign Language

Other elective courses available via advisement.

A thesis or departmental paper is also required.

The M.S. in Audiology degree program has monitoring and exit criteria. There are periodic comprehensive reviews of each student's academic and clinical abilities. These reviews may take the form of oral or written examinations during or near the completion of the program.

Faculty Research Teaching and Clinical Interests

Richard M. Angelo, Ph.D., Ed.D., professor, director of clinical services — basic and clinical electrophysiology; hearing aids.

G. Donald Miller, Ph.D., professor and curriculum coordinator — clinical audiology including electrophysiological evaluation, industrial audiology and hearing conservation; hearing aids. E-mail: gdmiller@planetx.bloomu.edu

Vishaka W. Rawool, Ph.D., associate professor — electrophysiology; clinical audiology; aural rehabilitation. E-mail: rawool@planetx.bloomu.edu

Biology (M.S.)

Administered By: Department of Biological & Allied Health Sciences

Campus Address: Hartline Science Center

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4780

Coordinator: Margaret L. Till, Ph.D.

Department E-mail Address: till@bloomu.edu

Degree Awarded: Master of Science

Departmental Faculty

Professors: James E. Cole, Judith P. Downing,

Philip A. Farber, Frederick C. Hill, Thomas S.

Klinger, Mark S. Melnychuk, Lynne C. Miller,

Louis V. Mingrone, James E. Parsons, Cynthia

A. Surmacz, Margaret L. Till

Associate Professors: Joseph P. Ardizzi, George P.

Chamuris, Judith Kipe-Nolt

Assistant Professors: George T. Davis, Jeanne W.

Lawless, Casey A. Shonis, Marianna D. Wood

About the Program

This program prepares students for admission to a research-oriented doctoral program in the biological sciences or employment in a biological or health-oriented profession.

The program also enhances the knowledge, perspective and experience of teachers of biology in secondary schools. A broad array of subdisciplines is represented among the faculty, providing a solid program in general biology.

The university is a member of the Marine Science Consortium. Courses in marine science are offered during the summer at Marine Science Center located near Wallops Island, Va. Graduate students may use this facility to take graduate-level courses in marine biology or to pursue research projects at the Bloomsburg University Marine Biology Laboratory.

Admission. In addition to the requirements of the graduate school, a Bachelor of Science or

Bachelor of Arts in biology, or its equivalent, is required. Undergraduate deficiencies must be rectified prior to admission to the program or during the first semester with the permission of the program coordinator. Deficiencies may be addressed by undergraduate course work without credit earned toward the degree, by graduate course work when suitable, or by outside readings. The method of addressing deficiencies is decided by the departmental graduate committee in consultation with the graduate program coordinator. Two letters of recommendation from previous science faculty are required. At least one letter should be from a faculty member who instructed the applicant in an upper-level (junior or senior) biology course. Applicants with research experience should submit one letter from the research adviser. Others may submit a letter from any professor with the ability to evaluate the applicant's laboratory research potential.

Candidacy. To be admitted to candidacy, every biology graduate student must pass an oral candidacy examination. The purpose of the examination is to assess the breadth of the student's background in biology. The examination will cover general principles and concepts of biology.

The oral candidacy examination must be scheduled before completing 6 credit hours of graduate coursework and be taken before scheduling beyond 12 hours, provided the student has a 3.0 or higher QPA. The examination will consist of six oral questions addressed to the student by the examination committee. Each question will be given 10 minutes of the examination.

The examination committee is composed of 1) the student's permanent academic adviser and tentative thesis committee (thesis option) or the student's tentative reading committee (nonthesis option); 2) at least three-fourths of the departmental graduate committee; and 3) any other departmental faculty member in attendance.

Outcome of the candidacy examination will be determined by a simple majority vote by the examination committee. One of three outcomes is possible:

Unconditional pass - The student may proceed with the program. The application for candidacy and transfer credit should be made immediately following successful completion of the oral candidacy exam.

Conditional pass - The examination committee decides that the student has an adequate background in all but one or two key areas. Conditions may include an oral re-test of problem areas, a written test in problem areas, and/or remedial actions. The student will be informed of the conditions decided upon by the committee. If after re-evaluation, the examination committee decides the student has not met the conditions set forth by the committee, he or she will be required to retake the entire examination according to the stipulations outlined below under "fail." If the student fails the examination at this retake, he or she will be dismissed from the program.

Fail - The student must retake the entire examination at a later date to continue with the master's program. The student has one more chance to pass. In order to continue with the program, the student must pass the examination unconditionally on the second attempt.

Graduation. A minimum of 30 semester hours of graduate-level courses is required.

Required Courses. With the exception of the Master of Science thesis (thesis option), there are no required courses. All courses are considered elective courses, but require the approval of the student's adviser and advisory committee.

- 50.411 Radiation Biology
- 50.432 Microbial Genetics
- 50.441 Cytogenetics
- 50.455 Environmental Microbiology
- 50.457 Entomology
- 50.462 Plant Anatomy
- 50.463 Biological Photographic Techniques
- 50.530 Evolution
- 50.531 Developmental Biology
- 50.532 Molecular Genetics
- 50.550 Mycology
- 50.551 Conservation Biology
- 50.559 Ornithology

- 50.560 Population Biology
 - 50.561 Animal Behavior
 - 50.570 Medical Parasitology
 - 50.571 Endocrinology
 - 50.572 Comparative Animal Physiology
 - 50.573 Systemic Physiology
 - 50.575 Cell Physiology
 - 50.576 Neuromuscular Physiology
 - 50.590 Current Topics in Biology
 - 50.591 Directed Study in Biology
 - 50.593 Master of Science Thesis
- Marine science courses offered at Wallops Island, Va.
- 55.431 Ecology of Marine Plankton
 - 55.484 Biological Oceanography
 - 55.432 Marine Evolutionary Ecology
 - 55.490 Marine Aquaculture
 - 55.491 Coral Reef Ecology
 - 55.492 Marine Mammals
 - 55.500 Problems in Marine Science
 - 55.540 Environmental Science Education
 - 55.541 Biology of Mollusca
 - 55.570 Research Cruise-Biology
 - 55.593 Behavioral Ecology

Thesis Option. This option is recommended for students planning to continue their graduate studies or professional training. A minimum of 18 semester hours must be taken from 500-level courses. 50.593 Master of Science Thesis accounts for six of these semester hours. An oral defense of the thesis is required.

Non-Thesis Option. This option is tailored for students interested in non-research-oriented careers. A minimum of 18 semester hours must be taken from 500-level courses. In addition, one of the following must be completed: (1) 50.591 Directed Study in Biology for three semester hours, which must be defended orally, or (2) a departmental research paper based on the literature must be submitted and defended orally. The departmental paper carries no semester hour credit.

Faculty Research Interests

- Joseph P. Ardizzi, Ph.D., associate professor — fungal genetics, microbiology and cell biology. E-mail: jardiz@planetx.bloomu.edu
- George P. Chamuris, Ph.D., associate professor — biology of wood-inhabiting and bark-

inhabiting fungi. E-mail:

chamuris@planetx.bloomu.edu

James E. Cole, Ph.D., professor — vertebrate ethology and allied health. E-mail: cole@planetx.bloomu.edu

George T. Davis, Ph.D., assistant professor - plant molecular genetics, genetic engineering and maize genetics. E-mail: gdavis@bloomu.edu

Judith P. Downing, Ph.D., professor — immunology and infectious diseases caused by bacteria. E-mail: jpdownd@planetx.bloomu.edu

Philip A. Farber, Ph.D., professor — cytogenetics

Frederick C. Hill, Ph.D., professor — vertebrate zoology and neotropical biology. E-mail: fhill@planetx.bloomu.edu

Judith Kipe-Nolt, Ph.D., associate professor — biology of soil composting and microbiology. E-mail: kipenolt@planetx.bloomu.edu

Thomas S. Klinger, Ph.D., associate professor — marine biology, physiological ecology, behavioral ecology and biometry. E-mail: klin@planetx.bloomu.edu

Jeanne W. Lawless, Ph.D., assistant professor — maternal and child nutrition, diet, and ethnicity and health. E-mail: jlawle@planetx.bloomu.edu

Mark S. Melnychuk, Ph.D., professor — nutrition, reproductive physiology, and seasonal weather changes and pollutant levels in fish-

ing creeks. E-mail:

mmelny@planetx.bloomu.edu

Lynne C. Miller, Ph.D., professor — medical parasitology, parasite immunology and physiology, experimental pharmacology and toxicology. E-mail: lmiller@planetx.bloomu.edu

Louis V. Mingrone, Ph.D., professor — phytochemical systematics and floristics. E-mail: lmingron@planetx.bloomu.edu

James E. Parsons, Ph.D., professor — clinical microbiology and medical mycology. E-mail: parsons@planetx.bloomu.edu

Casey A. Shonis, Ph.D., assistant professor — neurophysiology, genetic hypertension and neuroanatomy. E-mail: cshonis@bloomu.edu

Cynthia A. Surmacz, Ph.D., professor — cell physiology, and cholesterol metabolism in exercise and aging. E-mail: surmacz@planetx.bloomu.edu

Margaret L. Till, Ph.D., professor — endocrinology and cholesterol metabolism and the effects of reproductive status and exercise on cholesterol metabolism. E-mail: till@bloomu.edu

Marianna D. Wood, Ph.D., assistant professor — forest ecology and animal behavior. E-mail: mwood@bloomu.edu

Early Childhood Education (M.S.)

Administered By: Department of Curriculum
and Foundations
Campus Address: 3213 McCormick Center for
Human Services
Bloomsburg University
400 E. Second Street
Bloomsburg, PA 17815-1301
Telephone Number: (717) 389-4030
Coordinator: John, R. Hranitz, Ed.D.
Department E-mail Address:
hranitz@bloomu.edu
Degree Awarded: Master of Science
Enrollment: 55

Departmental Faculty

Any graduate faculty member from the Bloomsburg University liberal arts and sciences or education departments may participate in this program.

About the Program

This program is intended to enhance the professional competence of the individual as a teacher of young children. It includes integrated learning experiences in the study of the young child from prenatal through age eight, curriculum, current practice and areas of interest to the teacher of young children. Individuals not holding any type of certification can obtain the Instructional Level I Certificate in Early Childhood Education, N, K-3. The program also has an option that enables the teacher with an Instructional Level I Certificate in Elementary Education, K-6 to obtain N, K-3, Early Childhood Education Certification.

Admission. The following admission requirements, which apply to both the Master of Science in Early Childhood Education program and to the master's program with an Early Childhood Education Certification, must be met in addition to the general admission requirements for the

School of Graduate Studies. Undergraduate work need not be in a specific field of study.

An interview and a review of academic credentials are required. Applicants who lack an undergraduate QPA of 2.5 will be admitted on a provisional basis.

All applicants will take the Miller Analogies Test. A minimum score of 30 is required. Waivers may be granted to graduate students that score lower but have excellent academic records.

Certification Requirements. Three recommendations from any of the following persons: undergraduate or graduate faculty, direct-line supervisors, administrators, and other individuals who are familiar with the applicant's academic abilities and personal qualities. Recommendation forms are available from the program coordinator for early childhood education.

Written completion of a 10-day field experience. Forms are available from the observation/program coordinator.

Written completion of a 14-day participation experience. Forms are available from the program coordinator.

Passing and/or remediation of speech and hearing tests, and vision tests. TB tests are required. Forms are available from the program coordinator.

Passing the National Teacher Examination core battery and the specialty area of early childhood education.

Retention. Students must maintain a QPA of 3.0 throughout their program. Courses in which a grade of B- or lower are obtained must be repeated with a grade of B or higher. Nine graduate credits may be transferred into the program.

State Police checks (Criminal, Act 34 and Abuse, Act 151) required by the Department of Health and Welfare and the Bureau of Certification must be obtained prior to student teaching in private and public schools, Head Start programs, and day care centers in Pennsylvania.

All students will take and pass a screening examination (a candidacy exam) which is administered when they have completed 12 to 15 semester hours of graduate work. The examination consists of written and oral requirements. An appointment is made with the program coordinator.

Graduation. The Master of Science in Early Childhood program consists of 30 semester hours; 12 additional semester hours in course work and practicum are required for the Level I Certification, N, K-3. Students must complete 6 semester hours in foundation courses, 18 to 30 semester hours in early childhood education core courses, and 6 semester hours in related studies courses.

Required Courses

- 62.510 Methods and Materials in Early Childhood Education I
- 62.520 Methods and Materials in Early Childhood Education II
- 60.512 Computer Media or more advanced courses in the use of computers
- 62.522 Curriculum Trends in Early Childhood Education
- 62.523 Practices in Teaching the Young Child
- 62.590 Current Research and Development in Early Childhood Education
- 62.591 Learning and Development of the Young Child
- 62.592 Identification and Prescription of the Needs of Young Children
- 62.593 Organization and Administration of Educational Programs for Young Children

62.594 Practicum in Early Childhood Education - 6 credits, one semester

62.596 Practicum in Early Childhood Education 2 - 3 credits, partial semester

Students seeking a Master of Science in Early Childhood Education must complete 30 semester hours with a 3.0 QPA. Students seeking a Master of Science in Early Childhood Education with N, K-3 certification must complete 42 semester hours with a QPA of 3.0.

A departmental paper, thesis, comprehensive project, or the comprehensive examination is required for completion of the degree program. Specific guidelines are available from the program coordinator. All papers must be written following the American Psychological Association (APA) style guide. A five chapter format is preferred.

All program requirements must be completed within six years after admission into the program. Students are required to complete their programs within four years after candidacy is granted. Extensions may be granted in certain situations. Students who fail to enroll and complete a course within a two-year period are placed in an inactive file. Inactive students must reapply for admission, retake the screening examination. Courses older than six years will not meet the degree requirements. All deficiencies, tests, if applicable, monetary and academics, must be satisfied before the degree can be granted.

Education of the Deaf/Hard of Hearing (M.S.)

Administered By: Department of Exceptionality Programs

Campus Address: 101 Navy Hall

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4439

Coordinator: Samuel B. Slike, D.Ed.

Department E-mail Address:

sslike@planetx.bloomu.edu

Degree Awarded: Master of Science

Enrollment:11

Departmental Faculty

Professors: Samuel B. Slike, Gerald W. Powers

Assistant Professor: Carmel Collum Yarger

About the Program

The graduate program in Education of the Deaf/Hard of Hearing is offered through the Department of Exceptionality Programs. Prospective classroom teachers or itinerant hearing therapists are provided a variety of courses to prepare them for working with individuals with a hearing loss. Coursework furnishes conceptual as well as experiential background in the areas of academic teaching, speech-language therapy, communication, psycho-social development and curriculum and instruction. Depending on their undergraduate major, students are prepared to work with preschool, elementary, secondary or multi-handicapped deaf/hard of hearing individuals.

In their practica courses, students are provided the opportunity to work with individuals with a hearing loss in one-to-one and group situations. Various sites throughout Pennsylvania are offered for practicum experience. These sites are chosen according to the needs of the student intern. These practica provide a classroom as well as an itinerant experience with students with a hearing loss.

The education of the deaf/hard of hearing program does not advocate any particular method of working with students with a hearing

loss. Persons with a hearing loss are viewed as individuals with varying needs. Prospective classroom teachers are afforded a background in all methods of instruction so as to prepare them to work with persons with a hearing loss in a variety of educational settings.

Admission. Applicants with bachelor's degrees in early childhood education, elementary education, secondary education and special education, are considered to have appropriate educational backgrounds for entry into the program. Those students without education courses in their background are required to take a core of education courses. Prerequisite coursework in the following areas must be completed either before or during the graduate program.

Undergraduate area of concentration in education of the deaf/hard of hearing:

All applicants to the graduate program in education of the deaf/hard of hearing must have completed an introductory course in statistics or its equivalent and the following: (Students may take these, some as general education electives)

72.152 Introduction to Communication Disorders

72.200 Introduction to Audiology

72.450 Clinical Observation

74.153 Introduction to Sign Language

74.154 American Sign Language I

74.155 American Sign Language II

74.201 History, Education, and Guidance of the Deaf/Hard of Hearing

74.305 Introduction to Instructional Methods for the Deaf/Hard of Hearing

Students who anticipate applying for admission to the graduate program in education of the deaf/hard of hearing are strongly urged to elect the following elective courses:

74.254 The Deaf Culture

74.255 American Sign Language III

74.256 American Sign Language IV

A bachelor's degree with a QPA of 2.8 in the education of the deaf/hard of hearing area of concentration and an overall QPA of 2.8 are

required. If either QPA is below 2.8, the student may be admitted on a provisional basis and must earn a QPA of 3.0 or better upon completion of 9 to 12 semester hours in graduate-level courses. No Cs may be earned during the provisional period.

Applicants must submit a one-page, handwritten letter, stating professional background, experience and rationale for wanting to be admitted to this master's program.

Three letters of reference from individuals who have knowledge of the applicant's academic and teaching background are required. For confirmation purposes, the letters must contain the name, address, position and telephone number of the writer.

Applicants must make arrangements with the program coordinator for an interview.

The National Teacher Examination or the Graduate Record Examination will be required of all applicants.

There is one entry point for full-time enrollment in this graduate program - summer semester. The application deadline for summer enrollment is March 15. Application for admission as a part-time student is not restricted and may be made at any time.

There is no quota for students interested in entering the program on a part-time basis. Part-time students are required to meet with the program coordinator to design a curriculum sequence and time line.

Retention. Graduate students are required to earn a QPA of 3.0 with a maximum of two Cs for retention in this master's program. If a C is earned in a practicum course, the course must be repeated and a grade of B or better earned.

Required Courses

The following is an example of a full-time curriculum sequence:

Summer Sessions (total of 12 weeks)

72.522 Aural Rehabilitation: Theory and Practice

74.564 Speech for the Deaf/Hard of Hearing

74.566 Language for the Deaf/Hard of Hearing

I

74.568 Advanced American Sign Language

Fall Semester

74.560 Practicum with the Deaf/Hard of Hearing

ing

74.565 Problems and Trends in Education of the Deaf/Hard of Hearing

74.567 Language for the Deaf/Hard of Hearing II

74.569 Curricular Subjects for the Deaf/Hard of Hearing

Spring Semester

74.570 Student Teaching with the Deaf/Hard of Hearing

Summer Sessions (total of 6 weeks)

74.575 Counseling Needs of Communicatively Disordered Individuals and Their Families

74.584 Research in Education of the Deaf/Hard of Hearing

All graduate students must complete a departmental paper (thesis or nonthesis) and successfully pass a comprehensive examination administered during the semester the student plans to graduate. Upon graduation, students are academically prepared to apply for licensure in Pennsylvania and to pursue state and national certification as a teacher of the deaf/hard of hearing. They are granted a provisional national certification by the Council on Education of the Deaf (CED) upon formal application.

Faculty Research Interests

Samuel B. Slike, D.Ed., professor - teaching sign language and speech reading via videodisc/CD-ROM; teaching language to deaf/hard of hearing students.

Gerald W. Powers, Ed.D., professor - private practice with the deaf/hard of hearing; licensure; sign language (all sign systems); aural rehabilitation and characteristics of quality clinicians.

Carmel Collum Yarger, Ed.D., assistant professor - language acquisition and literacy development in students who are deaf/hard of hearing, educational interpreting, collaborative home-school partnerships.

Exercise Science and Adult Fitness (M.S.)

Administered By: Department of Health, Physical Education & Athletics

Campus Address: 6 Centennial Gymnasium
Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4563

Coordinator: Leon Szmedra

Department E-mail Address:

lszmedra@bloomu.edu

Degree Awarded: Master of Science

Departmental Faculty

Professors: Linda M. LeMura, Jerry K. Medlock

Associate Professors: Leon Szmedra, Susan J.

Hibbs, Swapan Mookerjee

Assistant Professor: Tamra Cash

About the Program

This program prepares students for advanced scholarly opportunities via doctoral study or employment in rehabilitation centers, corporate fitness, wellness programs and senior citizen continuing care facilities. The program is interdisciplinary in nature; students complete courses in Exercise Science and the Biological Health Sciences. Additionally, clinical and research internships are required, which encompass the full spectrum of health, including cardiac rehabilitation, physiological assessment and training for optimal performance.

Quality of instruction in the classrooms and laboratories is characterized by faculty who are continuously engaged as active learners. The faculty bring an excitement and enthusiasm for scientific inquiry by directly involving their students in both scholarship and discovery. These activities are augmented by learning resources such as library support (both on campus and at nearby Geisinger Medical Center) computer support, and well-equipped exercise, physiology and muscle laboratories. With excellent facilities, highly

qualified faculty, and practical field experiences that are integral to the program, the master's degree in Exercise Science and Adult Fitness provides strong preparation for successful careers in this burgeoning discipline.

Admission. A bachelor's degree in the biological or allied health sciences or a related field is recommended. Undergraduate deficiencies may be addressed while working towards the master's degree (without credit earned toward the degree). Additionally, applicants must have an undergraduate QPA of at least 2.5, provide Miller Analogy Test or Graduate Record Examination scores, three letters of recommendation and a statement describing goals and objectives of their graduate study.

Graduation. The Master of Science in Exercise Science and Adult Fitness requires 36 semester hours of which 6 to 12 semester hours in both a practicum and internship are required for graduation. Additionally, attendance at the American College of Sports Medicine (ACSM) regional and national meetings are recommended.

