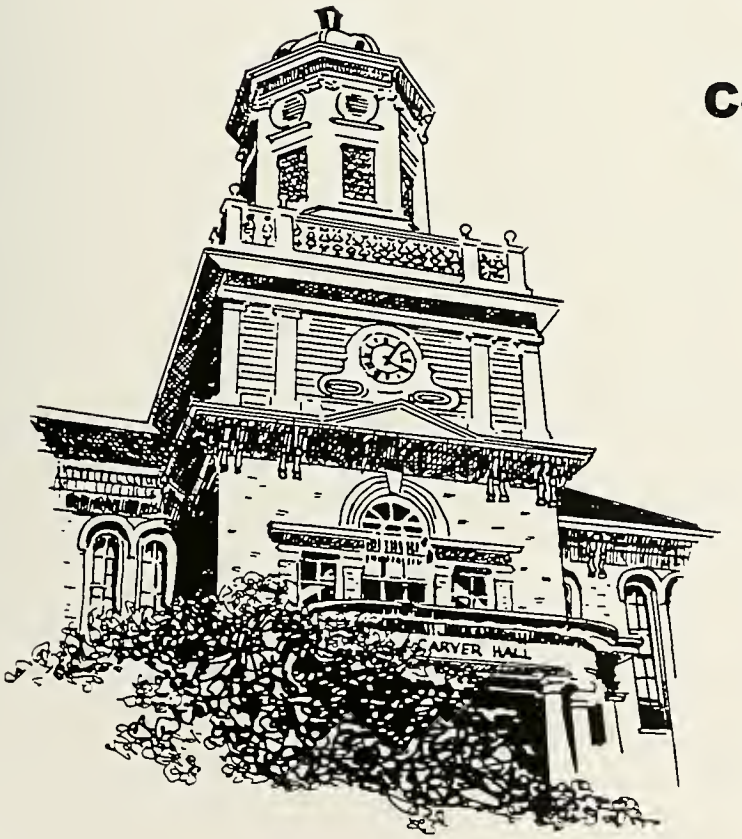
Bloomsburg University of Pennsylvania

Undergraduate Programs

Course Descriptions
Academic Policies



Fall 2001

Adviser's Edition

Bloomsburg University of Pennsylvania

Undergraduate Degree Programs,

Course Descriptions,

Academic Policies

Effective Fall, 2001

Note: This material is for advisement purposes. The official university catalog is published on the university's web site at http://www.bloomu.edu/academic. The sections that comprise this booklet may be downloaded individually from the respective web pages and freely reproduced for informational purposes.

Contents

College of Business

David K. Long, Dean

216 Sutliff Hall
389-4745

Accounting

Administered by: Department of Accounting
College: Business
Campus address: 219 Sutliff Hall
Telephone: (570) 389-4755
Fax number: (570) 389-3892
Department chair, e-mail: Nancy Coulmas, ncoulmas@husky.bloomu.edu
Degree awarded: Bachelor of Science in Business Administration
Effective: Fall, 2001

About the Program

The accounting program's curriculum is tailored to address the demands confronted by today's professional accountant. Students learn how to accumulate and summarize information, to analyze and interpret results and to present information that often becomes key to decision making.

The program emphasizes the importance of communication skills, both written and oral, because successful accountants spend more time working with people than with numbers and more time helping others to reach decisions than tabulating figures.

Students in accounting work extensively in computer laboratories with Windows-based microcomputer applications. Students are expected to cultivate a level of proficiency in the general use of computer software programs dealing with database management, electronic spreadsheets and word processing.

While approximately one-half of the students entering this program have completed an accounting course in high school, prior exposure to accountancy is not required for admission. The first accounting course, Principles of Accounting I, introduces the accounting cycle and presumes no prior knowledge of the discipline. At least one year of algebra and a solid academic background are the best preparation for entrance into this business specialty.

The department offers 18 courses in accounting plus the opportunity for an internship experience designed to provide upper-division students with the opportunity to gain valuable hands-on experience in the business community.

Many graduates become certified public accountants (CPAs), join corporations or enroll in graduate school, including the Master of Accounting program at Bloomsburg University. The department has enjoyed a nearly 100 percent job placement rate for the past 10 years. Five of the world's leading accounting firms, along with many public and private organizations, recruit at Bloomsburg.

The College of Business has two student computer labs that are dedicated to serving business students. Among other services, both labs provide stand-alone software, network software and direct access to the Harvey A. Andruss Library, electronic mail and the Internet. Students also have complete access to all campus computer facilities via modem or fiberoptic link from residence halls.

The accounting department includes 10 faculty, seven of whom have doctoral degrees and seven of whom are CPAs. Collectively, they possess diverse work experience in public and private accounting with major companies and small businesses, government agencies and not-for-profit organizations.

Mission

The Department of Accounting will continuously strive to provide the best accounting education in our competitive environment.

Goals to accomplish this mission:

1. To enhance the enthusiasm and capability of our students for lifelong learning.
2. To develop student ability in applying the critical thinking to problem solving.
3. To strive to provide our students the opportunities to develop the necessary academic and social skills to enter the accounting profession.
4. To strive to continuously improve the excellence of our teaching.
5. To continue to vigorously integrate technology into teaching and learning.
6. To support faculty efforts leading to regional recognition of faculty excellence in teaching, scholarly growth and service.
7. To create a continuous cycle of student, faculty, alumni and business community involvement in our programs.
8. To provide students with strong technical background for entry into the profession.

Required Courses

Among 65 semester hours of general education courses, students must take:

20.101 Composition I
20.201 Composition II
25.103 Public Speaking
40.121 Principles of Economics I
40.122 Principles of Economics II
40.156 Business and Economic Mathematics (or 53.123 Essentials of Calculus)
40.256 Business and Economics Statistics
53.118 Applied Matrix Algebra

Requirements for the Major - A total of 63 semester hours is required for a major in accounting under the business administration degree program. Required courses include:

Business Core Curriculum (24 semester hours):
91.221 Principles of Accounting I
91.223 Managerial Accounting
92.150 Introduction to Computer and Information Science
93.344 Principles of Management
93.481 Business Policies and Strategies
96.313 Introduction to Corporate Finance
97.310 Marketing: Principles and Practices
98.331 Law and Legal Environment

Accounting Requirements (24 semester hours):
91.222 Principles of Accounting II
91.321 Intermediate Accounting I
91.322 Intermediate Accounting II
91.323 Intermediate Accounting III
91.324 Federal Tax Accounting
91.342 Auditing Theory and Procedure
91.348 Cost Accounting
98.332 Business and Commercial Law

Accounting Electives - (6 credits) must be 400-level accounting courses not to include 91.432 Accounting Internship or 91.498 Introduction to Health Care.

Elective Courses - Three courses (9 credit hours) are required in upper-level business or economics courses. Most accounting students complete a six-credit internship (91.432) to fulfill part of this requirement.

When selecting an elective, students should be sure they have proper prerequisites and avoid elective courses below that level for which the student has already been prepared in that subject field. Courses designated with a 40, 90, 91, 92, 93, 94, 96, 97 or 98 prefix are considered business or economics electives.

General education electives - Select a minimum of 11 semester hours in non-business elective courses.

Note: Graduation requires successful completion of a total of 128 semester hours.

Requirements for the Minor - A minor in accounting provides students in disciplines outside of the College of Business with a broad background in accounting and its functional areas. The minor is designed so students can have the background necessary to apply their major discipline in the business environment. The minor consists of 18 semester hours, 12 of which must be taken at Bloomsburg University. The following courses are required:

91.220 Financial Accounting
91.223 Managerial Accounting
91.321 Intermediate Accounting I
91.322 Intermediate Accounting II
Choose two of the following three courses:
91.324 Tax Accounting
91.342 Auditing
91.348 Cost Accounting

Faculty Profiles

Richard L. Baker, professor - B.S., M.B.A., Bloomsburg State College; Ph.D., The Pennsylvania State University; CPA, CMA, CIA

William E. Bealing, Jr., associate professor - B.S.B.A., Shippensburg University of Pennsylvania; M.B.A., University of Montana; Ph.D., The Pennsylvania State University; CPA.

Michael C. Blue, professor - B.S., University of Wisconsin; M.S.B.A., Boston University; M.S., University of Wisconsin; Ph.D., University of Idaho; CPA, CFE, CMA,CGFM.

Nancy E. Coulmas, chairperson, associate professor - B.S., New York Institute of Technology; M.B.A., St. Bonaventure University; Ph.D., The Pennsylvania State University

Dennis B. K. Hwang, professor - B.A., Chengchi University; M.A., Ph.D., University of Oklahoma; CPA., CMA.

Richard E. McClellan, assistant professor - B.S., M.Ed., Bloomsburg State College; M.S.B.A., Bucknell University; CPA.

John A. Rude, associate professor - B.B.A., M.A., Western Illinois University; Ph.D., Kent State University; CPA.

Mike Shapeero, associate professor - B.S., M.B.A., California State University, Chico; Ph.D., Virginia Polytechnic Institute and State University; CPA, CMA

Business Education

Administered by: Department of Business Education and Office Information Systems
College: Business
Campus address: 217 Sutliff Hall
Telephone number: (570) 389-4756
Fax number: (570) 389-3892
Department chair: Donna Cochrane
Degree awarded: Bachelor of Science in Education
Effective Fall, 2001

About the Program

Graduates of the business education curriculum have specialized knowledge and skills to prepare them for positions in secondary teaching, as training managers for business and government, and for teaching in proprietary business schools. They are also prepared for graduate study in business education or related fields. The employment outlook remains strong with 100 percent of graduates finding appropriate employment.

As part of their business education program at Bloomsburg, students obtain a strong business and technology background in addition to teaching methodology. Upon completion of 48 or more semester hours, all business education majors must apply for acceptance into teacher education. As a culminating activity, students spend a full semester teaching in a secondary school.

Numerous financial and academic scholarships are available for business education majors. In addition, many are recipients of state and regional scholarships provided by professional associations.

Housed in the College of Business, the Department of Business Education and Office Information Systems curriculum is recognized by the National Association for Business Teacher Education. Fully qualified faculty are active in state, regional and national professional organizations.

Mission

The undergraduate major in Business Education provides students with specialized knowledge and skills for certification in secondary teaching, careers in training and development, careers in business-related fields and advanced study. The Masters of Education program degree provides business professionals and educators with advanced study in office systemsand an option for secondary teaching certification. In addition, students may be prepared for postsecondary teaching positions.

Required Courses

In addition to a total of 54 semester hours of general education requirements, the following general education courses are required with a grade of C or better:

20.101 Composition I
20.201 Composition II
25.103 Public Speaking
40.121 Principles of Economics I
40.122 Principles of Economics II
48.101 General Psychology
70.101 Introduction to the Exceptional Individual
Choose from one of the following two:
48.160 Basic Statistics
53.141 Introduction to Statistics

Business Education Core

90.101 Introduction to Business
90.333 Business Communications and Report Writing
91.221 Principles of Accounting I
92.150 Introduction to Computer and Information Science
94.221 Office Systems Concepts
94.405 Training and Development in Office Systems
98.331 Introduction to Law and Legal Elements

Requirements for the Major - A total of 74 semester hours is required for a major in business education. The student must have completed the following courses with a grade of C or better to be considered for certification as a teacher of business subjects:

60.201 Field Studies in Education
90.402 Methods of Teaching Business Education
90.403 Business Education Field Experience
90.404 Professional Semester in Business Education
90.406 Clinical Studies in Business Education
Choose one of the following two courses:
60.251 Psychological Foundations of Education
48.251 Psychological Foundations of Education
Choose one of the following two courses:
60.393 Social Foundations of Education

60.406 Multicultural Education

Areas of Certification - Upon completion of the curriculum, receipt of a recommendation from the university and successfully passing the National Teachers Examination, the graduate will be issued an Instructional Level I Certificate by the Pennsylvania Department of Education. Every certification indicates at least two certification areas of which Office Technologies is always one.

Students must complete each course in the certification area with a grade of C or better. Areas of certification in business education include:

Accounting
91.222 Principles of Accounting II
91.223 Managerial Accounting
Accounting elective

Data Processing
92.177 Structured Programming Methodology
92.254 Management Information Systems
Computer and Information Systems elective

Marketing
90.341 Principles of Selling
97.310 Marketing: Principles and Practice
Marketing elective

Office Technologies - This certification area is required for all business education majors
94.302 Business Document Generation
94.330 Telecommunications
94.340 Network Design and Administration
94.407 Information and Office Environment Management

Elective Courses - Students must choose at least 3 semester hours from:
90.341 Principles of Selling

Faculty Profiles

Donna J. Cochrane, chairperson, professor - A.A.S., Dutchess Community College; B.S., M.S., State University of New York at Albany; Ed.D., Temple University

Albert L. Fundaburk, assistant professor - B. S., Souithern Illinois University; M.B.A., Golden Gate University

Dennis O. Gehris, associate professor - B.S., M.A., Rider College; Ed.D., Temple University

Janice C. Keil, associate professor - B.S., M.Ed., Bloomsburg University of Pennsylvania; Ed.D., Temple University

John J. Olivo, professor - B.S., Davis and Elkins College; M.Ed., Trenton State College; Ph.D., Michigan State University

Lila D. Waldman, associate professor - B.S., M.S., University of Wisconsin; Ph.D., University of Minnesota

Supplemental Information

The Department of Business Education and Office Information Systems maintains a website at http://www.bloomu.edu/departments/beois/beois.htm

Computer and Information Systems

Administered by: Department of Computer and Information Systems
College: Business
Campus address: 224 Sutliff Hall
Telephone number: (570) 389-4560
Fax number: (570) 389-2071
Department chair: James S. Dutt
Degree awarded: Bachelor of Science
Effective Fall, 2001

About the Program

The Department of Computer and Information Systems in the College of Business offers a baccalaureate degree programs in Computer and Information Science (CIS).

The CIS curriculum prepares students in the development, operation and maintenance of computer-based information systems for the business environment. The program's focus centers on commercial software and hardware with an emphasis on problem solving, system analysis and design, data management, data communications and software development within a commercial context.

CIS has a strong technical emphasis. While students are required to take courses in economics, accounting and other areas of business, the majority of the required coursework is in computer and information science. Students work in a variety of environments including networked micro-computers and workstations, multiuser minicomputers and mainframes. The program prepares business students for positions such as: application programmer, programmer-analyst, systems analyst, data base administrator and information specialist.

Students enrolled in this program enjoy use of a dedicated computer lab with current technology on a mainframe computer of sufficient size to operate a medium-sized corporation.

Graduates enjoy an extremely high placement rate in a field where demand for professionals is high and the future remains quite bright. Students have access to a dedicated and state-of-the-art computer lab including a workstations and a mainframe capable of running a medium-sized corporation.

Mission

The Department of Computer and Information Systems offers a degree program that prepares students for careers as professionals in the field of computer-based information systems. The programs focus on the use of information technology to solve business and organizational problems. the department emphasizesan experiential, interactional approach to learning using methodologies. Students learn the skills they will need a s professionals by analyzing systems and developming software to solve business problems.

The Department supports the missions of the College of Business and Bloomsburg University by offering courses that introduce students to computer concepts and end-user application software at both the undergraduate and graduate levels. The department serves the college, the university and the community in diverse ways, particularly in the area of information technology.

Within the context of its educational mission, the department is also committed to the development of knowledge in the field of information systems through applied and/or basic research.

Required Courses

Bloomsburg University requires 53 semester hours in general education requirements and 128 semester hours to receive a baccalaureate degree. Computer and Information Systems majors must take 63 semester hours of specific courses and restricted electives and the balance of courses to meet the 128-hour requirement come from electives. Required courses include:

20.101 English Composition I
20.201 English Composition II (or 20.104 Honors Composition)
25.103 Public Speaking
53.141 Introduction to Statistics or 53.241 Probability and Statistics
40.211 Principles of Economics I
40.212 Principles of Economics II
Choose one of the following two combinations:
53.123 Essentials of Calculus and 52.118 Applied Matrix Algebra **or**
53.125 Analysis I and 53.126 Analysis II
Choose one of the following two combinations:
91.221 Principles of Accounting I and 91.222 Principles of Accounting II or
91.220 Financial Accounting and 91.223 Managerial Accounting

Required CIS Courses:

92.140 Introduction to Computer and Information Science
92.141 Introduction to Business Information System Development
92.240 Introduction to Programming I
92.241 Introduction to Programming II
92.351 Systems Analysis and Design
92.356 Data and Information Systems
92.362 COBOL
92.354 Data Base Processing Systems
92.358 Data Communication Systems
92.460 Advanced Systems Development I
92.460 Advanced Systems Development II

Elective Courses

Two CIS courses at the 300 or 400 level. Information technology courses offered by other departments can be used with approval of the CIS chairperson.

While an internship in CIS is not required for a degree, students are strongly encouraged to take 92.432 Internship in Computer and Information Systems. This course, which may be taken for a maximum of nine semester hours, can be counted only as a free elective.

Minor in Computer and Information Systems

The minor in Computer and Information Systems is designed to provide students majoring in non-computer disciplines with a background in computer and information systems. The program will enable students to develop a strong background in information systems, particularly in the areas of programming and systems analysis and design. Information technology is critical to the success of modern business. Today, businesses are looking for individuals with multiple skills: knowledge of marketing, finance, economics, biology, chemistry, but who aso understand information technology. A minor in CIS will enhance career opportunities of Bloomsburg University graduates.

The minor consists of 20 credits. The following courses are required:

92.142 Introduction to Computer and Information Science
92.143 Introduction to Business Information System Development
92.241 Introduction to Programming I
92.242 Introduction to Programming II
92.251 Systems Analysis and Design
A three-credit CIS elective at the 300 or 400 level
A minimum QPA of 2.0 in the minor is required.

Faculty Profiles

Carl J. Chimi, associate professor, Computer and Information Systems - B.A., M.B.A., Ph.D., University of Massachusetts

Frank S. Davis Jr., professor, Computer and Information Systems - B.S., M.Ed., Shippensburg University; Ph.D., University of Pittsburgh

James S. Dutt, chairperson, associate professor, Computer and Information Systems - B.S., M.S., Ph.D., The Pennsylvania State University

Harold K. Frey, associate professor, Computer and Information Systems - B.S., Lock Haven University; M.A., Iowa State University; M.S., Elmira College

Gene M. Gordon, associate professor, Computer and Information Systems - B.A., Southampton College; M.A., Antioch University; Ed.D., University of Massachusetts

Charles J. Hoppel, associate professor, Computer and Information Systems - B.S., University of Scranton; M.E.E., Ph.D., Syracuse University

James S. Mason, instructor - B.S., B.A., M.S, Bloomsburg University

Finance

Administered by: Department of Finance and Business Law
College: Business
Campus address: 223 Sutliff Hall
Telephone number: (570) 389-4560
Fax number: (570) 389-3892
Department chair: David G. Heskell
Degree awarded: Bachelor of Science in Business Administration

About the Program

The major in finance provides a perspective of the finance environment such as the functioning of major stocks and bonds markets, the banking system and international financial markets. It will provide students with educational opportunities that will prepare them to pursue careers in the domestic as well as international financial fields.

Mission

The Department of Finance and Business Law seeks to synergize its diverse strengths by offering state of the art programs in Finance, Business Economics and Law. It seeks to provide a model education, which will inspire its majors, encourage life-long learnin,and intrigue those students who seek minors in business and law subjects. It postulates that while most of its graduates will initially seek employment in business fields, many will eventually seek post-graduate education and a large number of those who will enter public administration, government and other professions as well as business. Our students need to be taught by professionals who are active in their academic and professional fields, integrating their scholarly activities with the classroom and positioning themselves as mentors capable of giving credible guidance and recommendations to our students entering the increasingly competitive global market of the 21st century. Test of our success is not how popular our program is with those who have yet to leave Bloomsburg, but how widely known and approved of our program becomes through the reputation of our graduates who venture forth from Bloomsburg into the wider world.

Required Courses

In addition to 68 semester hours of general education requirements, the program in finance requires 24 hours of core business courses, 15 hours of courses specific to finance, plus 21 hours of business electives to meet the university requirement of 128 hours for a bachelor's degree.

Among general education courses specifically required are:

20.101 English Composition I
20.102 English Composition II (or 20.104 Honors Composition)
25.103 Public Speaking
40.121 Principles of Economics I
40.122 Principles of Economics II
53.118 Applied Matrix Algebra
40.256 Business and Economics Statistics
Choose one of the following two courses:
40.156 Business and Economics Math
53.123 Essentials of Calculus

Business Core:
91.220 Financial Accounting
91.223 Managerial Accounting
92.150 Introduction to Computer and Information Science
93.344 Principles of Management
93.481 Business Polices and Strategies
96.313 Introduction to Corporate Finance
97.310 Marketing: Principles and Practice
98.331 Law and Legal Environment

Finance Specialization
96.323 Financial Markets and Institutions
96.343 Investment Management
96.454 Advanced Corporate Finance
Plus two Finance electives

Electives - Students must choose 21 semester hours in elective courses from General Business, Accounting, Computer and Information Systems, Management, Office Systems, Finance, Marketing and Business Law. Some additional courses are available as well; students should consult their adviser.

Faculty Profiles

Karen J. Elwell, associate professor - A.B., A.M., J.D., University of Illinois at Urbana-Champaign

David G. Heskel, chairperson, associate professor - M.B.A., Ph.D., University of Business. Vienna, Austria

David G. Martin, associate professor - B.A., C. W. Post College; M.B.A., Western Illinois University; Ph.D., Saint Louis University

Rand D. Martin, B.S.I.M., Georgia Institute of Technology; M.B.A., Emory University; Ph.D., University of Alabama

Bruce L. Rockwood. professor - B.A., Swarthmore College; J.D., University of Chicago Law School

Marketing

Administered by: Department of Marketing
College: Business
Campus address: 218 Sutliff Hall
Telephone number: (570) 389-4657
Fax number: (570) 389-4993
Department chair, email: Mary K. Ericksen, merickse@bloomu.edu
Secretary: Debbie Stolz
Degree awarded: Bachelor of Science in Business Administration
Effective Fall, 2001

About the Program

The marketing curriculum prepares graduates for numerous career options, including a variety of positions in product management, sales retailing, distribution, sales management, market research and promotion. Marketing management is one of the fastest growing career opportunities in the United States and global economies.

Marketing majors study the process by which organizations satisfy consumer wants and needs in contemporary society. Major marketing activities such as product planning, distribution, pricing and promotion are analyzed based on market research and consumer behavior. The marketing major gains written and verbal communication skills through class discussion, presentations, case analysis and research projects that develop critical thinking skills. Internships are offered year-round in a variety of business settings; practical experience opportunities are highly recommended. A dedicated core of faculty support students through their applied, on-going research efforts that provides up-to-date course coverage.

Mission

The marketing departments mission is to provide appropriate discipline-specific knowledge to develop the personal and professional skills of students so that they may effectively contribute to the marketing management of organizations.

Required Courses

Among 64 semester hours of general education requirements, English 20.101 and 20.201 and 25.103 Public Speaking are required. A total of 64 semester hours is required for a major in marketing under the business administration degree program.

Required general education courses for the Marketing curriculum include:

40.121 Principles of Economics I
40.122 Principles of Economics II
40.256 Business and Economic Statistics I
48.101 General Psychology

Choose one of the following two courses:
40.246 Business and Economics Mathematics
53.123 Essentials of Calculus
53.118 Applied Matrix Algebra

College of Business Core
91.220 Financial Accounting
91.223 Managerial Accounting
92.150 Introduction to Information Technology
93.344 Principles of Management
93.481 Business Policies and Strategies
96.313 Introduction to Corporate Finance
97.310 Marketing: Principles and Practice
98.331 Law and Legal Environment

Marketing Requirements
97.330 Consumer Motivation and Behavior
97.370 Sales Management
97.380 International Marketing
97.440 Marketing Research
97.340 Advertising Management
97.460 Marketing Management

3 semester hours of a marketing elective that may also be used as a business elective:
97.320 Marketing for Nonprofit Organizations
97.350 Retail Management Concepts
97.432 Internship in Marketing
97.480 Industrial Marketing Strategy
97.490 Contemporary Problems and Issues

Electives in Business - Select courses in business to complete a minimum 64 semester hours. In selecting an elective, the student is reminded to have the proper prerequisites.

Courses designated with a 90, 91, 92, 93, 94 96, 97 or 98 prefix are business courses. Additional courses permitted as electives include:

90.101 Introduction to Business (*Note: 90.101 will **not** be allowed for credit as a business elective once a student has completed 6 semester hours in business administration courses.*)

General education electives - Select general education courses needed to meet the 128-semester

hour graduation requirement.

Select free elective courses as needed to meet the 128 semester hours required for graduation.

Requirements for the Minor - The minor in marketing provides students both within and outside of the College of Business with a broad exposure to marketing theory and technique. The minor is designed for students to apply marketing practices successfully to their major discipline. The minor consists of 18 semester hours, 12 of which must be taken at Bloomsburg University. Required courses include:

97.310 Marketing Principles and Practices
97.330 Consumer Motivation and Behavior
97.440 Marketing Research
97.460 Marketing Management
Choose two from the following eight courses:
97.320 Marketing for Nonprofit Organizations
97.340 Advertising Management
97.350 Retail Management Concepts
97.370 Sales Management
97.380 International Marketing
97.432 Internship in Marketing
97.480 Industrial Marketing Strategy
97.490 Contemporary Problems and Issues

Faculty Profiles

Stephen S. Batory, professor - B.S., King's College; M.B.A., Old Dominion University; D.B.A., University of Maryland

Mary K. Ericksen, chairperson, professor - B.S., M.S., The Ohio State University; Ph.D., Virginia Polytechnic Institute and State University

Morry Ghingold, associate professor - B.Comm., M.B.A., McGill University; Ph.D., The Pennsylvania State University

William T. Neese, associate professor - B.A., University of Alabama; MBA, University of North Alabama; MJS Wasington University School of Law; DBA, Mississippi State University

Salim Qureshi, associate professor, Marketing - B.S., University of Karachi; M.B.A., Adelphi University; Ph.D., The Union Institute

Robert N. Watts Jr., associate professor, Marketing - B.S., Susquehanna University; M.B.A., Ohio University

Management

Administered by: Department of Management
College: Business
Campus address: 222 Sutliff Hall
Telephone number: (570) 389-4385
Fax number: (570) 389-3892
Department chair: M. Ruhul Amin
Degree awarded: Bachelor of Science in Business Administration

About the Program

The Department of Management offers both a major and a minor in management at the undergraduate level. The curriculum and the instructional strategies of the programs are designed to prepare executives and leaders of modern organizations. Over 400 students in the major program receive quality education, knowledge and skills in the areas of business strategies and decisions, organizational structure and processes, manufacturing, service, global and small business operations.

Successful students in the program enjoy working with people, being team players, and are ambitious and imaginative. Some dream of owning their own business, while others are eager for major roles in large corporations.

In addition, students learn the principles and best practices of human resource management and labor relations, employee productivity, motivation, morale, and leadership. Moreover, dealing with diversity and handling ethical issues and social responsibility, and acquiring interpersonal, intra organizational and managerial communication skills are integral parts of the management curriculum.

The instructional process of the department incorporates the components of critical and conceptual thinking, problem solving, analysis, integration and synthesis. Customized student advising and the abundant opportunity for internships as well as study abroad under various student-exchange programs with European universities enhance and enrich the educational experience of the management majors.

The program boasts a superlative placement record at entry-level management positions at a wide variety of organizations. In addition, students are also placed in graduate programs of reputable institutions.

Mission

The Department of Management's faculty derived is mission statement from that of the College of Business (COB), which states: Within our region we provide the opportunity for a business education recognized by our stakeholders for its quality. To help the COB achieve that mission, the Department of Management: Provides undergraduate and graduate students majoring and minoring in business with management education that enhances their career potential. With emphasis in teaching, advising, continuous improvement in the curriculum and applied research activity, we prepare our graduates with the knowledge and skills necessary to succeed in the public and private sectors.

Educational Objectives: The following draft has been forwarded to the Management Department faculty for discussion:

To provide students with a balanced academic background that includes liberal arts educatio in the areas of oral and written communication, quantitative and analytical reasoning, values and ethics, fitness and recreation, humanities, social and behavior sciences, and natural sciences.

To provide students with core competencies and integrated knowledge in the functional areas of business: financial/accounting, marketing, human resources, informational technology, legal environment and manufacturing/operation.

To develop students' specialized skills and knowledge of the functions, theories, principles, concepts and issues germane to the practice of management through grounding in the following major subdisciplines: organizational behavior, production and operations, managerial communication, human resource management, ethics and social responsibility, international management and strategy.

To enhance students' decision-making and leadership skills by developing their abilities to think critcally and creatively.

To prepare students to respond to the challenges of an increasingly complex business environment that is globally and domestically diverse, highly competitive and

stakeholder sensitive, with competence and integrity.

To provide students with career guidance through superior advisement for timely graduation with a highly marketable degree in management.

To provide students with a broad range of professional, leadership and entrepreneurial experiences that can afford them the opportunity to apply management principles, theories and techniques.

Required Courses

The four year (128 credit hours) bachelor's degree consists of 65 semester hours of General Education requirements, 24 hours of Business Core, 24 hours of specialized Management requirements, and 15 hours of Elective Courses in Business. Students are allowed 8-11 hours of Free Electives while meeting communication, natural, and social sciences, humanities, physical education, values and ethics, and cultural diversity requirements of General Education.

While some flexibility exists in the selection of courses, the management program requires students to complete the following courses as part of general education requirements.:

20.101 English Composition I
20.201 English Composition II (or 20.104 Honors Composition)
25.103 Public Speaking
40.211 Principles of Economics I
40.212 Principles of Economics II
53.141 Introduction to Statistics
40.346 Business and Economics Statistics
Choose one of the following two courses:
40.246 Business and Economics Mathematics
53.123 Essentials of Calculus

Business Core:

92.150 Introduction to Computer and Information Science
91.220 Financial Accounting
91.223 Managerial Accounting
97.310 Marketing: Principles and Practice
93.344 Principles of Management
98.331 Introduction to Law and Legal Environments
96.313 Introduction to Corporate Finance
93.481 Business Policies and Strategies

Specialized Management Requirements

93.345 Human Resource Management
93.348 Operations Management
93.445 Managerial Communications
93.449 Organizational Behavior
93.457 Business and Society
93.456 International Management
Plus two management electives

Elective Courses in Business

Required elective: 92.254 Management Information Systems
Select four other courses in business to complete a minimum of 63 semester hours.
Courses designated with a 91, 92, 93, 96, 97 or 98 prefix are business electives. Students must consult with their advisors when selecting and scheduling courses.

Human Resources Concentration

Students with a Human Resources Management Concentration are required to take the following courses:

93.345 Human Resource Management
98.460 Employment Discrimination and Affirmative Action
93.463 Employee Staffing
93.464 Compensation Management
93.432 Internship in Management
Choose one of the folloowing two courses:
93.346 Labor and Industrial Relations
94.405 Training and Development in Office Systems

Minor in Management

Requirements: Students majoring in disciplines other than management both within and outside the College of Business are provided a broad exposure to management principles and techniques. The minor is designed to prepare students with knowledge and skills necessary to be successful in management/supervisory roles in their major disciplines and/or occupation in a variety of business endeavors.

General Education- As part of their general education, students are required to take the following courses:

40.211 Principles of Economics I
53.141 Introduction to Statistics (or equivalent)
20.101 English Composition I
20.201 English Composition II (or 20.104 Honors Composition)
25.103 Public Speaking

Minor in Management- The minor consists of 18 semester hours. The following courses are required:

93.344 Principles of Management
93.345 Human Resource Management
93.348 Operations Management
93.445 Managerial Communications
93.449 Organizational Behavior
93.456 International Management

Minor in Entrepreneurship

Requirements: Students majoring in disciplines other than management both within and outside the

College of Business are provided a broad exposure to the operation of small businesses, as well as non-profit, private and human services organizations. The minor is designed to prepare students with knowledge and skills necessary to enhance the performance and profitability of small businesses and enable them to apply for jobs requiring supervisory and management skills.

General Education - As part of their general education, students are required to take the following courses:

40.211 Principles of Economics I
40.212 Principles of Economics II

Minor in Entrepreneurship - The minor consists of 24 semester hours. The following courses are required:

91.120 Small Business Accounting
93.344 Principles of Management
93.391 Small Business Management
93.400 Entrepreneurship and Venture Capital
93.440 Small Business Institute Seminar
96.220 Entrepreneurial Finance
97.310 Principles of Marketing
98.331 Introduction to Law and Legal Environment

Certificate Program in Entrepreneurship

Requirements: Area residents and members of the local business community with the required undergraduate admission qualifications are eligible for the Certificate Program in Entrepreneurship. The program is designed to provide the knowledge and skills to set up, operate and succeed in small business ventures.

Certificate Requirements – The certificate program consists of 24 semester hours. The following courses are required:

93.344 Principles of Management
93.391 Small Business Management
93.400 Entrepreneurship and Venture Capital
93.440 Small Business Institute Seminar
97.310 Principles of Marketing
98.331 Introduction to Law and Legal Environment
91.120 Small Business Accounting
96.220 Entrepreneurial Finance

Faculty Profiles

Mainuddin Afza, professor-B. com. (Honors), University of Rajshahi; M.Com., University of Rajshahi; M.B.A., Youngstown State University;Ph.D., National Academy of Sciences, Armenia, Yerevan, the former Soviet Union

M. Ruhul Amin, professor- B.A., M.A., The University of Dhaka;M.A., D.P.A., Carleton University; M.A. Ph.D., The University of Akron

Joan Benek-Rivera, associate professor - B.B.A., Angelo State University; M.B.A., Angelo State University; Ph.D., Texas Tech University

Lawrence Kleiman, associate professor - B.A., Syracuse University; M.A., Farleigh Dickinson University; Ph.D., The University of Tennessee

Stephen J. Markell, associate professor- B.A., SUNY at Albany; M.A., Ph.D., University of North Carolina at Chapel Hill

Stephen X. Si, associate professor - B.S., East China Normal University; M.B.A., Washington State University; Ph.D., Washington State University

Minoo Tehrani, associate professor- B.S., Pahlavi University/Michigan Technological University; M.S., Ph.D., Arizona State University

Peter Venuto, professor- B.A., Syracuse University; M.B.A., Ph.D., University of Santa Clara

Pamela M. Wynn, professor- B.A., M.A., Ph.D., University of Texas at Arlington

Supplemental Information

Internship Guidelines at http://www.bloomu.edu/academic/programs/mgmtintern.shtml

Office Information Systems

Administered by: Department of Business Education and Office Information Systems
College: Business
Campus address: 217 Sutliff Hall
Telephone number: (570) 389-4756
Fax number: (570) 389-3892
Department chair: Donna J. Cochrane
Degree awarded: Bachelor of Science in Business Administration
Effective Fall 2001

About the Program

Defined as the use of information/computer technologies to support office work and improve employee performance and organizational effectiveness, Office Information Systems addresses the continually changing needs of both business and government.

The program at Bloomsburg places heavy emphasis on end-user computing, with program requirements developed based on the Organizational Systems Research Association curricular guidelines. It demands strong written and oral communication skills, a broad range of general education and business administration courses as well as the ability to stay abreast of technology. Completion of an internship experience to explore career opportunities and to build a resume is highly encouraged and opportunities for such experiences are varied to meet individual needs.

Office Information Systems graduates find a wide range of career opportunities in government, financial institutions, hospitals, insurance companies and communications services as well as such consumer services as hospitality, travel, sports, transportation and education. Graduates are prepared to manage human resources, plan for and implement new technologies, analyze office environment (including layout and design) and evaluate the impact of technology on an organization's policies and procedures.

One of six departments in the College of Business, Office Information Systems includes six faculty who possess diverse work and teaching experiences and who are active in state, regional and national professional organizations. Currently, only 68 universities in the United States offer a degree in office systems and the program at Bloomsburg is considered a national model.

Mission

The undergraduate major in Office Information Systems prepares students for careers requiring a broad business background and office systems knowledge and skills necessary to manage human resources, technology, and office systems. The curriculum focuses on the impact of technology on the end-user.