Graduate students admitted to candidacy for the Master of Science degree are required to complete a thesis. The student must confer with the assigned graduate adviser to select a thesis adviser. The thesis adviser serves as chairperson of the thesis committee. A second faculty member is selected from either the Health, Physical Education and Athletics or the Biological and Allied Health Sciences departments. The third faculty member may be selected from any discipline within the university as appropriate to the thesis topic. The thesis topic must be approved by the thesis adviser and the graduate program coordinator. The completed thesis will be presented to the thesis committee, peers, and the university community.

Instructional Technology (M.S.)

Administered By: Department of Instructional
Technology

Campus Address: 1210 McCormick Center for
Human Services

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4506

Coordinator: Timothy L. Phillips, Ph.D.

Degree Awarded: Master of Science

Enrollment: 59

Departmental Faculty

Professors: June L. Trudnak

Associate Professor: Timothy L. Phillips

Assistant Professors: Karl Kapp, Mary J. Nicholson

About the Program

The Master of Science in Instructional Technology (MSIT) program emerged in response to the increasing need for professionals who can integrate interactive multimedia technology into educational and training environments. The MSIT program prepares students for two types of career directions:

- A corporate track for those who wish to enter a career in the training and development sector of business, industry, non-profit institutions or government, and those who already work in business, industry or health care settings as trainers and developers, but seek a formalized degree structured for their needs and further development

- An education track for those who wish to become instructional technology resource specialists in private, public or higher education

The curriculum concentrates on the application of the computer and other emerging technologies to education and training, with an emphasis directed towards the design, development, production and evaluation of computer-

based interactive multimedia courseware. Master's candidates have the opportunity to experience a variety of state-of-the-art interactive technology configurations through an instructional systems approach.

The MSIT program at Bloomsburg University has become a nationally acclaimed, unique program for the preparation of interactive multimedia technologists. This program integrates extensive experiences in instructional design and interactive technologies with a more modest coverage of media, communication skills and human resource development. The eclectic nature of this program forces cooperative teamwork as students combine their theoretical academic learning with practical, hands-on projects that are being designed, developed, produced and evaluated by Bloomsburg University's Institute for Interactive Technologies.

Curriculum Overview. Students study a variety of issues related to the design and development of effective instruction, and apply these principles in course projects. The program curriculum includes study in the following areas:

- Curriculum and instructional design - systems approach, curriculum and instructional materials, psychology of learning and screen design
- Instructional computing - computing literacy, programming and authoring, computer-assisted instruction, computer-based interactive video, computer graphics
- Video production and post-production - equipment, aesthetics, scripts and editing
- Technology - past and current technologies, emerging technologies and networking
- Human resource development - teamwork, interpersonal communication, organizational psychology, project management and organizational training

Admission. An individual with a bachelor's degree from an accredited four-year college, who

earned an undergraduate grade point average of at least 2.5 on a 4.0 scale, may apply for admission to the MSIT program.

Admission requirements:

- A completed application form for graduate studies at Bloomsburg University
- The application fee paid in full
- Official transcripts from all undergraduate institutions attended
- Three letters of recommendation
- A one to two-page essay describing the applicant's interest in instructional technology
- A personal interview, scheduled after the above materials have been processed

International applicants must complete a separate application form for the Office of Graduate Studies and Research and must take the Test of English as a Foreign Language (TOEFL). A minimum score of 570 on the TOEFL is required for admission to the program.

An individual may begin taking courses in the MSIT program on a part-time basis prior to admission, but completion of such courses does not guarantee admission.

Graduation. Persons who hold a bachelor's degree in any discipline from an accredited college or university may become degree candidates and proceed to the master's degree by completing a minimum of 33 semester hours of coursework concluding in either an internship or master's thesis. All courses are 3 semester hours unless otherwise indicated.

Required Courses for Corporate Option

The Master of Science in Instructional Technology requires 33 semester hours. Parentheses indicate the semesters the courses are offered.

Required Courses (12 semester hours):

- 57.550 Instructional Design (fall, spring)
- 57.551 Advanced Instructional Design (fall, spring)
- 57.570 Introduction to Interactive Technologies (fall, summer)
- 57.575 Managing Multimedia Projects (fall, spring)
- Instructional Computing (at two of the following three courses):
- 57.572 Authoring Tools for Cross Platforms (spring, summer)

57.573 Authoring Tools for Windows (fall, spring)

57.574 Authoring Tools for Networks (spring, summer)

Communications (at least one from the following):

25.445 Organizational Communication (spring)

25.585-7 Special Topics in Communication

- Interviewing Techniques
- Communication Training in the Organization
- Conflict and Communication
- Small Group Discussion

93.566 Organizational Behavior (fall)

93.556 International Management (summer)

93.583 Human Resource Development (fall)

94.581 Training and Development

Elective Courses (minimum of 6 semester hours):

57.556 Applying Theories of Learning to Interactive Technologies (summer)

57.560 Multimedia Productions (fall, summer)

27.511 Television Production and Design (summer)

32.595 Directed Study in Studio Art (fall, summer)

57.580-9 Special Topics

Final Requirement (one of the following two courses):

57.590 Graduate Internship (3 semester hours)

57.599 Graduate Thesis (6 semester hours)

Required Courses for Education Option

The Master of Science in Instructional Technology requires 33 semester hours. Parentheses indicate the semesters the courses are offered.

Required Courses (15 semester hours):

- 57.540 Technology Planning Across the Curriculum (fall, summer)
- 57.542 Technology Applications for the Classroom (spring, summer)
- 57.550 Instructional Design (fall, spring)
- 57.570 Introduction to Interactive Technologies (fall, summer)
- 57.580 Instructional Applications for Internet (spring, summer)
- Elective courses (15 semester hours):
- 57.546 Research in Instructional Technology
- 57.556 Applying Theories of Learning for Interactive Technologies (summer)
- 57.560 Multimedia Productions (fall, summer)

- 57.584 Distance Communications
32.595 Directed Study in Studio Art (fall, summer)
53.541 Statistical Analysis in Instructional Technology (spring)
56.576 Networks: Configuration and Implementation
Final Requirement (one course):
57.590 Graduate Internship (3 semester hours)
57.599 Graduate Thesis (6 semester hours)

Faculty Research Interests

Karl Kapp, Ph.D., assistant professor

Mary J. Nicholson, Ph.D., assistant professor — instructional design, application of learning theory to technology-based instruction, evaluation, cognitive psychology

Timothy L. Phillips, Ph.D., associate professor — instructional design, interactive graphics, instructional computing, authoring tools

June L. Trudnak, Ph.D., professor — mathematics education, instructional design, computer programming and design of hypermedia applications

Nursing (M.S.N.)

Administered By: Department of Nursing
 Campus Address: 3109 McCormick Center for
 Human Services

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4423

Coordinator: Sharon R. Haymaker, Ph.D.,
 C.R.N.P.

Department E-mail Address: haymaker@plan-
 etx.bloomu.edu

Degree Awarded: Master of Science in Nursing
 (M.S.N)

Enrollment: 27

Graduate Program Faculty

M. Christine Alichnie, Julia Bucher, Noreen
 Chikotas, Jacqueline Evans-Shields, Mary Gav-
 aghan, Annette Gunderman, Sharon Hay-
 maker, Nancy Onuschak, Joan Stone, Patricia
 Torsella, Dorette Welk

About the Program

The Master of Science in Nursing (M.S.N.) program offers preparation for advanced nursing practice as a clinical nurse specialist in the areas of community health and adult health and illness and as an adult nurse practitioner. The department offers an option for certified registered nurse anesthetists who wish to complete a master's in nursing degree. The program is accredited by a nationally-recognized accrediting agency.

The program has a 100 percent job placement rate in a variety of clinical and educational settings and has had graduates accepted into doctoral programs at nationally-renowned institutions such as the University of Pennsylvania and New York University.

The goals of this program are designed to guide students to:

- Use advanced knowledge, critical thinking and communication in the competent use of nursing process, therapeutic interventions and

technology to provide nursing services to improve health and wellness in diverse client populations

- Employ the multifaceted roles of advanced practice in accordance with Standards of Practice to improve and expand the delivery of health care services

- Participate in learning activities designed to facilitate personal growth and professional leadership contributions in professional health care organizations

Graduates of this program:

- Synthesize advanced knowledge of nursing and related disciplines to improve the practice of professional nursing

- Demonstrate advanced competence in nursing to formulate clinical decisions designed to promote, restore and maintain health, prevent illness, and attain client goals

- Use advanced knowledge and skills to assist diverse clients in a variety of settings to attain an optimal level of wellness

- Evaluate, apply and develop research for advanced nursing practice

- Employ knowledge and skills of leadership/management and consultation to impact the delivery of health care within a given organization and to promote attainment of client goals

- Engage in relevant activities designed to affect change in policies that affect health care at the local, state and national levels

- Engage in professional activities designed to enhance development in, and of, an advanced practice role

The program requires a minimum of 39 credits for both the community and the adult health and illness options and 42 credits for the adult nurse practitioner program. Of these required credits, 21 are from required core courses for all graduate students in nursing.

Community Health Specialization. This option is designed to prepare the graduate as a clinical specialist in community health nursing. The main focus is on preparing the graduate to assume a leadership /management role in the area of com-

munity health nursing, working with special populations and communities to promote and improve community health. Students develop competence in their multifaceted role as a clinical specialist and use their advanced knowledge, responsible decision-making, innovative problem solving and communication to promote change in the community. As advanced practitioners, they engage in the competent use of the nursing process to diagnose the health problems of special populations to design programs to facilitate optimal wellness within the community environment, and improve the delivery of health care, health education, early detection and screening and prevention services. As advanced practitioners, they serve as consultants and engage in social, ethical and political actions to influence and initiate change in health care policy in order to promote community health.

Adult Health and Illness Specialization. This option is designed to prepare the graduate to assume a leadership/manager position as a clinical specialist in the area of adult health and illness. Through the development of competence in their multifaceted role as a clinical nurse specialist, students engage in responsible decision-making, innovative problem-solving and independent/interdependent practice designed to meet the changing health needs of a specific adult population. Students use advanced knowledge, critical thinking and communication skills in the competent use of therapeutic interventions and technology to assist the adult client in attaining wellness. As advanced practitioners, the students serve as a consultant for clients and others to impact the delivery of health care for a specific adult population. Social, ethical and political actions are emphasized to initiate and affect change regarding the development of health care policy and its effect on health care delivery for a targeted adult population.

Adult Nurse Practitioner Specialization. This option is designed to prepare the graduate as an adult nurse practitioner. The core concept of role development focuses on the progressive development of competence in the multifaceted roles of advanced nursing practice as practitioner, researcher, leader/manager, consultant and educator. The program emphasizes the role of

advanced practitioner as a provider of independent and collaborative direct health care to adults. In addition, a rural community focus enables students to develop competence in assessing a community, identifying health needs and implementing programs which may occur at the individual level in the practice setting. Thus, adult nurse practitioners are keenly aware of the effect of the community on the individual seen in practice. Student nurse practitioners provide direct care for individuals under the guidance of their clinical preceptors. They also engage in social, ethical and political actions to influence and initiate change in health care policy and its effect on health care delivery. Finally, students are encouraged to continue their professional growth and aid the professional development of others by serving as role models and mentors.

Preceptors. Clinical preceptors act as essential role models, resource persons and liaisons for graduate students in all clinical specialties during clinical coursework. Preceptors assist students in attaining role socialization and in gaining competence and confidence in performing advanced clinical skills. Because preceptors serve such an integral function, they are carefully selected based on the level of clinical course and individual needs and goals. In some courses, students are encouraged to identify preceptors with whom they wish to work. In all instances, preceptors will be educationally and experientially qualified to serve and will be willing and able to spend time with students and to help them achieve clinical goals.

Clinical Placements. Students are placed in major medical and health care centers in Pennsylvania as well as with the National Institutes of Health (NIH) and community agencies and private practitioner offices in a variety of settings as appropriate to the clinical course objectives and goals. The selection is made jointly by the faculty adviser and the individual student. Individual requests are honored as much as possible. Although attention is given to selecting clinical sites relatively close to the student's place of residence, first priority is placing students in settings that offer excellent clinical experience.

Students must have documentation of CPR, liability insurance, a comprehensive health exam-

ination, current Pennsylvania nursing licensure and a current resume. All of the above are required by contractual agreements with agencies serving as practicum sites.

Admission.

A. B.S.N.-M.S.N. Program. In addition to meeting the general admission requirements for the School of Graduate Studies, applicants with a B.S.N. must comply with the following criteria:

- 1) A baccalaureate degree in nursing from a National League of Nursing accredited school program
- 2) A license to practice professional nursing in the state of Pennsylvania
- 3) A minimum of one year of direct care clinical practice (post baccalaureate) within the past two years in the selected clinical specialty area (for the adult nurse practitioner option, this direct care experience must be in adult health)
- 4) Graduate Record Examination (GRE) scores of at least 400 on each section (verbal, quantitative and analytical); the test must have been taken within five years of application to the program
- 5) An undergraduate quality point average (QPA) of at least 3.0 on a 4.0 scale
- 6) Satisfactory completion of the following undergraduate courses: statistics, research and health assessment (as a separate course or integrated concept)
- 7) Three current letters of professional and/or academic recommendation
- 8) A resume which includes description of professional nursing or clinical experience
- 9) A narrative describing personal and professional goals for graduate education (rationale and goals for the selected area of advanced practice must be included)
- 10) Personal interview following submission of admission materials with option adviser and/or program coordinator.

B. R.N.-M.S.N. Program - The Nursing Department also offers an R.N.-M.S.N. program. Applicants with an R.N. must meet criteria 2-4 and 7-10 above and must also meet the following criteria:

1. Placement according to Bloomsburg University articulation model.

2. Submission of an application that includes an official secondary school transcript and official college transcripts from each school attended regardless of whether credit was earned at the other institution(s).

C. M.S.N. to A.N.P. Program - Post master's applicants may apply to the adult nurse practitioner program in one of the following ways:

1. If M.S.N. is from Bloomsburg University, write a letter requesting reactivation as a student. A narrative explaining the student's goals is required.
2. If M.S.N. is from another university, follow admissions requirements for B.S.N.-M.S.N. applicant; however, GRE's are not required.

D. C.R.N.A. to M.S.N. Program - C.R.N.A.'s may apply to the M.S.N. program by meeting all of the criteria stated under the B.S.N. to M.S.N. program above. Additionally, documentation of successful completion of a nurse anesthetist program must be submitted.

Applicants who have not fulfilled the identified requirements for admission will be considered on an individual basis. Applicants may be admitted on a provisional basis until potential abilities for graduate education are demonstrated. After students have been notified of admission to the graduate program, they are required to schedule a program planning session with their assigned graduate faculty adviser.

Progression and Retention. In order to progress within the program, students must receive a minimum grade of B in advanced clinical courses and maintain the QPA of 3.0 specified by the university. The department retention policy is the same as that of the university except any grade of C in a clinical course must be repeated.

Transfer of Credit. A maximum of nine semester hours in graduate courses taken at other approved colleges or universities may be transferred and credited toward the program if they are applicable to the requirements and are approved by the specialty area adviser and the assistant vice president for graduate studies and research. Courses being transferred must have been taken in residence; must have been assigned a grade of B or higher; and must have covered content which is required for a particular pro-

gram option or recommended by the clinical adviser for elective credit.

Graduate students must request permission for transfer of credit from the assistant vice president of graduate studies and research once written approval has been obtained from the clinical option adviser. This request must be made at the time of application for candidacy.

Dismissal. Transfer to non-degree status without permission to reapply for candidacy constitutes dismissal from the program. Failure to meet the following factors leads to student dismissal from the program:

- Earn a grade of at least a B when repeating an advanced clinical course
- Earn a grade of at least a B in subsequent advanced clinical courses
- Complete the course of study within six years or within an extended time frame granted by the assistant vice president and dean for graduate studies and research
- Demonstrate academic and professional progress required in advanced nursing practice

Graduation Requirements. Upon fulfillment of the following, the student is awarded a master of science in nursing degree:

- Completion of all coursework, attaining the grades required and maintaining a minimum cumulative QPA of 3.0
- Completion of a comprehensive examination offered at the conclusion of the final clinical course in each of the specialty areas. The exam is not included as part of any course grade and meets university guidelines.
- A comprehensive program assessment exit interview must be held with the program coordinator to provide student input to facilitate program evaluation.

Required Courses

Students may select either full-time or part-time study depending on their individual needs. Classes are scheduled in late afternoon and evening to facilitate progression in either type of study. Clinical courses usually require experiences held during the day as dictated by the work schedules of the clinical preceptors and the hours of operation of the clinical facility.

Core courses for all areas of specialization total 21 credits, or approximately half of the required number of credits. This reflects the philosophy that advanced nursing practice shares a common theoretical basis regardless of specialization.

Core Courses (21 credits)

- 82.501 Theoretical Bases for Role Development in Advanced Nursing Practice - 3
 - 82.502 Epidemiology: Concepts for Advanced Nursing Practice - 3
 - 82.503 Bases of Research for Advanced Nursing Practice - 3
 - 82.504 Pathophysiology for Advanced Nursing Practice - 3
 - 82.507 Pharmacology for Advanced Nursing Practice - 3
 - 82.508 Adult Health Assessment and Promotion (clinical) - 6
- Community Health Specialization (18 additional credits)
- 82.511 Community Health Nursing I (clinical) - 6
 - 82.531 Community Health Nursing II (clinical) - 6
 - Electives - 6:

Graduate-level courses to fulfill elective requirements are chosen by the student and an adviser based on career needs, clinical requirements and role development of a clinical nurse specialist. Electives may be selected from graduate courses in psychology, political science, business, communication disorders, speech communication, education and nursing.

Adult Health and Illness Specialization (18 additional credits)

- 82.512 Adult Health and Illness I (clinical) - 6
- 82.532 Adult Health and Illness II (clinical) - 6
- Electives - 6

Elective requirements are as described under the community health specialization.

Adult Nurse Practitioner Specialization (21 additional credits)

- 82.515 Diagnosis and Management of Health Problems in Adults I (clinical) - 6
- 82.516 Diagnosis and Management of Health Problems in Adults II (clinical) - 6
- 82.534 Adult Nurse Practitioner Practicum and Seminar (clinical) - 6

- 82.520 Community Assessment and Planning - 3
The adult nurse practitioner specialization is also available as a post-graduate certificate option. Two core courses are waived for students who already hold an M.S.N. and additional courses may be waived after assessment of prior academic background.

Nurse Anesthetist Specialization (57 credits)

A master's degree in nursing option is also available for C.R.N.A.'s. This program requires the 30 credits described below in addition to 27 advance placement credits awarded for prior completion of a nurse anesthetist program.

- 82.501 Theoretical Bases for Role Development in Advanced Nursing Practice - 3
- 82.502 Epidemiology: Concepts for Advanced Nursing Practice - 3
- 82.503 Bases of Research for Advanced Nursing Practice - 3
- 82.520 Community Assessment and Planning - 3
- Education/Management Electives - 9
- Independent Study, Clinical Project(s)/Thesis - 6
- Electives - 3

Elective requirements are as described under the community health specialization.

Selected Clinical Sites

Private Practitioners throughout Northeastern Pennsylvania

Lehigh Valley Hospital, Allentown, Pa.

Berwick Hospital Center Home Health Care Services, Berwick, Pa..

Berwick Hospital Center, Berwick, Pa.

Maternal and Family Health Services, Inc., Wilkes-Barre, Pa..

The Milton S. Hershey Medical Center of the Pennsylvania State University, Hershey, Pa.

National Institute of Health, Dept. of Health and Human Services, Bethesda, MD

Polyclinic Medical Center, Harrisburg, Pa.

Presbyterian Medical Center, Philadelphia, Pa.

Veterans Administration Medical Center, Wilkes-Barre, Pa..

Harrisburg Hospital, Harrisburg, Pa.

University of Pittsburgh Medical Center, Pittsburgh, Pa.

Professional Home Health Care Agency (affiliate of Polyclinic Medical Center)

Student Health Center, Bloomsburg University, Bloomsburg, Pa.

Faculty Clinical and Research

Interests

M. Christine Alichnie, Ph.D., R.N., professor — Professional socialization of nursing students, relationship between interpersonal and personal values, predictors of success in nursing, cardiopulmonary nursing, advanced nursing practice and community/university nursing centers. E-mail: cmalic@bloomu.edu

Julia Bucher, Ph.D., R.N., associate professor — Knowledge and experiences of family care givers. E-mail: jbuche@planetx.bloomu.edu

Noreen Chikotas, M.S.N., C.R.N.P., assistant professor - delivery of health care in rural areas, political action related to advanced practice and family health.

Jacqueline Evans-Shields, Pharm.D. - Outcomes research and patient education related to pharmacotherapeutics.

Mary Gavaghan, Ed.D., R.N., associate professor — Causal attributions, coping and needs of cancer patients; practices of breast self-examination and psychosocial factors as possible determinants of breast cancer prebiopically; and information desired by patients undergoing lymphangiography. E-mail: mgavag@planetx.bloomu.edu

Annette Gunderman, Ed.D., R.N., associate professor — Patterns of continued learning activities among registered nurses. E-mail: agunde@planetx.bloomu.edu

Sharon Haymaker, Ph.D., C.R.N.P., associate professor — Advanced practice issues and student health. E-mail: haymaker@planetx.bloomu.edu

Nancy Onuschak, Ed.D., R.N., C.S., professor — Quality of life of chronically ill patients. E-mail: naonus@planetx.bloomu.edu

Joan Stone, Ed.D., R.N., assistant professor — Ethics instruction and complementary therapies. E-mail: jstone@planetx.bloomu.edu

Patricia Torsella, D.N.Sc., R.N., C.S., associate professor — Post-menopausal women's health (particularly in the cardiovascular area). E-mail: ptorse@planetx.bloomu.edu

Dorette Welk, Ph.D., R.N., professor — Pattern recognition as it relates to teaching strategies. E-mail: welk@planetx.bloomu.edu

Special Education / Exceptionalities (M.S.)

Administered By: Department of Exceptionalities Programs

Campus Address: 101B Navy Hall
Bloomsburg University
400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4119

Coordinator: Carroll J. Redfern, Ed.D.

Department E-Mail:

redfern@planetx.bloomu.edu

Degree Options:

Master of Science in Special Education

Master of Science in Exceptionalities

Master of Science in Exceptionalities and

Certification in Teaching Mentally/Physically Handicapped

Special Education Supervisory Certificate Program

Total Enrollment: 134

Departmental Faculty

Professors: Mary B. Hill, Kenneth P. Hunt,

Carroll J. Redfern, Joseph M. Youshock

Associate Professors: Sheila Dove Jones, Michael J. Karpinski

Assistant Professors: James K. Krause, Darlene E. Perner, Cynthia N. Schloss, Philip Tucker

About the Program

This program provides an opportunity for individuals to pursue three different master of science programs. The Master of Science in Special Education is for those who hold certification in special education. It is intended to improve the competence of the student's work for further graduate work in the field of special education. The Master of Science in Exceptionalities is for professionals who are not currently teaching in the special education field, but who work in a support group (nurses, physical therapists, occupational therapists, counselors, etc.) and wish to expand their knowledge and develop new skills

for working with the exceptional person. Certification in Special Education may also be pursued through the Master of Science in Exceptionalities program as an option.

Admission. Applicants seeking admission to the master's degree programs must satisfy the general admission requirements for the School of Graduate Studies. The following additional criteria are also required:

- A one-page, handwritten letter of intent stating professional background, experience and rationale for wanting to be admitted to the department

- Two letters of recommendation

- Resume

- An interview with the program coordinator

- Graduate Record Examination

- An undergraduate cumulative QPA of 2.8. If average is below 2.8, the student may be admitted as provisional, which must be eliminated after completion of 12 to 15 semester hours in which a QPA of 3.0 or better is earned. No Cs may be earned during a probationary period.

Retention. A QPA of 3.0 is required for retention in the program. A maximum of two Cs is permissible. If a C is earned in a practicum course, it must be repeated with a grade of B or better within a time frame determined by the area of concentration.

Graduation. Students seeking the M.S. in Special Education or the M.S. in Exceptionalities without certification must complete a minimum of 30 semester hours with a cumulative QPA of 3.0.

Master of Science in Special Education

(Prerequisite: B.S. in Special Education and certification)

Graduation requirements:

Choice A: Thesis option - 24 hours course work plus six credits for thesis

Choice B: Department paper option - 30 hours of course work plus department paper

Choice C: Course work option - 36 hours course work.

Core requirements (9 credits)

- 70.565 Reading and Interpreting Research in Special Education; OR
- 79.591 Research in Education
- 70.575 Seminar in Current Issues in Special Education
- 70.591 Practicum in Special Education
- Electives (a minimum of 12 credits must be taken in special education. Note: one graduate methods course is recommended if previous methods course has not been taken in the last five years).
- 70.501 Administration and Supervision in Special Education
- 70.506 Introduction to Early Intervention
- 70.516 Psychology of Exceptional Individuals
- 70.522 Mathematics for Students with Special Needs
- 70.525 Education of Individuals with Moderate/Severe Disabilities
- 70.526 Transition Services for Individuals with Special Needs
- 70.533 Language Arts for Students with Special Needs
- 70.544 Diagnostic and Remedial Techniques (recommended if previous assessment course is older than five years)
- 70.547 Technology and Exceptional Individuals
- 70.550 Elementary Methods for Individuals with Mild Disabilities
- 70.551 Secondary Methods for Individuals with Mild Disabilities
- 70.552 Project in Special Education
- 70.556 The Mentally Gifted Individuals
- 70.559 Seminar in Special Education
- 70.562 Issues of Individuals with Physical Disabilities
- 70.570 Foundations of Behavior Disorders
- 70.572 Seminar in Behavior Disorders
- 70.595 Internship
- 70.596 Special Workshop 1 (1-6 credits)
- 70.597 Special Workshop 2 (1-6 credits)
- 70.598 Special Workshop 3 (1-6 credits)
- 72.572 Augmentative Communication
- 74.501 Introduction to Sign Language

With adviser approval, students may also choose additional elective graduate courses in

related fields such as reading, early childhood, curriculum and foundations, psychology and sociology.

Master of Science in Exceptionalities

(This program does not lead to certification in Teaching the Mentally/Physically Handicapped)

Graduation requirements:

Choice A: Thesis option - 24 hours course work plus six credits for thesis

Choice B: Department paper option - 30 hours of course work plus department paper

Choice C: Course work option - 36 hours course work

Core requirements (9 credits)

- 70.516 Psychology of Exceptional Individuals
- 70.565 Reading and Interpreting Research in Special Education; OR
- 79.591 Research in Education
- 70.575 Seminar in Current Issues in Special Education
- Electives (a minimum of 12 credits must be taken in special education)
- 70.501 Administration and Supervision in Special Education
- 70.506 Introduction to Early Intervention
- 70.522 Mathematics for Students with Special Needs
- 70.525 Education of Individuals with Moderate/Severe Disabilities
- 70.526 Transition Services for Individuals with Special Needs
- 70.533 Language Arts for Students with Special Needs
- 70.544 Diagnostic and Remedial Techniques
- 70.547 Technology and Exceptional Individuals
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- 70.562 Issues of Individuals with Physical Disabilities
- 70.570 Foundations of Behavior Disorders
- 70.572 Seminar in Behavior Disorders
- 70.595 Internship
- 70.596 Special Workshop 1 (1-6 credits)
- 70.597 Special Workshop 2 (1-6 credits)

70.598 Special Workshop 3 (1-6 credits)

72.572 Augmentative Communication

74.501 Introduction to Sign Language

With adviser approval, students may also choose additional elective graduate courses in related fields such as reading, early childhood, curriculum and foundations, psychology and sociology.

Master of Science in Exceptionalities and Certification in Teaching the Mentally/Physically Handicapped

Graduation Requirements. Students are required to complete a minimum of 36 credits (M.S.) and a maximum of 45 credits or 42 credits plus student teaching (M.S. plus certification).

Core Requirements

70.516 Psychology of Exceptional Individuals

70.565 Reading and Interpreting Research in Special Education; OR

79.591 Research in Education

60.501 Major Philosophies of Education

Certification Courses (equivalent courses may be considered)

70.506 Introduction to Early Intervention

70.522 Mathematics for Students with Special Needs

70.525 Education of Individuals with Moderate/Severe Disabilities

70.526 Transition Services for Individuals with Special Needs

70.533 Language Arts for Students with Special Needs

70.544 Diagnostic and Remedial Techniques

70.547 Technology and Exceptional Individuals

70.550 Elementary Methods for Individuals with Mild Disabilities

70.551 Secondary Methods for Individuals with Mild Disabilities

70.559 Seminar in Special Education

70.570 Foundations in Behavior Disorders

70.591 Practicum in Special Education; OR

70.401 Student Teaching with Exceptional Individuals

70.461 Problems in Special Education
Electives

70.501 Administration and Supervision in Special Education

70.552 Project in Special Education

70.556 The Mentally Gifted Individual

70.562 Issues of Individuals with Physical Disabilities

70.572 Seminar in Behavior Disorders

70.575 Seminar in Current Issues in Special Education

70.596 Special Workshop 1 (1-6 credits)

70.597 Special Workshop 2 (1-6 credits)

70.598 Special Workshop 3 (1-6 credits)

72.572 Augmentative Communication

74.575 Counseling Needs of Communicatively Disordered Individuals and Their Families

74.501 Introduction to Sign Language

With adviser approval, students may also choose additional elective graduate courses in related fields such as reading, early childhood, curriculum and foundations, psychology and sociology.

A special education supervisory certificate may be obtained with an M.S. in special education and five years teaching experience in the discipline.

Supervisory Certificate in Special Education

(Prerequisites: B.S. in Special Education and five years teaching experience in the discipline.

Requirements:

Management and Administration

70.501 Administration and Supervision in Education of Exceptional Individuals

School Law and Finance

60.576 School Law and Finance

Group Dynamics

60.514 Home, School, Community Relations or

60.578 Group Processes in Supervision

Research Techniques

60.577 Educational Research for Supervisors or

70.565 Reading and Interpreting Research in Special Education or

79.591 Research in Education

Curriculum Development

60.584 Curriculum and Instruction, Theory,

Design and Development or

60.585 Curriculum and Instruction, Evaluation

Practicum - Field Experience

70.595 Internship

Faculty Research Interests

Mary B. Hill, Ph.D., professor — Special education research and technology. E-mail: hill@planetx.bloomu.edu

- Kenneth P. Hunt, Ph.D., professor — Behavior disorders, applied behavior analysis, behavior management. E-mail: hunt@planetx.bloomu.edu
- Sheila Dove Jones, Ed.D., associate professor — Early childhood, assessment, inclusive practices. E-mail: jones@planetx.bloomu.edu
- Michael J. Karpinski, Ph.D., assistant professor — Exceptionalities, vocational education, transition, supervision. E-mail: mkarp@planetx.bloomu.edu
- James K. Krause, M.S., assistant professor - Special education administration, inclusive practices, ethics, language arts, exceptionalities. E-mail: jkrause@planetx.bloomu.edu
- Darlene E. Perner, Ed.D., assistant professor - Inclusive education, assessment.
- Carroll J. Redfern, Ed.D., professor — Exceptionalities, supervision, special education regulations, program reviewer. E-mail: redfern@planetx.bloomu.edu
- Cynthia N. Schloss, Ph.D., assistant professor — transition, inclusive practices, advocacy and legislation. E-mail: schloss@planetx.bloomu.edu
- Philip Tucker, Ed.D., assistant professor — Moderate/severe disabilities, qualitative research, mental retardation, transition planning, communication and language development. E-mail: tucker@planetx.bloomu.edu
- Joseph M. Youshock, Ed.D., professor — Vocational assessment – secondary education, transition, supervision. E-mail: youshock@planetx.bloomu.edu

Speech-Language Pathology

Administered By: Department of Audiology and
Speech Pathology
Campus Address: Navy Hall
Bloomsburg University
400 E. Second Street
Bloomsburg, PA 17815-1301
Telephone Number: (717) 389-4436
Coordinator: G. Donald Miller, Ph.D.
Degree Awarded: Master of Science
Enrollment: 31

Departmental Faculty

Professors: Dianne H. Angelo, Ronald R.
Champoux, Robert J. Lowe
Associate Professors: Shaheen Awan, Julia M.
Weitz

About the Program

The graduate program in speech pathology prepares students for clinical practice with a variety of communication disorders and in a variety of clinical settings. The program is heavily based on clinical experience both in our in-house clinic and culminating with a full semester of externship practicum in a clinic, hospital and/or school setting.

Admission. In addition to meeting the general admission requirements for the School of Graduate Studies, applicants for the master's degree program in speech pathology must meet the following requirements:

- Applicants are required to submit a one-page, typed letter detailing their professional background, experience and rationale for wanting to be admitted to the program in speech pathology.
- Applicants are required to submit three letters of recommendation from references who have knowledge of their academic and clinical background. This information must include the name, address, position and telephone number of each reference.

- Applicants must have a bachelor's degree from an accredited institution with a major in communication disorders and a minimum QPA of 2.8. Applicants whose major is in an area other than communication disorders will be required to satisfactorily complete certain academic and practicum deficiencies. These will be prescribed by faculty following analysis of the individual's transcript.

- The Graduate Record Examination is required of all applicants. Typically, successful students have had scores of at least 1450.

- Deadline for submission of application materials is February 15.

Retention. Graduate students must maintain a QPA of 3.0 with a maximum of two Cs throughout the graduate program. If a grade of C is earned in a clinic course, the course must be repeated. To progress in graduate school, students must make application for admission to candidacy after they have completed 12 to 15 semester hours of coursework.

Graduation. The graduate program in speech pathology consists of a minimum of 48 semester hours with most courses being required. Clinical experience is considered necessary and inseparable from the existing course sequence. It becomes an important step in the development of a competent clinician, linking the classroom and textbook information with clinical experience, certification and eventual employment in the field.

Required Courses

- 72.550 Adult Aphasia
- 72.552 Preschool Language Disorders
- 72.554 Stuttering
- 72.556 Phonology
- 72.558 Clinic I
- 72.560 Voice Disorders
- 72.562 Language Disorders of School-aged
Children
- 72.565 Speech Disorders in Adults and Children

- 72.566 Clinic II
 72.572 Augmentative Communication
 72.576 Clinic III
 72.580 Communication Disorders of the
 Traumatically Head Injured
 72.582 Research in Speech and Language
 Pathology
 72.583 Swallowing Disorders
 72.584 Field Experience I
 72.586 Field Experience II
 Elective Courses
 72.530 Fundamentals of Audiology
 72.568 Speech Habilitation in the Schools
 72.570 Adult II - Secondary Language Disorders
 72.574 Seminar in Communication Disorders
 72.590 Independent Study and Research
 72.591 Independent Study and Research
 72.592 Workshop in Audiology and/or Speech
 Pathology
 72.593 Workshop in Audiology and/or Speech

- Pathology
 72.594 Workshop in Audiology and/or Speech
 Pathology
 72.599 Master's Thesis

Faculty Research Interests

- Shaheen Awan, Ph.D., associate professor —
 Voice, research, speech science, clinic
 Dianne H. Angelo, Ph.D., professor — Clinic,
 clinical methods, augmentative communica-
 tion
 Ronald R. Champoux, Ph.D., professor —
 Neurogenic disorders of speech and lan-
 guage, orofacial disorders of speech, clinic
 Robert J. Lowe, Ph.D., associate professor —
 Phonology, phonetics, clinic
 Julia M. Weitz, Ph.D., associate professor —
 Normal language, language disorders in chil-
 dren

Supervisory Certificate Programs

Administered By: Department of Curriculum and Foundations

Campus Address: 3213 McCormick Center for Human Services

Bloomsburg University

400 E. Second Street

Bloomsburg, PA 17815-1301

Telephone Number: (717) 389-4030

Coordinator: John R. Hranitz, Ed.D.

Department E-mail Address:

hranitz@bloomu.edu

About the Program

The Supervisor of Curriculum and Instruction Certificate Programs include the supervisor of curriculum and instruction certificate (N, K-12) and the subject specialist supervisory certificate programs designed for supervisors in an area of specialization. They are designed for individuals seeking certification with district-wide responsibilities that includes designing, coordinating, improving, evaluating, and extending instruction from N to 12.

Admission. Candidates must provide proof of a valid Pennsylvania teaching certificate and must provide evidence of at least five years of satisfactory teaching experience. (Experience on an emergency certificate or an intern certificate is not acceptable.)

Requirements

Supervisory (N, K-12). This program is designed for the person with primary responsibility supervising and directing the activities of professional and non-professional employees in given fields.

Candidates must complete a minimum of 36 semester hours at the graduate level from seven areas of competency:

- Curriculum and instruction-theory, design and development
- Curriculum and early childhood, elementary, middle and secondary education
- Research
- Supervision, management and administration
- Group dynamics
- School law and finance
- Practicum - field experience

Subject Specialist:

Curriculum and Instruction	...36 semester hours
Early Childhood Education	.....30 semester hours
Elementary Education	.....30 semester hours
Reading	.....30 semester hours
School Health Service	.....30 semester hours
Secondary Education	.....30 semester hours
Communication	.....30 semester hours
Foreign Languages	.....30 semester hours
Mathematics	.....30 semester hours
Science	.....30 semester hours
Social Studies	.....30 semester hours
Special Education	.....21 semester hours

Prerequisites for Admission:

- Certification in the area for which supervisory certification is sought.
- At least five years of satisfactory teaching experience in the field for which certification is sought. (Valid certificate in the field is required)

Program Requirements:

A minimum of 30 semester hours of graduate-level courses from the following areas:

- Management and administration
- Principles and practices in school supervision
- School law and finance
- Group dynamics
- Research techniques
- Curriculum development
- Practicum - field experience

Cooperative Doctoral Program

Bloomsburg offers a Doctorate of Education in cooperation with Indiana University of Pennsylvania (IUP). This is a cooperative doctoral program in elementary education that combines the resources of both institutions. The program includes areas of concentration in:

- curriculum and supervision;
- administration
- reading
- early childhood education
- educational psychology

- special education

Students take courses at both Bloomsburg and Indiana, and the doctoral committee guiding the dissertation consists of faculty from both institutions.

Those interested in this doctoral degree program, should contact John R. Hranitz, 3213 McCormick Center for Human Services, Bloomsburg University, 400 E. Second St., Bloomsburg, PA 17815-1301 (717) 389-4030.

Course Descriptions

Course Codes

Code	Field of Study	Page
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30	Art	73
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50	Biology	79
90	Business Education	100
23	Communication	72
25	Communication Studies	73
92	Computer and Information Systems	101
40	Economics	76
60	Educational Foundations	87
62	Elementary and Early Childhood Education	89
96	Finance	103
05	Exercise Science and Adult Fitness	71
80	Health Sciences	97
42	History	76
57	Instructional Technology	85
09	Interdisciplinary Studies	72
98	Law and Legal Elements	104
93	Management	102
55	Marine Science	84
97	Marketing	104
27	Mass Communications	73
53	Mathematics and Computer Science	82
82	Nursing	97
94	Office Information Systems	103
54	Physics	83
44	Political Science	76
79	Professional Studies	97
48	Psychology	79
63	Reading	63
65	Secondary Education	91
45	Sociology	77
70	Special Education	92
74	Studies in Hearing Loss	96

Exercise Science and Adult Fitness

Administered by Department of Health, Physical Education and Athletics

05.500 Technology in Health/Fitness (3) - Provides experiences in the use of conventional technology and procedures in the measurement and assessment of physiological functioning and the maintenance and calibration of such equipment.

05.510 Physiological Assessments (3) - Provides a complete overview of the research process employed in exercise science. Specific emphasis is given to conceptualization of the research problem, hypothesis development, literature review and basic statistical procedures. Alternative research paradigms and methodologies (qualitative, survey) are also discussed.

05.511 Concepts in Graded Exercise Testing (3) - Includes basic ECG theory and interpretation and the theory and applied physiology of exercise testing.

05.512 Current Research in Exercise Science (3) - Sharpens students' critical thinking and writing skills while interpreting and analyzing recent research in exercise science. Critically studies the most recent research in the area of exercise science and its subdisciplines, including exercise physiology, epidemiology and biochemistry. Deepens students' understanding of the development of a line of inquiry in exercise science and integrates and extends the information covered in the prerequisite courses.

05.575 Adult Exercise Programming (3) - Concentrates on the physiological responses and adaptations that result during and after exercise. Focuses on energy metabolism, the structure and function of skeletal muscles and cardiovascular dynamics during exercise.

05.576 Adult Exercise Physiology (3) - Provides a continuation of basic and advanced exercise physiology principles. Intended to develop student's knowledge of the physiology of human performance, the effects of ergogenic aids, aging and the environment on physical performance.

05.577 Methods and Materials in Adult Physical Education (3) - Emphasizes the academic and technical knowledge necessary to conduct

health and fitness programs in public and private agencies. Students are prepared to assume leadership and management positions within the health and fitness industries.

Interdisciplinary Studies

Administered by College of Arts and Sciences

09.401 History and Politics of the USSR (3) - Provides sufficient background in history and political science to enable students to better understand the USSR. Encompasses some of the major developments in the Soviet Union since 1917 employing lectures, films, slides, guest speakers, readings and discussion.

09.427 Socialism: Theory and History (3) - Surveys socialist philosophies from Biblical times to the present concentrating on the theories of Marx, Engels, Lenin and Mao and including a review of the major historical events surrounding socialist development.

09.580-589 Special Topics (1-3) - Provides an opportunity for graduate students from any graduate program to expand their knowledge from a previously learned experience or to explore a new learning experience not offered on a regular basis. Each course carries from 1 to 3 semester hours. Prerequisites are determined by the instructor.

09.590 Graduate Internship (1-6) - Provides a work-study experience initially administered by an academic faculty member and a sponsoring employer. Provides the opportunity for an internship experience across disciplines at a graduate level.

09.599 Master's Thesis (3-6)

Communication

Administered by Department of Communication Studies and Theatre Arts

23.501 Nature of Communication (3) - Examination, discussion, and evaluation of definitions and theories in the contemporary study of communication. Emphasizes developing competencies in recognizing philosophical assumptions, conceptual elements and adequacy of communication theories.

23.502 Interpersonal Communication (3) - Surveys assumptions, models, theories, processes and contexts related to the study of person-to-per-

son communication. Studies ways of perceiving the communication of self to others as a means of strengthening social interactions.