Required Courses

In addition to 53 semester hours of general education requirements, a total of 81 to 84 semester hours is required for a major in office information systems. Elective courses complete the balance of the university's 128-hour requirement for a bachelor's degree. Several specific general education courses are required in this major. They include:

20.101 Composition I
20.201 Composition II
25.103 Public Speaking
40.121 Principles of Economics I
40.122 Principles of Economics II
40.346 Business and Economic Statistics
53.118 Matrix Algebra
Choose one of the following two courses:
40.156 Business and Economic Mathematics
53.123 Essentials of Calculus

Requirements for the Major - A total of 81 to 84 semester hours is required for a major in office information systems. This total reflects program requirements and general education courses. Required courses include:

90.101 Introduction to Business
90.333 Business Communications and Report Writing
91.220 Financial Accounting
91.223 Managerial Accounting
92.150 Introduction to Computer and Information Science
93.344 Principles of Management
93.481 Business Policies and Strategies
94.221 Office Systems Concepts
94.302 Business Document Generation
94.330 Telecommunications (spring only)
94.340 Networking Design and Administration (spring only)

94.405 Training and Development in Office Systems (fall only)
94.407 Information and Office Environment Management (fall only)
96.313 Introduction to Corporate Finance
97.310 Marketing: Principles and Practice
98.331 Introduction to Law and Legal Elements
300- or 400-level business elective with advisor's approval

Electives and Free Electives - Students must choose 15 semester hours in elective courses from General Business, Accounting, Computer and Information Systems, Management, Office Information Systems, Finance, Marketing and Business Law.

Faculty Profiles

Donna J. Cochrane, chairperson, professor - A.A.S., Dutchess Community College; B.S., M.S., State University of New York at Albany; Ed.D., Temple University

Albert L. Fundaburk, assistant professor - B. S., Souithern Illinois University; M.B.A., Golden Gate University

Dennis O. Gehris, associate professor - B.S., M.A., Rider College; Ed.D., Temple University

Janice C. Keil, associate professor - B.S., M.Ed., Bloomsburg University of Pennsylvania; Ed.D., Temple University

John J. Olivo, professor - B.S., Davis and Elkins College; M.Ed., Trenton State College; Ph.D., Michigan State University

Lila D. Waldman, associate professor - B.S., M.S., University of Wisconsin; Ph.D., University of Minnesota

Supplemental Information

The Department of Business Education and Office Information Systems maintains a website at http://www.bloomu.edu/departments/beois/beois.htm

College of Liberal Arts

Tsien-Tung Liu, Dean

206 Centennial Hall
389-4410

Anthropology

Administered by: Department of Anthropology
College: Liberal Arts
Campus address: 154 Centennial Hall
Telephone number: (570) 389-4860
Fax number: (570) 389-4459
Department chair: Dee Anne Wymer
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

Anthropology, the study of humankind, attempts to establish useful information and generalizations about people, their behavior and their cultural and biological origins to arrive at the fullest possible understanding of human diversity. Anthropology promotes global cultural awareness through classroom studies of cultures everywhere. Anthropology, in common with other sciences, is concerned with the formulation and testing of hypotheses or tentative explanations of observed human phenomena. Anthropology also has an important humanistic tradition.

At Bloomsburg University, anthropology is divided into three study areas: cultural anthropology, which studies ways of life in societies across the world; physical anthropology, which traces human origins and biological variability; and prehistoric archaeology, which seeks to explain human behavior by studying material remains from past cultures.

Additionally, the department offers two minors, one in anthropology and one in Latin American Studies.

Program Emphasis in Prehistoric Archaeology - The Anthropology Department features a special program emphasis in prehistoric archaeology. Students can enroll in multiple archaeology courses to gain a professional understanding of academic archaeology and archaeological method and theory. The department offers summer field schools where methods and techniques in archaeological analysis are refined. During summers and upon graduation, students have many opportunities to find temporary or permanent employment in the field of archaeology both in the United States and abroad. The program has provided fieldwork and study in North America, Mesoamerica and South America.

Anthropology at Bloomsburg - The Department of Anthropology is dedicated to providing a quality undergraduate education in anthropology so that its graduates may go on to fulfilling professional careers in the discipline. To this end, the department offers an unusually wide variety of courses taught by nationally known faculty. Each student majoring in anthropology is expected to enroll in a core set of seven courses, including introductory courses in each of the three major subdisciplines of the field.

In addition, majors take an upper-level course on non-human primates, a research and writing course designed to teach library, writing and Internet skills and a rigorous senior-level course on anthropological theory. Each major is also expected to have practical hands-on experience in the discipline through an internship, an independent study or a field methods course. An additional 15 credits in elective courses fulfills the major. The anthropology faculty endeavor to know each of their students personally and will tailor the curriculum to individual student needs.

This curriculum is designed to prepare students for admission to graduate school in anthropology. Each year, approximately one-third of the seniors majoring in anthropology apply to graduate school, with 90 percent accepted at their first-choice institution.

To help these students be competitive in the discipline, the faculty strongly encourages student research opportunities. Students may conduct research in any of the subdisciplines of anthropology with the goal of presenting their research at a local, regional or national conference. Academic excellence in anthropology is rewarded through membership in Lambda Alpha, the national honorary society for anthropology.

Qualified anthropology majors are also encouraged to participate in the university's honors program. An active anthropology club and a monthly newsletter also support students' interest in the field.

Those students who do not choose to attend graduate school receive the same careful attention and preparation as those who do. Students are encouraged to increase their opportunities for employment through internships or, in the case of archaeology, employment while a student at local contract archaeology firms. These students are also encouraged to develop skills in computing, languages or other areas to help them reach employment goals. Anthropology majors have gone on to productive careers in business and government, with 85 percent of students finding meaningful employment within a year of graduation.

Required Courses

In addition to 54 semester hours of general education requirements, a total of 36 semester hours is required for a major in anthropology. An additional 38 semester hours of elective courses satisfies the 128-hour requirement for a bachelor's degree. The following courses are required:

46.200 Principles of Cultural Anthropology
46.210 Prehistoric Archaeology
46.220 Human Origins
46.385 Anthropology Research and Writing
46.470 History of Anthropological Thought and Theory

Choose one of the following four courses:

46.301 Field Archaeology
46.466 Independent Study in Anthropology
46.475 Field Methods in Cultural Anthropology
46.497 Internship in Anthropology

Elective Courses - Students may choose five courses, totaling 15 or more semester hours. At least 6 semester hours must come from each of the following two subdisciplines:

Archaeology and Physical Anthropology
46.300 Archaeological Method and Theory
46.301 Field Archaeology
46.310 Aztecs and Mayans
46.311 Archaeology of Northeastern North America
46.312 South American Archaeology
46.340 Native North Americans

Cultural Anthropology
46.102 Anthropology and World Problems
46.260 Men and Women: An Anthropological Perspective
46.290 Race and Racism
46.320 Contemporary World Cultures
46.333 Ethnic Identity in the United States
46.350 Medical Anthropology
46.360 Pseudoscience
46.370 Indigenous Cultures of Modern Mexico
46.390 Socialization of the Child
46.440 Language and Culture
46.460 Applied Anthropology
46.450 Peoples and Cultures of South America
46.466 Independent Study in Anthropology
46.475 Field Methods in Cultural Anthropology
46.480 Religion and Magic
46.495 Special Topics in Anthropology
46.497 Internship in Anthropology

Students contemplating graduate school are advised to take an introductory course in computer science.

Minor in Latin American Studies - In cooperation with the departments of History and Languages and Cultures, the department offers a 21-credit minor in Latin American Studies for students with an interest in the cultures of Mexico, Central and South America and the Spanish or French-speaking Caribbean. Six credits are in language courses, either Spanish or French. The remaining 15 credits are divided as follows.

A minimum of six credits from:
46.310 Aztecs and Mayas
46.312 South American Archaeology
46.333 Ethnicity in the United States
46.370 Indigenous Cultures of Modern Mexico
46.450 Peoples and Cultures of South America
46.495 Special Topics in Anthropology: Mexico Study Abroad
46.495 Special Topics in Anthropology: Peoples of the Caribbean
46.497 Internship in Anthropology (must be related to the minor)

A minimum of three credits from:
42.142 Latin America: From European Colonization to the Present
12.207 Hispanic Daily Life and Customs
12.211 Spanish Culture and Civilization
12.212 Spanish American Culture and Civilization
12.213 Hispanics in the U.S.: Culture and Literature
12.290 Spanish Studies Abroad (Latin America and Caribbean only)
10.290 French Studies Abroad (Caribbean only)
10.495 Special Topics (approved by adviser)
12.495 Special Topics (approved by adviser)
38.498 Internship in the Humanities: Puerto Rican Study Abroad

Minor in Anthropology - A minor constitutes 18 semester hours in anthropology. This includes three required courses:

46.200 Principles of Cultural Anthropology
46.210 Prehistoric Anthropology
46.220 Human Origins
and 9 additional semester hours from department electives.

Faculty Profiles

Thomas F. Aleto, professor - B.A., University of Notre Dame; M.A., Ph.D., University of Illinois, Urbana-Champaign

Susan R. Dauria, associate professor - B.A., State University of New York College at Geneseo; M.A., Ph.D., State University of New York at Albany

David J. Minderhout, professor - B.A., M.A., Michigan State University; Ph.D., Georgetown University

Faith Warner-Lange, assistant professor - B.A., Bloomsburg University; M.A., Ph.D., Syracuse University

Dee Anne Wymer, professor - B.A., M.A., Ph.D., The Ohio State University

Supplemental Information

The Department of Anthropology website: http://www.bloomu.edu/departments/anthro/

Art History, Art Studio

Administered by: Department of Art and Art History
College: Liberal Arts
Campus address: 213 Old Science Hall
Telephone number: (570) 389-4646
Fax number: (570) 389-4459
Department chair: Christine M. Sperling
Degree awarded: Bachelor of Arts
Effective Fall 2001

About the Program

The Art Department offers undergraduate major degree programs in art studio and art history. These disciplines are related and complementary. An understanding of art, whether it is an artistic medium such as photography or an artistic period such as the Italian Renaissance, expands and illuminates the academic liberal arts curriculum by bringing to students evidence of our most subtle, elevated and human forms of visual expression.

Students undertake the study of art studio for many reasons, including self-expression, to learn an artistic process and to pursue a vocation in the field. Studio course offerings at Bloomsburg University include ceramics, computer graphics, crafts, drawing, graphics, painting, photography and sculpture. Students, both in studio art and those with other majors but similar creative interests, may develop skills which will be a deep source of personal satisfaction now and throughout life. In the studio courses, the students learn the discipline and technical processes for creating art as well as the aesthetic principles associated with that medium. The latter takes place particularly in the critiques, the in-depth class discussions of the work the class has accomplished. The most advantageous training for an artist, particularly in today's constantly changing technical environment, is a foundational understanding of art theory and practice and the appreciation of art as a humanistic, academic discipline. All the same, the department is equipped for the future with a state-of-the-art computer graphics lab for student use.

Art history involves understanding these works of creativity through the ages and across diverse cultures. Such an understanding entails not only developing a basic visual vocabulary of great works of art and architecture past and present, but also the capacity to articulate their appearance, to describe and discuss the cultures they evidence and to explore the ideals and practices of their times. The museum and the library are the studio of the art historian.

Students participate in many activities that enrich and expand the classroom experience. In addition to trips to New York City and Washington, D.C., galleries and museums, the Haas Gallery brings several artists to campus each semester to show their work and to meet and talk with students. The presence of art on the Bloomsburg University campus is evidenced by the permanent collection, particularly the monumental outdoor sculptures recently donated by Philip and Muriel Berman and the anagama vases by Shiho Kansaki, the Japanese ceramicist, displayed in the Kehr Union. An active Student Art Association offers activities like movies and trips for its members and organizes the annual, juried Student Art Exhibition.

Besides their facility in their discipline and their experience in teaching, the Art Department faculty bring to the classroom an impressive array of experiences and expertise to share with the students. Karl Beamer collaborates closely with Shiho Kansaki, mentioned above and has built a Japanese anagama kiln on his property outside Bloomsburg. Students are invited to participate in the firings there. Carol Burns teaches Crafts and Fabric Design and resides part of the year in Santa Fe where she studies the folk-art traditions of the American southwest. Gary Clark is prolifically published as a computer graphics artist and is a frequently requested panelist at computer conferences. Vincent Hron is the painting instructor and exhibits his work nationally. Stewart Nagel teaches graphics and printmaking and offers a course in children's art as well. Andrea Pearson publishes and speaks nationally on issues of gender in Northern Renaissance art and offers courses too in museum studies. Christine Sperling regularly offers a summer study-abroad course in Italy, the site of her art historical research in Renaissance art. Barbara Strohman brings to the classroom her knowledge of museums and galleries here and in Europe. Vera Viditz-Ward is deeply involved in documenting with her photography the lives of people in West Africa, where she lived for many years. Charles T. Walters' specialty is later 19th century American art and culture.

The art studio and art history undergraduate degrees both provide the foundation for future activity in the discipline, whether it be employment for which a bachelor's degree is suitable or further advanced study at the graduate level at another institution. For students in minor programs in art history and art studio, for students in other degree programs and for non-degree participants, the Art Department offers experiences, training and insight into the fascinating world of art.

Required Courses

For the B.A. in art studio or art history, students must fulfill the requirements for the major, the general elective courses and whatever free elective credits remain to bring the number of semester hours to 128. Transfer students must take at least half the credits for the degree program at Bloomsburg University to graduate with a major in art studio or art history. Of the 13 courses needed, at least seven must be taken at Bloomsburg. All art courses at Bloomsburg are three semester hours unless indicated otherwise.

Requirements for Art Studio - A total of 39 semester hours is required for a major in art studio. Required courses include:

Core
32.111 Drawing I
32.212 Drawing II
32.151 Three-Dimensional Design
32.152 Two-Dimensional Design
32.231 Painting I
32.241 Sculpture I
Choose two courses from Art History (31)

Specialization - Three levels of one of the following: ceramics, fabric design, graphics, painting, photography, sculpture or weaving.

Art Electives - Complete the 39 credits for major with art electives in Art History or Art Studio.

Requirements for Art History - A total of 39 semester hours is required for a major in art history. The degree program in art history provides an overview of the history of art together with minimum competency in a foreign language pertinent to the discipline, as well as direct experience of the art-making process through studio courses. Art history majors are expected to work closely with their adviser to identify courses that are most relevant to their interests and postgraduate goals. Required courses include:

Core
Choose eight courses from the following:
31.215 American Art History
31.225 History of Architecture
31.235 Ancient and Medieval Art
31.236 Art from the Renaissance Through Impressionism
31.324 History of Photography
31.345 Islamic Art
31.346 Art History of the Far East
31.355 History of Modern Art
31.375 Independent Study in Art History
31.365 Italian Renaissance Art
31.366 Northern Renaissance Art
31.373 Romanesque and Gothic Art
31.450 Perspectives on Museums
31.451 Museum Exhibition
30.385 Philosophy/Psychology of Art
32.480 Internship In Art (depending on the nature of the internship experience, 3-6 credits)
Or any other Art History course (31)

Art Studio: Six semester hours in art studio courses in areas such as drawing, painting, sculpture, 2D or 3D design, ceramics, fabric design, graphics, photography, weaving and computer graphics.

Art electives: Three semester hours in an art elective class (art history or art studio)

Language: Six semester hours in a foreign language, namely French, German, Italian or a language approved by the department chairperson. Art history majors intending to continue studies at the graduate level should take two levels of the same language to acquire greater proficiency.

Minor in Art Studio
9 semester hours from three levels of a studio specialization: ceramics, drawing, fabric design, graphics, painting, photography, sculpture or weaving; 6 semester hours art studio choice (Code 32); and 30.101 Introduction to Art for a total of 18 credits.

Minor in Art History
15 semester hours in art history courses (Code 31); 30.101 Introduction to Art, for a total of 18 credits.

Faculty Profiles

Karl A. Beamer, associate professor - B.S., Kutztown State College; M.F.A., The Pennsylvania State University

Carol Burns, associate professor - B.S., The Pennsylvania State University; M.A., University of Northern Colorado; M.F.A., Cranbrook Academy of Art

Gary F. Clark, professor - B.F.A., Maryland Institute College of Art; M.A., West Virginia University

Vincent Hron, assistant professor - B.F.A., Drake University; M.F.A., University of Michigan

Stewart L. Nagel, professor - B.F.A., Cooper Union; M.F.A., Pratt Institute

Andrea G. Pearson, associate professor - B.A., Augustana College; M.A., University of Iowa; Ph.D., University of California, Santa Barbara

Christine M. Sperling, professor, chairperson - B.A., M.A., University of Oregon; Ph.D., Brown University

Barbara J. Strohman, professor - B.S., University of Maryland; M.F.A., Maryland Institute College of Art

Vera Viditz-Ward, associate professor - B.F.A., Hartford Art School/University Of Hartford; M.F.A., Indiana University

Charles Thomas Walters, associate professor - B.M., Depauw University; M.F.A., University of Wisconsin; Ph.D., University of Michigan

Communication Studies

Administered by: Department of Communication Studies and Theatre Arts
College: Liberal Arts
Campus address: 1103 McCormick Center for Human Services
Telephone number: (570) 389-4184
Fax number: (570) 389-3516
Department chair: Howard N. Schreier
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

Students who major in communication studies learn how communication functions in social and professional contexts. Students may focus their study in one of three functional areas:

Interpersonal relationship management: This area focuses on the importance of communication in human relationships. Students develop competencies that allow them to explore human interactions, assess barriers to communication in relationships and acquire communication skills necessary for successful personal and professional development. Study in this area prepares students for careers in social and human services such as counseling, public administration, health service management and the ministry.

Leadership and social influence: This area focuses on the importance of communication in a democratic society. Students develop competencies that allow them to understand the public deliberative process, to assess and create messages and to enhance their leadership skills. Study in this area prepares students for careers in government, law, public information, speechwriting, lobbying, campaign direction or elected office.

Applied communication: This area focuses on the importance of communication in business and professional settings. Students develop competencies that allow them to understand communication in professional organizations, develop professional communication skills and to train others to communicate effectively in professional settings. Study in this area prepares students for careers in personnel management, sales, executive management, industrial and labor relations, employee training or as a development officer.

The communication studies division of the department supports general education for the entire university with courses in public speaking, interpersonal communication and intercultural communication.

Forensic Society - Students in the forensics program debate current topics, develop original speeches and present readings at intercollegiate competitions. Team members compete locally, regionally and nationally and they help to organize tournaments sponsored by Bloomsburg University.

Participants may earn up to one credit per year by taking 25.108 Forensics Practicum. Students from all majors are welcome to join the forensics team to improve their self-confidence, competence in research, knowledge of current events, appreciation of literature and public presentation skills.

Among careers pursued by Communication Studies majors after graduation are speech writing, employee training, sales management, public information, development, technical writing, campaign direction, lobbying and negotiations.

Requirements for the Major

Among 54 semester hours of general education requirements of the university, Communication Studies majors must take:

25.103 Public Speaking

Core requirements: A total of 9 semester hours are required from the following:

25.104 Interpersonal Communication
25.207 Investigating Communication
25.220 Intercultural Communication (diversity)

Areas of Concentration: All majors are required to take five of six courses in their chosen area of concentration, which must include the appropriate required course for that area, plus a minimum of one course from each of the other two areas of concentration, for a total of 21 semester hours. Students may take additional courses as free electives.

Interpersonal Relationship Management
25.215 Communication Theory (required)
25.309 Gender Issues in Communication (diversity)
25.313 Communication and Conflict
25.419 Communication in the Family
25.425 Communication in Relationships
25.426 Leadership and Team Building

Leadership and Social Influence
25.205 Understanding Social Influence (required)
25.315 Persuasion
25.321 Argumentation
25.406 Evaluating Communication
25.413 Community Leadership
25.417 Evaluating Media Influence

Applied Communication
25.210 Organizational Communication (required)
25.306 Computer Applications for Professional Communicators
25.307 Communication for Business Professionals
25.407 Interviewing
25.423 Communication Training in Organizations
25.424 Corporate Communication

Capstone Experience: The capstone experience is required of all students in the major regardless of the area of concentration. After completing 80 or more semester hours, students with a minimum 2.5 cumulative grade point average are eligible to register for an internship that will serve as their capstone experience. Students may register for 3 to 12 internship semester hours. Additional internship credit beyond the required 3 hours cannot be substituted for other coursework, but would be considered as electives. Students academically ineligible for Internship in Communication should consult their academic advisor to arrange a suitable alternative experience, such as additional specialized coursework.

25.497 Internship in Communication

Elective Courses:

25.108 Forensics Practicum
25.206 Oral Interpretation
25.218 Discussion
25.470 Independent Study
25.492, 25.493, 25.495 Advanced Studies in Communication
25.494 Advanced Studies in Communication (diversity)

Minor in Communication Studies

Students who hold a minimum 3.0 cumulative grade point average on a minimum of 15 semester hours are eligible for admission to the minor. Students must maintain the minimum 3.0 cumulative grade point average to continue study for a Communication Studies minor. Students who do not maintain the required grade point average will be put on probation for one semester during which they must regain the required grade point average.

General Education Requirement:

25.103 Public Speaking

Core Course Requirements: A total of 9 semester hours are required from the following:

25.104 Interpersonal Communication
25.207 Investigating Communication
25.220 Intercultural Communication (diversity)

Areas of Concentration: Choose one course from each of three areas of concentration.

Interpersonal Relationship Management
25.215 Communication Theory
25.309 Gender Issues in Communication (diversity)
25.313 Communication and Conflict
25.419 Communication in the Family
25.425 Communication in Relationships
25.426 Leadership and Team Building

Leadership and Social Influence
25.205 Understanding Social Influence
25.315 Persuasion
25.321 Argumentation
25.406 Evaluating Communication
25.413 Community Leadership
25.417 Evaluating Media Influence

Applied Communication
25.210 Organizational Communication
25.306 Computer Applications for Professional Communicators
25.307 Communication for Business Professionals
25.407 Interviewing
25.423 Communication Training in Organizations
25.424 Corporate Communication

Faculty Profiles

Mary Kenny Badami, professor- B.S., Fordham University School of Education; M.A., Hunter College; Ph.D., Northwestern University

Dale A. Bertelsen, professor - B.S., Rider College; M.A., Ph.D., The Pennsylvania State University

Janet Reynolds Bodenman, associate professor - B.A., Willamette University; M.A.,Ph.D., The Pennsylvania State University

Timothy B. Rumbough, associate professor - B.A., M.A., University of Central Florida; Ph.D., Florida State University

Howard N. Schreier, professor - B.A., Brooklyn College; M.A., University of Georgia; Ph.D., Temple University

Kara Shultz, associate professor - B.S., M.A., University of Northern Colorado; Ph.D., University of Denver

Harry C. Strine III, associate professor - B.A., Susquehanna University; M.A., Ohio University

James E. Tomlinson, associate professor - B.A., M.A., California State University at Long Beach

Janice M. Youse, assistant professor - B.S., M.A., Temple University

Supplemental information

The Department of Communication Studies and Theatre Arts maintains a website at: website: http://departments.bloomu.edu/csta/

Criminal Justice

Administered by: Department of Sociology, Social Work and Criminal Justice
College: Liberal Arts
Campus address: 2106 McCormick Center for Human Services
Telephone number: (570) 389-4237
Fax number: (570) 389-2019
Department chair: I. Sue Jackson
Degree awarded: Bachelor of Arts
Effective Fall 2001

About the Program

Among Bloomsburg's newest and more popular programs, Criminal Justice is designed to give students a firm liberal arts education in sociology and criminal justice with a strong theoretical component. The program exposes students to the theoretical concepts and research methods of the field, introduces them to computer data analysis and prepares them for graduate study. The program provides students the opportunity to explore the causes of social problems with respect to race, class, gender, crime, the political economy, age, health, work, punishment, victimization and deviance. Students are encouraged to think critically about the structure and dynamics of social groups, institutions, ideology and the society.

Factors suggesting success in the program include strong people skills and the ability to work with diverse populations and good academic performance. Because the major is so popular, a 3.00 grade point average is required for admission.

Through the criminal justice sequence, students are exposed to justice, enforcement and corrections systems, police work, investigation and victim's services.

Students from the program have been placed in diverse settings in Pennsylvania and surrounding states for internships and graduates report good placement rates. Internship settings include juvenile and adult probation offices; county, state and federal correctional facilities for adults and youth, U.S. Marshal's offices, the Federal Bureau of Investigation; Department of the Treasury; offices of attorneys and legal services; forensics programs, victim advocacy programs, women's centers and a variety of specialized systems.

There is also a criminal justice student organization that arranges for guest speakers from various institutions and organizations.

Required Courses

In addition to 54 semester hours of general education requirements, a total of 42 semester hours is required for a major in criminal justice. An additional 32 semester hours in electives completes the 128-hour university degree requirement. The Sociology Internship Program (45.496) accounts for 6 to 15 semester hours. Internships provide first-hand experience in the field and can be at local, state or federal agencies or private institutions. Required courses are:

Core courses

45.211 Principles of Sociology
45.255 Research Methods for Social Inquiry
45.260 Basic Social Statistics
45.462 Sociological Theory

Criminal Justice sequence

45.244 Introduction to Criminal Justice (prerequisite to all other courses in the sequence)
45.242 Juvenile Delinquency
45.341 Criminology
45.342 Penology
45.343 Victimology
45.495 Criminal Justice Internship Program
Choose three departmental courses (Code 45) excluding courses listed above and excluding 45.297, 45.497 and 45.498, but including at least one course at or above the 300 level.

Faculty Profiles

Christopher F. Armstrong, professor - B.A., Washington and Lee University; M.A., Ph.D., University of Pennsylvania

Leo G. Barrile, professor - B.A., M.A., Ph.D., Boston College

Pamela Donovan, assistant professor - B.A., Hampshire College; M.Phil., Ph.D., City University of New York, York Graduate Center

David E. Greenwald, associate professor - B.A., University of Pennsylvania; M.A., Ph.D., University of California at Berkeley

James H. Huber, professor - B.S., Bloomsburg State College; M.A., University of Delaware; Ph.D., The Pennsylvania State University

I. Sue Jackson, chairperson, professor - A.B., Lycoming College; M.S.S.W., Graduate School of Social Work, University of Texas; Ph.D., Bryn Mawr College

Charles W. Laudermilch, associate professor - B.A., Moravian College; M.S.W., Wayne State University

Frank G. Lindenfeld, professor - B.A., Cornell University; M.A., Ph.D., Columbia University

Yvette J. Samson, assistant professor - B.A., Bowling Green University, M.A., Ph.D., University of California at Riverside

Neal Slone, associate professor - B.A., State University of New York at Albany; M.A., Ph.D., University of Washington

Dale L. Sultzbaugh, associate professor - B.A., Gettysburg College; M.Div., Lutheran Theological Seminary; M.S.W., West Virginia University

Anne K. Wilson, professor - B.A., Carleton College; M.S., University of Maryland; Ph.D., The Johns Hopkins University

Economics, Business Economics, Political Economics

Administered by: Department of Economics
College: Liberal Arts
Campus address: 316 Bakeless Center for the Humanities
Telephone number: (570) 389-4335
Fax number: (570) 389-4338
Department chair: Saleem Khan
Degrees Awarded: Bachelor of Arts, Bachelor of Science

About the Program

The Department of Economics at Bloomsburg University offers a systematic study of the economic activities of business, household and government. The core of the curriculum enables the student to master basic principles of economics, to develop analytical skills and to interpret economic phenomena.

To accommodate the diversity of interests at the undergraduate level, the department has three programs open to economic majors, two lead to a Bachelor of Arts and one to a Bachelor of Science. The three programs are: a general study of economics for students interested in graduate school or a career in the public or private sector; business economics for students interested in analytical economics and intend to pursue graduate work or career in business or government; and political economics, for students interested in careers dealing with political and international problems in the public arena or intend to pursue advanced study in the field.

A total of 45 semester hours is required for a B.A. in economics. A total of 48 semester hours is required for a major in business economics. A total of 45 semester hours is required for a B.A. in political economics.

Required Courses

In addition to 54 semester hours in general education requirements, five core courses plus a elective courses in either economics, business economics or political economics is required. The following five core courses are required:

40.121 Principles of Economics I
40.122 Principles of Economics II
40.222 Intermediate Micro-Theory and Managerial Economics
40.221 Intermediate Macroeconomic Theory
40.256 Business and Economics Statistics I

Required Elective Courses - Electives in economics, business and political science in any of the options require the adviser's approval.

General Economics - Choose one of the following two courses:

40.156 Business and Economic Mathematics
53.125 Analysis I

27 semester hours in elective courses in economics, including 40.456 Introduction to Econometrics or 40.356 Business and Economic Statistics II.

Business Economics

Choose one of the following two sets:

91.221 Principles of Accounting I and 91.222 Principles of Accounting II
or 91.220 Financial Accounting and 91.223 Managerial Accounting
93.344 Principles of Management
93.345 Human Resource Management
96.313 Business Finance
97.310 Marketing: Principles and Practice
Plus 18 semester hours in elective courses in economics, including 56.110 Introduction to Computer Science and 40.356 Business and Economic Statistics II or 40.456 Introduction to Econometrics.

Political Economics

44.120 United States Government
44.336 Public Administration Theory
40.315 Business and Government
40.322 Contrasting Economics
40.460 Advanced Political Economy
6 semester hours of elective courses in economics
9 semester hours of elective courses in political science.

Minor in Economics - The minor provides a basic competence in economics for non-economics majors and constitutes 18 semester hours. Courses required for a minor in economics include:

40.121 Principles of Economics I
40.122 Principles of Economics II
40.222 Intermediate Micro-Theory and Managerial Economics
40.2321 Intermediate Macroeconomic Theory
6 semester hours of elective courses in economics chosen from
General Economics Theory
40.313 Labor Economics
40.315 Business and Government

40.316 Urban Economics
40.326 Public Finance
40.327 Money and Banking
40.329 Environmental Economics
40.333 International Economics
Statistical Analysis
40.256 Business and Economic Statistics I
40.356 Business and Economic Statistics II
40.456 Introduction to Econometrics
Economic History and Systems
40.322 Contrasting Economics
40.323 History of Economic Thought
40.324 Economic Theory of the Western World
40.334 Economic Growth in Underdeveloped Areas
40.460 Advanced Political Economy

Faculty Profiles

Sukhwinder Bagi, assistant professor - B.A., M.Ed., M.A., Punjab Universtiy; Ph.D., Vanderbilt University

Peter H. Bohling, professor - B.A., Miami University; M.A., The University of Iowa; Ph.D., University of Massachusetts

Mehdi Haririan, professor - B.A., National University, Teheran; M.A., Iowa State University; Ph.D., New School for Social Research

Woo Bong Lee, professor - B.S., Delaware Valley College; M.S., Ph.D., Rutgers University

Saleem M. Khan, chairperson, professor - B.A., S.E., College, Bahawalpur; M.A., Government College, Lahore, Punjab University; Ph.D., J. Gutenberg University

Rajesh K. Mohindru, professor - B.A., M.A., DAV College, Panjab University; M.A., Ph.D., University of Pennsylvania

Robert S. Obutelewicz, assistant professor - B.A., B.S., Carson-Newman College; M.A., Ph.D., University of Massachusetts

Elizabeth P. Patch, associate professor - B.S., M.S., Ph.D., Lehigh University

Robert P. Ross, associate professor - B.A., M.A., Washington University

Supplemental Information

The Department of Economics maintains a website at http://departments.bloomu.edu/econ

English

Administered by: Department of English
College: Liberal Arts
Campus address: 114 Bakeless Center for the Humanities
Telephone number: (570) 389-4427
Fax number: (570) 389-3006
Department chair: Ervene Gulley
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

The department offers a program leading to a Bachelor of Arts in English and provides the English courses for Bachelor of Science in Education in two areas of concentration and Communication, which culminate in certification for teaching in secondary schools. The department also offers a minor in English. The discipline of English celebrates the power of words through appreciation of literature, understanding of language and creation of good writing. English majors grounded in humanistic studies are equipped for critical thinking and effective communication.

Among career paths pursued by recent graduates are technical writing, editing, communications management, human resources management and software development. Students interested in teaching English in secondary schools should see the specialization in English under Secondary Education.

Required Courses

A total of 42 semester hours is required for a major in English. No course may be used to satisfy more than one requirement. With the addition of general education requirements and elective courses of at least 32 semester hours, the 128-hour requirement for a baccalaureate degree is satisfied. Requirements are:

Core
20.203 Approaches to Literary Study
20.226 European Literature I
20.236 American Literature I
20.246 British Literature I or 20.247 British Literature II
20.256 Non-Western Literature I or 20.257 Non-Western Literature II
20.363 Shakespeare
20.488 Seminar or 20.489 Seminar
20.492 Literary Theory and Criticism or 20.493 Bibliography and Literary Research

Choose one course from the following four courses:
20.311 Structure of English
20.312 History of the English Language
20.411 Modern Linguistic Theory
20.413 Language in American Society

American Literature
Choose two courses from the following seven courses:
20.334 Studies in American Literature
20.335 Studies in American Literature
20.431 American Romanticism
20.432 American Realism
20.433 American Modernism
20.434 Contemporary American Literature
20.436 African-American Literature

British Literature
Choose one course from the following nine courses:
20.341 Medieval Literature
20.342 The Renaissance
20.344 The Neoclassical Age
20.345 Romantic and Victorian Literature
20.346 Studies in British Literature
20.347 Studies in British Literature
20.364 Chaucer
20.370 The English Novel
20.375 Renaissance Drama

Writing Genre
Choose one course from the following 11 courses:
20.301 Creative Writing: Fiction
20.302 Creative Writing: Non-Fiction Prose
20.303 Creative Writing: Poetry
20.306 Theory and Practice of Writing
20.370 The English Novel
20.372 Modern Novel
20.374 Short Story
20.375 Renaissance Drama
20.377 Modern Drama
20.379 Modern Poetry
20.391 Literature and Film

Electives

Choose two other 300-400 level courses.

Requirements for the Minor - The minor in English consists of 18 semester hours: 9 hours from courses on the 100 or 200 level except 20.101, 20.104, 20.200 and 20.201; 9 hours from courses on the 300 or 400 level and approval of the department chair.

Faculty Profiles

S. Ekema Agbaw, professor - B.A., University of Yaounde; M.A., University of Leeds; Ph.D., University of Connecticut

Joseph F. Battaglia, assistant professor - B.A., Rutgers University; M.A., Oklahoma State University; Ph.D., State University of New York at Binghamton

Mary G. Bernath, associate professor - B.A., M.A., Ph.D., University Of Pittsburgh

Janice Broder, assistant professor - B.A., Mount Holyoke College, M.A., University of Michigan; M.A., Ph.D., Brandeis University

Cramer R. Cauthen, assistant professor, director, University Writing Center - B.A., Pomona College; M.A., Syracuse University; Ph.D., University of Louisville

Betina I. Entzminger, assistant professor - B.A., University of South Carolina at Columbia; M.A., Ph.D., University of North Carolina at Chapel Hill

Ervene F. Gulley, chairperson, professor - A.B., Bucknell University; M.A., Ph.D., Lehigh University

Claire T. Lawrence, assistant professor - B.A., Pomona College; M.F.A., University of Utah; Ph.D., University of Houston

S. Michael McCully, assistant chairperson, associate professor - B.A., Hendrix College; M.A., Western Illinois University; Ph.D., University Of Iowa

Edwin P. Moses, assistant professor - B.A., Kansas State University; Ph.D., State University Of New York At Binghamton

Francis J. Peters, professor - B.A., Belmont Abbey College; M.A., Seton Hall University; Ph.D., New York University

Marion B. Petrillo, assistant professor - B.A., Wilkes College; M.A., Duquesne University; Ph.D., State University Of New York At Binghamton

David S. Randall, assistant professor - B.A., State University of New York at Potsdam; M.A., Ph.D., State University of New York at Binghamton

Terrance J. Riley, associate professor, -B.A., University Of Michigan; M.A., Ph.D., Michigan State University

Danny L. Robinson, associate professor, B.A., Northern Arizona University; M.A., Purdue University; Ph.D., Duke University

Sabah A. Salih, associate professor - B.A., University of Baghdad, M.A., Ph.D., Southern Illinois University

Riley B. Smith, associate professor - B.A., Ph.D., The University Of Texas, Austin

Louise M. Stone, assistant professor - B.A., M.A., University Of Michigan

Julie Vandivere, associate professor - B.A., University of Utah; M.A., Brigham Young University; M.A., Ph.D., Cornell University

Arthur G. Wemple, instructor - B.A., Vermont College; M.F.A., University of Massachusetts

Stephen W. Whitworth, assistant professor - B.A., University of South Alabama; M.A., Ph.D., University of Michigan (Ann Arbor)

Vivian Yenika-Agbaw, assistant professor, B.A., University of Yaounde; M.A., University of Connecticut; Ph.D., The Pennsylvania State University

Supplemental information

Affiliated website: http://hubble.bloomu.edu/~english/

Exercise Science

Administered by: Department of Exercise Science
College: Liberal Arts
Campus address: 121 Centennial Hall
Telephone number: (570) 389-4366
Fax number: (570) 389-2099
Department chair: Susan Hibbs
Exercise Science program director: Tamra Cash
Degree awarded: Bachelor of Science
Effective Fall, 2001

About the Program

Designed to prepare students for the wide range of careers in the growing field of wellness and fitness, Exercise Science at Bloomsburg is unique among State System of Higher Education universities. This challenging and demanding program leads to careers in corporate wellness programs, health care, education and research environments as well as in sports medicine and athletic training.