23.598 Master's Research Project (3) - Independent research on a topic approved by the student's adviser(s).

Communication Studies

Administered by Department of Communication Studies and Theatre Arts

25.501 Introduction to Communication Research (3) - Overview of the fields of research in communication and an examination of the contributions of professional speech communication organizations, graduate studies and research. Examines and evaluates historical, descriptive and experimental research studies. A pilot thesis is required to demonstrate competency in research techniques and use of bibliographical resources.

25.502 Rhetorical Criticism (3) - Studies theory and practice in the investigation and evaluation of symbolic acts created by people to influence thought and behavior.

25.585 Special Topics in Communication (3) - Specialized study by the class. Subjects vary by semester.

25.586 Special Topics in Communication (3)

25.587 Special Topics in Communication (3)

25.590 Master's Research Paper (3)

25.597 Internship in Communication - Graduate (3) - Integrates classroom experience with practical work experience in industrial, business or government work setting. Students must achieve academic integrity of their proposed experience and its relevance to course work in the major. Contact departmental internship coordinator to obtain detailed information and forms.

Mass Communications

Administered by Department of Mass Communications

27.511 Television Production and Design (3) - Focuses on the practical aspects of planning and producing video tapes for specific instructional purposes. Covers pre-production planning, production activities and post-production editing.

Art

Administered by Department of Art

30.590 Current Theories of Art and Art Education (3) - Focuses on current theories of art and art education practiced in American schools with an emphasis on eventual application. A research paper or research project is required.

30.591 Advanced Visual Arts for Exceptional Children (3) - Stresses importance of art activity as a means of enriching and stimulating special children's awareness of themselves and their world. Emphasis is placed on those positive aspects for creative activity which the handicapped child possesses.

30.595 Master's Thesis (3-6)

Art History

Administered by Department of Art

31.560 Readings and Research in Contemporary Art History (3) - Detailed study of contemporary movements in art from the late 19th century to the present with readings and research for advanced students.

31.565 Readings and Research in American Art History (3) - Advanced study of the history of visual art in America.

31.570 Readings and Research in Early European Art History (3) - Research focuses on specific topics relating to the periods from Pre-Historic to Gothic.

31.571 Readings and Research in Later European Art History (3) - Examines period from the early Renaissance through French Impressionism.

31.575 Readings and Research in Oriental Art History (3) - Advanced survey of Oriental Art in the broadest sense of the word, the art and architecture of the ancient Near East, Japan, China and India. An introduction to both monuments and cultural ideas. Exposes advanced students to basic problems in chronology, style and research methodology.

31.580 Readings and Research in Architectural Art History (3) - Advanced survey of the evolution of architecture in the Western World from the Pharaonic Egyptian period through the contemporary 20th century. Typical and outstanding examples of each period are dis-

cussed and researched. Imperative to an understanding of the physical structures studied is an analysis of the type of society and the rationale for the creation of such an architecture.

31.585 Art and Culture of France (3) - Study-tour of France with specific attention to French Art seen in relation to its social and cultural environment. Visits will be made to places of artistic and cultural interest in and around Paris and specific areas of France related to the particular course of study. Course also offered through the Continuing and Distance Education for advanced students and members of the community.

31.592 Readings and Research in Advanced Visual Aesthetics (3) - Advanced study of images and viable aesthetic positions in the plastic arts emphasizing artistic and perceptual awareness and concern with environmental relationships.

31.595 Directed Study in Art History (3-6) - Advanced study of a topic in the area of art history. Intensive review of the scholarly literature in the field. A paper is required under the direction of a faculty adviser.

Art Studio

Administered by Department of Art

32.500 Advanced Ceramics I (3) - Requires students to define in writing their level of knowledge and competency, then prepare a plan of study that will allow for a direction of work. Students are responsible for making and firing their own work.

32.501 Advanced Ceramics II (3) - Students intensify their study of selecting a specialized problem relating to the experiences gained in Advanced Ceramics I.

32.502 Advanced Ceramics III (3) - Students continue to pursue an advanced and refined level of study in the discipline of creating an art object. A specialized problem relating to the experiences gained in the first two levels facilitates continuity in learning.

32.503 Advanced Ceramics IV (3) - Focuses on professional and philosophical attitude reflected in students' work. Students are required to have an exhibition of their work.

32.510 Advanced Drawing I (3) - Explores advanced drawing techniques and involvement of personal expression and imagery.

32.511 Advanced Drawing II (3) - Emphasis on the development of individual themes and projects.

32.512 Advanced Drawing III (3) - Focuses on personal expression and imagery for potential thesis statement - self-direction and innovation.

32.513 Advanced Drawing IV (3) - Concentration and production of drawings for a unified thesis statement.

32.520 Advanced Crafts I (3) - Advanced levels of experimentation with contemporary idioms in crafts design. Emphasis on highly professional concepts of form and methods and on investigation and refinement of techniques as a means of realizing significant visual statements in crafts. Individualized instruction and independent planning for each student on all four levels.

32.521 Advanced Crafts II (3) - Individual concentration on specific media and related techniques. Intense involvement with refined design schemes, systems and variations that are oriented toward an increasingly more defined singular direction in crafts.

32.522 Advanced Crafts III (3) - Highly independent and mature involvement with advanced concepts, methods and processes in a specific crafts direction. Students should begin to develop a thesis presentation which should emerge from studio experiences, independent research, and from a wide, highly selective exposure to craft objects in museums, galleries and private studios.

32.523 Advanced Crafts IV (3) - Continued involvement with advanced concepts in crafts. Concentration on completing final works for a one-man or a one-woman show. A definitive position paper reflecting a personal philosophy in crafts should be developed.

32.530 Advanced Graphics I (3) - Advanced level exploration of traditional and/or experimental printmaking methods. Emphasis on personalized imagery and technical proficiency.

32.531 Advanced Graphics II (3) - Exploration of advanced level printmaking including color and color registration procedures.

32.532 Advanced Graphics III (3) - Focuses on personalized forms for potential thesis statement. Students are expected to be innovative and proficient in technology of printmaking.

32.533 Advanced Graphics IV (3) -

Concentration on the selected forms for a unified thesis statement.

32.540 Advanced Painting I (3) - Searches into purpose of painting with specific attention to traditional methods, i.e., glazing, egg tempera and underpainting.

32.541 Advanced Painting II (3) - Exploration and different approaches of painting for individual expression. Emphasis on achieving in representational painting.

32.542 Advanced Painting III (3) - Continued development into maturity of individual style - with emphasis on mural painting designed into architectural space.

32.543 Advanced Painting IV (3) - Mature fulfillment of personal expression. Painting should reflect continuity of intent and style. A selection of work is prepared for exhibition and thesis.

32.550 Advanced Sculpture I (3) - Requires students to define in writing their level of knowledge and philosophical direction, then prepare a plan of study that allows for a direction of work. Students are responsible for the completion of show quality pieces.

32.551 Advanced Sculpture II (3) - Emphasis on student experimentation while still being concerned with the concept form. Focus on growth and development of more positive philosophical ideas.

32.552 Advanced Sculpture III (3) - Students' work should reflect a significant transition from experimentation to a more definite direction in technique and aesthetic opinion.

32.553 Advanced Sculpture IV (3) - Students produce highly professional pieces of art while maintaining an awareness of their responsibility to society. This responsibility is fulfilled by an exhibition of each student work for a thesis.

32.580 Advanced Photography I (3) - Focuses on foundations of black and white photography for the advanced student. Emphasis on the technical controls of exposure and printing, research on historical and contemporary photographers and issues and active participation in class critiques and lectures.

32.581 Advanced Photography II (3) - Students identify technical and conceptual problems and goals which they will pursue during the course. Written statement of intentions, self-eval-

uation of work and a final portfolio required. Attendance at lectures and critiques is required.

32.582 Advanced Photography III (3) - Stresses proficiency in black and white exposure and printing. Students design a semester photographic project with a finished portfolio and exhibition as final goals. Continued class participation and development of technical skills expected.

32.583 Advanced Photography IV (3) - Students write a statement outlining their thesis work to be carried out during the course. A final thesis, exhibition and portfolio are required.

32.595 Directed Study in Studio Art (3 or 6) - Continued development of a student's involvement in a studio area after satisfactory completion of four levels of advanced study in that area or in a related area of relevance. Consent of the instructor and the department chairperson are required.

World from the Pharaonic Egyptian period through the contemporary 20th century. Typical and outstanding examples of each period are discussed and researched. Imperative to an understanding of the physical structures studied is an analysis of the type of society and the rationale for the creation of such an architecture.

31.585 Art and Culture of France (3) - Study-tour of France with specific attention to French Art seen in relation to its social and cultural environment. Visits will be made to places of artistic and cultural interest in and around Paris and specific areas of France related to the particular course of study. Course also offered through the Continuing and Distance Education for advanced students and members of the community.

31.592 Readings and Research in Advanced Visual Aesthetics (3) - Advanced study of images and viable aesthetic positions in the plastic arts emphasizing artistic and perceptual awareness and concern with environmental relationships.

31.595 Directed Study in Art History (3-6) - Advanced study of a topic in the area of art history. Intensive review of the scholarly literature in the field. A paper is required under the direction of a faculty adviser.

Economics

Administered by Department of Economics

40.513 Origin and Development of Capitalism (3) - Covers transition from feudalism to capitalism and the subsequent influence of leading capitalist institutions on industry, agriculture, commerce, banking and the social movement.

40.514 Labor Economic Theory (3) - Emphasizes labor economic theory and its application in analyzing the issues of employment and inflation. Topics include growth of the labor force and its composition, wage theories and wage structures, trade unionism and income distribution, economics of poverty, minimum wage, and hour laws and civil legislation. Occupational choices, job search, labor mobility and human capital formation included. Students are exposed to research and measurement methodology to meet the research requirements of the course.

40.515 Public Policy and Business (3) - Focuses on public policies affecting the economy: historical, philosophical and legal basis of regulation; the rationale of free enterprise. Intensive analysis of selected areas of economic policy related to government action.

40.531 Current Economic Problems (3) - Examines economic problems of current interest and concern to our society. Basic economic principles and theories and the thinking of recognized economists of the past and present as revealed in their published works.

40.532 Comparative Economic Systems (3) - Compares workings and performance of the major forms of economic organization: capitalist systems; the modern welfare states; state capitalism; communism; and socialism.

40.533 International Economic Policies and Relations (3) - Applies modern international economic and financial analyses to emerging contemporary problems of nations trading with one another. Selected topics include: customs unions; optimum currency area; international cartels; and flexible exchange rates. Focuses on impact of governmental and intergovernmental relations and regulations.

History

Administered by Department of History

42.404 Topics in American History (3) - Seminar allows students to focus on a specific topic or related topics in American history for in-depth study and analysis. Includes historiography of the chosen topic, discussion of problems associated with the topic and production for a research paper. Topics vary from semester to semester.

42.452 Soviet Russia (3) - Presents a critical analysis of the political, social, economic and cultural evolution of the Soviet Union and a study of Soviet foreign policy. Not offered every semester. Prerequisite: 42.113.

42.453 Problems of Contemporary Latin America (3) - Analyzes recent events or movements that may indicate recurrence of historical problems or major developments of international significance in selected countries of Latin America. Not offered every semester.

42.460/61 Topics in European History (3) - Investigates select topics in European history. Seminar-style course studies variety of problems in European history, in the medieval, early modern and modern periods. Discusses and analyzes secondary materials on the history, philosophy, politics, science and art of a chosen period. Research paper required. Topics vary from semester to semester. Prerequisite: 42.112 or 42.133.

42.472 History of Labor in the United States (3) - Surveys the emergence and development of organized labor from the post-Civil War period to the present. A third of the course is devoted to an analysis of contemporary labor-management problems and labor's changing role in our increasingly technological society. Prerequisite: 3 semester hours in history.

Political Science

Administered by Department of Political Science

44.405 Development of Political Thought (3) - A chronological survey from the ancient Greeks to the present. Examines the ideas of seminal political thinkers as they grapple with perennial problems.

44.409 American Political Thought (3) - Analyzes the relationship of American political

thought to modern political theory. Traditional models are used in a historical, chronological way but are reworked to show their relation and relevance to contemporary actions and issues. Covers the main ideas of the leading political thinkers in America from the colonial period to the present.

44.437 Public Administration Applications (3) - Examines major theories of public management and their application in the workplace to enhance productivity. Uses readings, cases and simulations and requires a term paper based on a government agency's data.

44.438 Public Personnel Administration (3) - Examines public service as a career, the personnel needs of national, state, and local governments; civil service law, personnel systems; and current problems in the public service.

44.440 The President and Congress (3) - Reviews presidential and congressional politics, public policy-making roles, executive-legislative relationships, constitutional issues. Explores the constitutional limitations, citizen expectations and myths surrounding these institutions.

44.446 Constitutional Law I (3) - Analyzes the evolution, structure, and function of the Supreme Court, concentrating on a case study approach of the court's interpretations of the powers of the president, Congress, and federal-state relationships. Offered fall semester only.

44.447 Constitutional Law II (3) - Studies the decisions of the Supreme Court as they are related to the individual and the government, concentrating on nationalization of the Bill of Rights, rights of persons accused of crimes, equal protection and voting rights. Offered spring semester only.

44.448 Judicial Process (3) - Studies policy-making by the federal courts, primarily the Supreme Court. Analyzes nature of the policy-making function as well as the impact of policy-making on American society.

44.452 State and Local Government and Politics (3) - Presents a description and analysis of state and local legislatures, executives and judiciaries; the myths and realities of state and local politics; intergovernmental relations; current policies and problems. Offered spring semester only.

44.456 Public Policy (3) - Studies the institu-

tional and political context of policy formation and implementation; the process for designing and administering government programs; and the techniques of analysis and evaluation that are or could be employed in formulating policy objectives, choosing from among alternatives and assessing performance. The approach is pragmatic, applied and interdisciplinary.

44.458 U.S. Foreign Policy (3) - Analyzes substance, methods, and purposes of U.S. foreign policy including the determinants of policy, policy-making machinery and implementation matters.

44.464 Government and Politics of Ireland (3) - Surveys historic, social, cultural, and religious developments in Ireland with concentration on a study of the government and politics of Northern Ireland and the Irish Republic. Examines contemporary literature, drama, music and art.

44.487 International Law and Organizations (3) - Examines the nature of international law and politics and surveys basic issues in contemporary international law. The course also examines the development of international organizations and selected issues.

44.490 Independent Study in Political Science (3) - Provides for individualized reading, research and reporting under conditions of minimal supervision. Projects must have departmental approval and be under way by the end of the first week of a session.

44.492 Seminar in Government and Politics (3) - Examines selected issues about government and politics in an attempt to review and unify theories and methods of political science. Emphasizes individual research projects.

Sociology

Administered by Department of Sociology

45.441 Social Indicators (3) - Reinforces and extends earlier learning in research techniques and methods by focusing on systematic step-by-step understanding, analysis, and preparation of social indicators at the federal, state and local levels of social policy planning and analysis. Promotes understanding of social indicators and the use of these indicators within all levels of society.

44.443 Sociology of Deviant Behavior (3) -

Evaluates the presence and function of deviance in society. Includes mental illness and various types of crime and stigmatized behavior. Examines how deviance is handled therapeutically and legally through institutionalization and treatment. Attempts to provide a broad theoretical perspective as well as concrete examples of deviance in any society. Examines current methods of rehabilitation and punishment.

45.450 Social Work Processes II (3) - Utilizes problem-solving interventions in small groups integrating social work knowledge, skills, and values. Offered fall semester only.

45.451 Family Counseling (3) - Surveys the major theoretical models for family assessment and intervention with primary emphasis on ecological systems. Covers knowledge of rudimentary assessment and intervention skills for problem solving with families.

45.453 Social Welfare Policy (3) - Frameworks for analyzing social and economic policies presented with special focus on legislative, judicial and administrative policies. Offered spring semester only.

45.465 Computer Applications in the Social Sciences (3) - An introduction to computer use for the social sciences (through use of SPSS). Emphasizes translating questions into data analysis and interpretation of statistical results. Prerequisites: 45.260 or similar statistics course. Offered spring semester only.

45.467 Population Problems (3) - Studies human population, its major theories, distributions composition, changes, and future developments of population and impacts of population problems on society as influenced by vital processes.

45.468 Social Service Planning (3) - Provides an advanced consideration of the social context of the development of social policy, planning, and implementation of social and/or human services at federal, state and local levels of organization. A critical analysis of the social effects of social policy, planning and services on people in a service-oriented, post-industrial society.

45.474 Contemporary Environmental Issues (3) - Examines some major human problems that lead to environmental deterioration, particularly water, air, and noise pollution, energy and other

resource depletion, and increasing population density.

45.490 Sociology of Aging (3) - Studies aging, its major theoretical themes, patterns of living, socio-psychological and cultural consequences of aging. Examines the contemporary issues, problems and programs of the aging. (Offered in spring semester only.)

45.500 Sociology of Mass Communication (3) - In-depth discussion of cognitive and behavioral effects of mass media, especially television, on audiences, the social structure of communications industry, particularly its influence on media content and the political use of mass media. Students critique the latest research articles in the field.

45.511 Social Institutions (3) - Sociological examination of major institutions in the United States cross-culturally compared with those in other societies. Specific institutions selected depending on the interest of students and faculty.

45.513 Adolescents in American Society (3) - Studies the role of adolescents in contemporary U.S. society with special emphasis on the adolescent's social interactions in groups and institutions.

45.523 The Contemporary American Community (3) - An advanced examination of the social dynamics of community life, its institutions organizations and people within the context of the development of post-industrial society.

45.525 Current Social Issues (3) - Analyzes current social issues and solutions offered to solve them. Explores issues and solutions within the broad framework of the social sciences and specific framework of sociological and anthropological data.

45.578 Sociology of Work (3) - Focuses on structure and organization of industrial and post industrial societies and the relationship between work organizations within communities and society. Presents a sociological examination of work and the milieu of the worker. Course focuses on formal and informal work organizations, worker job satisfaction and dissatisfaction.

Anthropology

Administered by Department of Anthropology

46.440 Language and Culture (3) - The place

of oral or non-oral language in human evolution and contemporary cultures. Topics discussed include: dialectal variation, discourse analysis, multilingualism, language, and cognition and the role of language in education.

46.450 Peoples and Cultures of South America (3) - Surveys introduction to the aboriginal, non-literate cultures of South America including the ecological background, archaeology and cultural patterns.

46.470 History of Anthropological Thought and Theory (3) - Intensive survey of the leading methods and theories of anthropological and ethnological interpretation with special emphasis on the concept of culture and its practical application to modern problems.

Psychology

Administered by Department of Psychology

48.406 Psychology Seminar (3) - Provides for an advanced consideration of significant topics in psychology. Requires reports and discussions of current research and may be repeated with change in topic. Prerequisite: 48.101 and consent of the instructor.

48.436 Theories of Personality (3) - Provides a critical study of theories explaining development, structure and organization of personality. Considers personality from psychoanalytic, social, trait, self and learning points of view. Prerequisite: 48.101, 48.160, 48.281 (minimum grade of C in each), 48.282 or consent of instructor. Offered fall semester only.

48.451 Laboratory Training in Group Processes (3) - Offers on-going experience on topics including norm-setting, leadership, problem solving, role playing cooperation/competition and decision making. Class size limited to 20 students. Prerequisite: 48.101 and consent of the instructor. Offered fall semester only.

48.453 Organizational Psychology (3) - Describes the application of psychological theory and research to the study of industrial, business, profit and nonprofit service, military and governmental organizations. Emphasizes the interaction of individual perceptions, group dynamics, and organizational climate and strategies to maximize the satisfaction and effectiveness of each component within and between complex organizations.

Prerequisite: 48.101, 48.253, or consent of instructor. Offered spring semester only.

48.464 Advanced Experimental Design (3) - Presents an advanced consideration of the planning, conduct, and evaluation of research in the behavioral and biological sciences, employing parametric and non parametric statistics. Emphasizes inferential statistics, design, analysis, interpretation and computer utilization. Prerequisites: 48.101, 48.160, 48.281, 48.282, or consent of the instructor.

48.466 Independent Study in Psychology (3) - Studies a topic via either review and research of technical psychological literature or empirical manipulation of variables in the field or laboratory under supervision of a psychology faculty member. Requires written report on results of study. Prerequisites: Consent of the instructor, departmental approval and approval by the dean of the College of Arts and Sciences.

48.497 Psychology Practicum (3-15) - Provides application of psychological knowledge through study, observation and practice in a community. May be repeated for a total of 15 semester hours. Prerequisites: 90 credit hours and completion of 48.101, 48.160, 48.281 (minimum grade of C in each) and consent of the instructor.

48.576 Theories of Human Learning (3) - Studies the historical and contemporary learning systems and models which yield principles for practical application.

Biology

Administered by Department of Biological and Allied Health Sciences

50.411 Radiation Biology (3) - Studies effects of radiation on living organisms and nuclear structure; studies fundamental properties of radiation, including physical, chemical and genetic effects on plants and animals from cells to whole organisms; studies application of radiochemicals in biological studies. Minimum of 4 hours per week including laboratory. Prerequisite: 50.232, 50.233, 53.141, or consent of the instructor.

50.432 Microbial Genetics (3) - Genetic analysis of microbes to provide insights into the molecular basis of gene action using viruses, bacteria and lower eukaryotes. Topics include DNA, genetic recombination, plasmids, transposons and

recombinant DNA. Two hours of lecture and three hours laboratory per week. Laboratory hours will vary. Prerequisite: Consent of the instructor or two of the following courses - 52.341 Biochemistry, 50.242 General Microbiology, 50.332 Genetics.