Emphasis is on the interpreted aspects of wellness and fitness, gerontology, nutrition, stress management, alternative medicine and therapies and cardiac rehabilitation in a rapidly evolving professional field. Major national corporations and graduate programs actively recruit Bloomsburg students. Many large companies, concerned with the health and productivity of employees, seek exercise science professionals to develop and manage corporate wellness facilities; other graduates go on to establish their own businesses in the personal training and fitness field or into sports medicine. A number of leading universities, including Bloomsburg, offer graduate study in Exercise Science and Adult Fitness involving clinical and research internships to encompass the full spectrum of health, including cardiac rehabilitation, physiological assessment and training for optimal performance.

Student factors that suggest a high probability of success include strong interpersonal skills, an intense desire to help others, versatility in individual skill and fitness abilities and strength in sciences, particularly those related to anatomy and physiology.

Program faculty offer advisement to assist individual students in tailoring a specific program of study to prepare them for career objectives.

The Department of Health, Physical Education and Athletics also administers courses needed to meet general education requirements for all academic majors, supports requirements for education majors and conducts the university's athletic programs.

Required Courses

In addition to general education requirements totaling 54 semester hours, a minimum of 44 semester hours are required for a major in exercise science, with the remaining 26 semester hours required for a bachelor's degree coming from elective courses.

48.101 General Psychology
45.211 Principles of Sociology
50.173 Anatomy and Physiology I
50.174 Anatomy and Physiology II
50.205 Introduction to Nutrition
50.231 Biology of Aging
52.101 Introduction to Chemistry
05.298 Fitness and Wellness
09.230 Human Sexuality
05.321 First Aid Safety
05.476 Exercise Physiology
05.477 Methods and Materials in Adult Physical Education
59.498 Internship in Exercise Science
Choose one of the following two courses:
05.411 Exercise Prescription and Programming for Special Populations
05.370 Measurement and Evaluation of Human Performance
Choose one of the following two courses:
93.344 Principles of Management
91.498 Introduction to Health Care Administration
Choose one of the following two courses:
05.250 Lifeguarding
05.305 Aquatic Fitness Programming
Choose one of the following four courses:
48.253 Social Psychology
48.311 Adulthood and Aging
48.380 Physiological Psychology
48.476 Principles of Behavior Modification
Choose one of the following two courses:
05.430 Current Issues in Health Education
28.290 Alcohol Use and Abuse

Requirements for the Minor

Students are required to complete a minor or area concentration. Contact a department adviser for details.

Faculty Profiles

Tamra Cash, assistant chairperson, assistant professor - B.S., Elon College; M.S. University of Tennessee; M.A., Eastern Kentucky University; Ed.D., Temple University

Charles W. Chronister, associate professor - B.S., M.Ed., East Stroudsburg State College

Mary T. Gardner, director of athletics, assistant professor - B.S., M.Ed., East Stroudsburg State College

Joseph B. Hazzard, Jr., athletic trainer, assistant professor - B.S., Salem College; M.S., Shippensburg University

Susan J. Hibbs, chairperson, associate professor - B.S., Western Kentucky University; M.Ed., East Stroudsburg State College; Ed.D., Temple University

Carl M. Hinkle, assistant professor - B.S., Montana State University; M.S., Ithaca College

Sheila A. Kaercher, assistant professor - B.A., William Paterson College; M.A., Bloomsburg University

Roch A. King, instructor - California State University at Fresno; M.S., Ph.D., Temple University

Linda M. LeMura, professor - B.S., Niagara University; M.S., Ph.D., Syracuse University

Thomas F. Martucci, assistant professor - B.S., Trenton State College; M.A., University of North Carolina

Marilyn K. Miller, assistant professor - B.S., East Stroudsburg University of Pennsylvania; M.S., Illinois State University; Ph.D., Southern Illinois University

Swapan Mookerjee, associate professor - B.P.E., M.P.E., Lakshmibai National Institute of Physical Education, Gwalior, India; Ph.D., University of Wisconsin, Madison

Sharon L. O'Keefe, assistant professor - B.S., Trenton State College; M.Ed., East Stroudsburg State College

Ronald E. Puhl, associate professor - B.S., Lock Haven State College; M.S., West Chester State College

Burton T. Reese, associate professor - B.A., M.Ed., East Stroudsburg State College

David R. Rider, assistant professor - B.A., The University of Chicago; M.S., Indiana University of Pennsylvania

Roger B. Sanders, professor - B.S., West Chester State College; M.A., Ball State University

Leon Szmedra, professor - B.S., State University of New York at Brockport; M.A., University of Northern Colorado; Ph.D., Syracuse University

Henry C. Turberville Jr., associate professor - B.S., M.A., University of Alabama

Ellen West, athletic trainer, assistant professor - B.S., California University of Pennsylvania; M.S., West Virginia University

History

Administered by: Department of History
College: Liberal Arts
Campus address: 104 Old Science Hall
Telephone number: (570) 389-4156
Fax number: (570) 389-4946
Department chair: William Hudon
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

The Bloomsburg University Department of History delivers a great course of studies where students and faculty work together in pursuit of excellence.

Students who major or minor in history at Bloomsburg bring to their college experience both excellent high school credentials and strong intellectual curiosity. The Department of History provides scholarships for outstanding students; in fact, no major at Bloomsburg University offers more scholarships and fellowships than does the Department of History. The department is dedicated to honing students' intellectual skills and fostering their love of learning, while providing a solid grounding in American, European and world history.

Students begin their training in History with a carefully planned series of introductory courses that provide a fundamental survey-level knowledge of the history of the United States as well as world and regional history. They then go on to upper-level seminar courses where they develop a deeper level of knowledge and enhance their ability to work accurately and critically with secondary sources and with primary source documents. Upper-level courses in the Department of History place heavy emphasis on writing, oral presentation and research skills. They also foster use of computers and other information technologies that facilitate historical research and analysis.

The excellence of the program is manifest in the academic success of our students and faculty. Students in the program often present their research at honors conferences; several student research papers have won prizes and several more have been published. The history faculty is composed of dedicated working scholars who make teaching their first professional priority. The faculty collectively have produced a long list of important books, research articles and conference presentations. They daily bring this professional experience and expertise into the classroom, where it is integrated into teaching that students routinely recognize as excellent. Faculty and secretarial staff members all work constantly to improve service for our students, evident, for instance, in the accessibility of faculty, the variety of internship opportunities available to students and the quality of student advisement.

Successful undergraduate students in the Department of History pursue a wide variety of careers. Many go on to successful careers in fields normally associated with history, such as law, law enforcement, public history, public administration and education. Students from the program are teaching in primary and secondary schools across the United States. Many of students have pursued graduate training in history at major universities and several have gone on to careers as university professors. Others have distinguished themselves in the business and corporate worlds, in industries ranging from insurance to high-technology information services.

Required Courses

In addition to 54 semester hours of general education requirements, a total of 36 semester hours is required for a major in history with at least 15 semester hours drawn from 300 and 400 level courses. It is strongly recommended that students take 42.398 Research and Writing Skills as early as possible in their program.

42.112 Origins of the Modern World
42.113 The Modern World
42.121 United States History Survey: Colonial Period to 1877
42.122 United States History Survey: 1877 to the Present
42.133 The Ancient and Medieval Worlds
42.398 Research and Writing Skills

Choose one from the following four courses:

42.141 The Modern Far East
42.142 Latin America: From European Colonization to the Present
42.143 Black Africa
42.144 Islamic and Hindu Worlds: Middle East, India and Malaysia

Any course, 3 semester hours, is selected from upper-division (300-400 level) offerings in American history.

Any course, 3 semester hours, is selected from upper-division course (300-400 level) offerings in Western civilization or European history covering the period through 1815.

Any course, 3 semester hours, is selected from upper-division (300-400 level) offerings in European history covering the period since 1789.

Electives in history: any two 300 or 400-level history courses.

Minor in History - This program requires 18 semester hours of history courses with at least 6 semester hours in 300 or 400 level courses. The minor includes:

6 semester hours, any two 100 level history courses
6 semester hours, any two 200 or 300 level history courses
3 semester hours, any of the 300 or 400 level history courses
42.398 Research and Writing Skills

The program for the history minor provides the following features: at least one directed exercise in independent historical research (42.398); a minimal background in those courses at the 100 level that are basic to and required of history majors; flexibility in framing a minor pertinent to the student's academic interest; and at least one course, in addition to 42.398, at an advanced level.

Faculty Profiles

Richard G. Anderson, associate professor - B.A., Western Kentucky State College; M.A., Ph.D., Texas Christian University

Jeffrey A. Davis, assistant professor - B.A., M.A., Eastern Washington University; Ph.D., Washington State University

Nancy Gentile Ford, professor - B.A., M.A., Ph.D., Temple University

Michael C. Hickey, associate professor - B.A., M.A., Ph.D., Northern Illinois University

Walter Howard, associate professor - B.A., M.A., University of West Florida; Ph.D., Florida State University

William V. Hudon, professor - B.A., Fordham University; M.A., Ph.D., University of Chicago

Douglas Karsner, assistant professor - B.A., Mansfield State College; M.A., Ph.D., Temple University

Jeanette Keith, professor - B.A., Tennessee Technological University; Ph.D., Vanderbilt University

Jeff E. Long, assistant professor - B.A., Hendrix College; M.A., Washington University; Ph.D., University of Hawaii

Arthur W. Lysiak, associate professor - B.S., M.A., Ph.D., Loyola University

Mark S. Quintanilla, assistant professor - B.S., Wingate University; M.A., East Carolina University; Ph.D., Arizona State University

Lisa M. Stallbaumer, associate professor - B.A., M.A., Wichita State University; Ph.D., University of Wisconsin-Madison

Supplemental information

The Department of History maintains a website at http://departments.bloomu.edu/history/

Languages and Cultures

Administered by: Department of Languages and Cultures
College: Liberal Arts
Campus address: 230 Old Science Hall
Department chair: Jing Luo
Telephone number: (570) 389-4750
Fax number: (570) 389-3992
Degree awarded: Bachelor of Arts
(French, German or Spanish)
Effective Fall, 2001

About Languages and Cultures

Knowledge of other languages carries advantages from the most utilitarian to general and abstract applications of learning. Foreign language study, thus benefits all students, no matter what their goals, interests or ideals are.

Studying another language helps students become more competitive after graduation. Employers and graduate schools are receiving an ever-increasing number of applications from qualified students and are looking for something special. A foreign language may be the ticket to a rewarding career in the areas of international business, education, health care, tourism, foreign service, management and social service, to mention just a few. No matter what field you specialize in today, you stand to benefit from the study of another language and culture because it provides you with a broader view of the world and an additional marketable skill.

Additionally, knowledge of another language fosters greater awareness of cultural diversity among the peoples of the world and allows greater appreciation of other people's values and ways of life.

Those who learn a second or third language also gain greater insight into their native language and culture. Knowledge of a second language, therefore, not only allows you to learn about others, you also learn more about yourself. Not only that, study of another language helps students comprehend the intricate connections between language and thought and thereby enhances higher-order thinking skills.

About the Programs

The Department of Languages and Cultures offers language instruction in seven languages: Chinese, French, German, Italian, Latin, Russian and Spanish. Japanese is offered on self-instructional learning basis. A student interested in a teaching career may elect French, German or Spanish as an area of specialization leading to a Bachelor of Science in Education.

The department offers majors and minors in French, German and Spanish, as well as a career concentration in Chinese.

As part of the department's mission in general education, the languages and cultures curriculum serves to enhance the quality of the students' liberal arts education with an international and multicultural perspective. In addition to developing proficiency for communication with speakers of other languages, the program also offers courses in culture and civilization taught in English to support the goals of global/cultural awareness and international education.

Courses in culture, civilization oral expression, literature and phonetics are included in the area of concentration. Students wishing to combine proficiency in languages and cultures with another major may elect a minor in French, German or Spanish, as well as basic and intermediate courses in the other languages offered. Area concentrations in French, German and Spanish are offered for students in early childhood education, elementary education and secondary education. The department also offers a career concentration in Chinese Studies and an interdisciplinary minors program of Spanish-American Studies with the Department of Anthropology.

Study Abroad Programs are available in China, France, Germany, Puerto Rico and Spain.

Individual Practice - Audio tapes, videotapes and compact disks for language courses are available for individual practice in the language laboratory, located in 238 Old Science Hall. The language laboratory is equipped with the latest computer technology.

Language Awards - Outstanding Academic Achievement - This award is presented to any graduating senior who has a minimum GPA of 3.8 for all courses in the major (A student majoring in more than one language may be considered for an award in each language.); has a minimum GPA in all work at the university of 3.5; and is recommended by the majority of the faculty of the major language.

Student Organizations include: Asian Language and Culture Club, French Club, German Club, H.A.B.L.A.S., Italian Club, and Phi Sigma Iota.

French

Students who have studied a language elsewhere should consult the department chairperson for appropriate placement. Generally, the student should schedule courses as follows:

With one year of high school study or equivalent, schedule 10.101.

With two years of high school study or equivalent, schedule 10.102.

With three years of high school study or equivalent, schedule 10.203.

With four years of high school study or equivalent, schedule 10.204.

With no previous language study, schedule special sections of 10.100 for beginners in French.

Education Majors - Students majoring in early childhood education and elementary education may elect an area of concentration in French. Students should consult their advisers in the Department of Languages and Cultures about course selection. It is recommended that courses in culture and civilization oral expression, literature, phonetics and foreign language in elementary school be taken to complete the area of concentration.

The area of concentration for students in early childhood education and elementary education is under revision and students should inquire about new requirements.

Requirements for a major leading to the Bachelor of Science in Education are found in the section on Secondary Education. Students should inquire in the department about changes in the requirements.

Programs Abroad - All language students are urged to seek opportunities to study abroad. An exchange and internship program with the University of Nancy's Faculté des Lettres and the Commercial Institute in Nancy, France, brings French students to Bloomsburg University. It affords Bloomsburg University students in French, regardless of their major, to study at Nancy. French majors, minors and/or business majors with a strong concentration in French, are especially encouraged to take part in this program.

Required Courses

A total of 36 semester hours is required for a major in French in addition to 54 semester hours of general education requirements. Other than the General Education distribution requirements, the department does not restrict the choice of courses in this area, however, students are encouraged to choose general education courses in consultation with their advisers. The balance of courses to meet the university's 128-semester hour requirement for a bachelor's degree come from elective courses. Required courses for the major include:

10.203 French III
10.204 French IV
10.205 Applied Phonetics and Pronunciation
10.206 Structure of the French Language
10.207 Conversation: French Daily Life and Customs
10.211 Foundations of French Culture and Civilization
10.401 Advanced French Language
10.402 Contemporary Issues in Francophone Media
10.422 Masterpieces of French Literature
10.423 Black Francophone Writers and Culture

Students will choose 6 credits of electives by advisement to fulfill the requirement.

Requirements for the Minor:

10.203 French III
10.204 French IV
10.206 Structure of the French Language

Plus 12 credits in French above the level of French III, for a total of 21 credit hours.

German

Requirements for the Major in German - A minimum of 36 credit hours is required for the major, beginning with German III (11.203). Students need German II (11.102) or the equivalent before entering the major sequence.

Students majoring in Education may elect an area of concentration in German. Students should consult their advisers in the Department of Languages and Cultures about course selection. It is recommended that courses in culture and civilization oral expression, literature, phonetics and foreign language in elementary school be taken to complete the area of concentration.

Area concentration in German is offered to Education majors, who should check with their adviser to develop a plan of study.

Requirements for a major leading to the Bachelor of Science in Education are found in the section on Secondary Education. Students should inquire in the department about changes in the requirements.

Study Abroad in Jena, Germany - Bloomsburg University offers an exchange program with the Friedrich-Schiller-Universität in Jena, Germany. The Jena program is open to all Bloomsburg University students who have had at least two years of college German or the equivalent. Jena offers a broad range of courses for exchange students, such as German Language, Culture, Literature, Intercultural Business and Communication. Students are placed in courses after taking a placement test in Jena. The exchange usually takes place in spring semester. Students are

encouraged to participate in their sophomore or junior years.

Required Courses:

11.203 German III
11.204 German IV
11.205 Applied Phonetics and Pronunciation
11.206 Structure of the German Language
11.207 Conversation: Daily Life and Customs
11.211 Culture and Civilization I
11.331 Selected Twentieth Century Writers
11.402 Contemporary Issues in the German Media
11.422 Masterpieces of German Literature
Choose one of the following two courses:
20.311 Structure of the English Language
20.411 Modern Linguistics Theory

Students choose six credits minimum of electives by advisement. Students who are exempted from any of the above through credit by examination or equivalency or because they enter the sequence with a course above 11.203, substitute an equal number of credits from the electives by advisement.

Requirements for the Minor in German:

11.203 German III
11.204 German IV
11.206 Structure of the German Language
Plus 12 credits in German above the level of German III, for a total of 21 credit hours.

Spanish

Students who have studied a language elsewhere should consult the department chairperson for appropriate placement. Generally, the student should schedule courses as follows:

With no background in the language, schedule 12.100
With one year of high school study or equivalent, schedule 12.101.
With two years of high school study or equivalent, schedule 12.102.
With three years of high school study or equivalent, schedule 12.203.
With four years of high school study or equivalent, schedule 12.204.
With no previous language study, schedule special sections of 12.100 for beginners in Spanish.

Education Majors - Students majoring in Education may elect an area of concentration in Spanish. Students should consult their advisers in the Department of Languages and Cultures about course selection. It is recommended that courses in culture and civilization oral expression, literature, phonetics and foreign language in elementary school be taken to complete the area of concentration.

The area of concentration for students in early childhood education and elementary education is under revision and students should inquire about new requirements.

Requirements for a major leading to the Bachelor of Science in Education are found in the section on Secondary Education. Students should inquire in the department about changes in the requirements.

Annual Spanish Section Award - This award is presented to a senior who: excels in the Spanish language, has rendered language-related service to the department and the university, and is recommended by the majority of the faculty in the Spanish section

Study Abroad Opportunities: The department offers an exchange program with the University of Puerto Rico, Cayey Campus. The UPR is open to all university students who have had at least two years of college Spanish. A Summer Abroad program is also offered, the first seven days at Bloomsburg University and then four weeks at the Universidad Pontificia of Salamanca, Salamanca, Spain. The program also includes trips to different cultural sites.

Internship Opportunities: Students can enroll in 38.498 Internship in the Humanities, transferred as an elective in the Spanish program. Internships in Spanish require total cultural immersion and must be designed to take place in a Spanish-speaking country. Internships are tailored to the students' interest and according to the skills gained in the language. Interns have both an on-site and a faculty supervisor to oversee and guide their work.

Career Opportunities: A student interested in a teaching career can elect Spanish as an area of specialization leading to a Bachelor of Science in Secondary Education or as a Career Concentration in Elementary Education. Students wishing to combine proficiency in Spanish with another major may elect 21 semester credit hours to complete a minor in Spanish. Other career opportunities exist in business administration, commerce, banking, public relations, translation and interpretation services, publishing, journalism, the tourist industry and hotel management. Since Spanish is spoken around the world, highly qualified bilingual graduates are in demand by the international business community, the Foreign Service and by international agencies such as the World Bank, the World Health Organization and the United Nations.

Requirements for the Major - Besides meeting the general education requirements, the student will take a total of 36 semester credit hours above the 100-level to complete his/her major. Along with foundational course work to develop proficiency in the language in the four skills and the learning of technical tools to approach literary works, the program also offers courses in culture and civilization taught in English to support the goals of global-cultural awareness and international education.

Required courses include:

12.203 Spanish III

12.204 Spanish lV
12.205 Phonetics: Theory and Practice
12.206 Structure of the Spanish Language
12.207 Conversation: Hispanic Daily Life and Customs
12.211 Spanish Culture and Civilization
12.214 The Hispanic World Today
12.306 Structure and Composition
12.331 Selected 20th Century Writers
12.402 Issues in the Hispanic Media
12.421 Hispanic Prose

The following two courses may count as required courses with the chair's approval:

12.250 Spanish for Spanish Speakers
12.212 Spanish American Culture and Civilization

Electives should be chosen from Spanish courses numbered above 12.204 with advisement.

Requirements for the Minor

12.203 Spanish III
12.204 Spanish IV
12.206 Structure of the Spanish Language
Plus 12 credits in Spanish above the level of Spanish III, for a total of 21 credit hours.

Career Concentration in Chinese Studies

The concentration program requires 18 credit hours of study, with 12 credits in core courses and 6 credits in elective courses. Bloomsburg University maintains academic relationships with several universities in China. Currently, QingHai Normal University, Northeast Normal University and ShenYang Teacher's College offer study-abroad programs to our students. Students taking courses through programs with these universities may have credits applied to the concentration.

Required Courses:
16.105 Chinese I
16.106 Chinese II
16.211 Foundations of Chinese Civilization
16.212 China Today

Elective Courses:
42.141 The Modern Far East
31.346 Art History of the Far East
44.160 Nations, States and Governments

Faculty Profiles

Brigitte L. Callay, professor, B.A., M.A., University of Delaware; Ph.D., University of Louvain, Belgium

Natalie Corneilus, assistant professor, M.A., Ph.D., University of Wisconsin-Madison

Gilbert Darbouze, associate professor, Ph.D., City College of New York; Ph.D., Graduate School and University Center-CUNY

Christopher J. Donahue, assistant professor, B.A., Millersville State College; M.A., Middlebury College; Ph.D., University of Arizona

Patricia Dorame-Holoviak, associate professor, Lic. in Spanish Lit., University of Veracruz, Mexico; Ph.D., University of Texas at Austin

Solange Garcia-Moll, assistant professor, B.A., M.A., University of Puerto Rico; Ph.D., Temple University

Amarilis Hidalgo-DeJesus, associate professor, B.A., University of Puerto Rico; M.A., Temple University; Ph.D., University of Colorado, Boulder

Brenda Keiser, associate professor, B.A., Kutztown State College; M.A., Middlebury College; Ph.D., University of Pennsylvania

Jing Luo, associate professor, B.A., M.A., Beijing University; Ph.D., The Pennsylvania State University

Jesus Salas-Elorza, associate professor, B.A., Universidad Veracruzana, Mexico; M.A., Ohio University; Ph.D., The University of Colorado, Boulder

Luke Springman, associate professor, B.A., Indiana University; M.A., Ph.D., Ohio State University

Supplemental information

The Department of Languages and Cultures maintains a website at Affiliated website: http://departments.bloomu.edu/langcult

Mass Communications

Administered by: Department of Mass Communications
College: Liberal Arts
Campus address: 1100 McCormick Center for Human Services
Telephone number: (570) 389-4836
Fax number: (570) 389-3983
Department chair: Richard Ganahl
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

In Mass Communications, students prepare to work as professionals in public relations, advertising, journalism or telecommunications. The degree program balances a broad knowledge of the liberal arts and natural sciences with the professional and theoretical preparation needed by today's media professionals. Bloomsburg offers:

Relevant course work in the competency areas of writing, professional skills and theoretical foundations.

Internship experiences at off-campus sites necessary to complete the student's professional training.

Professional experience with four campus media: The Voice, the competitive, weekly student newspaper; Spectrum, the nationally recognized, full-color regional magazine; BUTV, student-produced television programming; WBUQ -FM, student managed radio station featuring call-in and music programs.

Active local chapters of the Public Relations Student Society of America (PRSSA), the American Advertising Federation (AAF), the Society of Professional Journalists (SPJ) and the National Broadcasting Society-Alpha Epsilon Rho (NBS-AERho).

Degree Program

To earn a Bachelor of Arts in Mass Communications, majors must complete the necessary semester hours in three competency areas: writing, professional skills and theoretical foundations.

Practica and Internships - Students are encouraged to participate in practica or internships during which they are expected to practice the technical aspects of their specialties. Semester hours earned are in addition to the core and specialty areas. Internships are available on and off campus; some are paid. Students may take both an off-campus internship and an on-campus practicum to be as well prepared technically as possible. Some practica are available on student productions such as The Voice, Bloom News, Spectrum magazine and a range of other campus communications activities.

Recommended Preparation - High school students interested in communication-related careers should become involved in school media. These media can include newspapers, yearbooks, magazines, radio, video or television production and programs.

The committed student can gain valuable experience through volunteer efforts with community groups such as chambers of commerce, tourism offices and other non-profit organizations.

Admission Requirements - Admission to the Mass Communications program is by application to the chair and is limited to approximately 60 students, who should have achieved a cumulative grade point average of 2.5 or higher. Acceptance into the program depends, however, not only on the GPA, but also on past experience and potential. Students should exhibit strong writing, visual and creative qualities and a record of interest and participation in media-related extracurricular activities. Students are encouraged to make a case for their admission in the light of previous experience even if they feel their GPAs alone may not justify admission. Students will be notified of their acceptance as Mass Communications majors as quickly as possible. Students are expected to have declared their majors no later than the time they have accumulated approximately 72 semester hours.

Campus Media - Students have the opportunity to write for a number of university publications. These include the campus student newspaper, The Voice; the four-color regional magazine, Spectrum; the student yearbook, The Obiter; the annual student handbook, The Pilot; BUTV and WBUQ-FM.

Spectrum is a full-color regional magazine published twice a year within the department. Spectrum

has earned numerous national awards, including the American Scholastic Press Association's "Outstanding Magazine in the Country."

The Voice is a student newspaper with a circulation of 4,500. About 40 to 50 students work on the paper each semester. They participate in all management decisions. Students enjoy full editorial control and operate all newspaper departments.

The department operates three television studios for formal course work and to provide hands-on experience with modern broadcast equipment. In cooperation with BUTV/Radio Services, the department encourages students to participate in campus broadcast activities including student-produced programs, local telethons, charity drives, televised town council meetings and sporting events.

Bloom News is a weekly half-hour student-produced news program cablecast live and rebroadcast over local community channels. Students manage all editorial functions, studio production activities and all post-production work.

Students also staff a campus radio station, WBUQ-FM. The FM station has acquired the minimum local audience necessary for recognition by Arbitron, the country's major radio audience rating service. Students participate in station management, programming and as on-air personalities for student-produced music and talk programs.

In areas of advertising and public relations, students gain experience with The Voice and Spectrum magazine and they enter major regional and national competitions. The publications provide opportunities for sales management and account development.

Required Courses

In addition to general education requirements, a total of 36 to 42 semester hours is required for a major in Mass Communications. The balance of the university's 128-semester hour requirement for a bachelor's degree comes from elective courses. The department's curriculum ensures better preparation for today's changing communications industry. Graduates are broadly trained for careers in public relations, advertising, journalism and telecommunications. It is organized around three competency areas: theoretical knowledge, writing proficiency and professional development. Required courses include:

27.110 Mass Communications and the Popular Arts
27.230 Newswriting
27.241 Media Graphics or 27.271 Media Operations
27.310 Media Law
27.315 Social Foundations of the Mass Media
27.360 Mass Media Processes and Effects

Choose two from the following six courses:
27.334 Editing
27.340 Feature Writing
27.352 Publicity and Public Relations
27.366 Design in Advertising
27.371 Broadcast Journalism
27.440 Public Affairs Reporting
27.485 RTF Authorship Theory and Practice

Choose three from the following eleven courses:
27.251 PR Theory & Practice
27.261 Principles of Advertising
27.297 Mass Communications Practicum
27.367 TV Acting and Directing
27.375 Broadcast Programming and Management
27.390 Film and Video Production
27.435 Journalism Workshop
27.446 Magazine Editing and Production
27.455 Public Relations Cases and Problems
27.466 Advertising Media and Campaigns
27.480 Telecommunications Workshop

Choose one from the following three courses:
274.20 Audience Analysis
27.482 Mass Communications Seminar
27.497 Internship

Faculty Profiles

Walter M. Brasch, professor - A.B., San Diego State University; M.A., Ball State University; Ph. D., Ohio University

Steven Demas, assistant professor - B.A., Cornell University; M.F.A., City College of New York

Richard J. Ganahl III, chairperson, associate professor, Mass Communications - B.A., University of Missouri at St. Louis; B.J., M.A., Ph.D., University of Missouri at Columbia

William J. Green, associate professor, Mass Communications - A. B., Heidelberg College, M.A.., Ph.D., University of Toledo

Maria Teresita G. Mendoza-Enright, associate professor, Mass Communications - B.A., M.A., University of the Philippines System; M.A., University of Chicago; Ph.D., University of Wisconsin-Madison

Dana R. Ulloth, professor, Mass Communications - B.A., Southern College; M.A., Ph.D., University of Missouri

Supplemental information

The Department of Mass Communications maintains a website at http://departments.bloomu.edu/masscomm/

Music

Administered by: Department of Music
College: Liberal Arts
Campus address: 215 Haas Center for the Arts
Telephone number: (570) 389-4284
Fax: (570) 389-4289
Department chair: Mark R. Jelinek
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

The Bloomsburg University Department of Music offers four major tracks: Music Education Certification K-12, Music History and Literature, Applied Music, or Audio-Video Recording. Seven minor tracks of music include applied voice, applied instrumental, piano/ organ, history and literature, theory, music skills and audio-video recording. The department also supports a music concentration for majors in elementary Education.

Majors in all tracks develop musical skills through courses in music theory, music history, applied study, and performing ensembles. The Music Education Certification, K-12 track provides ample opportunity for students to participate in experiential studies through observations and teaching in local schools throughout their studies here. The Audio-Video Recording Track, designed for musicians with a career interest in the technical aspects of studio sound recording and/or sound enhancement in the sound lab or concert hall provides sound equipment for hands-on use, and internship experiences in the field. A modern audio recording studio is updated on a regular basis. The Music History and Literature track is research based and the Applied Music track prepares students for two public recitals. Music facilities for all include faculty studios, classrooms, music libraries, a new innovative music lab using a computer/keyboard/ software combination for Music Theory composition, and two auditoriums. The Bachelor of Arts in Music program also affords students the opportunity, through General Education elections and free electives, to study other forms of artistic expression (theater and art), as well as selected subjects from other major academic disciplines.

The department offers a high degree of individual attention with a faculty-to-student ratio of 3:1. Students may receive individual weekly instruction taught by faculty or participate in eight performing ensembles that include two bands, two orchestras, and four choral groups. A full calendar of public presentations is offered throughout the year for ensembles, recitals, special productions, and staged works in conjunction with theatrical groups.

Music scholarship and ensemble service stipends are awarded each year on the basis of contribution or potential, individually, or within one or more of the performing ensembles. Awards are not restricted to majors and minors.

Career Opportunities

The liberal arts music degree is a degree that stresses broad-based areas of knowledge. Students find employment as public school teachers or private teachers of voice or instruments, serve as music resource consultants, are church organists and choir directors, become professional vocal-instrumental performers in a variety of settings, become music library assistants and consultants, are mass media contributors (such as radio music programmers, recording specialists, and newspaper music columnists), find and develop allied opportunities with small businesses and large firms, are employed in many areas of the music and recording industry, and become arrangers, computer music copyists, and composers.

The Bachelor of Arts in Music Education K-12 degree results in receipt of a public school teaching certificate. Teaching opportunities are also available in private schools. Graduate level music study is encouraged as a follow-up.

Students who participate in internship programs (by working as a music apprentice off-campus during summer months or within the academic semester), may well be offered employment as a result of that experience. Internships are required for the Audio-Video Recording Track.

Initial Procedures

Prospective students should initially contact the Office of Admissions (570) 389-4316. Student Services Center, regarding admission procedures, indicating music background as requested on the admission application.

Upon notification of acceptance by the University, students contemplating the music major program should contact the Department of Music chairperson for an interview/audition. For fall semester, interviews and evaluation should occur before May 1, if possible, but no later than the student's summer orientation. For spring semester, interview by January 5. It is the prospective major's responsibility to initiate arrangements for an interview, and audition if necessary, so that sufficient time exists in which to prepare the initial semester schedule. Applied Music track majors must meet with the approval of the chairperson and track instructor. Music Education Certification, K-12 track, Music History and Literature track and Audio-Video Recording track majors must have sufficient musical training to provide reasonable assurance of completion of the major (to be determined by the chairperson).

Contact the Department of Music early to set a date for an interview (and performance audition with track advisor if required).

When a prospective student determines interest in the B.A. in Music degree program, he or she should request and carefully review both the undergraduate catalogue and the Department of Music informational "Music Major Booklet" concerning the specific description of the music degree program and tracks.

When coming to the Department of Music of Bloomsburg University for an interview/audition, the student should be prepared as follows:

For majors intending to select the Music Education Certification K-12 track, Music History and Literature track, or the Audio-Video Recording track:

1. Prospective students will complete an interview with the Music Department chairperson and possibly the track advisor.
2. Prospective students will summarize on the "Musical Experience Background" form provided by the Music Department chairperson at the interview, their background and understanding of music appreciation, theory, music history, keyboard, and applied ensemble experiences from high school or thereafter.
3. Music Education Certification, K-12 track majors must have a 2.6 GPA to transfer into the program.

For majors intending to select the Applied Music track:

1. Prospective students will perform two or three pieces demonstrating their background as a performer in voice or one or more instruments for their track advisor.
2. Prospective students will summarize on the "Musical Experience Background" form provided by the Music Department chairperson at the interview, their background and understanding of music appreciation, theory, music history, keyboard, and applied ensemble experiences from high school or thereafter.

Advisement Policy

Upon admission to Bloomsburg University the student will schedule an interview/audition with the chairperson. At the interview, the chairperson will evaluate the student for placement and draw up a course schedule for the first semester. If available, the student may meet with the track advisor at that time. The chairperson will assign an advisor to the student according to their chosen track. At the initial meeting with the advisor the student is given the Music Major Booklet, Sequence of Courses, policies packet, and an "Advisee Worksheet Checklist". It is the student's responsibility to fill in the requirements on the checklist as they are completed. Music Education Certification, K-12 track advisees will be given the "Application, Retention, Monitoring, Exiting Procedures" packet. Students of this track must be careful to read and complete all the requirements on time. Music Education students must keep a 2.6 GPA in order to remain in the track.

Thereafter, the student will meet with their advisor at least once a semester, preferably during advisement period (before scheduling courses), to make sure the student is correctly scheduled for the coming semester and for the chosen program requirements. At the same time (during advisement period, which falls near mid-semester), the student and advisor will discuss the student's progress thus far in the semester and examine the student's portfolio. All students are required to keep a portfolio as of January 2001.

Music Education Certification, K-12

Students with a concentration in Music Education Certification K-12 will be capable of comprehending the principals of music theory and displaying adequate aural acuity; understanding the historical period contributions to music; participating in ensembles; meeting the performance requirements of applied study; using voice, strings, brass, percussion and woodwinds pedagogical methodologies; developing a music curriculum; conducting an ensemble; performing in a recital; using music software; and writing daily lesson plans and thematic units in preparation for the teaching profession.

Assessment Criteria and Procedures: The culmination of the Music Education Certification, K-12 track is one semester of student teaching experience. Because the certification is K-12, the student teaching

experience will include both elementary and secondary assignments. The student will be evaluated by the cooperating teacher, the music content specialist, and the university supervisor.

Required courses include:

Content Area:
35.101 Music Listening
35.201 Sight Singing
35.203 Voice Methods
35.206 String Methods
35.207 Brass Methods
35.210 Music Theory I
35.211 Music Theory II
35.300 Music Theory III: Form and Analysis
35.301 Music Theory IV: Twentieth Century Practice
35.321 Music History to 1750
35.322 Music History 1750 to Present
Choose one from the following two courses:
35.328 Choral Conducting
35.329 Instrumental Conducting
35.410 Music Theory V: Counterpoint
35.411 Music Theory VI: Orchestration
Percussion Methods*
Woodwind Methods I and II*
General Conducting*

The list above includes three of the 53 credits of General Education requirements; others are specifically listed on the Checklist of requirements for the Music Education track. Students should consult with their advisors to plan their course of study. Students will take courses for Profession Teacher Education in conjunction with the Department of Educational Studies and Secondary Education as listed below.

8 semester hours of applied instrument or voice study; 6 semesters at one hour; semester of recital, two hours.
10 semesters (at least 3 at 1 credit) of ensemble participation.

Ensembles available to all tracks:
35.106 Maroon and Gold Band (Marching in fall, Concert in spring)
35.107 University-Community Orchestra (Chamber Orchestra optional)
35.108 Concert Choir
35.109 Women's Choral Ensemble
35.110 Husky Singers (male chorus)
35.111 Chamber Singers
35.112 Jazz Ensemble

Professional Teacher Education: 30 credits
60.204 Educational Computing and Technology
60.311 Educational Measurements and Evaluation
65.374 Teaching of Reading in Academic Subjects
Choose one from the following two courses:
60.393 Social Foundations of Education
60.406 Multicultural Education
35.320 Music in the Elementary School
35..... Secondary Methods and Curriculum*
60.497 Student Teaching
60.498 Student Teaching

* (New courses that need BUCC approval)

Piano proficiency examination - All Music Education students must exit with an acceptable level of keyboard proficiency. Course 35.302 Piano Proficiency may be elected and repeated to aid in the passage of the exam, but election of 35.302 may not be sufficient in itself to guarantee passage of the exam. See your advisor for details.