50.441 Cytogenetics (3) - The structure and behavior of plant and animal chromosomes and their effects on development are studied. The clinical significance of chromosome abnormalities in birth defects and cancer is described. Laboratory studies include microscopic techniques, cell culture methods and karyotype preparations. Two hours of lecture and two hours of laboratory work per week. Prerequisite: 50.233 or 50.332; 50.271; or consent of instructor.

50.455 Environmental Microbiology (3) - Studies the interactions of microbes with plants and animals and with each other in natural air, water and soil habitats. The roles of microbes in biogeochemical cycling, pollution and waste management are reviewed. Lab experience in sampling, counting and monitoring microbes in the environment. Four hours per week. Additional time may be required. Prerequisite: 50.242 or consent of instructor.

50.457 Entomology (3) - Studies the physiology, morphology, behavior, classification and general biology of the insects. A collecting period provides an opportunity for students to collect, mount and properly display insects for study. Taxonomic emphasis limited to order and family. Equivalent to 5 hours per week including laboratory.

50.462 Plant Anatomy (3) - Outlines recent concepts of plant anatomy and historical consideration of classical researchers. Reviews structure, function, growth and morphogenesis of the vascular plants. Addresses composition and growth of meristems and the phenomena of subsequent tissue differentiation to increase appreciation of development events. Describes anatomical organization by developmental and comparative methods in order to explain important cell, tissue and organ relationships. Two hours lecture, 3 hours laboratory per week. Prerequisite: 50.120.

50.463 Biological Photographic Techniques (3) - Presents theory and practice of photography as applied to biology including negative and

printmaking, gross specimen photography, copying, transparencies, filmstrips, autoradiography, nature work in close-ups, photomicrography, thesis illustrations and other special techniques. Two hours lecture, 3 hours laboratory per week. Additional laboratory hours may be required.

50.530 Evolution (3) - Examines major events in the history of life on Earth. Examines theoretical models of evolutionary processes and the evidence of evolutionary change from studies of fossil and extinct species. Three hours lecture per week.

50.531 Developmental Biology (3) - Study of progressive changes and transformations that occur during the existence of various model organisms. Morphogenesis, differentiation, metabolism and genetic control are discussed. Laboratory studies use amphibian eggs collected locally and other selected embryologic and microscopic material. Four hours per week. Offered in spring semester.

50.532 Molecular Genetics (3) - Study of macromolecules, macromolecular complexes, protein synthesis, gene regulation and chromosome structure with emphasis on the eukaryotes. Three hours lecture/seminar per week.

50.550 Mycology (3) - A critical survey of the kingdom Fungi with emphasis on the Ascomycota, Basidiomycota and Deuteromycota. Lectures cover morphology, physiology, biochemistry, cytology, genetics, systematics, ecology and evolution. Laboratory sessions stress comparative morphology of higher fungi, laboratory techniques and field mycology. Two hours lecture/3 hours laboratory per week.

50.551 Conservation Biology (3) - Presents the science of preserving biodiversity and sustaining the Earth. Draws on and synthesizes information from the fields of ecology, evolution, genetics, philosophy, economics, sociology and political science. Emphasis on the development of strategies for preserving populations, species, biological communities and entire ecosystems in the face of growing human populations and our impact on the environment. Brings scientific principles and theory to the problems of management for preserving the richness of life on Earth. Three hours of seminar per week.

50.559 Ornithology (3) - Presents the biology

of birds along with bird identification in the field and from museum collections along with a review of ornithological literature. Emphasis on bird vocalizations, behavior and morphology in making identifications. Students deliver a presentation on an ornithological topic and participate in class discussions. Field trips to study birds of the area also include an extended trip to an area such as Wallops Island, Va. Extra costs of approximately \$50 will be incurred for the extended trip. Two hours lecture, three hours laboratory per week. Off-campus field trips are required.

50.560 Population Biology (3) - Provides a rigorous treatment of the characteristics of natural populations of animals, plants and fungi. Introduces students to current concepts in speciation, ecological models of population structure and dynamics and principles of population genetics. Stresses current research, theoretical and computational mathematical models and current techniques in the study of populations. Additional time commitments and costs will be incurred for required extended off-campus field trips. Three hours of lecture/discussion per week.

50.561 Animal Behavior (3) - An in-depth introduction to modern behavioral biology, ecology and evolution. Emphasizes current models of animal behavior and theoretical foundations of ethology. Project oriented. Students master appropriate theory, familiarize themselves with appropriate literature and apply principles in project designed by the students under the direction of the professor. Additional time commitments and costs will be incurred for required off-campus field trips. Three hours of lecture discussion, two hours laboratory per week.

50.570 Medical Parasitology (3) - Presents life history, physiology, taxonomy and morphology of parasites of medical importance to humankind. Special attention given to clinical aspects such as pathology, symptomology, diagnosis, prevention and treatment. Laboratory work stresses identification of parasitic disease through living and preserved material, proper handling of specimens and methods of professional patient interviewing.

50.571 Endocrinology (3) - Studies the individual glands of the endocrine system with respect to their development, morphology, function, regulation and significance in integrating

physiological activities of higher vertebrates. Three hours lecture per week.

50.572 Comparative Animal Physiology (3) - Compares higher vertebrate adaptations to various environments with respect to regulation of body fluid volume and composition, core temperature and nitrogen metabolism. Four hours per week.

50.573 Systemic Physiology (4) - Examines how normal body function is maintained by the precise control and integration of the specialized activities of various organ systems. Three hours lecture, 3 hours laboratory per week.

50.575 Cell Physiology (3) - Applies physical and chemical principles to cellular processes, biochemistry of cellular constituents, physiochemical environment, bio-energetics and intermediate metabolism. Three hours lecture/discussion per week.

50.576 Neuromuscular Physiology (3) - Examines normal physiology of the nervous and skeletal muscular systems; specifically studying cellular neurophysiology, muscle contraction, sensory physiology, motor control and their integration. Three hours lecture and discussion per week. Background in mammalian or systemic physiology, biochemistry and anatomy recommended. Prerequisites: 50.573 or equivalent and knowledge of chemistry and electrical circuitry.

50.590 Current Topics in Biology (3) - Critically examines a specialized topic in biology in a lecture/seminar format. Topic varies each semester offered. May be repeated once, provided that the topic is different. Three hours of lecture/seminar per week.

50.591 Directed Study in Biology (3) - An independent investigation, conducted under the direction of a member of the Department of Biological and Allied Health Sciences, in an area of biology in which the student has a particular interest. Student encouraged to identify a problem, employ an experimental design and analyze collected data. Study of pertinent literature is required.

50.592 Master of Education Thesis (1-6) - Independent research and the preparation of a formal thesis in partial fulfillment of the requirements for the degree of master of education in biology.

50.593 Master of Science Thesis (1-6) - Independent research and the preparation of a formal thesis in partial fulfillment of the requirements for the degree of master of science in biology.

Mathematics and Computer Science

Administered by Department of Mathematics and Computer Science

53.411 Introduction to Group Theory (3) - Continued and advanced study of theorems and applications of group theory begun in abstract algebra. Prerequisite: 53.310.

53.421 Advanced Calculus (3) - Presents a rigorous treatment of the concepts of limit, continuity, derivative and integral for functions of a single real variable. Prerequisite: 53.226, consent of instructor.

53.421/53.521 Advanced Calculus (3) - Presents a rigorous treatment of the study of functions of a single real variable. Topics include limit, continuity, derivative and integration. Some topics for multivariable calculus include partial differentiation and multiple integration. Prerequisites: Analysis IV, Permission of Instructor.

53.422 Complex Variables (3) - Presents a rigorous treatment of the complex numbers and theory of functions of a complex variable, limits, continuity, analytic functions, Cauchy-Riemann equations, contour integrals, conformal mappings and applications. Prerequisites: 53.226, consent of instructor.

53.451 Introduction to Topology (3) - Introduces fundamentals of general topology; elementary set theory, topological spaces, mappings, connectedness, compactness, completeness, product and metric spaces; nets and convergence. Prerequisites: 53.226, consent of instructor.

53.461/53.561 Probability Models and Applications (3) - An introduction to the concepts and methods of probabilistic modeling for random trials and occurrences. It covers classical models, poisson processes, Markov chains, Renewal and Branching processes and their applications to various phenomena in engineering, management, physical and social sciences.

53.471 Numerical Analysis (3) - Provides a computer-oriented analysis of algorithms of

numerical analysis. Includes the topics of non-linear equations, interpolation and approximation, differentiation and integration, matrices and differential equations. Prerequisites: 53.322 and 53.373.

53.491 Special Topics in Mathematics (3) - Presents an area of mathematics not available as a regular course offering. Prerequisite: Consent of instructor.

53.500 Research and Communication in Applied Mathematics (3) - Practical information for scientists about research and technical writing. A study of how to prepare a manuscript and an introduction to certain basic communication principles that are accepted in most disciplines. Prerequisites: Analysis I, II, III, Probability and Statistics.

53.520 Mathematical Modeling (3) - An introduction to the concepts and methods of mathematical modelling with emphasis on the problems that arise in governmental and industrial projects. It includes modelling process, model construction including numerical considerations, testing the appropriateness of the models, model analysis and model research. Prerequisites : Analysis I, II, III or permission of instructor.

53.522 Applied Differential Equations (3) - Presents an advanced treatment of differential equations including systems of linear differential equations, systems of nonlinear differential equations and boundary value problems and their solutions, asymptotic behavior and applications. Prerequisite: Analysis III.

53.541 Applied Statistics (3) A comprehensive treatment of applications of statistical methodology in practice and development of statistical techniques for real world problem solving. Prerequisite: A first course in statistics.

53.542 Design and Analysis of Experiments (3) - Basic experimental statistics including analysis-of variance procedures, principle of experimental design, completely randomized and randomized complete block designs, factorial arrangements of treatments, linear regression and correlation analysis, covariance analysis and distribution-free methods and the Taguchi approach to parameter design.

53.543 Regression (3) - An in-depth, modern, applied approach to the study of multiple linear

regression analysis. Topics include simple linear regression, inferences in regression analysis, examination of residuals, multiple regression and model selection procedures. Prerequisites: Analysis I, II, III, Probability and Statistics.

53.544 Statistical Quality Control (3) - Presents the modern practice of statistical quality control with a strong engineering and management orientation. Prerequisite: Probability and Statistics, Applied Statistics.

53.545 Time Series Analysis and Its Application (3) - A survey of time series models, their statistical analysis and applications. It includes investigation of trend, seasonal variations, serial dependency and stationarity, and covers estimation, forecasting, and identification techniques for stationary and nonstationary autoregressive, moving average and mixed models and related computational problems.

53.563 Nonparametric Statistics (3) - Presents a comprehensive account of statistical inference using nonparametric approaches. Attempts to provide modern nonparametric techniques for data analysis with a view towards application. Prerequisite: Applied Statistics.

53.572 Operations Research (3) - Presents the principles of mathematical modeling applied to man-machine systems. Special emphasis will be given to mathematical programming models including linear and integer programming. Optimal decision models will be a focus of the course Mathematical Software. Prerequisite: Graduate Standing.

53.573 ((3) - The course demonstrates the role that computers and computer software play in mathematical modeling and research. Students will learn to use and apply various types of software including a spreadsheet such as Lotus 1-2-3, a computer algebra system such as Mathematica and a statistical analysis system such as SAS. Prerequisite: Graduate Standing.

53.574 Advanced Discrete Mathematics (3) - Includes discussion of topics such as combinatorial analysis (enumeration of various types of objects), discrete structures (for example, sets, relations, graphs and finite state machines), algorithmic thinking (development, implementation, and verification of algorithms) and applications of these ideas to diverse fields (such as business,

linguistics and the sciences). Prerequisites: 56.121 (Computer Science 1), 53.125 (Analysis 1), 53.185 (Introduction to Discrete Mathematics), 53.310 or 53.314 or 53.360.

53.576 Computer Graphics for Instructional Applications (3) - Sequel to 53.375 where techniques for creating color, graphics, and sound are examined and applied to the development of instructional computing programs.

53.592 Special Topics (3) -

53:471/56.571 Numerical Analysis (3) - A graduate level course in numerical analysis in the areas of nonlinear equation and systems of equations, interpolation theory, numerical integration, differential equations, numerical solution of linear systems and the matrix eigenvalue problems. The original problems to be solved and the numerical methods will be studied, including the derivation of the method, error analysis, convergence analysis and computational implementations. Prerequisites: Calculus III, Fortran and an elementary numerical method course (or permission of instructor).

56.576 Networks: Configuration and Implementation (3) - Introduces students to terminology, concepts, hardware and software related to the establishment of a local network and provides hands-on experience in the procedure necessary to install both a PC and Macintosh-based local area network.

Physics

Administered by the Department of Physics.

54.421 Solid State Physics (3) - Examines physical properties of matter in the solid state. Reviews basic quantum concepts, crystal structure, electrons in metals, electrical conductivity, semiconductors, band theory and the p-n junction. Studies dielectric and magnetic properties of matter. Three hours of class per week. Prerequisite: 54.310, 54.314; Mathematics 53.225.

54.422 Thermodynamics (3) - Presents concepts and principles of classical thermodynamics, thermodynamics of simple systems, introduction to kinetic theory and statistical thermodynamics. Three hours of class per week. Prerequisite: 54.212, or 54.112 with consent of instructor; Mathematics 53.225.

54.450 Introduction to Quantum Mechanics

(3) - Examines the development and interpretation of Schrodinger's wave mechanics, its mathematical formalism, and the results and predictions of this quantum theory as applied to one-dimensional systems, the hydrogen atom and multi-electron atoms. Three hours class per week. Prerequisite: 54.310; Mathematics 53.225.

Marine Science

Administered by Departments of Biology and Allied Health Sciences and Geography and Earth Science

55.431 Ecology of Marine Plankton (3) - Studies phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons made between the plankton populations of various types of habitats in relation to primary and secondary productivity.

55.432 Marine Evolution Ecology (3) - The study of the ecological mechanisms underlying evolutionary processes. This course is broad in scope and requires that students synthesize both evolutionary and ecological concepts and theory into an understanding of how organisms adapt to their environment. Marine, estuarine and maritime organisms are used as model systems and processes which affect marine populations are emphasized.

55.464 Biological Oceanography (3) - Interdisciplinary study of the interactions between biological communities and the ocean environment as seen by distributions of coastal plankton, fish and benthic invertebrates. Projects involve boat trips to sample populations and to quantitatively document environmental variables with state-of-the-art equipment, laboratory and field experiments to determine rate processes and visits to nearby field and government laboratories. Examples of project topics include transport of plankton at barrier island passes, effect of submarine banks on fish populations, ground truth data for satellite imagery and other current topics in biological oceanography.

55.470 Research Diver Methods (3) - Study and practice of aquatic research methods using SCUBA as a tool. Advanced research diving topics include areas such as navigation, search and recovery, underwater photography, survey methods, estimating population parameters and data

acquisition while under water. Specific research techniques will be presented in the context of specific aquatic research projects conducted by students under the direction of the instructor. Basic SCUBA certification (NAUI, PADL, SSI) required.

55.490 Marine Aquaculture (3) - This course includes the theory and practice of raising organisms for food and for the aquarium trade. Techniques of raising economically important organisms from the egg stage to marketable size and their food supplies are studied.

55.491 Coral Reef Ecology (3) - A study of coral reef structure, formation, types and the relationships of reef organisms to their environment. Emphasis is given to species diversity, identification, symbiosis and effects of temperature, salinity, light, nutrient concentration, predation and competition on the abundance and the distribution of coral reef organisms.

55.492 Marine Mammals (3) - A study of the distribution, population ecology, behavior, physiology and adaptations of marine mammals. Student projects entail collecting physiological and behavioral data at field sites and at facilities studying marine mammals.

55.500 Problems in Marine Science (3) - Graduate students may pursue one of the following options: Option A - Enroll in 200, 300, or 400 level course offered at the Marine Science Center in which they desire advanced work and complete, in addition to the regular course requirements, an approved project in the area under the direction of the instructor. Written permission from the instructor is required. OR - Option B - Enroll in an Independent Research Project. To be admitted, a student must submit a research proposal to the academic committee of the Marine Science Consortium. The proposal must include the scope and duration of the proposed research, equipment and facilities required and a recommendation and approval from the student's academic adviser. Requires written permission for graduate credit acceptability from the chairperson of the graduate committee of the Department of Biological and Allied Health Sciences before registering. Copies of this approval and the instructor's permission must be forwarded to the vice president for research of the Marine Science

Center before the student arrives on station to take the course.

55.540 Environmental Science Education (3) - Field-oriented approach to environmental education with special emphasis upon coastal zones. Students relate their own disciplines to education for quality environments. Consideration will be given to sources, facilities, methods, techniques and concepts used in environmental education.

55.541 Biology of Mollusca (3) - The Mollusca is the second largest group of animals and perhaps the most diverse in terms of morphological, ecological and behavioral variations. This course offers an evolutionary, functional and ecological approach to studying this important group of organisms.

55.570 Research Cruise - Biology (3) - A three-week session involving planning and preparations for an oceanographic research cruise of approximately eight days, actual execution of the cruise plan on board an ocean research vessel. Introduces data-processing techniques and instrumentation used by biological oceanographers. Prerequisite: 55.241 or its equivalent, or permission of the instructor.

55.593 Behavioral Ecology (3) - Designed to present animal behavior within an ecological and evolutionary context. Presents mathematical and theoretical framework of behavioral ecology. An in-depth exploration of the ways in which the behavior of animals is influenced by the environment, especially with regard to resource distribution.

Instructional Technology

Administered by Department of Instructional Technology.

55.540 Technology Planning Across the Curriculum (3) - Examines a systematic process for the identification, selection, use, and evaluation of technology within the curriculum. Students create technology plans for the classroom, building and district levels. Consideration is given to a number of issues that affect the procurement and use of technology in schools. Students also choose a specific technology in which they will develop expertise for use in curriculum planning.

57.542 Technology Applications for the

Classroom (3) - Explores the role of technology in the classroom. Special emphasis is placed on the use of technology as a mind tool to create a constructivist, higher-order thinking and learning environment. Students become proficient in a wide range of technologies and apply the instructional systems design process to all projects.

57.546 Research in Instructional Technology (3) - Prepares students to evaluate and conduct research in instructional technology. Students analyze research literature in instructional technology, evaluate the various methodologies used in the research process, conduct a research project and write a research paper using a systematic approach.

57.550 Instructional Design (3) - Examines the systems approach for the design, development and evaluation of instruction and training materials. Students conduct a needs assessment and instructional analysis, write objectives, develop instructional strategies, and develop a teacher's guide and student materials. Specific emphasis is given to applying instructional design techniques to the design and development of instructional products in print form.

57.551 Advanced Instructional Design (3) - Serves as a sequel to Instructional Design (57.550) by providing additional information and practice concerning the design of effective instruction. Course goes beyond the introductory course by elaborating on the design of instructional strategies for specific learning outcomes, techniques for writing effective test items, and procedures for formative and summative evaluation. In addition, the course emphasizes learning theory, cognitive and behavioral approaches to instruction, a comparison of instructional design models and research evidence that supports instructional design practices.

57.556 Applying Theories of Learning to Interactive Technologies (3) - Focuses on the application of theoretical principles of learning and instruction to the design of instructional materials. Topics include behaviorism, information processing models, cognitive science, memory models, constructivism, cognitive strategies and the learning theories of a number of influential theorists. In addition, the course emphasizes learning theory, cognitive and behavioral

approaches to instruction, a comparison of instructional design models and research evidence that supports instructional design practices. Students critique commercial software and design two brief instructional modules incorporating specific principles of cognitive science.

57.560 Multimedia Productions (3) - Provides a survey of the major aspects of multimedia production from the user perspective. Included are hands-on experiences with hardware, software and file manipulation. Examines research and theories of multimedia as well as guidelines for the development of instructional multimedia. A course where users create and integrate media into software applications.

57.570 Introduction to Interactive Technologies (3) - Examines the fundamental concepts of computer-based learning and information systems. Specific emphasis is placed on the design, development and authoring of interactive courseware using software such as Macromedia Authorware. Emerging technologies and their potential impact upon education and training are also studied.

57.572 Authoring Tools for Cross Platforms (3) - Acquaints students with authoring tools that may be implemented on Macintosh and PC platforms. Writing code for multimedia and hypermedia applications is emphasized. Software, such as Macromedia Director, is used to develop computer presentations. Applications for use in kiosks and for training are reviewed and developed with emphasis on good design and programming techniques.

57.573 Authoring Tools for Windows (3) - Provides a careful, in-depth study of various authoring systems and authoring tools in a Windows environment. Software packages, such as Toolbook, are used to develop computer projects. Specific areas of emphasis include types of authoring software, generalized authoring options, specific techniques for planning and creating instruction using the authoring tools and principles of effective design of computer-based instruction.

57.574 Authoring Tools for Networks (3) - Provides further study of various network-based authoring languages and systems for network environments. Software and languages such as

UNIX, IconAuthor and HTML are used to develop computer projects. Areas of emphasis include types of authoring software, issues in selecting authoring software, developing various types of instruction with authoring tools, data management techniques, Electronic Performance Support Systems (EPSS) and instructional hypermedia.