Music History and Literature

Students with a concentration in Music History and Literature will be capable of presenting a written paper and class lecture session on a specialized topic. This project would be of scholarly quality and reflect a level of presentation suitable to present to an undergraduate class of students majoring in music.

Assessment Criteria and Procedures: Through their work in two music history seminars students will select a research topic. They will prepare a written paper, as well as a presentation, which will be delivered on presentation day to department faculty and students. The professor and audience will provide feedback and ask for clarification of issues, which are not fully illuminated in the lecture or paper. The written paper will be judged for its suitability for publication in scholarly journals, which publish undergraduate student research in music history and literature.

Required courses include:
35.101 Music Listening
35.201 Sight Singing
35.210 Music Theory I
35.211 Music Theory II
35.300 Music Theory III: Form and Analysis
35.301 Music Theory IV: Twentieth Century Practice
35.321 Music History to 1750
35.322 Music History 1750 to Present
35.324 American Music
35.325 Opera and Music Theater
35.327 Survey of Popular Music
35.410 Music Theory V: Counterpoint
35.411 Music Theory VI: Orchestration
35.430 Seminar in Music History I

35.431 Seminar in Music History II
4 semester hours of applied instrument or voice study; need not be the same voice or instrument.
6 semesters (at least 4 at 1 credit) of ensemble participation. (See list Music Education Certification, K-12)

Piano proficiency examination - All Music History and Literature track students must exit with an acceptable level of keyboard proficiency. Course 35.302 Piano Proficiency may be elected and repeated to aid in the passage of the exam, but election of 35.302 may not be sufficient in itself to guarantee passage of the exam. See your advisor for details.

Applied Music

Students with a concentration in applied music will be capable of presenting a full-length recital reflective of their progress in applied music studies (technique and interpretation). This performance should also exhibit a synthesis of the cognate areas of music history and music theory.

Assessment Criteria and Procedures: A committee of three faculty members from the department of music will evaluate these presentations according to the procedures and criteria for assessment of the recital projects as delineated in Music Department Policy 5. The student will be evaluated at a recital preview, which will consist of the repertoire from the student's recital program and will be presented in the same manner in which it is intended to be presented at the final recital. The results of this recital preview will determine if the student may proceed with the recital.

Required courses include:
35.101 Music Listening
35.201 Sight Singing
35.210 Music Theory I
35.211 Music Theory II
35.300 Music Theory III: Form and Analysis
35.301 Music Theory IV: Twentieth Century Practice
35.321 Music History to 1750
35.322 Music History 1750 to Present
35.410 Music Theory V: Eighteenth Century Counterpoint
35.411 Music Theory VI: Orchestration

6 semesters of the student's choice of vocal or instrumental ensemble, four at one credit per semester and two semesters minimum at zero credit. (See list Music Education Certification, K-12)

8 semesters of the **same** instrument or voice (one hour of lessons per week for two credits per semester) for a total of 16 credits. Choices include violin, viola, violoncello, double bass, organ, voice, piano, trumpet, horn, trombone, baritone, tuba, flute, oboe, clarinet, bassoon and saxophone.

Applied music students must perform a recital in their junior and senior years at zero credit; before public presentation. A faculty committee screens recital programs.

Piano proficiency examination - All Applied track students must exit with an acceptable level of keyboard proficiency. Course 35.302 Piano Proficiency may be elected and repeated to aid in the passage of the exam, but election of 35.302 may not be sufficient in itself to guarantee passage of the exam. See your advisor for details.

Instrumental majors are encouraged to elect acoustics, 54.105 The Science of Sound to meet the natural sciences general education requirement.

Special requirements for voice students: Listed below are the required 15 credits of free electives from Languages and Cultures. Other course levels may be recommended instead, as appropriate for demonstrated language proficiency. Voice majors are also encouraged to take 35.325 Opera/Music Theater.

10.100 French I
10.102 French II
11.100 German I
11.101 German I
14.101 Italian I

Audio-Video Recording

Students completing a concentration in audio-video recording will have a variety of experiences (in breadth and depth) that will equip them with skills necessary for the work force in the audio-video recording industry.

Assessment Criteria and Procedures: - Students will submit a cumulative portfolio, which will exhibit the breadth and depth of their experiences throughout their studies at the university. Summaries of the four required internships and a log of the work required for the audio-video recording concentration are to be included. The faculty member supervising the internship experiences will review the portfolio to determine that the student has a sufficient variety and content of experiences to be both current and successful in the workplace.

Required Courses include:
35.101 Music Listening (general education requirement)
35.201 Sight Singing
35.210 Music Theory I
35.211 Music Theory II
35.219 Basic Audio Recording
35.322 Music History-1750 to Present

35.411 Music Theory VI: Orchestration
35.497 Internship I (basic workshop, summer after first year)
35.497 Internship II (summer after second year)
35.497 Internship III (summer after third year)
35.497 Internship IV (fourth year, video work in conjunction with TV/Radio Service)
Choose one of the following two courses:
35.300 Music Theory III: Form and Analysis
35.301 Music Theory IV: Twentieth Century Practice
Choose from the following three courses:
35.321 Music History to 1750
35.324 American Music
35.327 Survey of Popular Music

All Audio-Video majors are required to act as recording technicians for events sponsored by the Music Department as specified by the adviser. The requirement is for a minimum of three events each semester.

6 semester hours of applied instruction. 35.204 Class Piano I required for 2 credits. 4 more credits of piano or class piano or instrument or voice are required. See advisor for details.

6 semesters of the student's choice of vocal or instrumental ensemble, minimum four at one credit. (See list Music Education Certification, K-12)

Seven Music Minors

The minor provides an emphasis in areas designated applied voice, applied instrumental music, applied keyboard, music history and literature, theory (harmony and application), music skills (general music development) and audio recording techniques.

The minor in music is a 22-semester hour emphasis that may be selected by students who major in a program other than the Bachelor of Arts in Music. The minor, which may be completed in 8 or fewer semesters, is built from courses that include music theory, ear training, music history and style, applied study and performing ensembles.

All audio-video minors are required to act as recording technician for events sponsored by the Music Department as specified by the adviser. The requirement is for a minimum of three events each semester. Additionally, audio-video minors must complete three internships.

Faculty Profiles:

Alan L. Baker, assistant professor - B.M./B.M.Ed., Drury College; M.M., Temple University; D.M.A., Stanford University

Stephen Clickard, assistant professor - B.A., San Jose State University; M.M., University of Northern Colorado; D.M.A., University of Washington

James Douthit, assistant professor - B.M., Mars Hill College. M.M., Northwestern University; D.M.A., Eastman School of Music

Mark R. Jelinek, professor, Music - B.M.Ed., M.A., Eastern New Mexico University; D.M.A., Arizona State University

Wendy L. Miller, associate professor, Music - B.S., Bluffton College; M.M., D.Mus., Indiana University, Bloomington

Terry A. Oxley, associate professor, Music - B.M.Ed., University of Wisconsin, Eau Claire; M.M.Ed., University of Wisconsin, Stevens Point; D.A., University of Northern Colorado

W. Ann Stokes, associate professor, Music - B.Mus., M.Mus., University of North Carolina-Greensboro: Ph.D., Northwestern University

Philosophy

Administered by: Department of Philosophy
College: Liberal Arts
Campus address: 219 Bakeless Center for the Humanities
Telephone number: (570) 389-4246
Department chair: Scott Lowe
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

Philosophy is an activity concerned with reasoning about the deepest questions human beings have considered: Is there a God? Do we have free will? What is the relation between the mind and body? What is a just society? What is the nature of morality?

The questions the discipline addresses are as contemporary as the possibility of artificial intelligence and the ethics of cloning. However, philosophy also concerns itself with its own rich history. Philosophical figures from throughout the history of Western civilization, such as Plato, Aristotle, Descartes, Kant and Mill, remain an important part of the discipline's continuing dialog on major philosophical issues.

The Department of Philosophy offers a broad range of courses designed to provide both a general acquaintance with the issues and methods of philosophy as well as a solid foundation for advanced work in the discipline.

The department faculty also teach a number of courses in applied ethics: medical ethics, contemporary moral problems and business ethics. All courses examine the views of others about philosophic questions and critically look at and develop one's own beliefs that directly investigate thinking itself. The university offers both a major and a minor in philosophy and also supports the university's liberal arts mission by including courses that satisfy various general education requirements (i.e., in the humanities division and in the area of values, ethics and responsible decision making).

In all of its courses, the faculty encourage students to develop their thinking skills, by engaging them with the best minds of the past and present, by challenging them to examine and to criticize the arguments of others and by leading them to question their own values and commitments.

Regardless of topic or level of difficulty, philosophy courses provide a unique opportunity to acquire and to practice a variety of valuable skills, such as the ability to solve problems, to communicate effectively and to assess the strength and cogency of opposing arguments and proposed plans of action.

Students often take several philosophy courses because they find the discussions so interesting and stimulating.

Career Opportunities - An obvious choice for a philosophy major is to complete a graduate degree and teach at the college level. Others have demonstrated a strong ability to score higher on graduate entrance examinations for business and law degrees than students from majors directly concerned with those disciplines.

For those who turn to careers in business and industry, a number of recent studies have suggested that employers want and reward many of the capacities that the study of philosophy develops. These include the ability to solve problems, to communicate and to organize ideas and issues and to assess the strength and cogency of arguments. Students who complete a major or a minor in philosophy are well prepared to pursue advanced work in the discipline or to apply their philosophical skills in multiple career settings such as law, medicine, business or government.

Opportunities for Students - The Philosophy Club provides an opportunity for students, whether they are majors, minors or simply interested in philosophy, to meet with each other and with faculty members outside the classroom. The club sponsors guest speakers from on and off campus.

Independent study is available for students who wish to undertake intensive study of an area of philosophy or to pursue topics not normally covered within the program. Independent study permits personalized learning through one-on-one interaction with a faculty member.

An internship allows students to explore philosophical issues in a work setting, such as working with a medical ethics committee at a local hospital.

Required Courses

In addition to 53 semester hours of general education requirements, a total of 30 semester hours is required for a major in philosophy. The balance of the university's 128-hour requirement for a bachelor's degree comes from elective courses. The following courses are required:

Logic requirement - choose one of the following two courses:

28.270 Logic
28.271 Logic and Computing

Historical requirement

28.321 Plato and Aristotle
28.324 Descartes to Kant

Choose one of the following two courses:

28.328 Existentialism
28.329 20th Century Philosophy

Elective Courses - Six elective courses must also be selected in addition to the required courses for this degree program. Two courses must be from the 300 or above level sequence:

28.110 Critical Thinking
28.111 Introduction to Philosophy
28.220 Medical Ethics
28.292 Contemporary Moral Problems
28.295 Business Ethics
28.297 Ethics
28.403 Philosophy of Science
28.404 Philosophy of the Social Sciences
28.405 Philosophy of Law
28.406 Philosophy of Religion
28.407 Contemporary Political Philosophy
28.408 Feminist Philosophy
28.418 Contemporary Philosophy of Mind
28.419 Theory of Knowledge
28.453 Metaphysics

Requirements for the Minor - A total of 18 semester hours is required for a minor in philosophy. Required courses are:

28.111 Introduction to Philosophy
28.297 Ethics

Choose one of the following three courses:

28.270 Logic
28.110 Critical Thinking
28.213 Logic and Computing

Choose three elective courses, including one from:

28.321 Plato and Aristotle
28.324 Descartes to Kant
28.328 Existentialism
28.329 20th Century Philosophy

or one systematic course (a 400 level or above course)

Faculty Profiles:

Steven D. Hales, associate professor - B.A., Southwestern University; A.M., Ph.D., Brown University

Oliver J. Larmi, professor - A.B., Dartmouth College; Ph.D., University of Pennsylvania

Wendy L. Lee, associate professor - B.A., University of Colorado; Ph.D., Marquette University

Scott C. Lowe, chairperson, professor - B.A., College of William and Mary; M.A., Ph.D., University of Virginia

Kurt Smith, assistant professor - B.A., University of California at Irvine; M.A., Ph.D., Claremont Graduate University

Supplemental information

The Department of Philosophy maintains a website at http://www.bloomu.edu/departments/philosophy/pages/phildept.html

Political Science

Administered by: Department of Political Science
College: Liberal Arts
Campus address: Bakeless Center for the Humanities
Telephone number: (570) 389-4422
Fax number: (570) 389-2094
Department chair: Gloria Cohen-Dion
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

Political Science embraces the study of politics and government. This includes not only the study of national, state and local government, but also the study of all governments worldwide and the international relations among those governing bodies. Further, political science is concerned with ideas, concepts and theories about governments and the role of individuals organizations and the political parties within governmental systems.

A major in political science becomes a good foundation for a variety of fields, including law, government service, politics, journalism, mass communications, teaching, community service, planning and even private business. With the help of an adviser, students create concentrations that further expand opportunities for post-graduate careers and studies.

Some students use political science as a second major or a minor to complement majors in economics, mass communications, geography and English, while others are attracted to a political science emphasis in the comprehensive social studies program leading to a degree in secondary education.

Bloomsburg's program is challenging. Factors suggesting potential success for high school students include strong communication, reading and writing skills, an appreciation for social sciences and a keen interest in governmental affairs and international relations.

The department offers courses in all the major fields of political science for students who wish to acquire a thorough understanding of the art, science, theories, processes and structures of governments and politics.

Introductory courses are designed for both majors and non-majors. The importance of government and politics (locally, nationally and internationally) clearly points to political science as a critical element in the liberal education of any university student.

Advanced courses are offered for students who wish to pursue in-depth study and specialized subject matter to serve as a foundation for careers in politics, law, public administration, community service, international relations, criminal justice, communications or teaching.

All courses attempt to develop the student's ability to read carefully, communicate effectively, think critically, analyze logically and research thoroughly. A balance is sought between abstract concepts on the one hand and concrete applications on the other. Field work and internships give students an opportunity to apply what they have learned in the classroom to the realities of everyday work.

Law Option - The legal studies option provides students interested in the law with an opportunity to explore legal problems and institutions, the content and processes of the law and the practice of law from both an academic and practical standpoint. It helps students who are considering law school, paralegal work, quasi-judicial or legislative research careers, as well as other specialized legal positions in business, politics, government service or social welfare or for graduate study.

The department also offers a *career concentration in Public Administration*, which prepares students for entry-level managerial positions in the public sector. This career concentration is interdisciplinary and students need not be political science majors to enroll. Contact Dr. Agbango for information at (570) 389-4516.

Required Courses

In addition to the 53 semester hours of general education requirements, a total of 30 semester hours is required for a major in political science; the balance of the university's 128-semester hour requirement for a bachelor's degree come from elective courses. Required courses total 12 semester hours and include the following four courses in political science:

44.120 United States Government
44.160 Nations, States and Governments
44.210 Introduction to Political Theory
44.280 Introduction to International Relations

Elective Courses: 18 semester hours in Political Science, 12 semester hours of which must be chosen from upper division courses, i.e., at the 300 level or above.

Requirements for Law option - a total of 30 semester hours is required for this option. In addition to the core courses above, 18 hours are taken from the following eight courses:

44.440 President and Congress
44.446 Constitutional Law I
44.447 Constitutional Law II
44.448 Judicial Process
44.452 State and Local Government
44.456 Public Policy
44.487 International Law and Organization
44.497 Internship in a legal or judicial setting (only 3 hours count toward the option)

Requirements for the career concentration in public administration - A total of 27 hours (nine courses) is required. A student must take one course in each of the following areas: organization theory, policy, social psychology, communication, computer science, statistics, personnel, budgeting and planning.

Requirements for the Minor - A total of 18 semester hours (six coures) is required for a minor in political science. There is one required course: 44.160 Nations, States, Government. Students should consider building a minor around one the fields of political science; namely, American politics, comparative government, international politics, political theory and law.

Faculty Profiles

George Agbango, professor - Specialist Certificate (Geography), University of Cape Coast, Ghana; M.P.A., Atlanta University; Ph.D., Clark Atlanta University

Gloria T. Cohen-Dion, chairperson, assistant professor - B.S., M.P.A., Ph.D., Temple University

Richard L. Micheri, assistant professor - B.A., Fordam University; M.A., Columbia University

James W. Percey, associate professor - A.B., University of Pennsylvania; M.A., Rutgers University

Diana Zoelle, assistant professor - A.A.S., Butler County Community College, B.S., Slippery Rock University; M.P.A., University of Missouri; M.A., Ph.D., University of Maryland

Psychology

Administered by: Department of Psychology
College: Liberal Arts
Campus address: 2103 McCormick Center for Human Services
Telephone number: (570) 389-4471
Department chair: Winona Cochran
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

The Department of Psychology provides a strong undergraduate program for psychology majors and minors as well as support courses for the university's general education curriculum. All classes for the major are taught by faculty who have earned doctorates in their specialty.

Students in the major are expected to demonstrate a firm grounding in basic statistics and in experimental methodology and research, thus allowing them to excel in advanced theory and content courses.

A degree in psychology from Bloomsburg University gives quality students an appropriate background for graduate study and research in all areas of the discipline. It also offers qualified students a broad range of career possibilities with the potential for employment in settings such as clinics, counseling centers, hospitals, community human service agencies, educational institutions, research organizations or businesses.

About half of the department's graduates continue their education in graduate programs and the university enjoys a good placement reputation.

Factors suggesting a probability of success in the program for students considering Bloomsburg include strong reading, abstract thinking and analytical skills and a strong desire to understand fundamentals of behavior and cognition..

Required Courses

In addition to 53 semester hours of university general education requirements, the program of study in psychology requires a minimum of 36 semester hours from the courses specified below:

Freshman/Sophomore years: core courses (18 semester hours) (Note: 48.281 and 48.282 must be taken sequentially. A grade of C or higher is required in 48.101, 48.160 and 48.281.)

48.101 General Psychology
48.160 Basic Statistics
48.281 Experimental Psychology: Methodology
48.282 Experimental Psychology: Applications

Choose two from the following four courses:
48.211 Child Psychology or 48.212 Adolescence
48.253 Social Psychology
48.311 Adulthood and Aging

Junior/Senior years - content courses (12 semester hours)

Choose two from the following three courses:
48.360 Cognitive Psychology
48.375 Psychology of Learning
48.380 Behavioral Neuroscience

Choose one of the following two courses:
48.335 Abnormal Psychology
48.436 Theories of Personality

Choose one from the following seven courses:
48.321 Psychological Tests and Measurements
48.340 Community Psychology
48.350 Psychology of Sex and Gender
48.356 Psychology of Motivation
48.451 Laboratory Training in Group Processes
48.453 Organizational Psychology
48.476 Principles of Behavior Modification

Senior year - capstone courses (6 semester hours) - select two courses from the following six courses:
48.341 Theory and Practice of Academic Psychology
48.401 History of Psychology
48.406 Psychology Seminar
48.464 Advanced Experimental Design
48.466 Independent Study in Psychology
48.497 Practicum in Psychology

Minor in Psychology - A minimum of 18 semester hours in psychology as specified:
48.101 General Psychology
48.160 Basic Statistics
48.281 Experimental Psychology: Methodology
9 semester hours of Psychology courses, 6 of which must be at the 300 or 400 level.

Faculty profiles

Eileen C. Astor-Stetson, professor - A.B., Douglass College-Rutgers University; Ph.D., Vanderbilt University

John S. Baird Jr., professor - B.A., University of Virginia; M.S., Ph.D., North Carolina State University

Brett L. Beck, professor - A.A., James H. Faulkner State Junior College; B.A., University of West Florida; Ph.D., University of Alabama

Kambon Camara, assistant professor - B.S., Florida A & M University; M.S., University of Wisconsin-Stout

Winona J. Cochran, professor - A.S., Dalton Junior College; B.S. University of Tennessee; M.S., Ph.D., University of Georgia

Steven L. Cohen, professor - B.A., Oakland University; Ph.D., University of Maine

James H. Dalton, Jr., professor, B.A., King College; M.A., Ph.D., University of Connecticut

Julie M. Kontos, professor - B.A., M.S., Ph.D., University of Georgia

L. Richard Larcom, associate professor - B.S., M.A., Ph.D., The Ohio State University

Marion G. Mason, professor - B.S., Southern Nazarene University; M.A., Ph.D., The Ohio State University

Alex J. Poplawsky, professor - B.S., University of Scranton; M.S., Ph.D., Ohio University

Alicia King Redfern, assistant professor - B.A., Mercyhurst College; M.Ed., Ph.D., Temple University

Constance J. Schick, professor - B.B.A., Angelo State University; Ph.D., Texas Tech University

Joseph G. Tloczynski, professor - B.A., Bloomsburg State College; M.A., West Chester University; Ph.D., Lehigh University

John E. Waggoner, professor - B.A., Shippensburg State College; M.S., Ph.D., The Pennsylvania State University

Mary Katherine Waibel-Duncan, assistant professor - B.A., Bryn Mawr College; M.S., Ph.D., Vanderbilt University

Supplemental information

The Department of Psychology maintains a website at http://departments.bloomu.edu/psych/

Social Work

Administered by: Department of Sociology, Social Work and Criminal Justice
College: Liberal Arts
Campus address: 2106 McCormick Center for Human Services
Telephone number: (570) 389-4237
Fax number: (570) 389-2019
Department chair: I. Sue Jackson
Program director: Chuck Laudermilch (clauder@bloomu.edu)
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

The social work program is designed to prepare students to practice baccalaureate level generalist social work. Social work is unique among majors in the College of Liberal Arts. It represents professional and personal preparation to work in a field that demonstrates caring and concern for others through practice based on knowledge, values, ethics, and skills that define social work. At the completion of the educational experience, students will have achieved the tenets of the social work program's mission, goals, and educational objectives. The Council on Social Work Education provides the educational mission and philosophy to which the program adheres.

Because the Council on Social Work Education accredits Bloomsburg's Social Work program, graduates are eligible for licensing in states that have licensing at the baccalaureate level with the social work profession and potentially qualify for advanced standing status at colleges and universities with Masters in Social Work degrees.

Social work majors have two opportunities to apply academic preparation to practice experiences. The first practice experience occurs early in the curriculum and the second placement as the final capstone experience is a generalist social worker. Students are placed in a variety of different social welfare systems with the goal of exposing them to differing practice settings. They include area agencies on aging, children and youth services programs, day care programs, drug and alcohol programs, hospitals, mental health agencies, adult and juvenile probation programs, women's centers and voluntary organizations such as the Salvation Army and the YMCA.

Bloomsburg University Social Work Program Affirmative Action Plan

The program operationalizes a philosophy of egalitarian treatment of all students regardless of their ethnicity, gender, physical capacity, race or sexual orientation. The faculty establishes a safe climate in their offices and in their classrooms indicative of an acceptance of and appreciation of diversity. In addition, every effort is made to communicate this philosophy to faculty members who teach the other required courses. All allegations of discrimination are taken seriously and students are encouraged to file grievances when warranted. In addition, communication occurs with the Admissions Office toward the goal of increasing the enrollment of underrepresented populations within the program. The faculty are concerned with retention and are actively working toward preventing failure on the part of the students.

Required Courses

In addition to 53 semester hours of general education requirements, a total of 46 to 54 semester hours is required for a major in social work. The balance of the university's 128-semester hour requirement for a bachelor's degree come from elective courses. For information about admission criteria and details on the course sequence, see Charles Laudermilch, director of the social work program. Required courses for this degree program include:

- 40.211 Principles of Economics
- 44.120 United States Government
- 45.133 Introduction to Social Work and Social Wefare
- 45.211 Principles of Sociology
- 45.215 Racial and Ethnic Minority Groups
- 45.255 Research Methods for Social Inquiry
- 45.260 Basic Social Statistics
- 45.297 Introductory Practice Experience in Social Work
- 45.334 Social Work Practice with Individuals and Families
- 45.450 Social Work Practice with Small Groups
- 45.452 Social Work Practice With Organizations and Communities
- 45.453 Social Work Policy
- 45.462 Sociological Theory
- 45.497 Social Work Internship

45.498 Integrative Methods Seminar in Social Work and Social work
48.101 General Psychology
48.210 Life-Span Psychology
One additional three credit course in psychology.
50.101 General Biology I

Faculty Profiles

Christopher F. Armstrong, professor - B.A., Washington and Lee University; M.A., Ph.D., University of Pennsylvania

Leo G. Barrile, professor - B.A., M.A., Ph.D., Boston College

David E. Greenwald, associate professor - B.A., University of Pennsylvania; M.A., Ph.D., University of California at Berkeley

James H. Huber, professor - B.S., Bloomsburg State College; M.A., University of Delaware; Ph.D., The Pennsylvania State University

I. Sue Jackson, chairperson, professor - A.B., Lycoming College; M.S.S.W., Graduate School of Social Work, University of Texas; Ph.D., Bryn Mawr College

Charles W. Laudermilch, associate professor - B.A., Moravian College; M.S.W., Wayne State University

Frank G. Lindenfeld, professor - B.A., Cornell University; M.A., Ph.D., Columbia University

Yvette J. Samson, associate professor - B.A., Bowling Green University, M.A., Ph.D., University of California at Riverside

Neal Slone, associate professor - B.A., State University of New York at Albany; M.A., Ph.D., University of Washington

Dale L. Sultzbaugh, associate professor - B.A., Gettysburg College; M.Div., Lutheran Theological Seminary; M.S.W., West Virginia University

Anne K. Wilson, professor - B.A., Carleton College; M.S., University of Maryland; Ph.D., The Johns Hopkins University

Sociology

Administered by: Department of Sociology, Social Work and Criminal Justice
College: Liberal Arts
Campus address: 2106 McCormick Center for Human Services
Telephone number: (570) 389-4237
Fax number: (570) 389-2094
Department chair: I. Sue Jackson
Degree awarded: Bachelor of Arts
Effective Fall, 2001

About the Program

Students majoring in sociology have the choice of either majoring in sociology or doing an option in applied sociology.

Sociology is a great major for students who are excited about studying society and its various components of communities, institutions and other structured groups. Students who major in this area have begun careers in many diverse fields, including classical sociology as well as sales, fashion merchandising, industry, stock brokerages, computer programming, insurance, research and social welfare.

Because of the abstract nature of the subject matter, students must have very good study habits to do well in this discipline. Beyond taking the four required core courses listed below, students have considerable flexibility in the courses they select; of the eight additional sociology courses required, four must be at 300 or 400 level, excluding internship.

Internships are optional within the major, but those interested in field experience will work with their adviser to choose one that helps fulfill learning goals.

Applied Sociology is an exceptional option for those who want actual experience "doing sociology" while taking courses. All students entering the applied sociology option must do an internship for between six and 15 semester hours, most of which are with nonprofit voluntary and community-based organizations, while others are with government agencies. Internships often create links for future employment.

Required Courses

In addition to 53 semester hours of general education requirements, a total of 36 semester hours is required for a major in sociology. The balance of the university's 128-semester hour requirement for a bachelor's degree comes from elective courses.

Core courses:
45.211 Principles of Sociology
45.255 Research Methods for Social Inquiry
45.260 Basic Social Statistics
45.462 Sociological Theory

Sociology Major - Students also must select eight additional courses, 24 semester hours, from Sociology courses; four of these must be drawn from 300 and 400 level courses. The sociology internship and social work courses may not be counted as part of these eight courses.

Applied Sociology option
45.211 Principles of Sociology
45.255 Research Methods for Social Inquiry
45.260 Basic Social Statistics
45.462 Sociological Theory
45.316 Urban Sociology
45.461 Social Problems of Urban/Rural Communities
Choose three from the following six courses:
45.213 Contemporary Social Problems
45.490 Sociology of Aging
45.345 Medical Sociology
45.465 Computer Applications
45.468 Social Service Planning
45.441 Social Indicators
Three additional coures within the department, one of which must be a sociology course
An internship (6-15 semester hours)

Faculty Profiles

Christopher F. Armstrong, professor - B.A., Washington and Lee University; M.A., Ph.D., University of Pennsylvania

Leo G. Barrile, professor - B.A., M.A., Ph.D., Boston College

David E. Greenwald, associate professor - B.A., University of Pennsylvania; M.A., Ph.D., University of California at Berkeley

James H. Huber, professor - B.S., Bloomsburg State College; M.A., University of Delaware; Ph.D., The Pennsylvania State University

I. Sue Jackson, chairperson, professor - A.B., Lycoming College; M.S.S.W., Graduate School of Social Work, University of Texas; Ph.D., Bryn Mawr College

Charles W. Laudermilch, associate professor - B.A., Moravian College; M.S.W., Wayne State University

Frank G. Lindenfeld, professor - B.A., Cornell University; M.A., Ph.D., Columbia University

Yvette J. Samson, associate professor - B.A., Bowling Green University, M.A., Ph.D., University of California at Riverside

Neal Slone, associate professor - B.A., State University of New York at Albany; M.A., Ph.D., University of Washington

Dale L. Sultzbaugh, associate professor - B.A., Gettysburg College; M.Div., Lutheran Theological Seminary; M.S.W., West Virginia University

Anne K. Wilson, professor - B.A., Carleton College; M.S., University of Maryland; Ph.D., The Johns Hopkins University

Theatre Arts

Administered by: Department of Communication Studies and Theatre Arts
College: Liberal Arts
Campus address: 1103 McCormick Center for Human Services
Telephone number: (570) 389-4184
Fax number: (570) 389-3516
Department Chair: Howard Schreier
Degree Awarded: Bachelor of Arts

About the Program

The division of theatre arts is committed to providing a strong undergraduate program for its majors and minors in the study and practice of theatre, to supporting the university's general education curriculum and to enhancing the cultural life of the campus community. The Bachelor of Arts in Theatre combines the traditional objectives of higher education with the creative mandate of a living art. Theatre as the core of a higher education experience is an effective tool for the implementation of these aims. Since Theatre touches all aspects of life, past and present, and because the theatre process is an intense arena for the development of social and practical skills, this program prepares the graduate to adapt to a wide variety of career opportunities.

Students in the major are expected to demonstrate a working knowledge of historical and contemporary theories and practices in dramatic literature, design and performance. A degree in theatre arts provides successful students with a solid background for achievement in graduate studies and career possibilities as performers, artists, managers and technicians in professional theatre and related fields such as film and television. All courses are taught by professionals in the field. The program maintains high professional standards of creativity, work and decorum, and the highest expectations of its students. The quality of work pushes students to their limit.

Typical career opportunities for theatre majors are performing artist, scenic designer; costume designer, lighting designer, script writer and stage manager. While many students hope for careers in the theatre-in fact, a large number of our former students are having exciting theatre careers, the program has a broader aim than professional training. The theatre program's goal is to assist every major develop the skills and values which will serve him/her well in whatever future vocation is chosen.

An area of emphasis must be selected by the student following successful completion of the core curriculum and 60 total credit hours. The three areas, Performance, Design/Technology, and Integrated Theatre Studies, provide students with opportunities for advanced studies in a selected specialization and to develop skills necessary to begin a career in the art of theatre. Upon completion, the student will be prepared to pursue entry level positions in the chosen field, internships, or graduate school.

A bachelor of science in education with a specialization in Communication/Theatre is also available.

Bloomsburg Players is the theatre division's co-curricular producing and support organization. Membership includes majors, minors, and non-majors, students with professional ambition as well as those who share a love of the art and process as an avocation.

Required Courses

General Education

The following course is required for inclusion in the student's course of study as part of the Group A distribution requirement:

26.102 Introduction to Theatre

The following courses from the University's general education requirements are strongly recommended for inclusion in the student's course of study:

25.103 Public Speaking
20.363 Shakespeare
20.377 Modern Drama
30.101 Introduction to Art
35.101 Music Listening
46.200 Principles of Cultural Anthropology

Core Requirements For All Majors

The core curriculum is designed as a sequence of courses which introduce and investigate the theories and history of theatre and dramatic literature providing a solid background for advanced studies in the student's area of emphasis. It also provides a vehicle for planning and assessing each individual's progress as an artist, scholar, and technician. These courses are required of all majors, regardless of area of emphasis.

26.101 Career Seminar. A Theatre Life in Bloom
26.108 Theatre Practicum
26.202 Understanding Plays: Script Analysis
26.215 History of Theatre
26.270 Fundamentals of Theatre Design
26.325 History of Theatre II
26.416 Modern Theatre
26.401 Career Seminar: A Life in the Theatre

Areas Of Emphasis

Performance - The Performance area of emphasis is provided for students who wish to pursue advanced undergraduate studies as an actor or director. The curriculum offers a sequence of courses which guide the student to augment his or her own abilities by examining and applying techniques and methods of past and current masters. With these explorations, the student is encouraged to develop independently as a critical thinker and risk-taker and as a collaborative creative artist.

26.112 Fundamentals of Acting
26.200 Voice and Movement
26.312 Intermediate Acting
26.411 Play Directing
26.412 Advanced Acting
26.492 Seminar in Performance

One additional course from the Technical/Design Emphasis listed below

05.225 Beginning Ballet
35.203 Class Voice

Design Technology - The Design Technology area of emphasis is provided for students who wish to pursue advanced undergraduate studies as scenic, costume, and lighting designers and technicians. The curriculum offers a sequence of courses which examines and applies techniques of design concepts in each major area as well as construction and execution for stage production. With these explorations, the student is encouraged to develop independently as a critical thinker and risk-taker and as a collaborative creative artist.

26.211 Theatre Production
26.277 Costume Construction
26.311 Scene Design
26.314 Stage Light-Theory
26.377 Costume Design
26.491 Seminar in Tech. Theatre and Design
and one other design course

One additional course from the Performance Emphasis listed above

32.111 Drawing
54.180 Computer Aided Design and Engineering Graphics

Integrated Theatre Studies - Integrated Theatre Studies is provided for students who wish to continue the broader course of studies begun in the core curriculum and who wish to pursue advanced studies in each area of production. This option is especially appropriate for students who may wish to pursue careers in stage or theatre management, educational theatre, or theatre for youth. This curriculum offers courses which require theoretical and practical experience in all areas of the discipline.

26.219 Children's Theatre
26.321 Theatre and Stage Management

Two additional courses each from the Performance and Design/Technical Emphases listed above

One upper level course (300 or 400 level) selected from either Performance or Design

Minor In Theatre Arts

Preparation for a minor in Theatre Arts requires a total of 22 credits, including study in each basic category of the discipline: theory/criticism, history, performance, technical crafts, design, and practical application. The student may also study in additional areas of his or her own choosing. All required courses are currently offered in the division's program of study. The requirements are as follows:

26.102 Introduction to Theatre
26.108 Theatre Practicum
26.112 Fundamentals of Acting or 26.411 Play Directing
26.211 Theatre Production or 26.277 Costume Construction
26.215 History of Theatre
26.341 Fundamentals of Theatre Design

Two other courses selected from Division's curriculum

Faculty Profiles

Karen Anselm, professor, - B.A., University of Pittsburgh; M.F.A., Carnegie Mellon University

Bruce Candlish, assistant professor - B.A., San Jose State College; M.F.A., The Pennsylvania State University

Michael Collins, professor - B.A., Northeast Missouri State University; M.F.A., Purdue University

E. Ross Genzel, assistant professor - B.A., Concordia Teachers College; M.A., Northwestern University; M.F.A., George Washington University

Supplemental Information

The Department of Communications Studies and Theatre Arts maintains a website at http://departments.bloomu.edu/csta/

College of Professional Studies

Ann L. Lee, Dean

3106 McCormick Center for Human Services
389-4005

Audiology and Speech Pathology

Administered by: Department Audiology and Speech Pathology
College: Professional Studies, School of Health Sciences
Campus address: 338 Centennial
Telephone number: (570) 389-4436
TDD number: (570) 389-4864
Fax number: (570) 389-3980
Department chair e-mail: Richard Angelo (kmiller@bloomu.edu)
Degree awarded: Bachelor of Science
Effective Fall, 2001

About the Program

The undergraduate program in audiology and speech pathology prepares students for admission to graduate education in either audiology or speech-language pathology. Entry-level credentials for both professions require a master's degree. As such, Bloomsburg University does not make recommendations for state certification in either discipline at completion of the undergraduate program.

The preprofessional curriculum provides the student with a broad general education background. The primary emphasis is on general education with a few introductory courses pertaining to the professions of speech pathology and audiology. The required undergraduate courses are prerequisite to graduate school admission and are based on the American Speech-Language-Hearing Association (ASHA) accreditation and certification requirements.