57.575 Managing Multimedia Projects (3) - Provides a culminating experience in the Instructional Technology curriculum. Students are teamed together to apply concepts and skills learned in previous courses to simulate a hypothetical business environment. Student teams use a systems approach to design, develop and evaluate a comprehensive interactive computer-based multimedia project.

57.580 Instructional Applications of Internet (3) - Helps educators integrate the Internet into the curriculum to improve teaching and learning. Students learn basic and advanced concepts of the World Wide Web and the tools used to access Web sites, construct a web page, learn the educational applications of web sites and web site management. Students learn techniques for gathering, organizing and managing Internet information, apply Internet multimedia applications to the classroom, and explore emerging Internet technologies, issues and trends.

57.584 Distance Communications (3) - Prepares students with knowledge, skills and tools in the area of distance communications. Topics covered include communications, technology, delivery systems, instructional development for distance education and program quality assessment.

57.590 Graduate Internship (3) - Allows students to put into practice the theories that they have learned in previous courses. Each internship must last at least 12 weeks, be directly related to the general content of the master's program and be supervised by a professional in the multimedia field.

57.599 Master's Thesis (6) - Consists of an independent scholarly investigation in which the student designs, develops, implements and evaluates a brief instructional module to address a specific audience. Under the direction of a faculty committee, the student identifies a performance

problem in an audience of interest and works with a subject matter expert to design and produce instruction on a particular topic. The instruction is later implemented with the target audience and evaluated for its effectiveness. The student then makes the necessary revisions based on the evaluation data.

Educational Foundations

Administered by Department of Curriculum and Instruction.

60.451 Pupil Personnel Services in the Public School (3) - Comprehensive view of pupil personnel services in elementary and secondary schools; school attendance, school health programs, pupil transportation, psychological services, guidance services.

60.501 Major Philosophies of Education (3) - Interprets modern educational problems and trends in the light of philosophical viewpoints; study of primary sources of concepts and philosophies which have influenced and are influencing education.

60.502 School and Society (3) - Examines effects of social class, family and community pressures and changing patterns and standards of life in our society on the school program. Fosters understanding of these pressures and patterns so that the teacher can work effectively to encourage the good and reduce the harmful impacts of social forces in relationships of children.

60.503 History of American Educational Theory (3) - Historical foundations of American educational theory with emphasis on individuals and schools of thought which have influenced and are influencing education in America.

60.505 Comparative Education (3) - Educational ideas and practices of various countries are examined for their impact upon our culture and education. Particular attention is given to the relationship of European educational programs to the American philosophy and practice of public education.

60.506 Multicultural Education (3) - Examines problems of the urban educational system. Emphasizes growth of sensitivity to the disadvantaged youngster, in-depth examination of current research findings in areas studied, teaching strategies and resources and approaches to resolve

major problems. Discussion of polarization in critical problem areas.

60.507 Using Newspapers in the Classroom (3) - Activity-centered course that provides an orientation to the use of the newspaper in various subject areas. Provides opportunities for the development of learning experiences.

60.512 Educational Media and Software (3) - Advanced study of the role of media in the education process. Includes critical assessment of that role, selection of equipment and materials for optimum utility, a review of contemporary literature in the field and a production component involving advanced work in television, transparencies, slide-tape and computer-assisted instruction.

60.514 Home, School and Community Relations (3) - Introductory course in public relations with special reference to elementary school. Develops a philosophy of partnership between home, school and community. Considers principles, attitudes and techniques to encourage community sharing in the planning of and assuming responsibility for good schools.

60.520 Guidance and Counseling for Exceptional Children (3) - Studies needs of exceptional children in public schools (including the academically talented); guidance and counseling techniques for teachers and guidance counselors in meeting those needs; guidance and counseling for exceptional children related to the total guidance counseling program.

60.527 Classroom Management and Effective Discipline (3) - Focuses on theories of effective discipline and classroom management. Methods of planning for the beginning of the year and for establishing an effective classroom organization to promote appropriate behavior throughout the year are reviewed. Current models and major theories of discipline are reviewed and evaluated.

60.530 Guidance in the Elementary Schools (3) - Covers concepts and techniques of the guidance process in the elementary school, behavioral and developmental problems and releasing creative capacities of children.

60.533 Measurement and Evaluation in the Elementary School (3) - Emphasizes construction, administration and interpretation of group tests of intelligence, achievement, aptitude and

personality in elementary schools.

60.534 Creativity for Teachers (3) - Helps teachers become more creative in their approaches to students and subject matter. Emphasis on understanding the creative process, recognizing the creative child, and development of the creative potential of student and teacher.

60.550 Problems in Guidance and Counseling (3) - Covers philosophy of guidance; history of the guidance movement; guidance needs of children and adolescents; methods of gathering data; nature of school records; interpretation of test results and inventories; use of occupational information and data; interviewing and counseling techniques.

60.551 Techniques in Counseling (3) - Focuses on theories, principles, and practices of counseling; development and use of counseling materials such as test results, educational information and other pertinent materials.

60.552 Organization and Supervision of Guidance (3) - Examines types of guidance organizations used in schools and their effectiveness in providing for good guidance.

60.553 Group Processes in Guidance (3) (Experimental) - Enables learners to acquire a working knowledge of the group process and strategies for facilitating communication in groups. The nature and function of groups will be explored. Through theory and practice, teachers learn and practice skills in leading groups, empathic listening, discussion and decision-making. Teachers also learn to enhance students' self-awareness and self esteem in a group setting.

60.561 Measurement and Evaluation in the Secondary Schools (3) - Examines construction, administration, and interpretation of group tests in intelligence, achievement, aptitude and personality in secondary schools.

60.573 Introduction to Educational Administration (3) - Focuses on examination of the functions and tasks of educational administration. Issues include the evolving school setting; the meaning, development, and work of school administrators; educational systems analysis; school personnel administration; administrative and organizational behavior; and career ladders in educational administration.

60.576 School Law and Finance (3) -

Considers limitations established by local, state and federal laws relating to the interactions of school personnel. Special attention to recent changes resulting from judicial decisions. Covers fiscal control of education with emphasis on local budgetary problems.

60.577 Educational Research for Supervision (3) - Considers development of ability to read and interpret educational research and apply it to a school situation. Conclusions concerning curriculum content and teaching strategies designed for the improvement of the educational process are emphasized.

60.578 Group Processes in Supervision (3) - Emphasis on group processes, communication in the group and organizational goals related to educational supervision. Focuses on knowledge of and practice in laboratory experiences in group processes and applicability to supervision. Experiences provide opportunities for experimenting with and evaluating leadership skills and promoting creativity and initiative.

60.579 Supervision of Curriculum and Instruction (3) - Examines objectives, techniques and materials of staff supervision; defines the supervisory function directed toward the improvement of instruction with emphasis on the interrelationships between the humanistic aspects of education and democratic administrative behavior; studies roles of contemporary supervision with respect to educational quality assessment, interpersonal relations and the catalytic role of the supervisor.

60.580 Practicum in Supervision of Curriculum and Instruction (3) - Field-based practicum experience that places the candidate for a Curriculum and Instruction N-12 Supervisory Certificate in a cooperative relationship with an individual in a school setting responsible for the overall planning, coordination, implementation, and evaluation of a curricular and instructional program. Competency-based experiences discussed in a weekly seminar. Evaluation of the candidate's performance based on achievement of specified competencies.

60.581 Independent Study in Education (1-6) - Provides an opportunity for public school teachers to pursue in-service projects in cooperation with a faculty adviser. The teacher submits a

"learning contract" to an adviser designated by the department chairperson. Contract includes details of the academic goals, descriptions of the project in its relation to the goals and of a proposal for a final report, a reading list and the proposed credit. Permission to register for the course granted upon approval of the contract. Evaluation based on the written report and an examination by a committee appointed by the adviser and/or department chairperson. Students may register at any suitable time; the duration of the experience is flexible.

60.583 Seminar in Education (1-6) - Provides the opportunity for a group of teachers engaged in a common in-service project to use the resources of the university and its faculty. A "learning contract" similar to that of 60.581 is submitted by the group as a basis for permission to register. Papers relate to aspects of the project and to the literature designated in the contract. Discussion and criticism in seminar meetings under the direction of a faculty member. Evaluation is based on the seminar reports and a final comprehensive written report by the student.

60.584 Curriculum and Instructional Theory, Design and Development (3) - Competency-based course consisting of elements that provide a base in relevant theory associated with the activity of curriculum development. A review, critique and evaluation of current theoretical positions and design methodology are an integral part of the course.

60.585 Curriculum and Instructional Evaluation (3) - Competency-based course consisting of elements providing a base for the student in current theory and practice in the evaluation of school curriculum and instruction. Reviews, critiques and application of current thinking and practice in curriculum evaluation are an integral part of the course.

Elementary and Early Childhood Education

Administered by Department of Curriculum and Instruction.

62.510 Methods and Materials in Early

Childhood Education I (3) - For in-service teachers and graduate students. Study of selected areas in early childhood education. Individual or group study of subjects of interest or concern in teaching.

62.520 Methods and Materials in Early Childhood Education II (3) - See course description for 62.510.

62.521 Elementary School Curriculum (3) - Studies problems related to development, experimentation and improvement of curriculum practices in the elementary school.

62.522 Curriculum Trends in Early Childhood Education (3) - Studies the changing goals and the developing programs childbirth through age eight that are required to meet the needs of children who enter school with a variety of experiential backgrounds.

62.523 Practices in Teaching the Young Child (3) - Examination of current practices in teaching the young child with emphasis on the developmental aspects of childhood as they relate to the school program.

62.524 Knowledge and the Curriculum in the Elementary School (3) - Studies the place of knowledge in developing a curriculum. Emphasis on content influenced by innovative practices.

62.525 Current Practices in Elementary School Science (3) - Studies the problems resulting from the increased interest of children in science and the need for science instruction in the elementary grades; methods and materials for nurturing these interests and for implementing science instruction within the limits of the interests of children are presented and evaluated.

62.527 Social Studies in the Elementary School (3) - Examines contemporary trends and current research in the disciplines of the social sciences as a basis for development of a conceptual framework for a social studies program.

62.528 Language Arts in the Modern School (3) - Studies problems related to instruction in various aspects of the language arts; place of the language arts in the curriculum; current research and its practical application.

62.529 Literature for Children in the Elementary Grades (3) - Surveys ways children may encounter literature and methods that are effective in the encounter. Students become

acquainted with children's books, work with children in a storytelling experience, discover ways other than through reading by which children may experience literature.

62.530 Awareness of Environmental Education Problems for the Elementary Grades (3) - Helps classroom teacher organize environmental education activities. Areas of content include problem-solving activities, material sources, the use of resources, curriculum building, development of an awareness of environmental problems and possible solutions to them. Camping and a camp fee are required.

62.531 Environmental Education Awareness Activities and Materials for the Elementary School (1-3) - Opportunity for students to broaden their experiences in environmental education. Camping and a camp fee are required. Prerequisite: 62.530.

62.533 Values Clarification in the Elementary School (3) - Primarily for elementary education students. Emphasizes the philosophy and composition of values clarification as it applies to the elementary school child. Practical and theoretical aspects stressed as well as techniques for helping children build a value system by which they can live. Emphasis on methods which aid the teacher in becoming aware of the emotional needs of children, humanizing of the education process and improvement of working and learning relationships with others.

62.539 Current Topics in Elementary Education (3) - Investigates current thinking and research in aspects of elementary education.

62.581 Independent Study in Elementary Education (1-6) - Comparable to 60.583.

62.583 Seminar in Elementary Education (1-6) - Comparable to 60.583.

62.590 Current Research and Development in Early Childhood Education (3) - Examines recent literature and research in early childhood education, prenatal through age 8, characteristics of the learner, learning environment, learning materials and innovative programs. Departmental paper and/or curriculum projects are initiated in this course.

62.591 Learning and Development of the Young Child (3) - Surveys child development and its relationship to the early school years; the devel-

opment of the young child from prenatal through age eight.

62.592 Identification and Prescription of the Needs of Young Children (3) - Focuses on techniques of identifying the physical, emotional social and mental needs of young children and in developing appropriate prescriptive procedures.

62.593 Organization and Administration of Educational Programs for Young Children (3) - Studies the various programs in early childhood education with emphasis on the expansion and administration with regard to the selection of personnel, evaluative techniques, and curriculum procedures, school law, finance and other appropriate subjects.

62.594 Practicum in Early Childhood Education (6) - Individually prescribed course of study and activity-based learning and practice teaching. Previous experience and academic achievement reviewed. Practicum proposed and consent of program coordinator and department chairperson required.

62.595 Individualized Instruction - Principle and Practices for the Classroom (3) - Analyze practices, principles and procedures for individualizing instruction. Experiences include procedures for adapting conventional instructional modes to individualized settings.

62.596 Practicum in Early Childhood Education (3) - see 62.594.

Reading

Administered by Department of Curriculum and Foundations.

63.540 Introduction to the Teaching of Reading (3) - Focuses on recent research and trends and provides an historical perspective of reading instruction; designed to develop a knowledge base and instructional competence with different programs and approaches to reading instruction.

63.541 Diagnosis and Prescription in Reading (3) - Emphasizes the administration and interpretation of standardized tests, curriculum-based assessment and informal diagnostic techniques; analysis of extreme reading disabilities; application of practical remediation techniques; discussion of how to adapt instructional techniques to test results, a clinical environment and a class-

room.

63.543 Clinical Practicum I (3) - Clinical experience in diagnosing and remediating the reading difficulties of school-age students who have reading and/or learning difficulties; focuses on self-help strategies related to decoding, comprehension, oral reading and study skills; emphasizes the application of clinical strategies to curriculum materials and homework; written summary reports required. Prerequisites: 63.540, 63.541, 63.548 plus consent of clinic director.

63.544 Clinical Practicum II (3) - Clinical experience in applying a remedial setting; written summary reports required; when combined with the experiences acquired in 63.543, Clinical Practicum I, provides experience with different age/grade levels and practical application of various theories of reading instruction. Prerequisites: 63.540, 63.541, 63.543, 63.548 and consent of clinic director.

63.545 Organization and Administration of Reading Programs (K-12) - (3) - For classroom teachers, reading specialists and resource room specialists who are involved with a school district's reading program; emphasizes a working knowledge of certification requirements, job descriptions, guidelines for programs funded through federal or state agencies, resources for exemplary reading programs, program evaluation and parent involvement.

63.546 Reading in the Content Areas (3) - Presents theory and related teaching strategies for content area instruction in grades 4-12; topics include the reading process, textbook evaluations and strategies for improving comprehension, vocabulary and study skills.

63.547 Seminar in Reading (3) - Advanced independent work in the study of recent research in the field of reading as it is applied to curriculum, instructional materials and procedures of teaching reading.

63.548 Reading Instruction for the At-Risk Learner (3) - Emphasizes methodology related to improving the reading skills of at-risk learners; provides an overview of how Pennsylvania laws and at-risk learners affect classroom instruction; topics include historical and current theories and research on at-risk learners, diagnostic tests, learning modalities, exemplary programs and

adapting instruction.

63.549 Teaching Reading to the Hearing Impaired/Language Handicapped Child (3) - Principles, practices, methods, and materials of teaching reading to hearing impaired/language handicapped individuals; awareness of research and clinic practices which can be applied to classroom settings.

63.550 Literature, Literacy and Culture (3) - Examines psychological aspects of literacy development and implications for teaching reading, writing, listening and speaking across the curriculum; addresses the instructional needs of diverse learners.

Secondary Education

Administered by Department of Curriculum and Foundations.

65.530 Curriculum Development and Instructional Strategies in the Middle and Junior High Schools (3) - Inquires into the role of early secondary education by analyzing historical trends, curricular patterns, instructional designs and personnel structure of this organization unit. Emphasis on teacher behavior, student values and attitudes and instructional designs peculiar to junior high, middle and intermediate schools.

65.560 Development of the Secondary School Curriculum (3) - Problems related to development, experimentation and improvement of curriculum practices in the secondary school.

65.571 Evaluating Teaching in Middle and Secondary Schools (3) - Improvement of instruction through self analysis. Micro-teaching techniques, planning dimensions, self-appraisal techniques. Designed for teachers with special reference to the work of cooperating teachers.

65.581 Independent Study in Secondary Education (1-6) - Provides an opportunity for public school teachers to pursue in-service projects in cooperation with a faculty adviser. The teacher submits a "learning contract" to an adviser designated by the department chairperson. Contract includes details of the academic goals, descriptions of the project in its relation to the goals and of a proposal for a final report, a reading list and the proposed credit. Permission to register for the course granted upon approval of the contract. Evaluation based on the written

report and an examination by a committee appointed by the adviser and/or department chairperson. Students may register at any suitable time; the duration of the experience is flexible.

65.583 Seminar in Secondary Education (1-6) - Provides the opportunity for a group of teachers engaged in a common in-service project to use the resources of the university and its faculty. A "learning contract" similar to that of 60.581 is submitted by the group as a basis for permission to register. Papers relate to aspects of the project and to the literature designated in the contract. Discussion and criticism in seminar meetings under the direction of a faculty member. Evaluation is based on the seminar reports and a final comprehensive written report by the student.

Special Education/Exceptionalities

Administered by Department of Special Education.

70.501 Administration and Supervision of Education for Exceptional Individuals (3) - Application of the fundamental principles of school administration and supervision to the areas of exceptionality and to problems unique to each. School law, teacher recruitment, in-service education, organization and integration of special education and ancillary services, evaluation of special provisions and finance as these bear on special education.

70.506 Introduction to Early Intervention (3) - Presents an overview of the field of early intervention, including historical perspectives, philosophies of early intervention, influences of disabilities on the development of young children and early intervention models.

70.507 Family-Centered and Inclusive Practices in Early Intervention (3) - Provides students with information, strategies and practical application of best practices in early intervention, specifically with regard to family-centered practices, communication and collaboration, observation and assessment, inclusion and adaptations. Prerequisite: 70.506.

70.508 Experiences in Early Intervention (1-6) - Provides students with the opportunity to apply theory, best practices and knowledge in early intervention environments with identified fami-

lies and children, ages birth-6, with disabilities. Prerequisites: 70.506, 70.507.

70.516 Psychology of Exceptional Individuals (3) - Symptomatology personality formation and developmental and therapeutic consideration for the exceptional individual.

70.522 Assessment and Remediation of Mathematics for Special Needs Students (3) - Provides an overview of the concepts of hierarchy of skills, computation and application of addition subtraction, multiplication, division, fractions decimals, time and measurement. Students will administer and interpret achievement, diagnostic and curriculum-based mathematics assessment. Emphasis on development of remedial math programs, adaptations of math curriculum for special needs students and design of a functional mathematics curriculum for moderately disabled students. Students evaluate, design and implement a math program for elementary, middle school and/or secondary students. Math education software, manipulatives, games and materials will be evaluated and utilized.

70.525 Educating Individuals with Moderate/Severe Disabilities - (3) Presents an orientation to the nature and challenge of educating individuals with moderate/severe disabilities. Theory and technique for individual assessment curriculum development and instructional strategies are provided. Content focuses on the dynamics of integrating students into home, school and community environments.

70.526 Transition Services for Individuals with Special Needs (3) - Presents an overview of methodology and service structures that facilitate the successful transition from school to adult living for individuals with special needs. Examination of individual vocational assessment development of functional vocational curriculum and the instruction of vocational competencies will be content focus. Issues related to the transition planning process are presented.

70.533 Language Arts for Students with Special Needs (3) - Will provide preservice teachers with a comprehensive overview of skills, assessment and strategies for teaching listening, speaking, reading and written expression. A holistic philosophy for teaching language arts will be stressed. Students will prepare a portfolio o

resources and "best practices" for teaching language arts to students with special needs.

70.544 Diagnostic and Remedial Techniques (3) - Diagnostic and remedial techniques and instruments used with children in special education programs. Critical evaluation of applicability of each to the child in relation to causes and conditions of exceptionality. Development of skills in interpreting and writing case histories and reports in selection and application of remedial techniques and evaluation of progress. Prerequisite: Course in tests and measurements or its equivalent.

70.547 - Technology and Exceptional Individuals (3) - Provides an introduction to technology as it is being applied to meet the needs of exceptional individuals. Both simple and high technology solutions are explored as they relate to meeting the needs of individuals with mental, physical, sensory and communication disabilities. Topics include instructional tools and adaptations, environmental interfaces, prosthetics, as well as data and productivity tools.

70.550 Teaching Methods for Individuals with Mild and Moderate Disabilities, Elementary (3) - Presents principles for effective teaching techniques and current best practices applicable to elementary students with diverse learning needs and abilities. Provides awareness of role expectations of the special education teacher, practice collaborative problem solving and selecting and adapting instructional materials for students with special needs.

70.551 Teaching Methods for Individuals with Mild and Moderate Disabilities, Secondary (3) - Will familiarize students with a variety of instructional techniques used to enhance the learning process of individuals with disabilities at the secondary level. Information pertaining to current issues in secondary special education and their impact on service delivery will also be discussed.

70.552 Projects in Special Education (3) - Designed to further a student's own interest and competency in an area of special education for the exceptional child. Library research or individual projects involving service to the exceptional person may be agreed upon and conducted under supervision of a staff member.

70.556 The Mentally Gifted Individuals (3) -

Principles and practices that are modifying school programs to conserve and develop to the optimum degree the capabilities of the more able individuals. Covers teaching techniques and devices used effectively in both the elementary and the secondary school.