The program, which attracts students from throughout the world, is structured to allow students flexibility in determining career direction toward audiology or speech-language pathology. The undergraduate program has a comprehensive speech science and audiology laboratory with state-of-the-art equipment. Access and familiarity with speech and audiology instrumentation is regarded as an important plus for students applying to graduate programs. Many Bloomsburg students are accepted in nationally recognized graduate programs throughout the country, including Bloomsburg's own CAA accredited master's programs.

At the graduate level, Bloomsburg has one of only two master's programs in audiology found in Pennsylvania. Graduates enjoy a 100 percent career placement rate in this area. Students gain experience in evaluation and treatment, digital hearing aid fitting, aural rehabilitation, electrophysiological assessment (ABR, ENG, OAE) and occupational and environmental hearing conservation.

The graduate speech-language pathology program provides a comprehensive curriculum that prepares the graduate for work in a wide variety of occupational settings. In addition to courses typically offered, Bloomsburg has separate course in augmentative communication, swallowing disorders, head trauma and both a preschool and school-age language course. Over the past seven years, 100 percent of the graduates have passed the National Examination in Speech Pathology and Audiology.

Bloomsburg graduate students receive practical experience in the university's Speech, Hearing and Language Clinic, which provides diagnostic and intervention services in audiology, speech and language to area residents. Graduate students are enrolled in several practicum experiences throughout their program of study.

Factors suggesting a high probability of success in this very demanding program include strong verbal, quantitative and analytical skills, leadership abilities, interest in volunteer work and an outgoing personality.

Admission to the graduate programs in audiology and speech pathology is competitive and limited. Graduates of the master's degree program in speech pathology are eligible for certification in speech correction granted by the Pennsylvania Department of Education, the Certificate of Clinical Competence in Speech Pathology issued by the American Speech-Language Hearing Association (ASHA) and licensure in speech pathology issued by the Commonwealth of Pennsylvania. Graduates of the master's degree program in audiology are eligible for the Certificate of Clinical Competence in Audiology issued by the American Speech-Language Hearing Association (AHSA) and licensure in audiology issued by the Commonwealth of Pennsylvania.

Required Courses

In addition to 53 semester hours of general education requirements, a total of 51 semester hours is required for a major in speech pathology and audiology and with the addition of 23 semester hours of elective courses, the university degree requirement of 128 hours is met. Students should work with their adviser on course selection.

The following courses in speech pathology and audiology are required:

48.160 Basic Statistics
50.366 Anatomy and Physiology: Head, Neck and Thorax
70.101 Introduction to the Exceptional Individual
70.202 Technology for Exceptionalities
72.152 Introduction Communication Disorders
72.200 Introduction to Audiology
72.220 Phonetics
72.240 Normal Language Acquisition
72.300 Auditory Training and Speech Reading
72.310 Speech Science
72.320 Assessment and Remediation of Language Disorders
72.330 Assessment and Remediation of Speech Disorders
72.340 Applied Behavioral Analysis for Speech and Language
72.430 Fundamentals of Audiology
72.450 Clinical Observation
72.460 Psycholinguistics

Minor in Audiology and Speech Pathology

The minor in Audiology and Speech Pathology is offered to any individual enrolled at Bloomsburg who wishes to gain an introductory understanding of the professions of audiology and/or speech pathology. The undergraduate minor addresses basic processes of communication, development of communicative competence and an overview of the communication disorders. Students can use the minor to enhance preparation in their major or to explore the professions in preparation for graduate education in audiology or speech pathology. Completion of the minor does not qualify the student for certification as an audiologist or speech pathologist, nor does it meet the requirements for a speech-language assistant.

Choose six of the following seven courses:

72.152 Introduction Communication Disorders
72.200 Introduction to Audiology
72.220 Phonetics
72.240 Normal Language Acquisition
72.300 Auditory Training and Speech Reading
72.310 Speech Science
72.460 Psycholinguistics

Faculty Profiles

Dianne H. Angelo, professor - B.S., M.Ed., Clarion University; M.S., Ph.D., University of Pittsburgh

Richard M. Angelo, professor, chairperson, Clinical Director - B.S., Mansfield University of Pennsylvania; M.Ed., Bloomsburg University of Pennsylvania; Ed.D., Lehigh University; Ph.D., University of Pittsburgh

Shaheen N. Awan, professor - B.A., University of Western Ontario; M.S., Clarion University of Pennsylvania; Ph.D., Kent State University

Ronald R. Champoux, professor - B.A., Providence College; M.A.T., Assumption College; M.S., M.A., Ph.D., University of Michigan

Robert J. Lowe, professor - B.A., Slippery Rock University; M.Ed., Clarion University; Ph.D., Ohio University

Peter Stine, professor- B.A., Wesleyan University, Ph.D., The Pennsylvania State University

Jodi Seip, clinical staff - B.S., M.S., Bloomsburg University of Pennsylvania

Peggy Snyder, clinical supervisor - B.S., M.S., Bloomsburg University of Pennsylvania

Vishakha W. Rawool, professor - B.Sc., Bombay University; M.A., University of Texas at El Paso; Ph.D., Purdue University

Julia Mount-Weitz, associate professor - B.S., Emerson College; M.S., Ph.D., University of Pittsburgh

Thomas R. Zalewski, assistant professor - B.S., M.S., Bloomsburg University

Early Childhood Education

Administered by: Department of Early Childhood and Elementary Education
College: Professional Studies
Campus address: 3213 McCormick Center for Human Services
Telephone number: (570) 389-4032
Fax number: (570) 389-3848
Department chair: John R. Hranitz
Assistant chair: Lorraine Shanoski
Degree awarded: Bachelor of Science in Education
Effective Fall, 2001

About the Program

The teacher education program at Bloomsburg University is committed to improving the field of education through a comprehensive program, which recognizes its unique contribution to society, both as a reflection of that society and as an agent for the improvement of society. To meet this obligation, the programs draw upon the knowledge and understanding of general as well as professional education. It strives for a blend in preparing a person to fulfill a role in society as an informed, inquiring and skilled professional.

Facilities are modern and up-to-date technologies are available, including a course in educational computing. A state-of-the-art computer laboratory enables students to learn current advances in computer-assisted instruction.

Students are required to spend time observing and assisting in actual classroom settings through two field studies courses offered in the sophomore and junior years. These courses prepare students for the actual student teaching experience. Students may select an internship which provides a work-study program in an education-related setting. Overseas student teaching opportunities are another available option.

Early childhood education curriculum focuses on the growth and development of young children in addition to teaching specialized skills for dealing with the very young child. Students have the opportunity to gain practical experience by working at the campus child care center. Students in this program earn a Bachelor of Science in Education with nursery school/ kindergarten through grade three Instructional Level I certification.

Required Courses

In addition to 53 semester hours of general education requirements, early childhood education majors must take 74 hours of professional education and early childhood education specialization courses to satisfy the university's 128-hour requirement for a bachelor's degree. Requirements for Early Childhood Education (N-K-3) develop knowledge of the nature of the child, the nature of the school and center, the learning process, general methods of teaching and methods of teaching particular subjects and to provide student teaching experience. A total of 65 semester hours is taken in required courses. None may be taken on a pass/fail basis. An area of concentration is optional. No free electives are available for this program.

60.201 Field Studies in Education I
60.204 Educational Computing and Technology
60.251 Psychological Foundations of Education or 48.251 Psychological Foundations
60.291 Principles of Teaching
60.301 Field Studies in Education II
60.311 Classroom Measurement and Assessment
60.393 Social Foundations of Education or 60.406 Multicultural Education
60.497 Teaching in Education: First Experience
60.497 Teaching in Education: First Experience
60.498 Teaching in Education: Second Experience
60.498 Teaching in Education: Second Experience
62.121 Introduction to Early Childhood Education
62.302 Teaching Science in the Elementary School
62.310 Teaching Fine Arts in the Elementary School
62.322 Seminar in Learning Experiences with Young Children
62.371 Teaching Reading in the Elementary School
62.373 Diagnostic and Inclusionary Practices for Literacy
62.390 Teaching Social Studies in the Elementary School
62.391 Teaching Language Arts in the Elementary School
62.398 Teaching Mathematics in the Elementary School
62.410 Methods and Materials in Early Childhood Education I

62.420 Methods and Materials in Early Childhood Education II
62.497 Teaching Literature and Literacy in Diverse Classrooms

Elective Courses - A minimum of 9 to 12 semester hours is taken in elective courses. None of these courses may be taken on a pass/fail basis.

05.311 Methods and Materials in Elementary School Physical Education
05.320 Health and Safety in the Elementary School
20.384 Literature for Children
30.205 Children's Art
35.320 Music in Elementary School
60.427 Classroom Management and Effective Discipline
62.304 Environmental Education in the Elementary School
62.496 Practicum in Early Childhood Education/ Elementary Education
79.312 Internship in Education (1 to 3 semester hours only in this area)

Faculty Profiles

Gary J. Doby, associate professor - B.S., M.S., State University of New York College at Buffalo; Ph.D, SUNY at Buffalo

Bonita B. Franks, associate professor -B.S., M.S., Central Connecticut State University; Ph.D., The Pennsylvania State University

John R. Hranitz, professor - B.S., M.Ed., Ed.D., Indiana University of Pennsylvania

Judith McVarish, assistant professor - B.S., Bridgewater College, M.S., Lesley College; Ph.D., Lesley University

Frank Misiti, professor - B.S., Mansfield State College; M.Ed., Ph.D., The Pennsylvania State University

William S. O'Bruba, professor - B.S., California State College; M.Ed., Duquesne University; Ed.D., Indiana University of Pennsylvania

Rosemary T. Radzievich, assistant professor - B.A., The Pennsylvania State University; M.Ed., Bloomsburg University; Ed.D., Lehigh University

Lorraine A. Shanoski, professor - B.S., M.Ed., Northeastern University; Ed.D., Indiana University of Pennsylvania

Sharon G. Solloway, assistant professor - B.S., University of Oklahoma; M.Ed., University of Central Oklahoma; Ph.D., Oklahoma State University

Charles Starkey, assistant professor - B.S., M.Ed., Charleston Southern University; Ph.D., Virginia Polytechnic Institute and State University

Bonnie L. Williams, associate professor - B.S., M.Ed., Bloomsburg University; Ed.D., Temple University

David Wetzel, assistant professor -

Elementary Education

Administered by:Department of Early Childhood and Elementary Education
College: Professional Studies
Campus address: 3213 McCormick Center for Human Services
Telephone number: (570) 389-4032
Fax number: (570) 389-3848
Department chair: John R. Hranitz
Degree awarded: Bachelor of Science in Education
Effective Fall, 2001

About the Program

The teacher education program at Bloomsburg University is committed to improving the field of education through a comprehensive program, which recognizes its unique contribution to society, both as a reflection of that society and as an agent for the improvement of society. To meet this obligation, the programs draw upon the knowledge and understanding of general as well as professional education. It strives for a blend in preparing a person to fulfill a role in society as an informed, inquiring and skilled professional.

The Department of Early Childhood and Elementary Education teacher education programs in elementary and early childhood are accredited.

Facilities are modern and up-to-date technologies are available, including a course in educational computing. A state-of-the-art computer laboratory enables students to learn current advances in computer-assisted instruction.

Students are required to spend time observing and assisting in actual classroom settings through two field studies courses offered in the sophomore and junior years. These courses prepare students for the actual student teaching experience. Students may select an internship which provides a work-study program in an education-related setting. Overseas student teaching opportunities are another available option.

The major in elementary education leads to a Bachelor of Science in Education and Instructional Level I certification to teach kindergarten through sixth grade (K-6). (The major in early childhood education provides a Bachelor of Science in Education with certification to teach nursery through third grade, N, K-3).

A dual certification program leading to a bachelor's degree and certificates for teaching K-6 and nursery school/kindergarten through third grade (N, K-3) is available.

Required Courses

In addition to 53 semester hours of general education requirements, elementary education majors take 62 semester hours of professional education. The balance of the university's 128-hour requirement for a bachelor's degree comes from elective courses. The courses required for the major are intended to develop knowledge of the nature of the child, the nature of the school, the learning process, general methods of teaching and methods of teaching particular subjects and to provide student teaching experience. A total of 53 semester hours is taken in required courses and nine in education electives. None may be taken on a pass/fail basis. An area of concentration is optional.

60.201 Field Studies in Education I
60.204 Educational Computing and Technology
60.251 Psychological Foundations of Education or 48.251 Psychological Foundations
60.291 Principles of Teaching
60.301 Field Studies in Education II
60.311 Classroom Measurements and Assessment
60.393 Social Foundations of Education or 60.406 Multicultural Education
60.497 Teaching in Education: First Experience
60.498 Teaching in Education: Second Experience
62.302 Teaching Science in the Elementary School
62.310 Teaching Fine Arts in the Elementary School
62.371 Teaching Reading in the Elementary School
62.373 Diagnostic and Inclusionary Practices for Literacy
62.390 Teaching Social Studies in the Elementary School
62.391 Teaching Language Arts in the Elementary School
62.398 Teaching Mathematics in the Elementary School

Elective Courses - No elective courses may be taken on a pass/fail basis. Students select a minimum of 9 to 12 semester hours from the following courses:

05.311 Methods and Materials in Elementary School Physical Education
05.320 Health and Safety in the Elementary School
35.320 Music in the Elementary School
20.384 Literature for Children
30.205 Children's Art

60.427 Classroom Management and Effective Discipline
62.121 Introduction to Early Childhood Education
62.304 Environmental Education for the Elementary School Teacher
62.322 Seminar in Learning Experiences with Young Children
62.410 Methods and Materials in Early Childhood Education I
62.420 Methods and Materials in Early Childhood Education II
62.496 Practicum in Early Childhood Education/ Elementary Education
79.312 Internship in Education (1 to 3 semester hours only in this area)

Faculty Profiles

Gary J. Doby, associate professor - B.S., M.S., State University of New York College at Buffalo; Ph.D, SUNY at Buffalo

Bonita B. Franks, associate professor -B.S., M.S., Central Connecticut State University; Ph.D., The Pennsylvania State University

John R. Hranitz, professor - B.S., M.Ed., Ed.D., Indiana University of Pennsylvania

Judith McVarish, assistant professor - B.S., Bridgewater College, M.S., Lesley College; Ph.D., Lesley University

Frank Misiti, professor - B.S., Mansfield State College; M.Ed., Ph.D., The Pennsylvania State University

William S. O'Bruba, professor - B.S., California State College; M.Ed., Duquesne University; Ed.D., Indiana University of Pennsylvania

Rosemary T. Radzievich, assistant professor - B.A., The Pennsylvania State University; M.Ed., Bloomsburg University; Ed.D., Lehigh University

Lorraine A. Shanoski, professor - B.S., M.Ed., Northeastern University; Ed.D., Indiana University of Pennsylvania

Sharon G. Solloway, assistant professor - B.S., University of Oklahoma; M.Ed., University of Central Oklahoma; Ph.D., Oklahoma State University

Charles Starkey, assistant professor - B.S., M.Ed., Charleston Southern University; Ph.D., Virginia Polytechnic Institute and State University

Bonnie L. Williams, associate professor - B.S., M.Ed., Bloomsburg University; Ed.D., Temple University

David Wetzel, assistant professor

Elementary and Early Childhood Education
(Dual Certification)

Administered by:Department of Early Childhood and Elementary Education
College: Professional Studies
Campus address: 3213 McCormick Center for Human Services
Telephone number: (570) 389-4032
Fax number: (570) 389-3894
Department chair: John R. Hranitz
Degree awarded: Bachelor of Science in Education
Effective Fall, 2001

About the Program

The teacher education program at Bloomsburg University is committed to improving the field of education through a comprehensive program which recognizes its unique contribution to society, both as a reflection of that society and as an agent for the improvement of society. To meet this obligation, the programs draw upon the knowledge and understanding of general as well as professional education. It strives for a blend in preparing a person to fulfill a role in society as an informed, inquiring and skilled professional.

The Department of Elementary and Early Childhood Education includes teacher education programs in elementary, early and childhood education. All programs are accredited.

Facilities are modern and up-to-date technologies are available, including a course in educational computing. A state-of-the-art computer laboratory enables students to learn current advances in computer-assisted instruction.

Students are required to spend time observing and assisting in actual classroom settings through two field studies courses offered in the sophomore and junior years. These courses prepare students for the actual student teaching experience. Students may select an internship which provides a work-study program in an education-related setting. Overseas student teaching opportunities are another available option.

The dual certification program leads to a bachelor's degree and Instructional Level I certificates for teaching K-6 and nursery school/kindergarten through third grade, N, K-3.

Elementary and early childhood education majors must complete the general education requirements and 53 credits of academic background courses. Elementary education majors are required to take 62 credits of professional education. Early childhood education majors take 74 credits of professional education and early childhood education specialization.

Required Courses

In addition to a total of 53 semester hours in general education courses, 65 hours of course requirements for dual certification develop knowledge of the nature of the child, the nature of the school, the learning process, general methods of teaching, methods of teaching particular subjects and to provide student teaching experience. None may be taken on a pass/fail basis. An area of concentration is optional. The balance of the university's 128-hour requirement for a bachelor's degree come from elective courses.

60.201 Field Studies in Education I
60.204 Educational Computing and Technology
60.251 Psychological Foundations of Education or 48.251 Psychological Foundations of Education
60.291 Principles of Teaching
60.301 Field Studies in Education II
60.311 Classroom Measurement and Assessment
60.393 Social Foundations of Education or 60.406 Multicultural Education
60.497 Teaching in Education: First Experience
60.498 Teaching in Education: Second Experience
62.121 Introduction to Early Childhood Education
62.302 Teaching Science in the Elementary School
62.310 Teaching Fine Arts in the Elementary School
62.322 Seminar in Learning Experiences with Young Children
62.371 Teaching Reading in the Elementary School
62.373 Diagnostic and Inclusionary Practices
62.390 Teaching Social Studies in the Elementary School
62.391 Teaching Language Arts in the Elementary School
62.398 Teaching Mathematics in the Elementary School
62.410 Methods and Materials in Early Childhood Education I
62.420 Methods and Materials in Early Childhood Education II

62.497 Teaching Literacy and Literature in Diverse Classrooms
60.497 Teaching in Education: First Experience
60.498 Teaching in Educaiton: Second Experience

Elective Courses - A minimum of 9 to 12 semester hours is taken in elective courses. None of these courses may be taken on a pass/fail basis.

05.311 Methods and Materials in Elementary School Physical Education
05.320 Health and Safety in the Elementary School
20.384 Literature for Children
30.205 Children's Art
35.311 Music in the Elementary School
60.302 Research Literacy
60.427 Classroom Management and Effective Discipline
62.304 Environmental Education in the Elementary School
62.376 Language Experiences for Children
62.389 Individualized Instruction Activities in the Elementary School
79.312 Internship in Education (1 to 3 semester hours only in this area)

Faculty Profiles

Gary J. Doby, associate professor - B.S., M.S., State University of New York College at Buffalo; Ph.D, SUNY at Buffalo

Bonita B. Franks, associate professor -B.S., M.S., Central Connecticut State University; Ph.D., The Pennsylvania State University

John R. Hranitz, professor - B.S., M.Ed., Ed.D., Indiana University of Pennsylvania

Judith McVarish, assistant professor - B.S., Bridgewater College, M.S., Lesley College; Ph.D., Lesley University

Frank Misiti, professor - B.S., Mansfield State College; M.Ed., Ph.D., The Pennsylvania State University

William S. O'Bruba, professor - B.S., California State College; M.Ed., Duquesne University; Ed.D., Indiana University of Pennsylvania

Rosemary T. Radzievich, assistant professor - B.A., The Pennsylvania State University; M.Ed., Bloomsburg University; Ed.D., Lehigh University

Lorraine A. Shanoski, professor - B.S., M.Ed., Northeastern University; Ed.D., Indiana University of Pennsylvania

Sharon G. Solloway, assistant professor - B.S., University of Oklahoma; M.Ed., University of Central Oklahoma; Ph.D., Oklahoma State University

Charles Starkey, assistant professor - B.S., M.Ed., Charleston Southern University; Ph.D., Virginia Polytechnic Institute and State University

David Wetzel, assistant professor

Bonnie L. Williams, associate professor - B.S., M.Ed., Bloomsburg University; Ed.D., Temple University

Interpreting for the Deaf/Hard of Hearing

Administered by: Department of Exceptionality Programs
College: Professional Studies
Campus address: Navy Hall
Bloomsburg University
Telephone number: (570) 389-4119
Fax number :(570) 389-3890
TDY: (570) 389-4864
Department chair: Carroll R. Redfern
Program coordinator: Ruth Ann Schornstein
Degree awarded: Bachelor of Science
Effective Fall, 2001

About the Program

In one of just two four-year degree programs in the eastern United States, Bloomsburg University provides specialized training for individuals seeking to become American Sign Language interpreters. The objective for the sign language interpreting curriculum is to prepare individuals for certification from the Registry of Interpreters of the Deaf as professional interpreters between deaf/hard of hearing and hearing consumers within the context of a variety of settings: legal, educational, social or business.

In addition to learning to interpret, students in this program also receive strong education in aspects of deaf culture and related communication issues.

Bloomsburg's program draws additional strength from having a deaf individual as one of the two faculty assigned to the program, plus a graduate program in Education of the Deaf/Hard of Hearing and strong commitment to undergraduate and graduate programs in audiology that includes a professional regional clinic.

Graduates of this program enjoy a 100 percent placement rate in a variety of educational and vocational settings.

Individuals desiring to specialize in communication with the deaf have two options: a program leading to a bachelor of science in interpreting or a minor in sign language. Individuals seeking entrance to the program must complete the following courses prior to formal admission to the program: 75.154 American Sign Language I and 75.155 American Sign Language II.

Required Courses

In addition to 53 semester hours in general education requirements, the major in interpreting requires 18 semester hours in American Sign Language training and 36 semester hours in interpreting; the remaining 20 semester hours required for a bachelor's degree come from elective courses.

American Sign Language training:

75.153 Introduction to Sign Language
75.154 American Sign Language I
75.155 American Sign Language II
75.254 The Deaf Culture
75.255 American Sign Language III
75.256 American Sign Language IV

Interpreting requirements:

25.103 Public Speaking
25.215 Communication Theory
72.152 Introduction to Communication Disorders
72.200 Introduction to Audiology
75.201 Interpreting in the Educational Setting
75.301 Introduction to Interpreting for the Deaf
75.302 Interpreting Engish to American Sign Language
75.303 Transliterating English to Sign Language
75.304 Oral Interpreting/Transliterating
75.401 Sign to Voice Interpreting
75.415 Practicum in Interpreting
one additional course from the Code 25 course listing.

Elective Courses are to be chosen with the approval of an adviser and as required to meet the university's graduation requirement of 128 semester hours. Students may choose from the following free electives:

20.111 Language and Social Interaction
20.411 Modern Linguistic Theory
26.112 Fundamentals of Acting
28.220 Ethics
28.290 Medical Ethics
45.211 Principles of Sociology
45.213 Contemporary Social Problems
45.231 Marriage and Family
46.101 Introduction to Anthropology
46.200 Principles of Cultural Anthropology
46.440 Language and Culture
48.101 General Psychology
48.160 Basic Statistics
48.211 Child Psychology
48.321 Psychological Tests and Measurements

70.101 Introduction to the Exceptional Individual
72.460 Psycholinguistics
74.260 Interpreting in the Educational Setting

Area of Concentration in Education of Deaf/Hard of Hearing - Interpreting students may choose to take an area of concentration in education of the deaf/hard of hearing. The undergraduate curriculum in education of the deaf/hard of hearing lays the foundation for the training and education needed to prepare classroom teachers and itinerant hearing therapists to work in educational settings with deaf/hard of hearing children and adults. Students supplement the curriculum for their majors with an area of concentration in education of the deaf/hard of hearing that requires a minimum of 18 semester hours.

Certification to teach deaf/hard of hearing students in school programs is granted by the Pennsylvania Department of Education upon completion of a related graduate program.

All applicants to the graduate program in Education of the Deaf/Hard of Hearing must have completed the following courses. Students without an education background will need to take five education courses agreed upon by the curriculum coordinator in education of the deaf/hard of hearing.

Required Courses

The following is a suggested time sequence for courses required in this program of study.

Freshman Year
70.101 Introduction to Exceptional Individuals
74.201 History, Education and Guidance of the Deaf/Hard of Hearing
74.153 Introduction to Sign Language

Sophomore Year
72.200 Introduction to Audiology
75.154 American Sign Language I

Junior Year
A statistics course
75.305 Introduction to Instructional Methods for the Deaf/Hard of Hearing
75.155 American Sign Language II

Senior Year
72.450 Clinical Observation
Elective Courses

A total of 12 semester hours is taken in elective courses. Courses include:
75.155 American Sign Language II
75.254 The Deaf Culture
75.255 American Sign Language III
75.256 American Sign Language IV

Requirements for the Minor in Sign Language

Students from any academic discipline may declare a minor in sign language. The minor consists of 18 semester hours and requires the following courses:
74.153 Introduction to Sign Language
75.154 American Sign Language I
75.155 American Sign Language II
75.254 The Deaf Culture
75.255 American Sign Language III
75.256 American Sign Language IV

Faculty Profiles

Kiersten Stager Muroski, instructor - B.A., Mercyhurst College; M.A., Gallaudet University

Ruth Ann Schornstein, assistant professor - B.A., Kean College of New Jersey; M.S., Western Maryland College

Nursing

Administered by: Department of Nursing
College: Professional Studies
Campus address: 3109 McCormick Center for Human Services
Telephone number: (570) 389-4423 or 4426
Fax number: (570) 389-5008
Department chair, e-mail: M. Christine Alichnie (cmalic@bloomu.edu)
Degree awarded: Bachelor of Science in Nursing
Effective: Fall, 2001

About the Program

Recognized as one of the leading four-year nursing programs statewide, Bloomsburg prepares students for a wide range of careers in home care, occupational health, rehabilitation, trauma, clinical specialties, informatics and case management and additionally offers the increasingly valuable path toward a master of science in nursing through its related graduate study program.

As the realm of modern health care becomes increasingly complex, this rigorous and demanding program requires potential students to have exceptional leadership and time management skills, self assurance and independent critical thinking. Other factors suggesting potential for success at Bloomsburg include a strong background in sciences and algebra as well as very high reading comprehension skills and a strong work ethic.

Students enjoy high success on NCLEX examinations, a strong placement rate and continuation of graduate studies after initial work experiences, much of which is outside of traditional hospital settings.

The goals of the BSN program are to assist students to:

1. attain the competencies required of the generalist practitioner, including application of relevant knowledge, skills, values and other professional behaviors designed to help the person attain an optimal level of functioning.
2. collaborate with others to promote health in a diverse and multicultural society.
3. value and engage in activities designed to enhance personal growth and promote professional role development.

The Bachelor of Science in Nursing (BSN) is awarded to those students who successfully complete the requirements for the degree. Degree recipients (non-R.N.) are then eligible to take the NCLEX licensure examination administered by the Board of Nursing in the state of their choice.

Students must assume responsibility for their own travel to both inpatient and outpatient/community clinical agencies. Travel may vary from one mile to approximately 40 miles, depending on the nature of clinical experiences.

Specific policies govern admission, performance standards, good standing, retention and licensure.

Generic Students

"Generic" is a term used by accrediting agencies and the Pennsylvania State Board of Nursing to designate students who are currently not registered nurses. Four types of candidates fall into the generic category: freshman candidates, external transfer candidates, internal transfer candidates and second degree candidates.

Advanced Placement

The faculty in the department of nursing have approved four mechanisms to petition for advanced placement or credit by examination, as outlined in an articulation model available from the Department of Nursing:

1. College Level Equivalency Examination Program (CLEP). All students are eligible to pursue CLEP testing for Bloomsburg University credit. CLEP enables Bloomsburg University to grant course credit for scores earned on written examinations provided by the College Entrance Examination Board. Information is available from the Coordinator of Testing.

2. Credit by Examination (faculty prepared examinations). Once students have been admitted to the university they may earn credit in selected science, general education or nursing courses by petitioning for the privilege of establishing credit through a comprehensive exam instead of through registration and class attendance. Eligibility to petition is based upon student presentation or evidence of adequate experience with the course content through experience other than college attendance or through independent study of the course content. Students wishing to petition for credit in departments other than nursing must

contact the chairperson of the respective department. Study guides are available from course faculty(nursing, biological and allied health science, etc.) to facilitate review for these examinations.

3. Articulation model and/or NLN Mobility Profile II: 36 semester hours of advanced placement may be earned by R.N. students through the department's articulation model or NLN Mobility Profile II tests.

4. Transfer course credits. Please refer to the transfer policies in the Admissions section. A student applying to transfer courses must fulfill the provisions of residence requirements and graduation requirements.

Required Courses

A total of 61 semester hours is required for a major in nursing. In addition to the major, all students must satisfy 53 semester hours of general education requirements; a bachelor's degree at Bloomsburg requires a total of 128 semester hours of study. A number of the prescribed courses in the physical sciences and social sciences, required as prerequisites for the nursing curriculum, may also apply toward general education requirements.

Requirements for the Major - Generic Students

Prerequisite courses
48.101 General Psychology
48.210 Life-Span Psychology
50.173 Anatomy and Physiology I
50.174 Anatomy and Physiology II
50.240 Introductory Microbiology
52.101 Introductory Chemistry
52.108 Physiological Chemistry
Choose one of the following three courses:
45.211 Principles of Sociology
45.213 Contemporary Social Problems
46.200 Principles of Cultural Anthropology
Professional Courses
82.210 Professional Nursing
82.211 Nutrition
82.212 Pharmacology
82.213 Foundations of Nursing Practice
82.214 Health Assessment
82.215 Pathophysiology for Nursing Practice
82.306 Introduction to Nursing Research (a statistics course, either 48.160 Statistics or 53.141 Introduction to Statistics is prerequisite)
82.310 Family Nursing
82.311 Adult Health I
82.312 Maternal and Child Health Nursing
82.410 Community Health Nursing
82.411 Psychiatric/Mental Health Nursing
82.412 Adult Health II
82.414 Nursing Management/Leadership
Elective Courses - Additional courses must be taken as necessary to complete the minimum graduation requirement of 128 semester hours.

Requirements for the Major - R.N. Students

Prerequisite courses:
48.101 General Psychology
48.210 Life-Span Psychology
50.173 Anatomy and Physiology I
50.174 Anatomy and Physiology II
50.240 Introductory Microbiology
52.101 Introductory Chemistry
52.108 Physiological Chemistry
Choose one of the following three courses:
45.211 Principles of Sociology
45.213 Contemporary Social Problems
46.200 Principles of Cultural Anthropology
Professional Courses:
82.214 Health Assessment
82.215 Pathophysiology for Nursing Practice
82.305 Role Development for the Nurse Generalist (RN)
82.306 Introduction to Nursing Research (a statistics course, either 48.160 Statistics or 53.141 Introduction to Satistics is prerequisite)
82.310 Family Nursing
82.410 Community Health Nursing
82.414 Nursing Management/Leadership in Nursing
Elective Courses - Additional courses must be taken as necessary to complete the minimum graduation requirement of 128 semester hours.

Faculty Profiles

M. Christine Alichnie, R.N., chairperson, professor, Nursing - B.S.N., University of Pittsburgh; M.S.Ed., Wilkes College; M.S.N., Ph.D., University of Pennsylvania; E-mail - cmalic@bloomu.edu

Jean E. Berry, R.N., assistant professor, Nursing - B.S.N., Georgetown University; M.S.N., University of Pennsylvania; E-mail - jberry@bloomu.edu

Robert L. Campbell, R.N., associate professor, Nursing - Diploma, Robert Packer Hospital School of Nursing; B.S.N., University of Pittsburgh; M.N., University of Washington; E-mail - rcampbel@bloomu.edu

Mary Ann Cegielsky, R.N., assistant professor, Nursing - Diploma, Ashland State Hospital School of Nursing; B.S.N., The Pennsylvania State University; M.S.N., Villanova University; E-mail - macegi@bloomu.edu

Noreen Chikotas, R.N., C.R.N.P., assistant professor - Diploma, Pottsville Hospital School of Nursing; B.S.N., Immaculata College; M.S.N.- F.N.P., Widener University; E-mail - nchikota@bloomu.edu

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Cathy E. Livengood, R.N., C.R.N.P., assistant professor - B.S., Alderson-Broaddus College; M.S.N., West Virginia University, C.R.N.P. in Women's Health, University of Pennsylvania/ PPFA; E-mail - cliven@bloomu.edu

Fredda Massari-Novak, R.N., assistant professor - Diploma, Reading Hospital; B.S.N., Catholic University of America; M.S.N., Allentown College of St. Francis de Sales; E-mail - fmassari@bloomu.edu

Joan Miller, R.N., C.R.N.P., assistant professor - Diploma, Ashland State Hospital School of Nursing; B.S.N., M.S.N., Bloomsburg University of Pennsylvania, C.R.N.P., The Pennsylvania State University; E-mail - jmiller@bloomu.edu

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Nancy A. Onuschak, R.N., professor - Diploma, Wyoming Valley Hospital School of Nursing; B.S., M.S.Ed., Wilkes College; M.N., The Pennsylvania State University; D.Ed., Temple University; E-mail - nonuscha@bloomu.edu

Lynn M. Painter, R.N., assistant professor - B.S.N., Bloomsburg University; M.S.N., College Misericordia; E-mail - lpainter@bloomu.edu

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Gloria J. Schechterly, R.N., assistant professor - Diploma, Geisinger Medical Center School of Nursing; B.S.N., Wilkes College; M.S., The Pennsylvania State University; Ph.D., The Pennsylvania State University; E-mail - gschect@bloomu.edu

Bryan E. Snook, R. Pharm., assistant professor - Pharm.D., Philadelphia College of Pharmacy and Science

Dorette E. Welk, R.N., professor - B.S.N., D'Youville College; M.S.N., University of Pennsylvania; Ph.D., The Pennsylvania State University; E-mail - dwelk@bloomu.edu

Supplemental Information

University policy "Department of Nursing Academic Good Standing": http://www.bloomu.edu/policy/3540.shtml

University policy "Credit by Examination for RN's": http://www.bloomu.edu/policy/3451.shtml

Departmental policies: http://www.bloomu.edu/academic/programs/nurspol.shtml

The Department of Nursing maintains a website at http://departments.bloomu.edu/nursing/

Secondary Education

Administered by: Department of Educational Studies and Secondary Education
College: Professional Studies
Campus address: 1210 McCormick Center for Human Services
Telephone number: (570) 389-4025
Fax number: (570) 389-3894
Department chair: Robert Gates
Degree awarded: Bachelor of Science in Education
Effective Fall, 2001

About the Program

The teacher education program at Bloomsburg University is committed to improving the field of education through a comprehensive program which recognizes its unique contribution to society, both as a reflection of that society and as an agent for the improvement of society. To meet this obligation, the programs draw upon the knowledge and understanding of general as well as professional education. It strives for a blend in preparing a person to fulfill a role in society as an informed, inquiring and skilled professional.

The Department of Educational Studies and Secondary Education includes teacher education programs, educational studies, educational technology, student teacher supervision (pre-K-12) and secondary education. All programs are accredited.

Facilities are modern and up-to-date technologies are available including courses in educational computing. A state-of-the-art computer laboratory enables students to maintain familiarity with cutting-edge advances in computer technology.

Students are required to spend time observing and assisting in actual classroom settings through two field studies courses offered in the sophomore and junior years. These courses prepare students for the actual student teaching experience. Students may select an internship which provides a work-study program in an education-related setting.

The major in secondary education leads to a Bachelor of Science in Education and certification to teach grades seven through 12.

Required Courses

Some courses which satisfy the university's general education requirement are included in the course listings for the individual areas of specialization under secondary education.

Requirements for the Major Secondary Education (7-12) include a total of 35 semester hours in required core courses, plus courses specified for various specializations. Students should consult their advisor to plan a course of study. The balance of courses to satisfy the university's 128-hour requirement for a bachelor's degree, come from free electives.