70.559 Seminar in Education of Exceptional Individuals (3) - Facilitates an in-depth study of the research pertaining to the fields of mental retardation and learning disabilities, including the study of psychosocial retardation and brain injury. Includes detailed study of behavioral and cognitive development of individuals with mental retardation and learning disabilities.

70.562 Issues of Individuals with Physical Disabilities (3) - Provides information and experience with educationally relevant motor disabilities. Covers normal motor development; formal and informal assessment of motor skills and problems; developmental and corrective preschool and elementary school programs; conditions resulting in severe motor disabilities, self-care, academic and psycho-social aspects of physical disability; prevocational and vocational adjustment of the physically handicapped; and current issues related to research and litigation.

70.565 Reading and Interpreting Research in Special Education (3) - Aids the student in reading, understanding and evaluating the results of statistical and behavioral research carried out by others. Covers a working knowledge of basic statistical terms, an introduction to the type of research questions that can be answered by various statistical procedures, a knowledge of the basic steps of hypothesis testing, analysis and comparison of excellent and poor research designs and the development of an ability to detect misuse of statistics.

70.570 Foundations of Behavior Disorders (3) - Covers characteristics of children with behavior disorders, approaches to remediation, general principles of classroom management, simulated problem solving, ideal academic models for children with behavior disorders, research findings and sources of information.

70.572 Seminar on Behavior Disorders (3) - Seminar group composed of those who wish to read and discuss current material related to the area of behavior disorders. Group reads new

research and discusses implications for applications, as well as future directions, moral issues and more advanced systems of management and instruction.

70.575 Seminar in Current Issues in Special Education (3) - Will provide students with a forum to review and analyze current trends and issues in special education. The content of the course will change as current trends and issues emerge.

70.591 Practicum in Special Education (3) - Graduate experience for students in a setting with exceptional persons. Student spends a minimum of eight hours per week in practicum and meets regularly in a seminar fashion with the university instructors.

70.595 Internship (3-6) - Internship in special education. Supervision to take place in schools or educational situations under supervision of the local supervisor and graduate faculty.

70.596, 597, 598 Special Workshop I (1-6) - Temporary special workshop seminars designed to focus on contemporary trends, topics and problems in the field of special education. Lecturers, resource speakers, team teaching, field experience and practicum, new media and related techniques. Usually workshops are funded projects.

Audiology/Speech Pathology

72.500 Measurement of Hearing Loss (3) - Studies anatomy and physiology of the hearing mechanisms. Covers etiology of hearing losses, interpretation of audiometric evaluations and available rehabilitative procedures. Lab experience in the administration of clinical audiometric evaluation is provided. Prerequisite: 72.200, 72.300.

72.502 Physiological Methods in Audiology: Brainstem Evoked Response Audiometry and Electronystagmography (3) - Study of the electrophysiological techniques used to assess cochlear and retrocochlear function. Review of theories and clinical applications of vestibular tests, auditory brainstem evoked responses and electrocochleography.

72.504 Hearing Aids and Auditory Training (3) - Theoretical and clinical analyses of literature in relation to educational and other rehabilitative

measures available to individuals with serious organic and nonorganic hearing problems. Study, interpretation and evaluation of modern instruments and tests included.

72.506 Externship: Clinical Practicum in Audiology I (6) - Hearing losses and deafness affecting the personal and socio-economic adjustment of individuals evaluated and treated through supervised study and experience. Externships may be arranged in approved private and public institutions.

72.508 Externship: Clinical Practicum in Audiology II (6) - See course description for 72.506.

72.510 Research in Audiology (3) - Application of clinical and non-clinical research literature to the solution of diagnostic and treatment problems encountered in the general practice of audiology.

72.512 Seminar in Audiology: Special Problems (3) - Analysis, interpretation and study of selected problems in audiology and related disciplines that may include education, psychology, otology, rehabilitation and other fields.

72.514 Seminar in Audiology: Industrial and Public Health Audiology (3) - Problems and programs of hearing conservation in public institutions and industries examined with special emphasis on legislation and medico-legal questions. Examines role and function of the public health and industrial audiologist.

72.516 Seminar in Audiology: Auditor Problems in Children (3) - Congenital and acquired hearing impairment in children examined with special emphasis on problems of differential diagnosis. Educational and social implication of hearing impairment in children discussed in conjunction with appropriate rehabilitative procedures.

72.518 Seminar in Audiology: Theoretical and Clinical Masking (3) - Neurophysiological and acoustic basis of problems of masking in auditor measurement explored and training offered in clinical masking procedures.

72.520 Educational Audiology (3) - Deals with the diagnostic and rehabilitative aspects of audiology in the educational setting. Examines the effects of hearing loss on speech and language development, the use of amplification in the

schools and educational audiology alternatives and models.

72.522 Aural Rehabilitation: Theory and Practice (3) - Habilitation/rehabilitation of the hearing impaired including auditory training, speech reading, hearing aids, assistive listening devices, communication strategies and counseling. Emphasis on the sensory capabilities (auditory, visual, tactile and auditory-visual training) - of the hearing impaired with practicum lab.

72.524, 72.525, 72.526, 72.527, 72.528 Clinical Methods and Practicum in Audiology (3) - Emphasizes the Speech, Hearing and Language Clinic as an integral part of the teaching-training program of the Department of Communication Disorders. The clinic provides outpatient diagnostic and therapeutic services for persons of all ages with speech, hearing and language problems, including students, other members of the university community and residents of the Bloomsburg area; serves as an extension of the classroom where students can apply and study evaluation procedures, therapeutic methods, techniques and materials and the classification and etiology of speech and hearing disorders; gives students an opportunity to relate text and lecture information to actual clinical cases under the close supervision of certified staff. Students gain experience in all aspects of remediation - diagnosis, therapy, counseling and report writing - with a wide variety of clients.

72.530 Fundamentals of Audiology (3) - Designed for graduate students who are not audiology majors such as, but not limited to, students in speech pathology, education of the hearing impaired, reading, nursing, or special education. Presents a synopsis of the primary concepts in diagnostic and rehabilitative audiology. Attempts to relate the possible implications of the audiological topics to each of the fields of study listed above.

72.532 Instrumentation and Electronics: Clinical and Hearing Science (3) - Emphasis on solving practical equipment problems and understanding the operation of equipment used in clinical practice and hearing services.

72.550 Adult Aphasia (3) - Studies language disorders in brain-injured adults. Areas of concentration include history of aphasia, neurologi-

cal basis for aphasia, symptomatology of aphasia, associated problems, intelligence and aphasia, evaluation of language and non-language functions and current rehabilitative procedures.

72.552 Preschool Language (3) - Reviews normal language acquisition with primary emphasis on the application of developmental information to the diagnosis and habilitation of language disorders in children.

72.554 Stuttering (3) - Studies the development, diagnosis and treatment of stuttering disorders with equal emphasis on academic understanding and clinical management.

72.556 Phonology (3) - Examines language-based disorders of articulation. Emphasis on identification, description and remediation of phonological disorders. Generative and natural phonological processes are discussed.

72.558 Clinic I (3) - Provides a variety of supervised clinical experiences related to management of individuals with communication disorders in the Speech, Hearing and Language Clinic. Students participate in various aspects of evaluation and treatment while accumulating ASHA clinical hours. Experiences include assessment, goal setting program planning, individual and group therapy; conferencing, report writing and clinical problem solving.

72.560 Voice Disorders (3) - Studies diagnosis and clinical management of functional and organic voice disorders.

72.562 Language Disorders of School Aged Children (3) - Explores disorders of later language acquisition and the interaction of language disorders with academic achievement, especially in the acquisition of literacy skills. Diagnostic assessments and treatment approaches are developed.

72.565 Disorders of Speech in Children and Adults (3) - Considers the neuromuscular and structural disorders that may affect the speech process as an aerodynamic mechanism. Special emphasis on the adult, cerebral palsy, cleft palate and dysarthrias.

72.566 Clinic II (3) - See course description for 72.558.

72.568 Speech Habilitation in the Schools (3) - Examines the profession of speech and language pathology in a school setting as it interacts with

the other school-related disciplines. Emphasis is placed on facilitating of communication among the disciplines.

72.570 Adult II - Secondary Language Disorders (3) - Study of secondary disorders of language in adults. Special emphasis on disorders of right hemisphere damage, dementia and schizophrenia.

72.572 Augmentative Communication (3) - Explores the field of augmentative communication and non-speaking persons. Topics include candidacy issues, assessment, vocabulary configuration, symbol selection and communication interaction training for language board and electronic device users. Examines current research practices and studies in communication interaction patterns of non-speaking individuals.

72.574 Seminar in Communication Disorders (1-6) - Selected theoretical and clinical areas of communication disorders and related disciplines. Selected areas may include clinical and research topics pertaining to student needs.

72.576 Clinic III (3) - See course description for 72.558.

72.580 Communication Disorders of the Traumatically Head Injured (3) - Studies the nature of traumatic head injuries, emphasizing assessment and treatment of resultant cognitive communication disorders.

72.582 Research in Speech and Language Pathology (3) - Application of clinical and non-clinical research literature to the solution of treatment problems encountered in speech and language pathology.

72.584 Field Experiences I (3) - Considers special clinical problems of clients through advanced study and experience. Externships in approved institutions or schools. Problem areas and student practicum must be approved by a graduate adviser.

72.586 Field Experiences II (3) - See course description for 72.584.

72.590 Independent Study and Research (3) - Permits students to work under close faculty guidance on library study of specified areas or on individual research projects when particular needs cannot be met by registration in regularly scheduled courses.

72.591 Independent Study and Research (3) -

See course description for 72.590.

72.592 Workshop in Audiology and/or Speech Pathology (3) - Temporary workshops/seminars designed to focus on contemporary trends, topics and problems in the fields of audiology or speech pathology. Guest lecturers, resource speakers, team teaching, field experience and practicum, new media and technologies and related techniques and methodologies are concepts that might be incorporated into one of the workshops/seminars.

72.593 Workshop in Audiology and/or Speech Pathology (3) - See course description for 72.592.

72.594 Workshop in Audiology and/or Speech Pathology (3) - See course description for 72.592.

Studies in Hearing Loss

Administered by Department of Communication Disorders

74.490 Counseling Needs of Communicatively Disordered Individuals and Their Families (3) - Designed to help students identify counseling needs of communicatively disabled individuals and their families and to provide basic, short-term counseling. Students introduced to various counseling strategies in individual and group settings as appropriate to schools and speech and hearing clinics.

74.501 Introduction to Sign Language (3) - Involves a study of basic sign language vocabulary and fingerspelling techniques used in communication with deaf/hard of hearing individuals. Emphasis on developing proper expressive and receptive skills.

74.560 Practicum with the Deaf/Hard of Hearing (3) - Provides an opportunity to work with deaf/hard of hearing children and/or adults. Emphasis on speech and language remediation of deaf/hard of hearing individuals. Prerequisites: 74.564, 74.566 and 74.567 (concurrently).

74.564 Speech for the Deaf/Hard of Hearing (3) - Study of the principles and techniques used in development and formation of English speech sounds by the synthetic and analytic methods with special consideration given to production, classification and transmission of speech sounds. Supervised demonstrations and practica are an integral part of the course.

74.565 Problems and Trends in Teaching the Deaf/Hard of Hearing (3) - Focuses on current practices and trends in education and welfare of deaf/hard of hearing individuals. Concerned with psychology, social adjustment, educational achievement, political and social viewpoints, learning problems and vocational competence of the deaf/hard of hearing. New techniques and methodologies.

74.566 Language for the Deaf/Hard of Hearing I (3) - Study of the principles and techniques used in the development and correction of language for deaf/hard of hearing individuals. Student is familiarized with leading systems of natural language development designed for the deaf/hard of hearing. The step-by-step development of at least one language system is required for each student. Supervised demonstrations are an integral part of the course.

74.567 Language for the Deaf/Hard of Hearing II (3) - Study of structured approaches to teaching spoken and written language, of language assessment devices and appropriate lesson planning. Supervised demonstrations and presentations are an integral part of this course.

74.568 Advanced American Sign Language (3) - Study of the expressive and receptive components of American Sign Language with an emphasis on communicating with the deaf.

74.569 Curricular Subjects for the Deaf/Hard of Hearing (3) - Examines practices, content and methods of teaching school subjects to the deaf/hard of hearing with emphasis on content and methods rather than theory.

74.570 Student Teaching with the Deaf/Hard of Hearing (6) - Evaluates hearing losses affecting the communicational, educational and vocational adjustment of individuals through supervised observation, classroom practice and practicum experience. Students are assigned to approved private and public programs for the deaf/hard of hearing and work with selected professionals in education of the deaf/hard of hearing, following the same schedules and responsibilities similar as professionals. Arrangements relating to student interest must be approved by program adviser. Permission of curriculum coordinator required.

74.580 Independent Study and Research (3) - Permits students to work under close faculty guid-

ance on library study of specified areas or individual research projects when particular needs cannot be met by registration in regularly scheduled courses.

74.581 Independent Study and Research (3) - See course description for 74.580.

74.584 Research in Education of the Deaf/Hard of Hearing (3).

74.599 Master's Thesis (3 - 6).

Professional Studies

Administered by Department of Curriculum and Foundations.

79.591 Research in Education (3) - Studies methods and techniques used in educational research; development and interpretation of statistical data and application to professional problems.

79.593 Studies in Human Diversity (3) - Designed for teachers seeking an advanced degree in education. Broadly based and field-based oriented. Provides additional opportunities to integrate new learning and classroom experiences in these areas: human development, language and culture, learning modes and styles, multicultural and exceptional studies and an understanding of the social and cultural milieu.

79.599 Thesis (6) - Student demonstrates ability to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern. The problem area selected for the research project must be related to the curriculum that the student is pursuing.

Health Sciences

80.500 Health Sciences Internship (3-6) - Provides students in the multidisciplinary health sciences an opportunity to apply acquired knowledge in an on-site practicum experience under the supervision of an appropriately credentialed preceptor.

Nursing

Administered by Department of Nursing

82.500 Applied Statistics for Health Professionals (3) - Applies principles and methods of statistical analysis of data in the health professions. The course emphasizes statistical con-

cepts as a set of principles and a way of thinking for health professionals. Course is not required. Prerequisites: high school algebra, basic statistics course or consent of the instructor.

82.501 Theoretical Bases for Role Development in Advanced Nursing Practice (3) - Examines theoretical formulations related to role development in advanced nursing practice. Students use concepts, principles and strategies inherent in a variety of theories (i.e., systems, change, professional socialization and role) to serve as a framework for the development and enrichment of their advanced practice roles. Theory building, the relationship of models to theories and major conceptual and theoretical models in nursing practice are also introduced. Students analyze and apply tenets of a select conceptual model of nursing to their own philosophy of advanced nursing practice. Leadership principles are also incorporated as students identify an actual or potential issue or problem related to their advanced practice role and design a proposal for planned change.

82.502 Epidemiology: Concepts and Principles for Advanced Nursing Practice (3) - Focuses on conceptual orientation and knowledge of techniques from epidemiology as a basis for all aspects of population-based practice in advanced nursing. Epidemiological perspective presented as a framework for assessing the well-being of populations and designing, implementing and evaluating strategic nursing and health care investigations. Students apply basic epidemiologic research designs in the investigation, analysis and proposed solutions to observed patterns of health states in contemporary populations.

82.503 Bases for Research for Advanced Nursing Practice (3) - Builds on previous knowledge of research and statistics to enhance student application, use and development of nursing research to improve the quality of health and health care delivery. Principles and strategies inherent in scientific inquiry, critical evaluation and the research process are applied. Focuses on identification of a researchable problem in clinical nursing practice, conduct of a review and critique of relevant literature, selection of a conceptual or theoretical framework and identification of an appropriate research design and methodol-

ogy to study the problem. Students plan, develop and present a research prospectus using appropriate scholarly format and style.

82.504 Pathophysiology for Advanced Nursing Practice (3) - Presents pathologic mechanisms of disease that serve as a major component in the foundation for clinical assessment and management of individuals, essential for advanced nursing practice. Primary focus is on applying pathophysiological mechanisms to explain illness phenomena and in assessing an individual's response to the pharmacologic management of illnesses. Major laboratory studies useful for verifying abnormalities are discussed. Builds on knowledge from undergraduate courses through pursuit of content in greater depth and synthesizing and applying research-based knowledge.

82.507 Pharmacology for Advanced Nursing Practice (3) - Applies principles of pharmacology to advanced nursing practice of adults. Emphasis is on physiological mechanisms of drug action and significant adverse reactions. Presents proper prescribing and monitoring procedures for various drug regimens used to treat common disease states. Discusses self-medication, multiple drug interactions, legal, ethical and sociological implications of drug therapy and patient teaching. Presents alternative "drug" therapies. Prerequisite: 82.504.

82.508 Adult Health Assessment and Promotion (6) - Focuses on developing the student's competence in performing health assessment of adults. Learning experiences are provided for synthesizing cognitive knowledge with psychomotor skills. Throughout the course, emphasis is placed on health assessment, communication, analysis of data, written and verbal presentation of data and issues related to health promotion and disease prevention in adults. Prerequisite or corequisite: 82.504.

82.511 Community Health Nursing I (6) - Focuses on the role development of the clinic nurse specialist in community health nursing. Students apply advanced knowledge, skills and critical thinking in the competent use of the nursing process with populations and the community as a whole. Evaluation and refinement of a model for advanced practice provide a framework for the student's development of the multifaceted

roles of practitioner, educator, researcher, consultant and leader/manager. Leadership principles and strategies are applied as students assess and analyze the health status and determinants of health of populations and the total community. Students collaborate and coordinate with other community health nurses, a variety of providers and clients in a diversity of settings to plan and develop innovative programs designed to meet identified health needs of risk populations in the community. Weekly seminars assist and enable the students to participate in the analysis of current community health issues, develop research skills and understand the development and operationalization of health policies within community health programs. Prerequisites: See clinical option adviser.

82.512 Adult Health and Illness Nursing I (6) - Focuses on the role development of the clinical nurse specialist in adult health and illness. Students apply advanced knowledge, skills and critical thinking in the competent use of nursing process, therapeutic interventions and technology to administer nursing services to a specific adult population to facilitate optimal wellness and to impact on the delivery of adult health care. Evaluation and refinement of a model for advanced practice provide a framework for holistic care of adult clients and one's development of the multifaceted roles as practitioner, educator, consultant and leader/manager. Leadership principles and strategies are employed as students collaborate with adult clients, support systems and variety of providers in diverse settings to promote, restore and maintain adult health. Through social, ethical and political actions, client advocacy and change process are encouraged to affect the quality of adult health care. Weekly seminar affords student's participation in analyzing current adult health care problems, trends/issues and in evaluating and formulating strategies for health care reform. Research skills are enhanced through seminar presentations, clinical practicum and course assignments. Prerequisites: See clinical option adviser.

82.513 Management and Organizational Behavior in Advanced Nursing Practice (3) - Explores the concepts of organizational style and the theories of management behavior related to

the role of the clinical nurse specialist in advanced practice. Focuses on leadership theories, strategies for maturation and change, concepts of power and influence and organizational decision making. Prerequisite: consent of the instructor.

82.514 Independent Study (3) - Student works with a faculty preceptor in conducting an individualized study related to a particular area of clinical interest.

82.515 Diagnosis and Management of Health Problems in Adults I (6) - First of two clinical courses that focuses on diagnosis and management of health problems in adults. Emphasis on developing knowledge related to the most common problems for adults in ambulatory care, including but not limited to hypertension, cough, chest pain, dyspnea, edema and fatigue. Addresses issues related to the role of the nurse practitioner and provides opportunities to discuss these as the student begins the transition to this advanced practice role. Prerequisites: 82.502, 82.507, 82.508.

82.516 Diagnosis and Management of Health Problems in Adults II (6) - Second of a two-semester clinical sequence that focuses on the diagnosis and management of health problems in adults. Emphasis on developing knowledge related to the most common problems for adults in ambulatory care, including but not limited to sore throat, abdominal pain, headache and arthritis. Addresses issues related to the role of the nurse practitioner and provides opportunities to discuss these as the student continues transition to this advanced practice role. Prerequisite: 82.515.

82.520 Community Assessment and Planning (3) - Provides students with knowledge and skills to perform a comprehensive community assessment and develop a program for an identified health need or problem. Students use concepts from nursing theory, epidemiology, cultural principles and research to identify a community need or problem, develop a proposed solution and plan of action. Preparation of a grant proposal will be a major focus of the plan of action. Class format is seminar and collaborative group work. Prerequisite: 82.502.

82.531 Community Health Nursing II (6) - Builds upon Practicum I and concentrates on

advanced professional nursing. There is an emphasis on the student's increasing independence and self-directed learning. Through the assimilation of additional theory, students continue to apply critical thinking, communication skills, therapeutic interventions and values as they implement and evaluate community health nursing programs and interventions for selected high-risk populations. They function independently and collaboratively with others who influence the health care environment to improve the health of the community. Students continue to engage in social, ethical and political actions which initiate and effect change at the community level. Interventions that assist in the development of public policy based on the assessed needs of populations are stressed. Weekly seminars continue to focus on the analysis of current community health issues, leadership in the development of health policy and research in the advanced practice in community health nursing. Prerequisite: 82.511.