60.201 Field Studies in Education I
60.204 Educational Computing and Technology or an advanced undergraduate course in educational technology
60.251 Psychological Foundations of Education or 48.251 Psychological Foundations of Education
60.291 Principles of Teaching
60.301 Field Studies in Education II
60.311 Classroom Measures and Assessment
60.393 Social Foundations of Education or 60.406 Multicultural Education
60.497 Teaching in Education: First Experience
60.498 Teaching in Education: Second Experience
65.374 Teaching Reading in the Academic Subjects

Students are required to take a secondary methods course corresponding to their major from the following:

65.351 Teaching Communication in the Secondary School
65.352 Teaching Mathematics in the Secondary School
65.353 Teaching Science in the Secondary School
65.355 Teaching Social Studies in the Secondary School
65.358 Teaching Foreign Language in the Secondary School

Specialization Areas

Areas of Specialization in Secondary Education - Each area of specialization develops scholarship basic to teaching the content subject. Each area of specialization develops scholarship basic to teaching the content subject in secondary schools and course requirements and each area of specialization will meet Pennsylvania Department of Education standards for certification. Specialization areas include:

Biology

Chemistry
Communications/Media
Communication/Speech
Communication/Theater
Earth and Space Science
English
French
General Science
German
Mathematics
Physics
Spanish
Citizenship Education
Social Sciences

Faculty Profiles

Neil L. Brown, assistant professor - B.S., Kutztown State College; M.Ed., Lehigh University; Ed.D., Temple University

Robert L. Clarke, assistant professor - B.A., King's College; M.A., Seton Hall University; Ed.D., University of Pennsylvania

Henry D. Dobson, professor - B.S., Bloomsburg University; M.S., Syracuse University; Ph.D., The Pennsylvania State University

M. Hussein Fereshteh, associate professor - B.A., Teacher University of Tehran; M.P.A., University of Hartford; Ph.D., The University of Connecticut

Robert E. Gates, professor - B.S. University of Maine at Farmington; M.Ed., Ed.D., University of Louisville

Mary G. Harris, professor - B.A., Macalester College; M.A., California Lutheran College; Ed.D., University of Southern California

W. Francis Keating, assistant professor - A.B., Kings College; M.S., Ed.D., State University of New York at Albany

Raymond S. Pastore, associate professor - B.S., California University of Pennsylvania; M.S., St. Bonaventure University; Ph.D., The Pennsylvania State University

Donald L. Pratt, associate professor - B.S., Utica College of Syracuse University; M.Ed., St. Lawrence University; Ph.D., University of South Florida

Shelley C. Randall, associate professor - B.S., University of Michigan; M.A., Wayne State University; Ph.D., University of Pennsylvania

Viola C. Supon, associate professor - B.S., Bloomsburg State Teachers College; M.A., Trenton State University; Ed.D., Temple University

David E. Washburn, professor - B.A., M.Ed., Ph.D., University of Arizona; postdoctoral certification in multicultural education, University of Miami

Mary Alice Wheeler, assistant professor - B.A., University of Denver; M.S., Georgetown University; Ph.D., University of Pennsylvania

Patricia Wolf, associate professor - B.A., Morehead University; M.A., Duquesne University; Ph.D., University of Pittsburgh

Special Education

Administered by: Department of Exceptionality Programs
College: Professional Studies
Campus address: 104 Navy Hall
Telephone number: (570) 389-4119
Fax number: (570) 389-3980
TDD number: (570) 389-4119
Program coordinator: Sheila Dove Jones
Department chair: Carroll J. Redfern
Degree awarded: Bachelor of Science in Education
Effective Fall, 2001

About the Program

The program in special education leads to certification for teachers to teach individuals with cognitive, behavior, physical/health disabilities (CBP/HD) in grades N-12. Students may also acquire a concentration in education of the deaf/hard of hearing.

Students enrolled in special education have the opportunity to student teach in the following settings: public schools, intermediate units, approved private schools, preschools, state centers, adjudicated environments and hospitals. Special education student teaching assignments are located within an approximate 50-mile radius of Bloomsburg.

All students are assigned to an adviser and receive close guidance in university classrooms and field experiences. The department prides itself on accessibility of faculty to students.

Factors suggesting the potential for success at Bloomsburg include acceptance of individuals and the ability to work with acquired skills, the ability to deal with diversity and differences, strong task commitment, affectiveness and the ability to deal with individual needs.

Bloomsburg's faculty, among the largest in Pennsylvania, displays a broad spectrum of specializations that provide students with a thorough and diverse learning environment. Faculty specializations include technology, early intervention, mild disabilities, the moderate/sever disabilities, behavioral disorders, assessment, transition, language and methodology.

Most recent placement statistics average between 98 and 100 percent.

Required Courses

General Education Requirements - The university requires 53 hours of general education requirements, some of which are specifically required for this major. Core courses designated by the department as applicable to the general education requirements may be elected in partial fulfillment of that requirement. The following general education courses are required for teaching individuals with cognitive, behavior, physical/health disabilities (CBP/HD):

20.101 Composition I and 20.201 Composition II (or any of the writing intensive literature courses) Those testing out of 20.101 or 20.201 will schedule 20.104 Honors Composition and are required to take only six of the nine hours required under Communication
25.103 Public Speaking or 25.104 Interpersonal Communication
48.101 General Psychology
48.210 Life-Span Psychology
50.101 General Biology I
05.321 First Aid and Safety
53.141 Introduction to Statistics or 48.160 Basic Statistics
To meet state certification requirements, special education majors must have six credits of mathematics, composition and any literature course.

Requirements for the Major - A total of 75 semester hours is required for a major in special education including professional education courses, those required for special education and electives.

Professional Education courses include:

60.251 Psychological Foundations in Education or 48.251 Psychological Foundations in Education
60.393 Social Foundations of Education or 60.406 Multicultural Education
62.302 Teaching of Science in the Elementary School or 62.390 Teaching Social Studies in the Elementary School
62.371 Teaching Reading in the Elementary School
62.398 Teaching Mathematics in the Elementary School
Choose one of the following four courses:
62.373 Diagnostic and Inclusive Practices

74.305 Introduction to Instructional Methods for the Deaf/Hard of Hearing (reserved for Deaf/ Hard of Hearing area of concentration only).
60.375 Teaching the Reluctant Reader
65.374 Teaching Reading in Academic Subjects

Special Education Courses include:
70.101 Introduction to Exceptional Individual
70.202 Technology for Exceptionalities
70.206 Introduction to Early Intervention
70.240 Foundations in Special Education
70.250 Behavior Disorders
70.340 Educating Individuals with Moderate/Severe Disabilities
70.353 Assessment and Planning
70.357 Vocational Programming
70.401 Student Teaching With Exceptional Individuals
70.433 Language Arts for Students with Special Needs
70.450 Methods for Elementary Special Education
70.451 Methods for Secondary Special Education
70.461 Problems in Special Education

Elective Courses - A total of 12 semester hours may be taken as electives for this major. These courses include:
70.255 Experience with Exceptional Individuals
70.375 Individual Project
72.152 Introduction to Communication Disorders
74.153 Introduction to Sign Language

Students may opt to take any four hours of electives to complete the 128-semester hour requirement for a bachelor's degree.

A Typical Plan of Study

Students entering the university who have declared special education as their major are advised by faculty in the Department of Exceptionality Programs. They begin taking courses in the major in the first semester of the freshman year and generally enroll in at least one or more special education courses every semester thereafter.

Adjustments are made in the above sequence of courses which reflect the needs of students who desire to take less or more semester hours of work than the average student. Transfers (internal and external), readmitted students, adult learners and part-time students make it necessary to provide adjustments in scheduling. Although most studentes complete student teaching in the last semester, students who have the necessary requirements may complete their student teaching the first semester of their senior year and return to campus to complete their general education requirements for graduation. Students who enroll in summer school could possibly graduate early or reduce the number of semester hours taken during the academic year. Students seeking dual certification (Special Education/Elementary Education) often enroll in summer sessions.

Although majors should work with their advisers to determine a specific plan of study, an example showing all but general education requirements follows:

Freshman Year
Fall Semester
70.101 Introduction to Exceptional Individuals
Spring Semester
70.240 Foundations of Special Education
70.206 Introduction to Early Intervention

Sophomore Year
Fall Semester
70.250 Behavior Disorders
70.202 Technology for Exceptionalities
60.251 Psychological Foundations of Education

Junior Year
Fall Semester
70.357 Vocational Programming
70.340 Educating Individuals with Moderate/Severe Disabilities
60.393 Social Foundations of Education
62.398 Teaching of Mathematics in the Elementary School
62.302 Teaching Science in the Elementary School
Spring Semester
70.433 Language Arts for Students with Special Needs
70.450 Elementary Methods for Individuals with Mild Disabilities
62.371 Teaching Reading in the Elementary School

Senior Year
Fall Semester
70.353 Assessment and Planning
70.451 Methods for Secondary Special Education
Spring Semester
70.401 Student Teaching With Exceptional Individuals
70.461 Problems in Special Education

Area of Concentration in Education of the Deaf/Hard of Hearing

Special education students may choose to take an area of concentration in education of the deaf/hard of hearing. The undergraduate curriculum in education of the deaf/hard of hearing lays the foundation for the training and education needed to prepare classroom teachers and itinerant hearing therapists to work in educational settings with deaf/hard of hearing children and adults. Students supplement the curriculum for their majors with an area of concentration in education of the deaf/hard of hearing that requires a minimum of 24 semester hours.

Certification to teach deaf/hard of hearing students in school programs is granted by the Pennsylvania

Department of Education upon completion of a related graduate program.

All applicants to the graduate program in Education of the Deaf/Hard of Hearing must have completed the courses listed below. Students without an education background will need to take five education courses agreed upon by the curriculum coordinator in education of the deaf/hard of hearing.

Required Courses

The following is a suggested time sequence for courses required in the area of concentration of the deaf/hard of hearing.

Freshman Year

70.101 Introduction to Exceptional Individuals
74.201 History, Education and Guidance of the Deaf/Hard of Hearing
74.153 Introduction to Sign Language

Sophomore Year

72.200 Introduction to Audiology
75.154 American Sign Language I

Junior Year

A statistics course
74.305 Introduction to Instructional Methods for the Deaf/Hard of Hearing
75.155 American Sign Language II

Senior Year

72.450 Clinical Observation

Dual Certification: Elementary Education and Special Education

A dual certification in Elementary Education and Special Education leads to elementary education certification to teach kindergarten through sixth grade (K-6) and special education certification to teach individuals with cognitive, behavior, physical/health disabilities in grades N-12.

The number of students accepted into the dual certification program is limited. Students may not declare a dual certification as an entering freshman, but must apply for admission after meeting minimum requirements. To apply, students must have 15 to 54 credits, a Bloomsburg University GPA of 2.6 or higher (2.8 in Fall 2002 and 3.0 thereafter) and a completed admission packet from elementary or special education. An interdepartmental admissions committee reviews applications and selects the most qualified applicants. Admission into the dual certification program is completed twice during the academic year (October and March). Students accepted into the dual certification program are advised by faculty in the Special Education Program. Student teaching is supervised by faculty in the Special Education program.

This program requires 130 credits for graduation with eligibility for dual certification.

Required Courses

General Education Requirements - The university requires 53 hours of general education requirements, some of which are specifically required for this major. Core courses designated by the department as applicable to the general education requirements may be elected in partial fulfillment of that requirement. The following general education courses are required:

20.101 Composition I and 20.201 Composition II (or any of the writing intensive literature courses) Those testing out of 20.101 and 20.201 will schedule 20.104 Honors Composition and are required to take only six of the nine hours required under Communication
25.103 Public Speaking or 25.104 Interpersonal Communication
48.101 General Psychology
48.210 Life-Span Psychology
45.211 Sociology or 46.200 Anthropology
70.101 Introduction to Exceptional Individuals
53.141 Introduction to Statistics or 48.160 Basic Statistics
Any American history course
Any literature course
50.101 General Biology
54.103 Physical Science
53.201 Theory of Arithmetic
05.321 First Aid and Safety

Requirements for the Major - A total of 77 semester hours is required for dual certification in elementary education and special education

Professional Education courses include:

60.251 Psychological Foundations of Education or 48.251 Psychological Foundations of Education
60.393 Social Foundations of Education or 60.406 Multicultural Education
62.302 Teaching of Science in the Elementary School
62.390 Teaching Social Studies in the Elementary School
62.371 Teaching Reading in the Elementary School
62.398 Teaching Mathematics in the Elementary School
62.373 Diagnostic and Inclusive Practices
05.311 Methods and Materials in Elementary School Physical Education or 05.320 Health and Safety in Elementary School
60.291 Principles of Teaching
62.310 Teaching Fine Arts
70.202 Technology for Exceptional Individuals
70.206 Introduction to Early Intervention
70.240 Foundations of Special Education
70.250 Behavior Disorders
70.340 Educating Individuals with Moderate/Severe Disabilities

70.353 Assessment and Planning
70.357 Vocational Programming
70.401 Student Teaching with Exceptional Individuals
70.433 Language Arts for Students with Special Needs
70.450 Methods for Elementary Special Education
70.451 Methods for Secondary Special Education
70.461 Problems in Special Education

Faculty Profiles

Kenneth P. Hunt, professor - B.S., State University of New York, College at Buffalo; M.Ed., State University of New York at Buffalo; Ph.D., University of Pittsburgh

Sheila Dove Jones, program coordinator, professor - B.S., M.Ed., Bloomsburg University of Pennsylvania; Ed.D., University of Missouri-Columbia

Michael J. Karpinski, professor - B.S., M.Ed., Bloomsburg University of Pennsylvania; Ph.D., University of Maryland

James K. Krause, assistant professor - B.S., M.S., Bloomsburg University of Pennsylvania; Ed.D., Temple University

June I. Maddox, assistant professor - B.S., M.T., University of Central Oklahoma; Ph.D., University of Oklahoma

Darlene E. Perner, assistant professor - B.A., Knox College; M.S., M.Ed., State University of New York at Buffalo; Ed.D., University of British Columbia

Carroll J. Redfern, chairperson, professor - B.S., Johnson C. Smith University; M.Ed., Bloomsburg State College; Ed.D., Lehigh University

Cynthia N. Schloss, associate professor - B.S., Illinois State University; M.S., Ph.D., Southern Illinois University-Carbondale

Philip J. Tucker, associate professor - B.A., University of Notre Dame; M.Ed., Rhode Island College; Ed.D., University of Cincinnati

Joseph M. Youshock, professor - B.S., M.Ed., Bloomsburg University of Pennsylvania; Ed.D., Temple University

College of Science and Technology

Robert Marande, Dean

13 Benjamin Franklin Hall
389-5333

Allied Health Preparatory Programs

Administered by: Department of Biological and Allied Health Sciences
College: Science and Technology
Campus address: 105 Hartline Science Center
Telephone number: (570) 389-4319
Fax number: (570) 389-3028
Program coordinator: Judith A. Kipe-Nolt
Advisers: Lynne C. Miller, Casey Shonis, Cynthia A. Surmacz, Margaret L. Till

About the Programs

The allied health science programs are part of the Department of Biological and Allied Health Sciences at Bloomsburg University. Approximately half of the students in this department are majoring in the health career disciplines of physical therapy, occupational therapy, medical technology, medical imaging, respiratory therapy, pharmacy and cytotechnology. Medical Technology and Medical Imaging, both formal degree programs, are described elsewhere in the catalog. In some instances, Bloomsburg University confers the baccalaureate degree, as with medical technology, respiratory therapy and medical imaging; while in the others, the degree is conferred by another health agency or university away from the Bloomsburg campus. Each of the Allied Health Preparatory Programs at the university combines a strong liberal arts focus with specialization in career-oriented courses.

Bloomsburg's allied health programs are rigorous and high school students considering careers in this area should have a strong background in all the sciences as well as exceptional reading comprehension skills.

Respiratory Therapy - This new baccalaureate program, initiated in the fall of 1998, is designed for those students who possess an associate degree in respiratory therapy. It is presently pursued only by graduates of the Mansfield University Respiratory Therapy Associate Degree Program. The course requirements, leading to the B.S. degree, are similar to those for medical imagers described elsewhere.

Allied Health Preparatory Programs

Pre-Physical Therapy, Pre-Occupational Therapy, Pre-Cytotechnology and Pre-Pharmacy preparatory programs usually require two to four years to complete. After this period, transfer is made to institutions where completion of the professional (clinical) education occurs and a degree is conferred. Bloomsburg University does not offer specific degrees in these areas.

Students who select one of these preparatory programs follow a course of study that prepares them for entry into a variety of programs at different schools and for a degree in biology if they wish to remain at Bloomsburg University for four years.

Advisement. Presently four faculty members, all in the Department of Biological and Allied Health Sciences, serve as advisers for the preparatory curricula. Each is familiar with the admission requirements for allied health schools across the country.

Placement. Placement to complete the degree in an allied health program away from the campus is not guaranteed. However, the placement success at Bloomsburg has been good and the placement sites vary considerably.

The opportunity to obtain a degree in physical therapy or occupational therapy has been greatly enhanced by two affiliation agreements with major universities in the Philadelphia area: Thomas Jefferson University's College of Health Professions and Medical College of Pennsylvania-Hahneman University's School of Health Professions.

The affiliation with Thomas Jefferson University facilitates transfer to upper-division degree programs for students who have completed a minimum of two or three years preparatory education at Bloomsburg. These "2+2," "2+3" or "3+3" arrangements provide the advantage of offering a quality, reasonably priced education at a rural university combined with training in an attractive urban setting at a major medical center. Although the "2+2" arrangement is still in place for most allied health programs, the arrangement for physical therapy is "2+3" or "3+3" and culminates in a master's degree from Thomas Jefferson University.

Bloomsburg University is a participant in the PACE (Plan A College Education) program sponsored by Thomas Jefferson University's College of Health Professions. PACE is an early admission program for academically talented high school seniors wishing to matriculate to Thomas Jefferson University after attending an accredited university for at least the first two years.

It is also important to know that many physical therapy programs are entered only after the student receives a baccalaureate degree and the post-baccalaureate program leads to a master's or doctoral degree. Medical College of Pennsylvania - Hahneman University has such a program and their affiliation with Bloomsburg University virtually ensures matriculation provided undergraduate requirements are met. All of these undergraduate requirements are part of the B.S. degree in Biology at Bloomsburg University.

Colleges of pharmacy offering the bachelor's degree require five years of undergraduate education. Students who are interested in this career take two years of pre-pharmacy work at Bloomsburg and then transfer to a college of pharmacy for three additional years of professional training. Some recent programs have added a fourth year, leading to a Pharm. D. degree.

Core Curriculum. More than 70 students are enrolled in the pre-physical therapy program; listed below are some of the courses found in that curriculum. The curricula for the other preparatory programs are similar to pre-P.T. but do vary; hence, students are encouraged to design a program that fits the requirements of the school to which they wish to transfer. Like pre-P.T., the courses in pre-occupational therapy, pre-cytotechnology and pre-pharmacy are drawn primarily from the physical, biological and behavioral sciences.

Professional Courses

The following courses are required:

20.101 Composition I
20.201 Composition II
45.211 Principles of Sociology (not required for physical therapy)
48.101 General Psychology
50.115 Concepts in Biology
50.173 Anatomy and Physiology I
50.174 Anatomy and Physiology II
46.200 Principles of Cultural Anthropology or 45.215 Racial and National Minority Groups (not required for physical therapy)

Select one of the following three courses:

48.210 Life Span Psychology
48.211 Child Psychology
48.335 Abnormal Psychology (required for occupational therapy only)

Select one of the following three courses:

53.112 Trigonometry
53.123 Essentials of Calculus
53.125 Analysis 1
48.160 Basic Statistics or 53.141 Introductory Statistics

Chemistry and physics courses are required for the physical therapy program at Thomas Jefferson University. These include:

52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
54.111 Introductory Physics I
54.112 Introductory Physics II

Students must select additional elective courses to complete 55 semester hours in occupational therapy or 65 semester hours in physical therapy.

Allied Health Affiliating Agencies

Abington Memorial Hospital, Abington
Geisinger Medical Center, Danville
The Johns Hopkins Hospital, Baltimore, Md.
Reading Hospital and Medical Center, Reading
Guthrie Medical Center, Robert Packer Hospital, Sayre
Allegheny University Hospitals, Elkins Park, Md.
Sacred Heart Hospital, Allentown
Scranton Medical Technology Consortium, Scranton
Divine Providence Hospital, Williamsport
Lancaster General Hospital, Lancaster
Thomas Jefferson University, College of Health Professions, Philadelphia
York Hospital, York
Medical College of Pennsylvania - Hahneman University
Mansfield University of Pennsylvania

Supplemental Information

The Department of Biological and Allied Health Sciences maintains a website at : http://departments.bloomu.edu/biology/

Biology

Administered by: Department of Biological and Allied Health Sciences
College: Science and Technology

Campus address: 125 Hartline Science Center
Telephone number: (570) 389-4400
Fax number: (570) 389-3028
Department chair: Louis Mingrone
Degrees Awarded: Bachelor of Science, Bachelor of Arts
Effective Fall, 2001

About the Programs

The study of living systems prepares students for an exciting variety of professions. Bloomsburg University graduates who major in the biological and allied health sciences find employment in a wide spectrum of careers or continue with their studies in professional school or graduate school. Many enter the work force as allied health professionals, as laboratory or field technicians or as teachers. They work in private industry, research centers, health care facilities and government agencies.

The Department of Biological and Allied Health Sciences offers a small school's personal attention while providing a large school's opportunities. Since upper-level class size averages between 12 and 15 students, there is ample opportunity for individualized interaction between faculty and students and for hands-on experience. Opportunities for independent studies and internships are also available.

Each of the 18 full-time and one part-time faculty holds a Ph.D. The areas of faculty specialization include animal behavior, animal physiology, botany, cell biology, development, ecology, environmental microbiology, exercise, physiology, genetics, herpetology, human genetics, immunology, marine biology, medical microbiology, molecular biology, mycology, parasitology, plant pathology, plant physiology and plant systematics. The collective experiences and training of the faculty afford each student the opportunity to develop under a highly competent tutelage.

A variety of equipment and facilities supports the teaching and research activities of the department. These include an animal room, an aquatics room, cell biology laboratory, computer resource center, darkroom, fungal culture collection, genetics laboratory, greenhouse, growth chambers, herbarium, microbiology laboratories, parasitology laboratories and radiation laboratory. The university is also a member of the Marine Science Consortium, maintaining a research laboratory at theMarine Science Center at Wallops Island, Virginia.

Bachelor of Science, Bachelor of Arts - Students may elect to earn either a bachelor of arts (B.A.) or a bachelor of science (B.S.) in biology. Both programs offer options in microbiology and marine biology. The B.S. program provides a rigorous background in biology (39 credit hours), chemistry (20 credit hours), physics (8 credit hours) and mathematics (6 credit hours). The program meets the needs of students who plan to enter graduate or professional school in the natural sciences and of those seeking employment in the private sector and government agencies.

The B.A. program allows more freedom in choosing courses, especially in a minor or second academic major. The program requires courses in biology (39 credit hours), chemistry (16 credit hours) and mathematics (6 credit hours). B.A. graduates have entered fields such as outdoor education and biological illustration.

Students pursuing either a B.S. or a B.A. may elect an option in microbiology or marine biology. The core requirements are the same as for the general B.S. and B.A. programs, but appropriate additional course work is also required. The microbiology option is also open to medical technology majors. The marine biology option requires that at least four summer courses be taken at the Marine Science Center in Virginia.

B.S. in Education - Students considering a career as a biology teacher on the secondary school level can earn teaching credentials at Bloomsburg. Through the College of Professional Studies' School of Education, the university offers a bachelor of science in education (B.S.Ed.) with a concentration biology. Biology is also an optional area of specialization for students majoring in elementary education.

Research and Internship - In addition to course work, students have opportunities to learn biology in a hands-on setting outside of the classroom. This can be done through an independent study project or internship.

The faculty maintains active research programs in which students are involved at both the undergraduate and graduate levels. Students pursue biological

research under the direction of a faculty member, earning biology elective credit (3 credit hours).

Internship experiences allow students to earn university credits while working as a biologist. Experiences have included assignment with the National Park Service; the Smithsonian Institution; the Pennsylvania Department of Agriculture and the Fish and Wildlife Commission; Children's Museum; Macneil Pharmaceutical Company; Elmwood Park Zoo; Geisinger Medical Center; Pennsylvania Power and Light; and many other private and government agencies.

Pre-Professional Study

Students who intend to enter a professional field such as osteopathic, allopathic or veterinary medicine; optometry; podiatry; or dentistry can choose a major such as biology, chemistry or physics. As a rule, professional schools do not specify an undergraduate major, but do specify minimum essential requirements, including courses in general chemistry organic chemistry, mathematics, biology and physics.

High standards of undergraduate scholarship are demanded for consideration. You should contact either co-chair of the Pre-Professional Advisory Committee for advisement if you are considering this career choice. The placement of Bloomsburg University graduates in professional schools, especially those in medicine and dentistry, has been noteworthy. More than 85 percent of the students recommended by the Pre-Professional Advisory Committee have gained acceptance to professional schools. Some former students lead their classes in academic standing at these schools. The classroom and laboratory preparation the students received and the close faculty supervision offered to them during their undergraduate years at Bloomsburg University are believed to be major factors for success.

A number of required courses are taught in the Department of Biological and Allied Health Sciences. Students interested in pursuing a medical career must follow a degree program that includes science courses required for entrance into medical school. A strong program of liberal arts courses is highly recommended by American medical schools.

The Pre-Professional Advisory Committee bases recommendations on the student's academic record, resume, performance on required standardized tests and faculty evaluations. By the time a student in the program attains junior standing, chance of acceptance to a professional school is excellent. The Pre-Professional Committee is composed of five professors from the Department of Biological and Allied Health Sciences and the Department of Chemistry. In addition to providing advisement, the committee is responsible for evaluating credentials of students who seek the committee's recommendation. Three levels of recommendation are offered by the committee: strongly recommended, recommended and recommended with reservations. The latter endorsement indicates that a student falls short of one or more of the measured criteria. The majority of students recommended by the Pre-Professional Committee are either strongly recommended or recommended. Students not seeking the committee's evaluation can receive a realistic assessment of their credentials and letters of recommendation from faculty. However, this route for seeking acceptance is not the most desirable.

Each student is assigned a major advisor, who is a faculty member with special insight into the professional field selected by the student and the requirements necessary for acceptance by professional schools. In addition, any member of the Pre-Professional Advisory Committee can offer guidance to the students.

Many students opt to attend professional schools in Pennsylvania, for example: Penn State Hershey, University of Pennsylvania, Thomas Jefferson University, University of Pittsburgh, Temple University, Allegheny University, Philadelphia College of Osteopathic Medicine, Lake Erie College of Osteopathic Medicine and the Pennsylvania College of Optometry. However, many Bloomsburg Alumni have attended other professional schools such as Georgetown University School of Medicine, Kansas City College, Fairleigh Dickinson, West Virginia University and the University of LTIM in Germany.

Pre-professional students enrolled in the Department of Biological and Allied Health Sciences pursue the Bachelor of Science degree in biology. Required courses are taken in biology, chemistry, physics and mathematics. Many other useful biology elective courses are also available. Highly recommended biology electives for premedical preparation include the following courses: Comparative Vertebrate Anatomy, Embryology, Vertebrate Histology, Immunology, Medical Parasitology and Writing in Biology. Pre-professional students are strongly encouraged to become computer-literate. Fluency in a foreign language can also be useful.

A carefully-chosen internship or independent research project can be of value in preparation for professional school. Students must also perform volunteer or observational activities at a hospital or an office of an appropriate health professional.

The general education requirements can be fulfilled by taking courses in the humanities and social sciences. Humanities courses are offered in the departments of Art, English, Language and Cultures, Music, Philosophy, Speech and History. Social science courses are offered in the departments of Anthropology, Economics, Geography, Political Science, Psychology and Sociology.

The curriculum at Bloomsburg University challenges one to learn more about the world so that he or she can help change it for the better by responsible citizenship and generous, professional service.

Required Courses

Biology majors may substitute 50.290 Writing in Biology for the second English writing course (20.200 or 20.201). In addition to general education requirements, additional free elective hours are required to meet the university requirement of 128 hours for a baccalaureate degree.

Required Courses for Bachelor of Science in Biology - In this degree program, students may choose an option in microbiology or marine biology.

50.114 Concepts in Biology I
50.115 Concepts in Biology II
50.242 Biology of Microorganisms
50.271 Cell Biology
50.332 Genetics
50.351 General Ecology
50.380 Biology Seminar
50.479 Integrated Physiology Laboratory
52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.231 Organic Chemistry I
52.232 Organic Chemistry II
52.341 Biochemistry

Choose one of the following physiology lecture courses:

50.472 Animal Cell Physiology
50.474 Vertebrate Systems Physiology
50.477 Plant Physiology
50.478 Microbial Physiology
And additional biology courses for a minimum of 39 semester hours.

Choose one of the following two combinations:

54.111 Introductory Physics I and
54.112 Introductory Physics II
OR
54.211 General Physics I and
54.212 General Physics II

Choose one from the following three sets of options:

53.141 Introduction to Statistics or
48.160 Basic Statistics and
53.123 Essentials of Calculus
OR
53.141 Introduction to Statistics or
48.160 Basic Statistics and
53.125 Analysis I
OR
53.125 Analysis I and
53.125 Analysis II

Languages and Cultures: at least one of any of the following courses: 10.102 French II, 10.203 French III, 10.204 French IV, 11.102 German II, 11.203 German III, 11.204 German IV, 12.102 Spanish II, 12.203 Spanish III, 12.204 Spanish IV, 13.102 Russian II, 13.203 Russian III, 13.204 Russian IV; 14.102 Italian II or 16.106 Chinese II.

Required Courses for Bachelor of Arts in Biology - In this degree program, students may choose an option in microbiology or marine biology.

50.114 Concepts in Biology I
50.115 Concepts in Biology II
50.242 Biology of Microorganisms
50.271 Cell Biology
50.332 Genetics
50.351 General Ecology
50.380 Biology Seminar
50.479 Integrated Physiology Laboratory

Choose one of the following physiology lecture courses:

50.472 Animal Cell Physiology
50.474 Vertebrate Systems Physiology
50.477 Plant Physiology
50.478 Microbial Physiology
And additional biology courses for a minimum of 39 semester hours.
52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.230 Fundamentals of Organic Chemistry
52.341 Biochemistry

Mathematics (6 hours)

Choose one from the following three sets of options:

56.110 Introduction to Computer Science and 53.141 Introduction to Statistics (or 48.160 Basic Statistics)

OR

56.110 Introduction to Computer Science and 53.125 Analysis I (or 53.123 Essentials of Calculus)

OR

53.141 Introduction to Statistics (or 48.160 Basic Statistics) and 53.125 Analysis I (or 53.123 Essentials of Calculus)

Languages and Cultures: at least one semester of any of the following courses: 10.102 French II, 10.203 French III, 10.204 French IV, 11.102 German II, 11.203 German III, 11.204 German IV, 12.102 Spanish II, 12.203 Spanish III, 12.204 Spanish IV, 13.102 Russian II, 13.203 Russian III, 13.204 Russian IV; 14.102 Italian II or 16.106 Chinese II.

Microbiology Option - The option provides a biology major the opportunity to specialize in microbiology while obtaining a general background in biology. The option is also open to medical technology majors; see the section on Medical Technology. The requirements for this option are the same for the Bachelor of Science program as they are for the Bachelor of Arts program.

50.114 Concepts in Biology I

50.115 Concepts in Biology II
50.242 Biology of Microorganisms
50.271 Cell Biology
50.332 Genetics
50.342 Medical Bacteriology
50.343 Immunology
50.351 General Ecology
50.380 Biology Seminar
50.479 Integrated Physiology Laboratory

Select one of the following physiology lecture courses (50.478 Microbial Physiology is recommended):

50.472 Animal Cell Physiology
50.474 Vertebrate Systems Physiology
50.477 Plant Physiology
50.478 Microbial Physiology

Electives (9 semester hours) Choose from:

50.333 Molecular Biology
50.350 Plant Pathology
50.432 Microbial Genetics
50.442 Virology of Mammals
50.450 Mycology
50.455 Environmental Microbiology
50.470 Medical Parasitology

Marine Biology Option - This option provides the biology major with the opportunity to specialize in marine biology while obtaining a foundation in the fundamental principles of biological science. Program specific courses in marine biology are offered at the Marine Science Center, Wallops Island, Va., a field station supported by the department.

Biology:

50.114 Concepts in Biology I
50.115 Concepts in Biology II
50.211 Invertebrate Zoology or 55.221 Marine Invertebrates
50.242 Biology of Microorganisms
50.271 Cell Biology
50.332 Genetics
50.351 Ecology or 55.260 Marine Ecology
50.380 Biology Seminar

Choose one of the following physiology lecture courses:

50.472 Animal Cell Physiology
50.474 Vertebrate Systems Physiology
50.477 Plant Physiology
50.478 Microbial Physiology

Marine Biology:

55.241 Marine Biology

Electives (6 semester hours):

55.250 Wetland Ecology
55.298 Physiology of Marine Invertebrates
55.300 Behavior of Marine Organisms
55.320 Marine Microbiology
55.330 Tropical Invertebrates
55.342 Marine Botany
55.343 Marine Ichthyology
55.345 Marine Ornithology
55.394 Comparative Physiology of Marine Organisms
55.431 Ecology of Marine Plankton
55.432 Marine Evolutionary Ecology
55.441 Biology of Molluscs
55.464 Biological Oceanography
55.470 Research Diver Methods
55.490 Marine Aquaculture
55.491 Coral Reef Ecology
55.492 Marine Mammals
55.493 Behavioral Ecology

Minor in Biology

The minor in biology consists of 22 semester hours. Required courses are:

50.114 Concepts in Biology I
50.115 Concepts in Biology II
50.242 Biology of Microorganisms
50.271 Cell Biology

and at least two courses (6 semester hours) at the 300-level or above that are chosen from departmental offerings acceptable to the major. These may not include: 50.380, 50.390, 50.490, 50.493 and 50.494.

Internship/Independent Study — The department provides opportunities for students to engage in internships and independent study. Only 6 semester hours can be applied as biology electives from the following courses, with no more than 3 semester hours applied as internship (50.490):

50.390 Independent Study in Biology I
50.490 Internship in Biology
50.493 Honors Independent Study I - Biological Research
50.494 Honors Independent Study II - Biological Research

Faculty Profiles

Joseph P. Ardizzi, associate professor - B.S., St. Joseph's University; Ph.D., Cornell University

George P. Chamuris, professor - A.A.S., Dutchess Community College; B.S., State University of New York at Albany; M.S., James Madison University; Ph.D., State University of New York, College of Environmental Science and Forestry at Syracuse

George T. Davis, assistant professor - B.A., M.S., Southern Illinois University; Ph.D., University of Illinois

Judith P. Downing, professor - B.S., Bowling Green State University; M.A., Ph.D., State University of New York at Buffalo

Carl A. Hansen, assistant professor - B. A., University of Vermont; M.A., University of Maine at Orono; Ph.D., Milton S. Hershey Medical Center, The Pennsylvania State University

Frederick C. Hill, professor - B.S., M.S., Illinois State University; Ph.D., University of Louisville

Thomas S. Klinger, professor - A.A., Bradford College; B.A., Macalester College; M.A., Ph.D., University of South Florida

Judith Kipe-Nolt, associate professor - B.A., Messiah College; M.S., Ph.D., The Pennsylvania State University

Mark S. Melnychuk, professor - B.S., Moravian College; Ph.D., Kent State University

Lynne C. Miller, professor - B.S., College of Pharmacy, University of Rhode Island; M.S., University of Texas; Ph.D., New Mexico State University

Louis V. Mingrone, chairperson, professor - B.S., Slippery Rock State College; M.S., Ohio University; Ph.D., Washington State University

James E. Parsons, professor - B.S., M.S., Ph.D., The Ohio State University

Casey A. Shonis, associate professor - B.A., Slippery Rock University; M.S., Ph.D., University of Illinois at Champaign-Urbana

Cynthia A. Surmacz, professor - B.S., The Pennsylvania State University; Ph.D., Milton S. Hershey Medical Center, The Pennsylvania State University

Margaret L. Till, professor - B.S., M.S., Ph.D., Auburn University

Gary T. Wassmer, assistant professor - B.S. State University of New York at Binghamton; Ph.D., Univesity of Delaware

Kevin Williams, assistant professor - B.S., Northwestern Oklahoma State University; M.S., Fort Hays State University; Ph.D., Syracuse University

Marianna D. Wood, assistant professor - B.S., Northland College; Ph.D., University of Kansas

Supplemental Information

The Department of Biological and Allied Health Sciences maintains a website at http://departments.bloomu.edu/biology/

Chemistry, Clinical Chemistry

Administered by: Department of Chemistry
College: Science and Technology
Campus address: 230 Hartline Science Center
Telephone number: (570) 389-4895
Fax number: (570) 389-3028
Department chair, e-mail: Lawrence Mack, lmack@bloomu.edu
Degrees awarded: Bachelor of Science, Bachelor of Arts
Effective Fall, 2001

About the Programs

A knowledge of chemistry is central to research in all areas of scientific knowledge. Chemists are considered to be among the most versatile of all scientists and, therefore, are very employable. The program at Bloomsburg is recognized as offering high-quality pre-professional training for careers in research, industry, higher education, medicine and allied health professions. Because not all chemists are employed in a laboratory environment, chemistry majors may consider careers as high-school teachers, consultants, patent lawyers, librarians or editors. Your local physician, dentist, an industrial marketing manager or a computer expert may have started with a bachelor's degree in chemistry.