82.532 Adult Health and Illness Nursing II (6) - Concentrates on advanced professional nursing practice as a clinical nurse specialist within a specialized area of adult health and illness through independent, self-directed learning. Through self-directed learning activities, the student is facilitated to assimilate additional theory and research in advancing the student's knowledge, critical thinking, communication skills, therapeutic interventions/technology and values in advanced clinical nursing practice for adult clients. Students enhance their expertise in the multifaceted roles of the clinical nurse specialist in adult health and illness by assuming leadership/management positions in a health care setting and by functioning both independently and collaboratively with clients, support systems, other providers and community in improving the quality of adult health care. Social, ethical and political actions are employed in order to initiate and affect change regarding the development of health care policy and its effect on health care. Weekly student-conducted seminars focus on the analysis of current concepts, practices, trends, issues, health policies and research in their role enactment as clinical nurse specialists in the advanced practice of adult health and illness. Prerequisite: 82.512.

82.533 Management and Organizational Behavior in Health Care Delivery System (3) Seminar format that explores model building and the future directions of organizational structures for advanced nursing practice. Organizational theory provides the framework for organizational characteristics and identifying the organizational strategies and structures with greatest potential for promoting effective performance and organizational growth. Focuses on organizational environments and planned change in the health care delivery system. Course may be taught in another country to provide international aspects. Prerequisite: Consent of the instructor.

82.534 Adult Nurse Practitioner Practicum and Seminar (6) - Culminating clinical course for the adult nurse practitioner program. Provides the student an opportunity to apply knowledge gained throughout the program while gaining entry-level competence in the clinical area of the student's choosing. Addresses clinical and professional role issues, including management of complex patients and assessment of organizations in practice settings, quality of care and risk management and professional responsibilities of practice. Issues of professional responsibility include influence of and on health policy, continuing education, health education of the community and clinical research. Focuses on developing confidence and competence as an adult nurse practitioner. Prerequisite: 82.516.

82.590 Thesis (6) - Available as an elective. Prerequisite: see clinical option adviser.

Business Education

Administered by Department of Business

Education and Office Information Systems

90.551 Teaching Strategies in Business Education (3) - Presents teaching-learning environments based upon instruction which is geared to involve students in the assessment of their performance according to specific criteria. Emphasizes an increasing degree of professionalism and teacher competency in education today by using specific criteria for judging a teacher's effectiveness. Designed to develop teaching strategies and to evaluate the results of performance-based instruction.

90.560 Business and Office Education

Workshop (I-3) - Addresses those educational ideas and experiences that encourage, support and guide participants to acquire an increased understanding of the accumulated knowledge pertaining to the development of business skills, enhancement of business education as a profession and determination of a business and office personnel's responsibility and role in the business world.

90.564 Business Education Program Management and Development (3) - Studies basic management and curriculum theory as it applies to business education program administration and supervision. Course approached from the perspectives of planning, organizing, staffing, directing and controlling.

90.581 Seminar in Business Education (3) - Investigates and evaluates completed research in business education on particular topic area(s). Students submit written reports which are used as the basis for class discussions.

90.590 Master's Thesis in Business Education (6).

90.599 Special Topics in Business Education and Office Systems (3) - Studies current or advanced topics in the field of business teacher education and/or office systems not normally presented in other courses.

Accounting

Administered by Department of Accounting.

91.501 Financial Accounting (3) - Emphasis on asset valuation, income determination and financial accounting principles, with selected topics from the cash flow statements and interpretation of financial statements.

91.502 Advanced Financial Accounting (3) - Advanced problems in consolidated statements, stockbroker's equity, partnerships, fiduciary accounting and selected topics dealing with government units and nonprofit service organizations. Selected reference to professional literature and uniform CPA examination problems. Prerequisite: 91.501.

91.503 Government & Fund Accounting (3) - Accounting principles and practices of governments and nonprofit institutions. Comparisons between accounting principles and practices that apply to governments and nonprofit institutions

and those which are generally accepted in business.

91.521 Advanced Cost Accounting (3) - Provides a thorough understanding of the basic concepts and practical procedures of reporting cost information to business management. Special emphasis is placed upon the use of budgetary control and budget analysis; the use of standard costs; the relevance of management's costs and profit responsibility reports; and the importance of capital expenditure planning and control.

91.522 Advanced Auditing Theory (3) - In-depth examination of the audit process, including compliance with GAAS, ethical considerations, EDP auditing, use of statistical analyses, as well as current problems facing the auditing profession.

91.523 Advanced Tax Accounting (3) - Presents an in-depth analysis of Federal and Pennsylvania tax codes with particular emphasis on corporations, estates and trusts.

91.524 Managerial Accounting (3) - Introduction to the literature of accounting in management decision making. Theory, problem solving, case studies.

91.551 International Accounting (3) - Addresses the global nature of accounting in the current business environment.

91.552 Controllership Accounting (3) - An integrating course dealing with administrative problems of the accounting function; internal control system design and maintenance; relations with audit committee, CPA firm and regulatory agencies pertaining to internal and external reporting.

91.599 Special Topics (3) - This course addresses a variety of topics in accounting and allows the instructor to focus on appropriate current topics in the accounting profession. Students should contact the instructor prior to enrollment.

Computer and Information Systems

Administered by Department of Computer and Information Systems

92.550 Information Processing (3) - A comprehensive introduction and basic orientation to the use of information processing in the educational environment. Students required to investi-

gate the impact of the computer and associated peripheral devices on the classroom. Emphasis on the effective use of available computer resources.

92.554 Management Information Systems (3) - Studies information analysis and systems design from the user's point of view. Students identify the basic concepts of systems point of view, organization as a system, information flows and nature of management information systems. Data bases and data base management systems will be investigated from the manager's perspective.

92.599 Special Topics (3) - Examines current or advanced topics in the field of computer and information systems not normally examined in depth in other classes.

Management

Administered by Department of Management.

93.511 Statistical Analysis: Covers statistical inference and its application to the commonly used methods of estimation, hypotheses testing, prediction and decision making relevant to business and managerial problems. Prerequisites: (All level I courses shall be taken in advance).

93.512 Managerial Economics: Covers economic analysis of the firm and its environment. Addresses issues of input/output, employment, capital markets, infrastructure, labor pool and resources in relation to organizational decisions. Prerequisites: (All level I courses shall be taken in advance).

93.540 Small Business Institute Seminar: Provides experience in applying theoretical concepts to practical decision-making activities for entrepreneurs and small-businesses. The students work with small-business owners in the community to provide strategic planning and necessary consulting in implementation of the plan. Prerequisites: 91.254; 97.551; 96.535. Prerequisites: (All level I courses shall be taken in advance).

93.556 International Management: Focuses on dynamic changes in international business environment and increased foreign competition that challenge managers. Addresses international issues and understanding of their impact on markets, products and services. Develops understanding of international business environment and issues that have the potential of enhancing an

enterprise's survival and success. Prerequisites (All level I courses shall be taken in advance).

93.560 Operations Management: Analyze manufacturing and service systems and application of managerial decision-making in resolving operational policy problems. Prerequisites 93.511. (All level I courses shall be taken in advance).

93.562 Organizational Theory: Provides a macro level understanding of organizational structure, processes and management of external organizational relationships. Prerequisites: (All level I courses shall be taken in advance).

93.563 Operations Research: Covers quantitative models in dealing with the dynamics of manufacturing/service operations in an organization. Prerequisites: 93.511. (All level I courses shall be taken in advance).

93.566 Organization Behavior: Focuses on human aspects of an organization, groups and individuals. Addresses behavioral concepts and theories in leadership, motivation, performance appraisal, stress, job satisfaction and inter- and intra-group processes.

93.583 Human Resources Development: Focuses on current research and theories related to management and development of human resources in organizational settings. Emphasize theories related to motivation, training and development, leadership, behavior and performance in an organization.

93.558 Social Responsibility and Business Ethics: Focuses on theories, concepts and tools for managing social responsibility and ethics in different organizational settings. Prerequisites 91.524; 97.551; 96.535; (All level I courses shall be taken in advance).

93.581 Strategic Management: Examines complex industrial situations to determine better strategies to ensure a firm's long-run survival and growth in competitive markets. Emphasizes problem solving skills and implementation of optimal decisions. Examines the factors that can result in performance differentials by understanding how a firm attains a superior performance. Analyze and investigate strategic problem-solving processes that can enhance control of the firm over the market and competition. Prerequisites Capstone course, to be taken in graduating

semester; 91.524; 93.511; 96.535; 97.551; 93.560; 93.566. (All level I courses shall be taken in advance).

93.599 Special Topic: Addresses a variety of advanced topics in management at the graduate level and permits the instructor to focus on issues of particular importance and interest to the discipline. Prerequisites: Approval of the department curriculum Committee and the chair. (All level I courses shall be taken in advance).

Office Information Systems

Administered by Department of Business

Administration and Office Information Systems.

94.500 Office Systems and Information (3) - An overview of office systems - people, technology and procedures within organizational and environmental contexts. Provides an understanding of the evolving role of the office as a key information systems center.

94.510 Office Systems Applications (3) - Discusses applications of office automation technologies to enhance productivity of office employees from support personnel to managers. Hands-on experience includes comparative and selective techniques for hardware and software, as well as an evaluation of appropriate training materials for support personnel.

94.520 Administrative Communications (3) - Provides application of communication skills for those professionals who work in environments with automated information and communication systems. Topics include: oral and written reports, systems-related documents (reports, proposals, procedures) - , research methods and information technology.

94.530 Telecommunications (3) - Introduction to telecommunications in the business environment. Topics include: telephony, data codes, protocols, network architectures, local area networks, communications media, hardware and software. Management issues and practical applications are an integral part of the course. Emphasizes the application of telecommunications to facilitate information interchange in whatever form the information takes: voice, data, text and image.

94.540 Training and Development (3) - Applies theories of learning and instructional

procedures to education and training of employees in office systems. Topics include: instructional design, strategies, technology and implementation, evaluation and management of training with the organizational structure.

94.550 Integrated Office Systems (3) - Capstone course of office systems curriculum. Includes a synthesis and an application of concepts related to current office systems topics. Students should enroll in this course during the last semester of the degree program. Prerequisite: 94.500, 94.540 or consent of the instructor.

Finance

Administered by Department of Finance and

Business Law.

96.535 Financial Management (3) - In-depth study of management activities involved in the financial aspects of business enterprise. Theoretical knowledge gained through exposure to financial management literature is applied to problem situations through the use of case studies and simulation techniques. Emphasis on the development of perspective in the decision-making process with the acquisition of tools to facilitate effective decision making. Prerequisites: 91.524, 93.511.

96.540 International Finance (3) - Studies the principles and practices relevant to understanding the nature of international finance, its problems and its institutions. Discussion centers on sources and instruments of international export and import financing, exchange rates, balance-of-payments, governmental regulations and policies, financial management, as well as accounting for international transactions. Prerequisite: 96.313 Business Finance.

96.550 Security Analysis and Portfolio Management (3) - Advanced treatment of aspects involved in developing a logical and systematic approach to analyzing and evaluating types of securities. Investment strategy and management of an investment portfolio. Theoretical aspects of security analysis and problems involved in analyzing and evaluating securities within the context of the type of industry issuing them.

96.599 Special Topics (3) - May address a variety of advanced topics in law at the graduate level and permits the instructor to focus on issues of

particular importance and interest to the discipline. Students should contact the professor prior to enrollment.

Marketing

Administered by Department of Marketing.

97.551 Marketing Management (3) - Develops the strategic application of marketing in an organization through the analysis of marketing activities. Integrates the analysis of global marketing opportunities, segmentation of target audiences, growth and competitive strategy, marketing research systems, buyer behavior and marketing mix development.

97.552 Marketing Research (3) - Advanced techniques of the scientific marketing research procedure (problem definition, research design, data collection, analysis and interpretation). Focuses on an applied orientation for the global users of marketing research. Qualitative and quantitative research methods are developed with the statistical tools to produce a marketing research report.

97.599 Special Topics (3) - This course addresses a variety of topics in marketing and allows the instructor to focus on appropriate current topics in the marketing profession. Students should contact the instructor prior to enrollment to learn the current focus.

Law and Legal Elements

Administered by Department of Finance and Business Law.

98.507 International Legal Environment of Business (3) - Introduction to public and private international law as applied to the increasingly globalized business environment. Cases include: Trade law; extraterritorial application of U.S. law; treaty law; U.S.-Japan relations; NAFTA and the GATT; European Union; multinational corporations; human rights, labor, communications and environmental regulation in the international system.

98.599 Special Topics (3) - Addresses a variety of topics in law and legal elements and allows the instructor to focus on appropriate current topics in law and business. Students should contact the instructor prior to enrollment.

Administration and Faculty

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Lorrain Shanoski	Early Childhood Education.
Samuel Slike	Deaf/Hard of Hearing.
Leon Szmedra	Exercise Science/Adult Fitness.
Margaret Till	Biology.
Vera Viditz-Ward	Art.

The Graduate Council also includes student representation. Students are chosen annually.

Graduate Faculty

Mainuddin Afza, professor, Management - B. Com., University of Rajshahi; M.Com., University of Rajshahi; M.B.A., Youngstown State University; Ph.D., National Academy of Science, Yerevan, Armenia.
George Agbango, associate professor, Political Science - Specialist Certificate (Geography), University of Cape Coast, Ghana; M.P.A., Atlanta University; Ph.D., Clark Atlanta University.
Thomas F. Aleto, associate professor, Anthropology - B.A., University of Notre Dame; M.A., Ph.D., University of Illinois, Urbana-Champaign
M. Christine Alichnie, R.N., chairperson, profes- sor, Nursing - B.S., University of Pittsburgh; M.S., Wilkes College; M.S., Ph.D., University of Pennsylvania
M. Ruhul Amin, professor, Management - B.A., M.A., The University of Dhaka; M.A., D.P.A., Carleton University; M.A., Ph.D., The University of Akron
Shahalam Amin, assistant professor, Geography and Earth Science - B.Sc., M.Sc., University of Dhakam, Bangladesh; M.Sc., University of Guelph, Ontario, Canada; Ph.D., Kent State University
Dianne H. Angelo, professor, Communication Disorders and Special Education - B.S., M.Ed., Clarion University; M.S., Ph.D., University of Pittsburgh
Richard M. Angelo, professor, Clinical Director, Communication Disorders and Special Education - B.S., Mansfield State College; M.Ed., Bloomsburg State College; Ed.D., Lehigh University; Ph.D., University of Pittsburgh
Joseph P. Ardizzi, associate professor, Biological and Allied Health Sciences - B.S., St. Joseph's University; Ph.D., Cornell University

- Christopher F. Armstrong, professor, Sociology and Social Welfare - B.A., Washington and Lee University; M.A., Ph.D., University of Pennsylvania
- Eileen C. Astor-Stetson, professor, Psychology - A.B., Douglass College-Rutgers University; Ph.D., Vanderbilt University
- Shaheen N. Awan, associate professor, Communication Disorders and Special Education - B.A., University of Western Ontario; M.S., Clarion University of Pennsylvania; Ph.D., Kent State University
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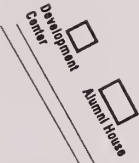
Tuition 18.

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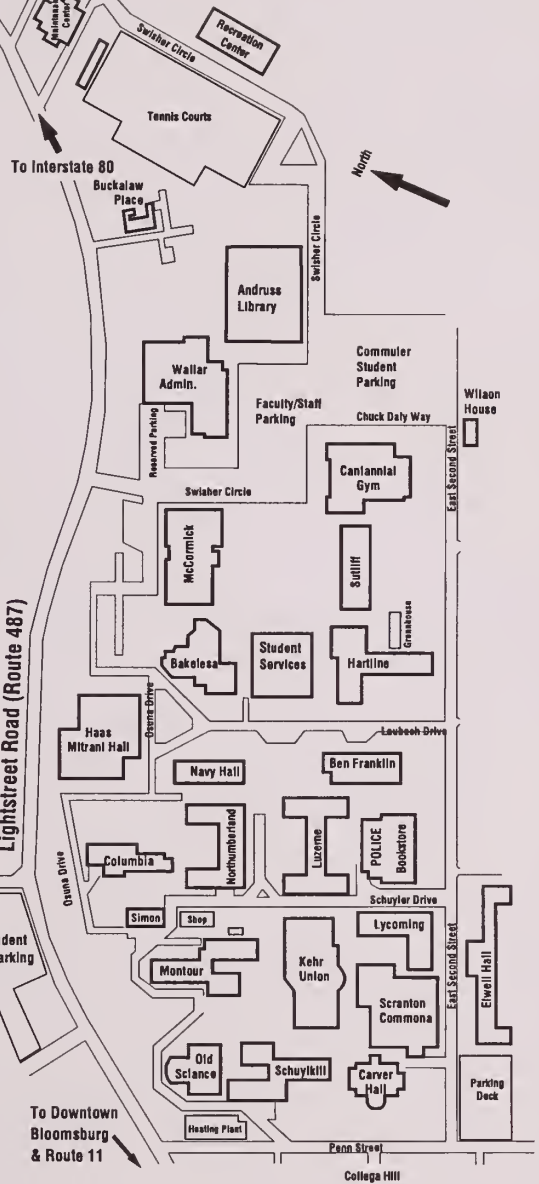
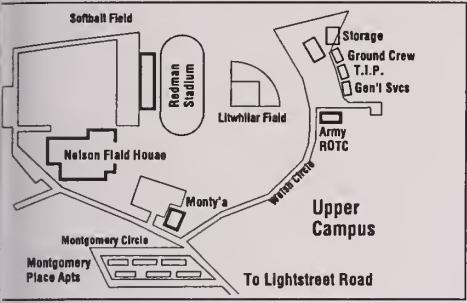
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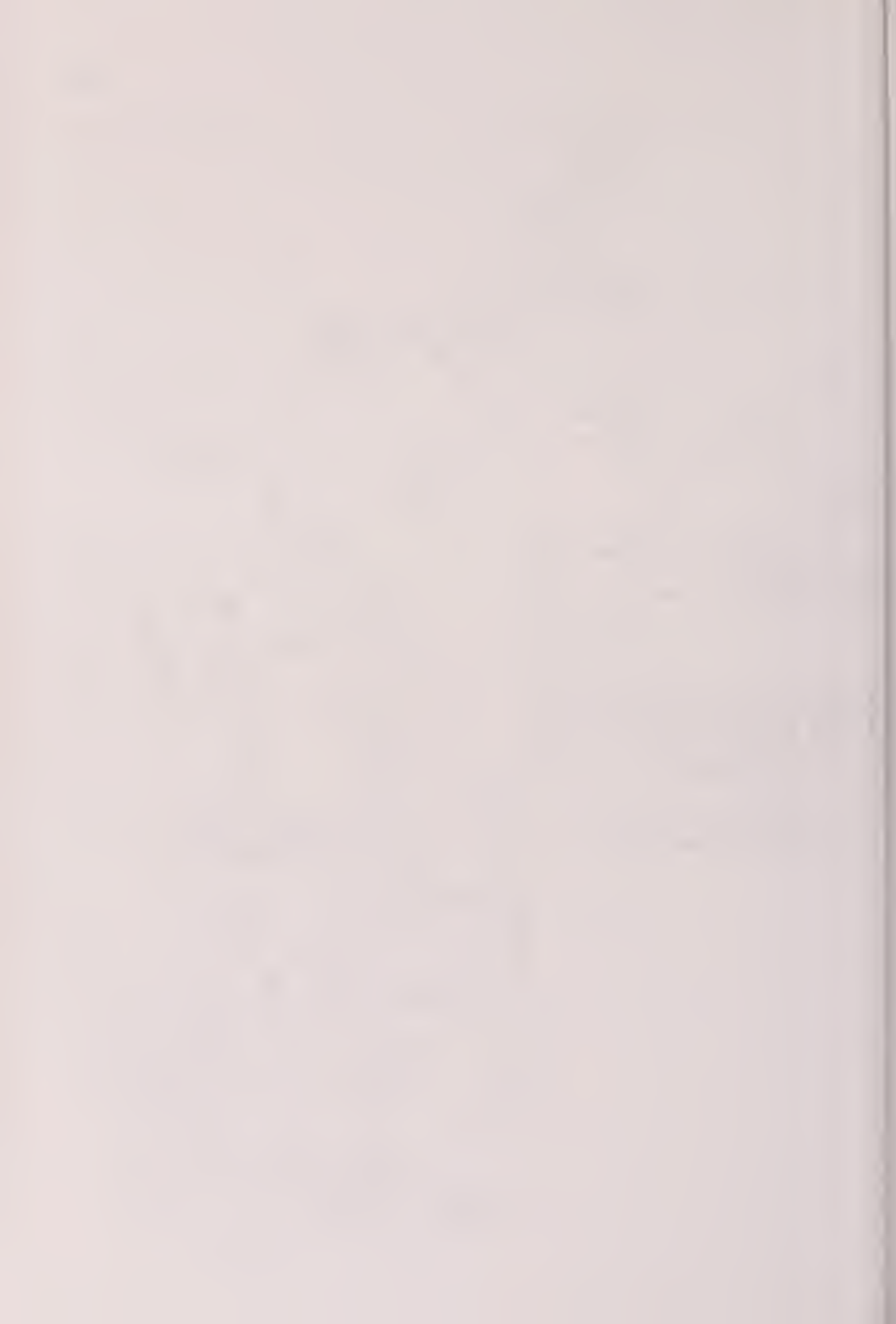


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