The strength of the chemistry programs at Bloomsburg University is in the quality of its faculty, in the flexible structure of the curriculum and in the modern facilities. The Department of Chemistry is recognized by the Committee on Professional Training of the American Chemical Society (ACS) as one that meets its nationally recognized standards for undergraduate education in chemistry. The chemistry department is housed in a newly renovated facility, with an excellent collection of computers and chemical instrumentation dedicated to undergraduate education. At Bloomsburg the student will have a Ph.D. chemist in the laboratory as the instructor, not a graduate student teaching assistant. We believe that this will result in a better educated student.

The Bachelor of Science program in chemistry is designed to give students a strong background in the sciences with several options. The degree has three tracks all with a common 5-semester core requirement. The first is the standard Bachelor of Science Degree (B.S.) . The second track is the Bachelor of Science Degree with a biochemistry option (B.S.-biochemistry) which has an additional molecular biology emphasis. The third track is the American Chemical Society (ACS) - approved degree. (B.S.-ACS)

The Bachelor of Science degree offers a strong professional preparation in chemistry. It is recommended for those students who wish to follow a pre-law curriculum or to enter business upon graduation. The standard B.S. degree allows ample time for taking additional courses in other disciplines and taking a minor in related fields of interest. The B.S. chemistry-business minor program allows students to enter the Masters of Business Administration program in the College of Business at the end of the fourth year. Such a choice of study allows a student to have the background to be eligible for admission in masters of business administration (MBA) programs after graduation.

Students interested in a pre-medical or pre-dental curriculum are encouraged to take the B.S.-biochemistry option. This curriculum features a requirement of a full year of biochemistry/molecular biology and four courses in biology.

Most students in either the B.S. or B.S.-biochemistry tracks chose to take additional courses to meet the standards for certification for undergraduate professional training by the American Chemical Society, the largest scientific society in the world. This is our B. S. - ACS degree. Students who intend to pursue advanced degrees in chemistry, biochemistry or related disciplines or who anticipate a career in the chemical industry and research are encouraged to take the B.S.-ACS program. Students in this program will culminate their studies by conducting an independent research project in collaboration with a faculty member. These individual research projects may be part of a larger research program by the faculty member and may lead to a presentation or publication with the student as a co-author. This experience is extremely valuable if the student decides to go to graduate school or industrial research. Students completing the B.S.-ACS degree program are certified by the American Chemical Society and become eligible for membership in the society immediately upon graduation

Students who wish to qualify for Honors in Chemistry must take the B.S.-ACS course of study and three semesters of undergraduate research.

The Bachelor of Science program in Clinical Chemistry is a select program in cooperation with the Geisinger Medical Center in nearby Danville, Pa. It is designed to prepare students for careers in a hospital setting or a pharmaceutical clinical laboratory. The program features a senior-year, 12-month clinical research experience in a laboratory at the Penn State/ Geisinger Medical Center.

Students who wish to pursue careers as chemistry teachers at the secondary education level should select the Bachelor of Science in Education program. (B.S .-Ed.) This curriculum is offered in cooperation with the College of Professional Studies. (See Secondary Education.)

The Bachelor of Arts (B.A.) curriculum is designed for students in such programs as pre-engineering or pre-pharmacy. These are typically a "3+2" or "3+3" schedule in which students spend three years at Bloomsburg and the remaining semesters at another campus. Students interested in chemical engineering can take part in the Cooperative Program in Engineering with The Pennsylvania State University. With the addition of three courses beyond the requirements of the B.A., a student may earn a B. A. in chemistry and a B. S. in chemical engineering after completing the program.

Many students transfer to Bloomsburg University after one or more years of college elsewhere to take advantage of the quality programs on campus. Early contact with a faculty advisor will smooth the transition into the chemistry program as well as campus life in general. All interested students who have been accepted into the university for transfer should contact the chairperson in the Department of Chemistry for further information. Students transferring into the chemistry program for the junior year should have completed four semesters of chemistry: two semesters of general chemistry, especially those courses stressing inorganic chemistry and chemical principles and two semesters of organic chemistry. All of these courses should have a laboratory component. In addition, a year of general physics and several calculus courses through multiple variables is highly recommended.

Facilities and Equipment

A major renovation of Hartline Science Center in 1991 has substantially increased the amount of laboratory space and quality of facilities for the chemistry department. The department has a number of computers in a network available in Hartline Science Center for student use, as well as computers for the chemical instrumentation.

The Chemistry Department has available for student use most of the major scientific equipment normally present in industrial and graduate research environments, including instrumentation in such areas as atomic spectroscopy, electrochemistry, FT-IR spectroscopy, UV-visible-NIR spectroscopy, gas and liquid chromatography, fluorescence spectrophotometry, mass spectrometry, ultra-centrifugation, light scattering, vacuum techniques, protein and nucleic acid electrophoresis, laser kinetic apparatus, DNA thermocycler and nuclear magnetic resonance.

Required Courses

Requirements for the Major (B.S.) - In addition to meeting general education requirements totaling 51-54 semester hours, the following courses are required:

52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.231 Organic Chemistry I
52.232 Organic Chemistry II
52.233 Organic Spectroscopy
52.321 Analytical Chemistry
52.322 Instrumental Analytical Chemistry
52.361 Physical Chemistry I
52.362 Physical Chemistry II
52.452 Advanced Inorganic Chemistry
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
54.211 General Physics I
54.212 General Physics II
Choose one of the following three courses
56.110 Introduction to Computer Science
56.121 Computer Science I
56.116 Algorithmic Processes for Computers

Students who want American Chemical Society certification (B.S.-ACS) upon graduation must complete the following additional requirements beyond requirements for the Bachelor of Science:

52.281 Introduction to Scientific Literature
52.341 Biochemistry I
52.492 Independent Study II: Introduction to Research
52.493 Independent Study III: Chemical Research
A restricted elective selected from any 300 and 400 -level course in chemistry (except Independent Study) or any approved 300 or 400-level course in mathematics or physics.

Requirements for the Major - for a B.S. with a biochemistry track: in addition to the general education requirements of the university, the following courses are required:

52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.231 Organic Chemistry I
52.232 Organic Chemistry II
52.233 Organic Spectroscopy
52.281 Introduction to Scientific Literature

52.321 Analytical Chemistry
52.341 Biochemistry I
52.442 Biochemistry II
52.361 Physical Chemistry I
54.211 General Physics I
54.212 General Physics II
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
Choose one of the following three courses:
56.110 Introduction to Computer Science
56.121 Computer Science I
56.116 Algorithmic Processes for Computers
Chemistry electives - choose two of the following five courses:
52.322 Instrumental Analytical Chemistry
52.452 Advanced Inorganic Chemistry
52.362 Physical Chemistry II
52.492 Introduction to Research
52.493 Chemical Research
Required biology courses:
50.242 Biology of Microorganisms
50.271 Cell Biology
50.332 Genetics
Choose one of the following seven courses:
50.343 Immunology
50.371 Principles of Mammalian Physiology
50.372 Plant Physiology
50.411 Radiation Biology
50.432 Microbial Genetics
50.441 Cytogenetics
50.472 Cell Physiology

Students who want American Chemical Society certification upon graduation mus complete the follwoing courses as part of the B.S.-Biochemistry Curriculum:
52.322 Instrumental Analytical Chemistry
52.362 Physical Chemistry II
52.452 Advanced Inorganic Chemistry

Required Courses for B.S. in Clinical Chemistry - In addition to 58 semester hours of general education requirements, the following are required:
52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.231 Organic Chemistry I
52.232 Organic Chemistry II
52.321 Analytical Chemistry
52.341 Biochemistry
52.361 Physical Chemistry I
50.271 Cell Biology
50.343 Immunology
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
54.211 General Physics I
54.212 General Physics II
56.110 Introduction to Computer Science
52.322 Instrumental Analytical Chemistry is strongly recommended

Requirements for the Major for a Bachelor of Arts in Chemistry - In addition to general education requirements of the university, the following courses are required:
52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.231 Organic Chemistry I
52.232 Organic Chemistry II
52.281 Introduction to Scientific Literature
52.321 Analytical Chemistry I
52.322 Instrumental Analytical Chemistry
52.361 Physical Chemistry I
52.362 Physical Chemistry II
54.211 General Physics I
54.212 General Physics II
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
Plus one of the following computer courses:
56.110 Introduction to Computer Science
56.121 Computer Science I
56.116 Algorithmic Processes

Requirements for the Minor - The minor in chemistry consists of 19 to 21 semester hours.

A minor in chemistry shall be awarded when a student obtains a 2.0 grade point average in the following prescribed courses:

Option I
52.115 Fundamentals of Organic Chemistry
52.116 Chemical Principles and Measurements
52.230 Fundamentals of Organic Chemistry
and three 3- or 4-credit 200, 300, 400 level courses within the Chemistry Department excluding independent research, 52.231 and 52.232.

Option II
52.115 Fundamentals of Organic Chemistry
52.116 Chemical Principles and Measurements
52.231 Organic Chemistry I
52.232 Organic Chemistry II
and two 3- or 4-credit 200, 300, 400 level courses within the Chemistry Department excluding independent research and 52.230.

In addition to meeting the grade point average requirement, the student will be expected to meet with his/her minor adviser before scheduling the electives.

Faculty Profiles

Wayne P. Anderson, professor - A.A.S., Jamestown Community College; B.A., Harpur College; M.S., Ph.D., University of Illinois

Michael A.G. Berg, assistant professor - B.S., Washington and Lee University; Ph.D., Virginia Polytechnic Institute and State University

Sharon Yee Fredericks, assistant professor - B.A. University of Maryland-Baltimore County, Ph.D., University of Pittsburgh

Christopher P. Hallen, associate professor - A.B., Assumption College; Ph.D., University of New Hampshire

Cindy L. Kepler - assistant professor - B.S. Shippensburg University of Pennsylvania; Ph.D., University of Southern California

Lawrence L. Mack, chairperson, professor - A.B., Middlebury College; Ph.D., Northwestern University

Roy D. Pointer, professor - B.S., University of Kansas; M.S., Ph.D., University of Michigan

Michael E. Pugh, associate professor - B.S., University of California, Davis; Ph.D., Arizona State University

Emeric Schultz, professor - B.A., University of California; Ph.D., University of Illinois

Bruce E. Wilcox, associate professor - B.S., M.S., State University of New York at Oswego; Ph.D., University of Cincinnati

Adjunct Faculty for Clinical Chemistry, PennState/ Geisinger Medical Center, Div. of Laboratory, Danville, Pa.: Conrad Schuerch, M.D., Chairperson of Laboratory Medicine; Paul Bourbeau, Ph.D., Director of Microbiology; Jay Burton Jones, Ph.D., Director of Chemistry/ Toxicology; Mildred Louise Kaiser Fleetwood, Ph.D., Director of Immunology; George Wadich, M.D., Associate Pathologist; Stephen Meschter, M.D., Associate Pathologist; Alvin Swartzentruber, B.S., Educational Coordinator, School of Medical Technology, Skip Sharetts, M.T., Supervisor of Clinical Chemistry Laboratory

Supplemental information

The Department of Chemistry maintains a website at http://departments.bloomu.edu/chem/Default.htm

Computer Science

Administered by: Department of Mathematics, Computer Science and Statistics
College: Science and Technology
Campus address: 1105 McCormick Center for Human Services
Telephone number: (570) 389-4500
Fax number: (570) 389-3599
Department chair, e-mail: James C. Pomfret, pomfret@bloomu.edu
Degree awarded: Bachelor of Science
Effective Fall, 2001

About the Program

The Computer Science program of the Department of Mathematics, Computer Science and Statistics gives students a thorough grounding in the design, production and analysis of software. Both the practical and theoretical issues involved in software and its development are emphasized. Students also obtain a basic understanding of hardware and its principles, particularly as it influences software. Mathematics is an essential tool in the curriculum. Students work in a variety of computing environments, ranging from single-user personal computers to multiple-user minicomputers and mainframes. Graduates are prepared for either further study in computer science or employment in the software industry.

Bloomsburg University graduates enjoy exceptional placement in a wide range of professional fields. Among career paths available are software development, numerical analysts, systems analysts, database administration, scientific programming, software engineering, computer engineering, instructional technology management, computer systems administration, electrical engineering, customer support services, human interface design, electronic game development, computer animation, virtual reality design, CAD-CAM development and computer science teacher.

The academic program prepares students for either immediate employment or admission to major graduate programs.

Required Courses

A total of 54 semester hours is required for a major in computer science, as well as 54 hours of general education requirements, to include:

25.103 Public Speaking
Requirements for the major:
53.125 Analysis I
53.126 Analysis II
53.185 Discrete Mathematics
56.121 Computer Science I
56.122 Computer Science II
56.221 Computer Science III
56.240 Assembly Language Programming
56.250 Programming Language Paradigms
56.330 Digital Design
56.350 Organization of Programming Languages
56.355 Analysis of Algorithms and Data Structures
56.386 Concurrent Programming and Foundations of Operating Systems
Specialized Requirements
Select five courses totaling 15 semester hours from the following 11 courses:
56.356 Windows Programming
53.361 Coding and Signal Processing
56.373 Numerical Methods in Computing
53.374 Introduction to Discrete Systems Simulation
56.471 Numerical Analysis
56.472 Matrix Computation
56.491 Special Topics in Computer Science
56.323 Artificial Intelligence
56.357 Principles of Database Design
56.450 Compiler Construction
56.375 Local Area Networks
56.497 Internship in Computer Science
At most, one of the following three courses:
53.241 Probability and Statistics
53.225 Analysis III
53.314 Linear Algebra
56.410 Computer Graphics
56.430 Computer Architecture
56.444 Parallel Processing

Requirements for the Minor - The Department of Mathematics, Computer Science and Statistics offers a minor in computer science, which requires completion of six courses in computer science and mathematics.

56.121 Computer Science I
56.122 Computer Science II
56.221 Computer Science III

Three elective courses chosen from a list of 17 specific courses offered by the department.

Faculty Profiles

William Calhoun, assistant professor - B.A., Carleton College; Ph.D., University of California at Berkeley

Kevin Ferland, assistant professor - B.S., University of New Hampshire, Ph.D. Syracuse University

Paul G. Hartung, professor - B.A., Montclair State College; M.A., University of Colorado; Ph.D., The Pennsylvania State University

E. Dennis Huthnance Jr., associate professor - B.S., M.S., Ph.D., Georgia Institute of Technology

Scott Inch, associate professor - A.A., Williamsport Area Community College; B.S., Bloomsburg University; M.S., Ph.D., Virginia Polytechnic Institute and State University

Curt Jones, associate professor - B.S., Lock Haven; M.S., University of Iowa; Ph.D., The Pennsylvania State University

Zahira S. Kahn, professor - B.A., Punjab University; M.Sc., Islamabad University; B.S., Bloomsburg University; M.A., Ph.D., Temple University

Stephen Kokoska, professor - B.A., Boston College; M.S., Ph.D., University of New Hampshire

Lisa Lister, assistant professor - B.A., University of Maine Orono; M.S., Ph.D., University of Wyoming

Paul Loomis, assistant professor - A.B., Wabash College, M.S., Ph.D., Purdue University

Lu, Youmin, associate professor - B.S., M.S., Shandong University; M.S., Shippensburg University of Pennsylvania; M.S., Ph.D., University of Pittsburgh

Elizabeth Mauch, assistant professor - B.S., Moravian College, Ph.D., Lehigh University

Robert Montante, assistant professor - B.S., Massachusetts Institute of Technology; M.S., Ph.D., Indiana University, Bloomington

Reza Noubary, professor - B.S., M.S., Tehran University, M.Sc., Ph.D., University of Manchester, England

John Polhill, assistant professor - B.S., University of Richmond, M.S., Ph.D. University of Virginia

James C. Pomfret, chairperson, professor - B.S., Bates College; M.S., New Mexico State University; Ph.D., University of Oklahoma

Medhi Razzaghi, professor - G.C.E., Lewes Technical College; B.S., Sussex University; Ph.D., University of London

John H. Riley Jr., professor - B.A., Lehigh University; M.S., Ph.D., The University of Connecticut

Yixun Shi, associate professor - B.S., Anhui Normal University at Chuzhon, China; M.S., Shanghai Teachers University, China; Ph.D., University of Iowa

Erik Wynters, associate professor - B.S., University of New Hampshire; M.S., Ph.D., Cornell University

Supplemental information

The Department of Mathematics, Computer Science and Statistics maintains a website at http://departments.bloomu.edu/MathCompSciStats/

Earth Science

Administered by: Department of Geography and Geosciences
College: Science and Technology
Campus address: 116S1 Hartline Science Center
Telephone number: (570) 389-4108
Fax number: (570) 389-3028
Department chair: Norman M. Gillmeister
Degree awarded: Bachelor of Science

About the Program

The primary goal of the faculty of the geology-earth science program is to provide students with a solid foundation in geology and/or the earth sciences. This is accomplished by balancing classroom studies, laboratory exercises and field experience with ancillary courses in chemistry, physics and mathematics. The departmental program also supports the university's aim of providing a strong liberal arts background for our students. This integration of science and liberal arts successfully prepares graduates for entry-level employment in the earth science profession or for acceptance into highly competitive graduate programs in the geological sciences. In addition to the major in Earth Science, the program also offers an option in Environmental Science

Required Courses

In addition to 54 semester hours of general education requirements, a total of 59 semester hours is required for a major in earth science. The balance of the university's 128-semester hour requirement for a bachelor's degree come from electives. Required courses are:

51.101 Physical Geology
51.102 Historical Geology
54.110 Introduction to Astronomy
51.111 Physical Geology Laboratory
51.112 Historical Geology Laboratory
51.255 Meteorology
51.259 Oceanography
51.260 Earth Materials
Choose four from the following 13 courses:
51.261 Mineralogy
51.262 Petrology
51.265 Geomorphology
51.320 Remote Sensing of the Earth
51.355 Synoptic Meteorology
51.360 Introduction to Paleontology
51.369 Structural Geology
51.370 Hydrology
51.460 Aqueous Geochemistry
51.468 Stratigraphy and Sedimentation
51.470 Groundwater Hydrology
51.475 Independent Study
51.480 Geophysics
51.493 Bibliography and Research
51.496 Internship in Earth Science
Approved courses offered by the Marine Science Center, Wallops Island, Va. (Courses in marine science are offered during the summer by the Marine Science Consortium. The consortium is a joint program sponsored by several Pennsylvania state universities. A maximum of 9 semester hours from the Marine Science Consortium may be applied toward this bachelor's degree.)
Choose one from the following two courses:
56.110 Introduction to Computer Science
92.150 Introduction to Computer and Information Science
Or a higher-level course in programming
Choose two from the following six courses:
53.113 Pre-Calculus
53.123 Essentials of Calculus
53.124 Essentials of Calculus II
53.125 Analysis I
53.126 Analysis II
53.141 Introduction to Statistics
Choose two from the following three courses:
52.115 Fundamentals of Inorganic Chemistry
52.131 Fundamentals of Organic Chemistry
52.216 Chemical Principles and Measurements (highly recommended as the second course)
Choose one of the following two combinations:
54.111 Introductory Physics I and
54.112 Introductory Physics II

Environmental Science Option

The option in Environmental Science requires a total 66 to 68 credits in addition to General Education requirements, depending on choices of electives. Required couress include:

51.100 Environmental Geology
51.101 Physical Geology
51.111 Physical Geology Lab
51.255 Meteorology
51.259 Environmental Issues and Choices
50.114 Concepts in Biology I
50.115 Concepts in Biology II
Choose at least 15 credits from the following:
51.260 Earth Materials
51.265 Geomorphology
51.320 Remote Sensing of the Earth
51.360 Paleontology
51.369 Structural Geology
51.370 Surface Hydrology
51.460 Aqueous Geochemistry
51.468 Stratification and Sedimentation
51.470 Groundwater Hydrology
51.480 Applied Geophysics
51.496 Internship in Earth Science
or up to nine credits from approved Marine Science courses
Choose two courses from the following:
51.242 Map Skills
41.258 Environmental Conservation
41.301 Water Resources Management
41.302 Land Resources Management
41.304 Environmental Valuation
41.342 Geographical Information Systems
41.462 Techiques of Geographic Measurement
Choose one of the following two courses:
50.351 General Ecology
50.451 Conservation Biology
Choose two from the following three courses:
52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
52.230 Funamentals of Organic Chemistry
54.111 Introductory Physics I
Choose a maximum of one of the following two courses:
53.112 Trigonometry
53.114 College Algebra
Choose a minimum of one course from (both may be chosen from this group):
53.113 Pre-Calculus
53.123 Essentials of Calculus
53.125 Analysis I
53.126 Analysis II
53.141 Introduction to Statistics

Faculty Profiles

Shahalam M. N. Amin, assistant professor - B.Sc., M.Sc., University of Dhakam, Bangladesh; M.Sc., University of Guelph, Ontario, Canada; Ph.D., Kent State University
John E. Bodenman, assistant professor - B.A,. Williamette University; M.S., Ph.D., Pennsylvania State University.
Duane D. Braun, professor - B.S., New York at Fredonia; M.A., Ph.D., The Johns Hopkins University
Patricia J. Beyer, B.A., Valparaiso University; M.S., University of Illinois; Ph.D., Arizona State University
Norman M. Gillmeister, professor - B.A., Harvard College; M.A., Indiana University; M.A., Ph.D., Harvard University
Sandra J. Kehoe-Forutan, associate professor - B.A., Queen's University; MCRP, The Ohio State University; Ph.D., The University of Queensland
Jerry T. Mitchell, B.S., M.A., Towson State University; Ph.D., University of South Carolina
Joseph R. Pifer, associate professor - B.S., Clarion State College; M.A., Arizona State University
Michael K. Shepard, assistant professor - B.S., Vanderbilt University; Ph.D., Washington University
Dale A. Springer, associate professor - A.B., Lafayette College; M.S., University of Rochester; Ph.D., Virginia Polytechnic Institute and State University
Lawrence Tanner, associate professor - B.A., Williams College; M.S., University of Tulsa; Ph.D., University of Massachusetts
Karen M. Trifonoff, associate professor - B.S., M.S., University of Akron, Ph.D., University of Kansas
Cynthia Venn, assistant professor - B.A., Vanderbilt University; M.S., Texas A&M University; Ph.D., University of Pittsburgh

Supplemental information

The Department of Geography and Geosciences maintains a website at http://planetx.bloomu.edu/~geog/

Electrical and Electronics Engineering Technology

Administered by: Department of Physics and Engineering Technology
College: Science and Technology
Campus address: 55 Hartline Science Center
Telephone number: (570) 389-4107
Fax number: (570) 389-3028
Department chair: P. James Moser
Program Coordinator: Biswajit Ray
Secretary: Donna Murphy
Degrees awarded: Bachelor of Science
Effective Fall, 2001

About the Program

Supported by more than a half million dollars in funding from Pennsylvania's Link-To-Learn Initiative and the State System of Higher Education, Bloomsburg's degree in electrical and electronics engineering technology will teach students to work with the very latest in high-tech equipment.

Electronics engineering technologists concentrate on applied design using current engineering practices. They typically are involved in product development, manufacturing, quality control, sales and program management. The day-to-day problem-solvers in the electronics manufacturing industry, technologists differ from technicians, who specialize in assembly, troubleshooting and repair.

As key players on the engineering team, electrical and electronics engineering technologists enjoy salaries and benefits similar to those of engineers.

To prepare students for real-world careers, the five-year program is structured so students serve two seven-month paid apprenticeships. This unique arrangement means students pay tuition for only four years.

Reflecting Bloomsburg's close relationship with the electronics industry, the curriculum has been shaped with input from industry leaders who serve on the program's advisory board. These leaders include representatives from Pennsylvania high-tech firms such as Litton Electron Devices, Primus Technologies, Optimum Controls Corporation, JPM and Advanced Electrical Concepts Inc.

Degree Requirements:

In addition to general education requirements of the university, the following courses are required:

52.115 Fundamentals of Inorganic Chemistry
53.113 Precalculus (if needed)
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
53.322 Differential Equations
54.211 General Physics I
54.212 General Physics II
54.315 Electronics
54.316 Digital Electronics
54.317 Microprocessor Electronics
56.121 Computer Science
58.101 Introduction to EEET
58.141 Circuit Analysis
58.180 Computer Aided Design and Engineering Graphics
58.231 Electric Power and Machinery
58.241 Electronic Instrumentation and Data Acquisition
58.300 Career Orientation
58.321 Manufacturing Processes
58.331 Linear Signals and Systems
58.380 Cooperative Education in Industry I
58.431 Industrial Process Control
58.441 Communications Systems
58.451 Digital Signal Processing
58.461 Radio Frequency Effects and Measurements
58.480 Cooperative Education in Industry II

Faculty Profiles

Jack G. Couch, professor - B.S., Utah State University; M.S., Vanderbilt University; Ph.D., Texas A & M University

Nathaniel R. Greene, assistant professor - B.S., Antioch College; M.A., Ph.D., Boston University

James M. Hetrick, assistant professor - B.S., University of Michigan; M.S., Ph.D., University of Illinois

Phillip R. Koran, assistant professor - B.S., Heidelberg College; M.S., Ph.D., Carnegie-Mellon University

Gunther L. Lange, assistant professor - B.S., Ph.D., The Ohio State University

P. James Moser, chairperson, professor - B.S., M.S., Ph.D., The Pennsylvania State University

Biswajit Ray, associate professor - B.E., University of Calcutta, India; M. Tech, Indian Institute of Technology, Kanpur, India; Ph.D., University of Toledo

Peter C. Stine, professor - B.A., Wesleyan University; Ph.D., The Pennsylvania State University

Supplemental information

The Department of Physics and Engineering Technology maintains a website at http://planetx.bloomu.edu/~physics/; the EEET program has a website at http://planetx.bloomu.edu/~eeet

Engineering Science 3+2

Administered by: Department of Physics and Engineering Technology
College: Science and Technology
Campus address: 57 Hartline Science Center
Telephone number: (570) 389-4148
Program coordinator: Gunther Lange
Effective Fall, 2001

About the Program

The Engineering Science 3+2 program provides the opportunity for students to pursue a rewarding and challenging career in the high-demand field of engineering without forgoing the broader scope of a Bloomsburg University educational experience. This cooperative program of study leads to two baccalaureate degrees, one in science and technology awarded by Bloomsburg University and one in an area of engineering from either The Pennsylvania State University or Wilkes University.

Candidates for these degrees spend three years at Bloomsburg University, where they study science, mathematics, pre-engineering and a broad variety of liberal arts subjects, followed by two years at Penn State or at Wilkes University, where they study engineering disciplines.

Students may pursue an engineering education in any of the following areas:

Aerospace Engineering (Penn State)
Agri/Biological Engineering (Penn State)
Chemical Engineering (Penn State)
Civil Engineering (Penn State)
Computer Engineering (Penn State)
Electrical Engineering (Wilkes or Penn State)
Engineering Management (Wilkes)
Engineering Science (Penn State)
Environmental Engineering (Wilkes or Penn State)
Industrial Engineering (Penn State)
Materials Engineering (Wilkes)
Mechanical Engineering (Wilkes or Penn State)
Material Science and Engineering (Penn State)
Mining Engineering (Penn State)
Nuclear Engineering (Penn State)
Petroleum and Natural Gas Engineering (Penn State)

All Penn State engineering disciplines listed are offered at the University Park campus. In addition, programs in electrical engineering and environmental engineering may be completed at the Penn State-Harrisburg campus.

Required Academic Performance

Students wishing to complete their studies at The Pennsylvania State University must maintain a quality point average (GPA) of 3.0 overall and a 2.75 in required core courses.

For transfer to Wilkes University, students must maintain a GPA of 2.5 overall. Transfer candidates to the environmental engineering, materials engineering and engineering management programs are required to have a 2.65 GPA in science, mathematics and pre-engineering courses, while candidates to the electrical engineering program must maintain a 2.75 average in these technical courses.

Admission Procedures

To enter the program, individuals need only apply and be accepted for admission to Bloomsburg University. However, applicants should be aware that any engineering program requires the application of strong mathematical and problem-solving skills. It is expected that the student's high school mathematics background is sufficient for enrollment in 53.125, the initial course in the required calculus sequence, during the first semester of study.

Applicants for admission who previously were registered as degree candidates and established an academic record as degree candidates at The Pennsylvania State University prior to entering this cooperative program at Bloomsburg University will be considered readmission candidates and must meet additional enrollment criteria for readmission to The Pennsylvania State University.

Students should indicate a desire to follow this program of study at the time of admission to Bloomsburg University in order to insure sufficient time to complete all of the required courses. Notification should be made to the director of academic advisement who, in turn, will notify the coordinator of

the Engineering Sciences 3+2 Program. The coordinator will assign each student an academic adviser who is a member of the Pre-Engineering Advisory Committee. Students should consult both their advisers and the coordinator for assistance in schedule planning. At the end of the second year of study, students become candidates for transfer if they have maintained a sufficiently high GPA.

Transferring to Penn State

In January of the third year of study, students should apply for transfer to The Pennsylvania State University. All correspondence and the application should clearly indicate that the transfer is requested under a cooperative 3/2 program. Jan. 31 is the application deadline. Successful applicants will be offered provisional admission to Penn State for the following fall semester.

Completed applications should be supported by the following documentation: An official transcript of the applicant's final secondary school grades;

Two official transcripts of the applicant's Bloomsburg University academic record including all grades earned;

A schedule of courses to be taken in the spring semester of the third year;

A letter of recommendation from the Pre-Engineering Advisory Committee.

At the end of the third year of study, two copies of the student's official Bloomsburg University transcript should be forwarded to the Admissions Office of The Pennsylvania State University. Students who have maintained the required quality point average, who have completed all required courses and who are recommended by the Pre-Engineering Advisory Committee, will be offered permanent admission to Penn State.

Transferring to Wilkes

At the beginning of the third year of study, students should apply for transfer to Wilkes University through the coordinator of the program at Bloomsburg University. Applications are available in the coordinator's office.

Completed applications should be supported by the following credentials: An official transcript of the applicant's final secondary school grades;

An official Bloomsburg University transcript of the applicant's grades including all grades earned during the first two years;

A schedule of all courses to be taken during the third year.

The Pre-Engineering Advisory Committee reviews these credentials and submits a recommendation to the dean of admissions of Wilkes University. Successful applicants will be offered provisional admission to Wilkes University for the following summer.

At the end of the third year, a copy of the student's official Bloomsburg University transcript should be submitted to the coordinator. Students who have maintained the required quality point average, who have completed all the required courses and who are recommended by the Pre-Engineering Advisory Committee, will be offered permanent admission to Wilkes University.

The Bloomsburg University Degree

In January of the student's final year in engineering college, the student should send an official transcript of all courses taken to the registrar at Bloomsburg University. A letter indicating intent to graduate should be sent to the coordinator of the Engineering Science 3+2 Program so that course evaluations can be made. The registrar, upon evaluation of the transcript, will arrange for a diploma to be awarded at the university's May graduation.

Required Courses

All students in this program must complete the following 49 or 50 semester hours of core courses at Bloomsburg University plus additional courses specific to their field of interest in engineering.

General Education Requirements - All candidates must satisfy the General Education requirements of Bloomsburg University and the specific requirements for the B.A. degree in either physics or mathematics. Students should consult the program coordinator each semester as they plan their schedules. With careful planning, it is possible to satisfy all of the requirements indicated during the student's three-year residence at Bloomsburg University

Requirements for the Major

54.211 General Physics I
54.212 General Physics II
54.310 Modern Atomic Physics
52.115 Fundamentals of Inorganic Chemistry
52.116 Chemical Principles and Measurements
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
53.226 Analysis IV
53.322 Differential Equations
53.314 Linear Algebra
56.116 Algorithmic Processes or 56.121 Computer Science I
54.301 Mechanics: Statics
54.302 Mechanics: Dynamics
58.180 Computer Aided Design and Engineering Graphics

For a few particular engineering degree options, additional discipline-specific courses may also be required while the student is at Bloomsburg University.

Geography

Administered by: Department of Geography and Geosciences
College: Science and Technology
Campus address: 116S1 Hartline Science Center
Telephone number: (570) 389-4108
Fax number: (570) 389-3028
Department chair: Norman M. Gillmeister
Degree awarded: Bachelor of Arts

About the Program

Designed for students with strong analytical skills interested in spatial relationships, statistics and the where and why of people-land relationships, Geography offers three options of study that provide the education necessary for a wide range of careers in government, industry and business. Computer skills are important for this fast-paced, challenging program.

In addition to the popular Urban/Regional Planning and Environmental Planning, a general geography option allows students considerable flexibility in tailoring a program of study to meet individual needs.

Urban/Regional and Environmental Planning programs culiminate in major internships that have won praise from agencies and companies working with Bloomsburg University and very frequently lead directly to career opportunities upon graduation. Geography majors are found planning the future in environmental, community, transportation and industrial areas.

The geography faculty strives to foster a spirit of learning, inquiry and curiosity among students culminating in the strengthening of their intellectual achievements. Students are provided with the necessary problem-solving skills that will contribute to their success in a rapidly changing world. These problem-solving skills are presented within the context of professional, social and ethical responsibilities. The geography program, moreover, emphasizes regional, national and global, as well as environmental, concerns.

The programs in Urban/Regional Planning and Environmental Planning are aimed at providing majors with a broad based background in the planning field that will qualify them to obtain entry-level positions in the public and private sectors or prepare them for entry into graduate programs in planning.

These programs include the incorporation of interdisciplinary courses that are vital to this broad-based preparation. In addition the academic program plays a major role in preparing the students for a required internship that provides practical experience in dealing with diverse planning activities.

Required Courses

In addition to 54 semester hours of general education requirements, a total of 30 to 60 semester hours is required for a major in geography. The balance of hours toward the 128-hour university requirement for a bachelor's degree is made up of elective courses

Option I - Emphasis on General Geography

Core Courses:
41.101 World Physical Geography
41.102 World Cultural Geography
41.221 Economic Geography
41.242 Map Skills
41.462 Techniques of Geographic Measurement
41.492 Geography Seminar
18 semester hours to be selected from electives. The elective courses are divided into areas of specialization for your information. A minimum of 9 semester hours are to be selected from 300- and 400-level courses.

Physical:
41.125 Weather and Climate
41.303 Soil Resources Management

Human:
41.250 Elements of Planning
41.310 Population Geography
41.363 Urban Geography

Regional:
41.200 Geography of the United States and Canada
41.203 Geography of Australia
41.204 Geography of South Asia
or any regional geography course that may be offered

Environmental:
41.105 Environmental Issues and Choices
41.258 Environmental Conservation
41.301 Water Resources Management

41.302 Land Resources Management
41.304 Environmental Valuation
41.315 Geography of Recreation , Tourism, Sport
41.305 Enviornmental Risks and Hazards
Techniques:
41.264 Applied Cartography
41.342 Geographic Information Systems
51.320 Remote Sensing of the Earth
Special Topic: Title changes depending on topic
Optional Elective: 41.496 Internship in Geography
Upon departmental approval a student may choose to undertake an internship of 3 to 12 semester hours of which a maxiumum of 3 semester hours may be applied to the required elective credits.

Option II - Emphasis on Urban and Regional Planning

Core Courses:
41.101 World Physical Geography
41.221 Economic Geography
41.250 Elements of Planning
41.350 Advanced Planning
41.497 Internship in Planning
41.498 Applied Planning Seminar
Electives (choose 3 from the following six courses)
41.258 Environmental Conservation
41.302 Land Resources Management
41.304 Environmental Valuation
41.315 Geography of Recreation, Tourism and Sport
41.363 Urban Geography
51.100 Environmental Geology
Skills and Tools
09.231 Technical Writing
25.103 Public Speaking
53.141 Introduction to Statistics
56.110 Introduction to Computer Science
Choose two from the following four courses:
41.242 Map Skills
41.264 Applied Cartography
41.342 Geographic Information Systems
51.320 Remote Sensing of the Earth
Cognate Areas
Economics (choose at least one from the following four courses)
40.211 Principles of Economics I
40.212 Principles of Economics II
40.316 Urban Economics
40.410 Public Finance
Political Science
44.120 United States Government
44.452 State and Local Government
Also recommended are:
44.438 Public Personnel Administration
44.452 Public Policy
Sociology (choose at least one from the following five courses)
45.211 Principles of Sociology
45.213 Contemporary Social Problems
45.316 Urban Sociology
45.457 Sociology of Community
45.468 Social Service Planning

Option III - Emphasis on Environmental Planning

Core Courses:
41.101 World Physical Geography
41.105 Environmental Issues and Choices
41.250 Elements of Planning
41.258 Environmental Conservation
41.301 Water Resources Management
41.302 Land Resources Management
41.350 Advanced Planning
41.497 Internship in Planning
41.498 Applied Planning Seminar
Electives (choose a minimum of three from the following five courses)
41.303 Soil Resources Management
41.304 Environmental Valuation
41.315 Geography of Recreation, Tourism and Sport
41.305 Environmental Risks and Hazards
51.100 Environmental Geology
51.370 Hydrology
Skills and Tools
09.231 Technical Writing
25.103 Public Speaking
44.452 State and Local Government
53.141 Introduction to Statistics
92.150 Introduction to Computer and Information Science
44.120 United States Government (strongly recommended)
Choose two from the following four courses
41.242 Map Skills
41.264 Applied Cartography
41.342 Geographic Information Systems
51.320 Remote Sensing of the Earth

Minor in Geography - The minor in geography constitutes 18 semester hours and must include the following courses:
41.105 Environmental Issues and Choices
41.250 Elements of Planning
41.258 Environmental Conservation
41.301 Water Resources Management
41.302 Land Resources Management
Choose one from the following three courses:
41.315 Geography of Recreation, Tourism and Sport
41.242 Map Skills
41.264 Applied Cartography

Faculty Profiles

Shahalam M. N. Amin, assistant professor - B.Sc., M.Sc., University of Dhaka, Bangladesh; M.Sc., University of Guelph; Ph.D., Kent State University

John E. Bodenman, associate professor - B.A,. Williamette University; M.S., Ph.D., Pennsylvania State University.

Duane D. Braun, professor - B.S., State Univesity of New York at Fredonia; M.A., Ph.D., The Johns Hopkins University

Patricia J. Beyer, assistant professor - B.A., Valparaiso University; M.S., University of Illinois; Ph.D., Arizona State University

Norman M. Gillmeister, professor - B.A., Harvard College; M.A., Indiana University; M.A., Ph.D., Harvard University

Sandra J. Kehoe-Forutan, associate professor - B.A., Queen's University; MCRP, The Ohio State University; Ph.D., The University of Queensland

Jerry T. Mitchell, assistant professor - B.S., M.A., Towson State University; Ph.D., University of South Carolina

Joseph R. Pifer, associate professor - B.S., Clarion State College; M.A., Arizona State University

Michael K. Shepard, associate professor - B.S., Vanderbilt University; Ph.D., Washington University

Dale A. Springer, professor - A.B., Lafayette College; M.S., University of Rochester; Ph.D., Virginia Polytechnic Institute and State University

Lawrence Tanner, professor - B.A., Williams College; M.S., University of Tulsa; Ph.D., University of Massachusetts

Karen M. Trifonoff, associate professor - B.S., M.S., University of Akron, Ph.D., University of Kansas

Cynthia Venn, assistant professor - B.A., Vanderbilt University; M.S., Texas A&M University; Ph.D., University of Pittsburgh

Supplemental information

The department of Geography and Geosciences maintains a website at http://planetx.bloomu.edu/~geog/

Geology

Administered by: Department of Geography and Geosciences
College: Science and Technology
Campus address: 116S1 Hartline Science Center
Telephone number: (570) 389-4108
Fax number: (570) 389-3028
Department chair: Norman M. Gillmeister
Degree awarded: Bachelor of Science
Effective Fall, 2001

About the Program

The primary goal of the faculty of the geology-earth science program is to provide students with a solid foundation in geology and/or the earth sciences. This is accomplished by balancing classroom studies, laboratory exercises and field experience with ancillary courses in chemistry, physics and mathematics. The departmental program also supports the university's aim of providing a strong liberal arts background for students. This integration of science and liberal arts successfully prepares graduates for entry-level employment in the earth science profession or for acceptance into highly competitive graduate programs in the geological sciences.

Required Courses

General Education Requirements - In addition to 54 semester hours of general education requirements, 72 semester hours is required for a major in geology. The balance of the university's 128-hour requirement for an undergraduate degree comes from elective courses. The degree program in geology requires the following courses:

51.101 Physical Geology
51.102 Historical Geology
51.111 Physical Geology Laboratory
51.112 Historical Geology Laboratory
51.261 Mineralogy
51.262 Petrology
51.360 Introduction to Paleontology
51.265 Geomorphology
51.369 Structural Geology
51.468 Stratigraphy and Sedimentation
51.470 Groundwater Hydrology
51.493 Bibliography and Research
51.460 Aqueous Chemistry
51.480 Geophysics (highly recommended)
51.451 Field Techniques in Earth Science or equivalent 4 to 6 semester hours field course
Choose one of the following two sets of courses:
53.123 Essentials of Calculus and 53.141 Introduction to Statistics
or 53.125 Analysis I and 53.126 Analysis II
Choose two of the following three courses:
52.115 Fundamentals of Inorganic Chemistry
52.131 Fundamentals of Organic Chemistry
52.216 Chemical Principles and Measurements (highly recommended as the second course)
Choose one of the following two sets of courses:
54.111 Introductory Physics I and 54.112 Introductory Physics II
or 54.211 General Physics I and 54.212 General Physics II
Note: 51.480 Geophysics may be substituted for the second semester of physics.

Requirements for the Minor - A total of 20 semester hours is required for a minor in geology. A minor program in geology requires the following:

51.101 Physical Geology
51.102 Historical Geology
51.111 Physical Geology Laboratory
51.112 Historical Geology Laboratory
12 hours selected from the following 11 courses:
51.261 Mineralogy
51.262 Petrology
51.320 Remote Sensing of the Earth
51.355 Synoptic Meteorology
51.360 Introduction to Paleontology
51.265 Geomorphology
51.369 Structural Geology
51.370 Hydrology
51.468 Stratigraphy and Sedimentation
51.470 Groundwater Hydrology
51.475 Independent Study
51.460 Aqueous Chemistry
51.480 Geophysics (highly recommended)

Faculty Profiles

Shahalam M. N. Amin, assistant professor - B.Sc., M.Sc., University of Dhaka, Bangladesh; M.Sc., University of Guelph; Ph.D., Kent State University

John E. Bodenman, associate professor - B.A., Williamette University; M.S., Ph.D., Pennsylvania State University.

Duane D. Braun, professor - B.S., State University of New York at Fredonia; M.A., Ph.D., The Johns Hopkins University

Patricia J. Beyer, assistant professor - B.A., Valparaiso University; M.S., University of Illinois; Ph.D., Arizona State University

Norman M. Gillmeister, professor - B.A., Harvard College; M.A., Indiana University; M.A., Ph.D., Harvard University

Sandra J. Kehoe-Forutan, associate professor - B.A., Queen's University; MCRP, The Ohio State University; Ph.D., The University of Queensland

Jerry T. Mitchell, assistant professor - B.S., M.A., Towson State University; Ph.D., University of South Carolina

Joseph R. Pifer, associate professor - B.S., Clarion State College; M.A., Arizona State University

Michael K. Shepard, associate professor - B.S., Vanderbilt University; Ph.D., Washington University

Dale A. Springer, professor - A.B., Lafayette College; M.S., University of Rochester; Ph.D., Virginia Polytechnic Institute and State University

Lawrence Tanner, professor - B.A., Williams College; M.S., University of Tulsa; Ph.D., University of Massachusetts

Karen M. Trifonoff, associate professor - B.S., M.S., University of Akron, Ph.D., University of Kansas

Cynthia Venn, assistant professor - B.A., Vanderbilt University; M.S., Texas A&M University; Ph.D., University of Pittsburgh

Supplemental information

The Department of Geography and Geosciences maintains a website at http://planetx.bloomu.edu/~geog/

Health Physics

Administered by: Department of Physics and Engineering Technology
College: Science and Technology
Campus address: 55 Hartline Science Center
Telephone number: (570) 389-4107
Fax number: (570) 389-3028
Department chair: P. James Moser
Program Coordinator: Jack Couch
Secretary: Donna Murphy
Degrees awarded: Bachelor of Arts, Bachelor of Science
Effective Fall, 2001

About the Program

The health physics profession is diverse and one of the most interesting and rewarding fields of scientific endeavor. It is devoted to protecting people and their environment from potential radiation hazards, while making it possible to enjoy the benefits of the peaceful use of the atom. It has common scientific interests with many areas of specialization, including physics, biology, engineering, chemistry, environmental sciences and medicine. Health physicists are engaged in a variety of occupations, including the power industry and the environmental and regulatory agencies of government. Also, they work in research laboratories, hospitals and pharmaceutical manufacturing, where they assist with medically beneficial uses of radiation.

The Bachelor of Science in Health Physics provides a foundation of courses in physics, mathematics, chemistry and biology, as well as specialized courses in health physics. As with other science majors, the major in health physics requires dedication, so, for success, students must spend about 50 or more hours per week on academic studies, involving classes, laboratories and outside preparation. Modern laboratories introduce students to state-of-the-art instrumentation and advanced techniques of measurement. Internships are offered in industrial, medical or government settings.

The program provides students with the knowledge and skills necessary to begin professional work or to succeed in graduate school. Qualified Bloomsburg graduates are sought by nationally recognized graduate programs at Ohio State University, University of Florida and Texas A and M University. Also, across the nation, there has been an extended shortage of health physicists, so today, there are excellent prospects for professional employment immediately upon graduation from Bloomsburg.

Required Courses

In addition to 54 semester hours in general education requirements, the bachelor of science program in health physics requires 68 semester hours, with the balance of the university's 128-semester hour requirement for a bachelor's degree coming from elective courses. Required courses:

54.211 General Physics I
54.212 General Physics II
54.310 Modern Atomic Physics
54.315 Electronics
54.320 Nuclear Radiation I
54.330 Radiation Physics
54.360 Health Physics
54.420 Nuclear Radiation II
54.460 Applied Health Physics
59.498 Internship in Natural Sciences and Mathematics
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
53.241 Probability and Statistics
56.116 Algorithmic Processes for Computers
52.115 Fundamentals of Inorganic Chemistry
52.216 Chemical Principles and Measurements
50.110 Biology of Animals
50.120 Biology of Plants
50.411 Radiation Biology

Faculty Profiles

Jack G. Couch, professor - B.A., Utah State University; M.A., Vanderbilt University; Ph.D., Texas A & M University

Nathaniel Greene, assistant professor - B.S., Antioch College; M.A., Ph.D., Boston University

James M. Hetrick, assistant professor - B.S., University of Michigan; M.S., Ph.D., University of Illinois

Phillip R. Koran, assistant professor - B.S., Heidelberg College; M.S., Ph.D., Carnegie-Mellon University

Gunther L. Lange, assistant professor - B.S., Ph.D., The Ohio State University

P. James Moser, chairperson, professor - B.S., M.S., Ph.D., The Pennsylvania State University

Biswajit Ray, associate professor - B.E., University of Calcutta, India; M. Tech, Indian Institute of Technology, India; Ph.D., University of Toledo

Peter C. Stine, professor - B.A., Wesleyan University; Ph.D., The Pennsylvania State University

Supplemental information

The Department of Physics and Engineering Technology maintains a website at http://planetx.bloomu.edu/~physics/

Mathematics

Administered by: Department of Mathematics, Computer Science and Statistics
College: College of Science and Technology
Campus address: 1105 McCormick Center for Human Services
Telephone number: (570) 389-4500
Fax number: (570) 389-3599
Department chair, e-mail: James C. Pomfret, pomfret@bloomu.edu
Degrees awarded: Bachelor of Arts, Bachelor of Science
Effective Fall, 2001

About the Program

The primary objective of the mathematics program is to provide a thorough background in both the theoretical and real-world applications of mathematics. The curriculum and instructional strategies are designed to encourage and promote critical thinking and problem-solving skills, the articulation of mathematical ideas and the effective use of calculator and computer technology.

Bloomsburg's mathematics program enjoys a strong reputation in both business and the academic community and offers 100 percent placement rates in business and graduate programs. Among career paths chosen by mathematics majors are actuarial science, statistical analysis, operations research analysis, software engineering, industrial engineering, numerical analysis, cryptology, systems analysis, decision analysis and teaching.

Bloomsburg's program is rigorous and demanding. In addition to strong verbal skills, potential students with scores in excess of 500 on SATs are traditionally competitive, but those in excess of 600 generally do best.

The Department of Mathematics, Computer Science and Statistics offers four baccalaureate degree programs: Bachelor of Arts, Bachelor of Arts - Statistics Track, Bachelor of Science in Mathematics and Bachelor of Science in Computer Science (See Computer Science). In addition, the department offers the subject area curriculum supporting teacher certification in secondary education mathematics. The department also offers a minor in computer science, one in statistics and another in mathematics. Additionally, the department has a strong program in applied statistics that prepares students for interesting careers in data analysis, design of experiments and actuarial science.

The course sequence in all of the degree programs in mathematics is essentially the same through the first two years. The bachelor of arts program in mathematics offers a more flexible curriculum designed to accommodate varied career objectives while the bachelor of science program is specifically applications-oriented with more required courses in mathematical analysis and science. In the bachelor of science program, students select an area of concentration in their junior year to develop proficiency in an area of applied mathematics.

Many students choose a joint program in mathematics and computer science, mathematics and statistics, or mathematics and an area of business or physical sciences. A student majoring in education who chooses an area of concentration in mathematics essentially follows the bachelor of arts program in mathematics. The department strongly supports the implementation of mathematical and statistical software throughout all the mathematical programs. Students who complete a degree program in mathematics are prepared to continue their studies of mathematics on the graduate level or to enter industry in an area where mathematics is used.

For admission to the major in mathematics, a student should have a thorough preparation in high school mathematics. Students who complete the Advanced Placement Examination with a score of 3 or higher may earn university credit for the first calculus course, 53.125 Analysis I.

Required Courses

Advisement should be considered before selecting general education courses in this major.

Core Courses (all majors)
53.125 Analysis I
53.126 Analysis II
53.185 Discrete Mathematics
53.225 Analysis III
53.226 Analysis IV
53.241 Probability and Statistics
53.310 Introduction to Abstract Algebra
53.314 Linear Algebra
56.121 Computer Science I

Bachelor of Arts in Mathematics - Required courses:

At least one 3-semester-hours computer science course numbered 56.122 or above.

At least three 3-semester-hours mathematics courses at the 300 level, including at least one from the classical core consisting of:

53.322 Differential Equations
53.331 Modern Geometry
53.341 Statistical Methods
53.360 Number Theory
53.411 Introduction to Group Theory
53.421 Advanced Calculus
53.422 Complex Variables
53.451 Introduction to Topology

In addition, at least 6 semester hours in a discipline to which mathematics is traditionally applied (as approved by the adviser). Courses 53.311 and 56.305 may not be counted as requirements for the major.

B.A. Statistics Track - The Statistics track prepares students for a variety of careers in statistics in research, industry and government and provides a base for work at the graduate level. Students planning to continue with graduate studies should take 53.225, 53.236 and 53.462. The track provides a foundation in mathematics as well as courses in statistical methodology, computer programming and statistical software.

Required courses:
53.141 Introduction to Statistics
56.121 Computer Science I
56.122 Computer Science II
53.125 Analysis I
53.126 Analysis II
53.185 Discrete Mathematics
52.240 Statistical Methods
53.241 Probability and Statistics
53.314 Linear Algebra
53.340 Statistical Software
53.342 Design and Analysis of Experiements
53.343 Applied Regression Analysis
Select two courses from Mathematics numbered 53.225 or above

Recommended choices for electives:
53.225 Analysis III
53.226 Analysis IV
53.243 Nonparametric Statistics
53.373 Numerical Methods
53.374 Introduction to Discrete Systems Simulation
53.441 Mathematics and Sports
53.461 Probability Models and Applications
53.462 Mathematical Statistics
53.491 Special Topics in Mathematics
Select two courses from one area in which statistics is applied, with advisor's approval (Biology, Economics, Geography, Geology, Psychology)

Bachelor of Science in Mathematics - A 9-semester-hours concentration in a special interest area within mathematics or in a related discipline; areas of concentration available upon request.

53.125 Analysis I
53.126 Analysis II
53.185 Discrete Mathematics
53.225 Analysis III
53.226 Analysis IV
53.241 Probability and Statistics
53.310 Introduction to Abstract Algebra
53.314 Linear Algebra
54.211 General Physics I
54.212 General Physics II
56.121 Computer Science I

At least one 3-semester-hours computer science course numbered 56.122 or above.

At least three 3-semester-hours mathematics courses at the 300 level including at least one from the classical core consisting of:

53.322 Differential Equations
53.331 Modern Geometry
53.341 Statistical Methods
53.360 Number Theory
53.411 Introduction to Group Theory
53.421 Advanced Calculus
53.422 Complex Variables
53.451 Introduction to Topology

Courses 53.311 and 56.305 may not be counted as requirements for the major.

Minor in Mathematics - The program requires 21 hours of mathematics courses. The quality point average of all courses applied to the minor in Mathematics must be at least 2.0 based on a 4.0 system. Required courses are:

53.125 Analysis I
53.126 Analysis II
53.185 Discrete Mathematics
53.225 Analysis III
53.241 Probability and Statistics

At least three courses (6 semester hours) chosen a list of upper-level courses:

53.231 College Geometry
53.226 Analysis IV
53.310 Introduction to Abstract Algebra
53.314 Linear Algebra
53.322 Differential Equations
53.331 Modern Geometry
53.341 Statistical Methods
53.360 Number Theory
53.361 Coding and Signal Processing

53.381 Introduction to Operations Research
53.421 Advanced Calculus
53.422 Complex Variables
53.451 Introduction to Topology

Minor in Statistics - This program requires 18 semester hours of credit, at least 15 of which must be in the Department of Mathematics, Computer Science and Statistics. Students within the Department of Mathematics, Computer Science and Statistics may apply the following courses toward the minor:

53.341 Statistical Methods
53.342 Design and Analysis of Experiments
53.343 Applied Regression Analysis
53.461 Probability Models and Applications
53.462 Introduction to Mathematical Statistics
53.491 Special Topics in Mathematics

One course related to applications of statistics from other departments, with approval of adviser.

Students from departments other than mathematics and computer science may apply the following courses to the minor:

53.241 and courses listed above for students with the Department of Mathematics, Computer Science and Statistics; or select courses from the following list (select one of):

53.141 Introduction to Statistics
45.260 Basic Social Statistics
48.160 Basic Statistics
40.346 Business and Economic Statistics
53.123 Essentials of Calculus
53.125 Analysis I
53.342 Design and Analysis of Experiments
53.343 Applied Regression Analysis
53.491 Special Topics in Mathematics
53.492 Independent Study in Mathematics

Courses outside the department recommended for the minor are:

40.400 Introduction to Econometrics
40.446 Business and Economic Statistics II
48.464 Advanced Experimental Design
50.351 General Ecology
82.306 Methods of Inquiry
45.466 Social Research

Faculty Profiles

William Calhoun, assistant professor - B.A., Carleton College; Ph.D., University of California at Berkeley

Kevin Ferland, assistant professor - B.S., University of New Hampshire, M.S., Ph.D. Syracuse University

Paul G. Hartung, professor - B.A., Montclair State College; M.A., University of Colorado; Ph.D., The Pennsylvania State University

E. Dennis Huthnance Jr., associate professor - B.S., M.S., Ph.D., Georgia Institute of Technology

Scott Inch, associate professor - A.A., Williamsport Area Community College; B.S., Bloomsburg University; M.S., Ph.D., Virginia Polytechnic Institute and State University

Curt Jones, associate professor - B.S., Lock Haven; M.S., University of Iowa; Ph.D., The Pennsylvania State University

Zahira S. Kahn, professor - B.A., Punjab University; M.Sc., Islamabad University; B.S., Bloomsburg University; M.A., Ph.D., Temple University

Stephen Kokoska, professor - B.A., Boston College; M.S., Ph.D., University of New Hampshire

Paul Loomis, assistant professor - A.B., Wabash College, M.S., Ph.D., Purdue University

Youmin Lu, associate professor - B.S., M.S., Shandong University; M.S., Shippensburg University of Pennsylvania; M.S., Ph.D., University of Pittsburgh

Lisa Lister, assistant professor - B.A., University of Maine Orono; M.S., Ph.D., University of Wyoming

Elizabeth Mauch, assistant professor - B.S., Moravian College, Ph.D., Lehigh University

Robert Montante, assistant professor - B.S., Massachusetts Institute of Technology; M.S., Ph.D., Indiana University, Bloomington

Reza Noubary, professor - B.S., M.S., Tehran University, M.Sc., Ph.D., University of Manchester, England

James C. Pomfret, chairperson, professor - B.S., Bates College; M.S., New Mexico State University; Ph.D., University of Oklahoma

John Polhill, assistant professor - B.S., University of Richmond, M.S., Ph.D. University of Virginia

Medhi Razzaghi, professor - G.C.E., Lewes Technical College; B.S., Sussex University; Ph.D., University of London

John H. Riley Jr., professor - B.A., Lehigh University; M.S., Ph.D., The University of Connecticut

Yixun Shi, professor - B.S., Anhui Normal University at Chuzhou, China; M.S., Shanghai Teachers University, China; Ph.D., University of Iowa

Erik Wynters, associate professor - B.S., University of New Hampshire; M.S., Ph.D., Cornell University

Supplemental information

The Department of Mathematics, Computer Science and Statistics maintains a website at http://departments.bloomu.edu/MathCompSciStats/

Medical Technology

Administered by:Department of Biological and Allied Health Sciences
College: Arts and Sciences
Campus address: 105 Hartline Science Center
Telephone number: (570) 389-4319
Fax number: (570) 389-3028
Program coordinator: Judith A. Kipe-Nolt
Degree awarded: Bachelor of Science
Program advisers: Judith P. Downing, Judith A. Kipe-Nolt, James E. Parsons

The programs in allied health sciences encompass those health areas in which individuals support, aid and increase the efficiency and effectiveness of other health professionals by becoming a contributing member of a health care team. Programs in this area combine natural science and liberal arts education with clinical instruction. In general, students who complete any of the programs may enter their professions immediately. Others may select postgraduate education in health care. Central to most allied health programs, especially the clinical portion, is satisfactory completion of the clinical standards, often referred to as the Essentials. These standards establish requirements related to curriculum, personnel, financing, resources and records.

Bloomsburg's medical technology program is one of the largest in the Commonwealth. The curriculum consists of a minimum of 96 semester hours of courses prescribed by the university, followed by one calendar year of clinical education in a medical technology program accredited nationally by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Bloomsburg's program is rigorous and demanding. It attracts individual who have strong quantitative and people skills and great strength in reading comprehension. Students should be prepared to study in both an academic and clinical environment and have a strong background in all the sciences.

Advisement. Three faculty members serve as advisors to medical technology students-guiding them in their course selections and various other academic and professional activities.

Placement. In the past five years, the clinical placement rate for medical technology students has been 100 percent. It is anticipated that this high placement rate will continue in the foreseeable future.

Admission to the clinical year experience is not automatic. Students begin the application procedure after completing two academic years, usually the summer following the sophomore year.

Assistance in making application for admission is offered by the university, but admission is determined solely by the clinical affiliates. Presently, Bloomsburg is affiliated with nine hospitals; however, clinical experience may be taken at any hospital with an accredited program.

Students who are not selected at the end of their junior year can change their major and readily satisfy the requirements for the Bachelor of Arts in Biology during their senior year; other degree options are also available. Students may continue to seek admission for the clinical year while completing their degree.

Program of Study - As mentioned earlier, the medical technology program consists of a minimum of 96 semester hours of course work prescribed by the university, followed by one calendar year of clinical education in a medical technology program.

Assistance with the admission application to the clinical year phase is offered by the university, but admission to that phase, as well as fees, are determined solely by the institution where the clinical work is done. The university cannot guarantee that a student will be accepted for the clinical education portion of the program. In general, students with the highest academic achievement, who interview well and have a history of volunteer work are given priority.

Students who successfully complete all of the requirements and the clinical year earn a Bachelor of Science degree. All clinical year graduates become eligible to take the two certification examinations for medical technologists. Upon successfully completing one or both of these examinations, the student is awarded a certificate of registry and the designation Medical Technologist (M.T.) (ASCP) or Clinical Laboratory Scientists (C.L.S.) (NCA).

A student who fails to gain admission to a clinical program at the end of the junior year (3+1 program) or wishes to complete a degree prior to entering the clinical experience may remain at the university and complete the requirements for a baccalaureate degree. Ordinarily, a student can complete the degree requirements for a Bachelor of Arts, with a major in

biology, in one additional year; other curricula may demand more time. Many students in the medical technology program select an option in microbiology. This option is detailed in the section on Biology.

Required Courses

A minimum of 96 semester hours in general education requirements and professional education requirements and 32 clinical hours are required for a major in medical technology leading to a Bachelor of Science degree.

Professional Education Courses

50.107 Medical Terminology
50.115 Concepts in Biology I
50.233 Human Genetics or 50.332 Genetics
50.242 Biology of Microorganisms
50.271 Cell Biology
50.342 Medical Bacteriology
50.343 Immunology
52.115 Fundamentals of Inorganic Chemistry
52.230 Fundamentals of Organic Chemistry
52.116 Chemical Principles and Measurements
52.341 Biochemistry or 52.232 Intermediate Organic Chemistry
53.141 Introduction to Statistics or 48.160 Basic Statistics
54.107 Applied Physics for Health Sciences
56.110 Introduction to Computer Science

Choose one of the following physiology lecture courses (50.472 recommended)

50.472 Animal Cell Physiology
50.474 Vertebrate Systems Physiology
50.477 Plant Physiology
50.478 Microbial Physiology

Elective Courses - Students must select additional courses to complete the minimum program requirement of 96 semester hours. The following courses are recommended as electives:

50.364 Vertebrate Histology
50.442 Virology of Animals
50.455 Environmental Microbiology
50.470 Medical Parasitology

Clinical Experience - A total of 32 semester hours must be earned from the listing of courses in medical technology that are given at the clinical site.

Adjunct Faculty

Abington Memorial Hospital, Abington, Pa.: Paul J. Cherney, M.D., Medical Adviser; Barbara J. Scheelje, M.T. (ASCP), Program Director

Alleghany University Hospitals, Elkins Park, Pa.: Richard Rupkalvis, M.D., Medical Adviser, Phyllis Gotkin, Ph.D., M.T. (ASCP), Program Director

Guthrie Medical Center: Robert Packer Hospital, Sayre, Pa.; Joseph J. King, M.D., Medical Adviser; Brian D. Spezialetti, M.S., M.T. (ASCP), Program Director

Lancaster General Hospital, Lancaster, Pa.: James T. Eastman III, M.D., Medical Adviser; Nadine E. Gladfelter, M.T. (ASCP), Program Director

Pennsylvania Hospital, Philadelphia, Pa.: Michael Warhol, M.D., Medical Director; Caryn Lennon, M.T. (ASCP), S.H., Program Director

Reading Hospital and Medical Center, Reading, Pa; William K. Natale, M.D., Medical Director; Joanne S. Grant, M.S., M.T. (ASCP), Program Director

Scranton Medical Technology Consortium, Scranton, Pa.; Mary A. Meihofer, M.D., Medical Adviser; Mary Gene Butler, M.S., M.T. (ASCP), Program Director

Susquehanna Health System: Divine Providence Hospital, Williamsport, Pa.; William Lubble, M.D., Medical Adviser; Loretta A. Moffatt, M.T.(ASCP), Program Director

York Hospital, York, Pa.: John Whiteley, M.D., Medical Adviser; Brenda L. Kile, M.A., M.T. (ASCP), Program Director

Supplemental Information

The Department of Biological and Allied Health Sciences maintains a website at http://departments.bloomu.edu/biology/

Medical Imaging

Administered by: Department of Biological and Allied Health Sciences
College: Arts and Sciences
Campus address: 105 Hartline Science Center
Telephone number: (570) 389-4319
Fax number: (570) 389-3028
Program Coordinator: Judith Kipe-Nolt
Degree awarded: Bachelor of Science
Program advisers
Casey A. Shonis, Judith Kipe-Nolt

About the Program

Medical imagers are allied health professionals who have expertise in the operation of imaging equipment and the preparation of patients for various diagnostic procedures. These procedures may include competencies in radiography, nuclear medicine, sonography, radiation therapy, cardiovascular interventional radiography and cross sectional imagery. Additionally, many clinically educated radiographers pursue careers in managerial or teaching roles within their disciplines. To meet the varying needs of medical imagers, the program offers an assortment of academic pathways leading to a baccalaureate degree.

Bloomsburg offers a bachelor of science degree to those possessing certification in radiography/radiologic technology, to students who have completed the Radiology Technology Associate Degree at Mansfield University and to those students who have completed a unique program with the university and Johns Hopkins Hospital.

Most radiography students are required to select a group of courses comprising either a management or an education emphasis in addition to general education courses.

The Johns Hopkins Hospital Option provides the student with at least two clinical competencies that must be pursued at the Johns Hopkins Hospital in Baltimore, Md. The student selects two clinical competencies (radiologic technology, nuclear medicine technology, diagnostic medical sonography, nuclear medicine technology, cardiovascular interventional radiography and cross sectional imaging-MRI and CT) offered at JHH following the pre-clinical years at Bloomsburg University. Although the management and education emphases are not selected in this option, some additional courses are required.

The Mansfield University/Bloomsburg University association facilitates transfer from Mansfield's Associate Degree program in Radiology Technology to Bloomsburg's baccalaureate degree for medical imagers. After admission to Mansfield, an interested student signs a letter of intent to transfer to Bloomsburg at the time the Associate in Applied Science degree is completed.

The Office of Admissions at Bloomsburg reserves a place for the student as a junior year transfer student upon receipt of the student's letter of intent.

One year prior to matriculation at Bloomsburg, the student confirms the intent to enroll by completing the transfer admission application.

Bloomsburg accepts all 67 credits from Mansfield. A minimum of 61 additional semester hours of credit must be completed to be awarded the Bloomsburg University Bachelor of Science degree. Bloomsburg residency requirements must be observed.

Advisement. This program has the greatest number of allied health science students. The advisors guide students in the selection of courses, in choosing the most appropriate academic pathway and in clinical placement. Clinical placement, however, is not automatic; generally, a GPA of at least 2.5 is required.

Admission. Students may enter the program as first-year freshmen or at an advanced level following clinical preparation in radiography. Students entering at the advanced level are awarded 20-60 credit hours for satisfactory completion of the AMA-approved program and passing the ARRT examination.

Bloomsburg's program is rigorous and demanding. It attracts individuals who have strong quantitative and people skills and great strength in reading comprehension. Students should be prepared to study in both academic and clinical environments and have a strong background in all the sciences.

Required Courses

In addition to 54 semester hours of general education requirements, the major requires several specific courses, plus options depending on whether the student prefers an emphasis in management, education or both. The balance of course work to satisfy the university's 128-hour requirement for a bachelor's degree come from elective courses. Students should

work closely with their adviser to organize an efficient plan of study.

Professional Courses

50.115 Concepts in Biology I or equivalent
50.173 Anatomy and Physiology I
50.174 Anatomy and Physiology II
52.101 Introductory Chemistry
54.107 Applied Physics for Health Sciences
48.101 General Psychology
48.160 Basic Statistics or 53.141 Introduction to Statistics
56.110 Introduction to Computer Science or 92.150 Introduction to Computer and Information Science

Emphasis Courses - Select an emphasis in either management or education, both require a total of 15 semester hours in courses:

Management Emphasis

90.101 Introduction to Business
91.220 Financial Accounting
93.344 Principles of Management
93.345 Human Resource Management
91.498 Special Topics: Intro to Health Care

Education Emphasis

60.204 Educational Computing and Techology
60.251 Psychological Foundations in Education
60.291 Principles of Teaching
60.311 Classroom Measurement and Evaluation
60.393 Social Foundations in Education

Supplemental Information

The Department of Biological and Allied Health Sciences maintains a website at http://departments.bloomu.edu/biology/

Physics

Administered by: Department of Physics and Engineering Technology
College: Science and Technology
Campus address: 55 Hartline Science Center
Telephone number: (570) 389-4107
Fax number: (570) 389-3028
Department chair: P. James Moser
Secretary: Donna Murphy
Degrees awarded: Bachelor of Arts, Bachelor of Science
Effective Fall, 2001

About the Program

Physics is the fundamental science of the properties and interactions of matter and energy. Physics students study a great deal of mathematics in order to understand nature in mathematical terms. Also, they learn laboratory skills of designing experiments and applying instrumentation, such as, electronics circuits and optical instruments, to observe and measure natural phenomena.

The major in physics requires dedication. Successful students spend about 50 to 60 hours per week on academic studies. This includes time in classes and laboratories and about 30 to 40 hours in studying and preparing assignments. If you enjoy logic puzzles, such as mathematical word problems and you have a natural curiosity about how things work, then you will likely enjoy learning about physics. At Bloomsburg there are opportunities to study nuclear physics, astrophysics, applied physics and laser physics using state-of-the-art equipment.

The Bachelor of Science in Physics provides the student with knowledge and skills that are desired by a variety of industrial employers and some Bloomsburg physics graduates have followed careers in business where they attained leadership positions. Also, physics graduates are well prepared to succeed in graduate and professional schools. Some students have completed masters and doctorates in physics, engineering, medicine and law. Indeed, physics graduates, equipped with sharp analytical skills and fundamental understanding of nature are sought by schools of medicine and law.

The Bachelor of Arts in Physics is more limited in scope than the Bachelor of Science degree. It is usually combined with an engineering degree through the engineering/liberal arts program offered by Bloomsburg University in cooperation with The Pennsylvania State University or Wilkes University (*see Engineering and Liberal Arts*).

The minor in Physics provides an introduction to the discipline for those students in other majors having a curiosity and a desire to learn more about physics. The Minor in Electronics provides a foundation in the design, construction and modification of electronics circuits for use in scientific investigations.

Additionally, the university offers a Bachelor of Science degree in Health Physics and a Bachelor of Science in Education with a concentration in physics (*see Secondary Education*).

Required Courses

In addition to 54 semester hours of general education requirements, the bachelor of arts program requires 54 semester hours and the bachelor of science program requires 71 semester hours for a major in physics.

Bachelor of Arts required courses include:
54.211 General Physics I
54.212 General Physics II
54.302 Mechanics: Dynamics
54.310 Modern Atomic Physics
54.314 Electricity and Magnetism
54.400 Advanced Physics Laboratory
12 semester hours chosen from other physics courses numbered above 300
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
53.322 Differential Equations
56.116 Algorithmic Processes for Computers
52.115 Fundamentals of Inorganic Chemistry
52.216 Chemical Principles and Measurements

Bachelor of Science required courses include:
54.211 General Physics I
54.212 General Physics II
54.302 Mechanics: Dynamics
54.310 Modern Atomic Physics
54.314 Electricity and Magnetism
54.315 Electronics
54.318 Optics
54.400 Advanced Physics Laboratory
54.422 Thermodynamics

54.450 Introduction to Quantum Mechanics
12 semester hours chosen from other physics courses numbered above 300
52.115 Fundamentals of Inorganic Chemistry
52.216 Chemical Principles and Measurements
53.125 Analysis I
53.126 Analysis II
53.225 Analysis III
53.322 Differential Equations
56.116 Algorithmic Processes for Computers
3 semester hours chosen from the following three courses:
53.226 Analysis IV
53.314 Linear Algebra
56.373 Numerical Methods in Computing

Requirements for the Minor in Physics - A minimum of 18 semester hours is required, including the following:

54.211 General Physics I
54.212 General Physics II
54.310 Modern Atomic Physics
Plus seven semester hours from upper-level physics courses (300 and higher)

Requirements for the Minor in Electronics - These courses must be taken in sequence:

54.211 General Physics I
54.212 General Physics II
54.315 Electronics
54.316 Digital Electronics
54.317 Computer Electronics

Faculty Profiles

Jack G. Couch, professor - B.A., Utah State University; M.A., Vanderbilt University; Ph.D., Texas A & M University

Nathaniel Greene, assistant professor - B.S., Antioch College; M.A., Ph.D., Boston University

James M. Hetrick, assistant professor - B.S., University of Michigan; M.S., Ph.D., University of Illinois

Phillip R. Koran, assistant professor - B.S., Heidelberg College; M.S., Ph.D., Carnegie-Mellon University

Gunther L. Lange, assistant professor - B.S., Ph.D., The Ohio State University

P. James Moser, chairperson, professor - B.S., M.S., Ph.D., The Pennsylvania State University

Biswajit Ray, associate professor - B.E., University of Calcutta, India; M. Tech, Indian Institute of Technology, India; Ph.D., University of Toledo

Peter C. Stine, professor - B.A., Wesleyan University; Ph.D., The Pennsylvania State University

Supplemental information

The Department of Physics and Engineering Technology maintains a website at http://planetx.bloomu.edu/~physics/

Pre-Professional Study

Osteopathic, Allopathic, Veterinary Medicine;

Optometry, Podiatry, Dentistry

Administered by Departments of Chemistry, Biological and Allied Health Sciences
Campus Address: 74N1 Hartline Science Center
Telephone: (570) 389-4887 or 389-4219
Co-Chairs: Joseph Ardizzi, Mark Melnychuk

Students who intend to enter a professional field such as osteopathic, allopathic or veterinary medicine; optometry; podiatry; or dentistry can choose a major such as biology, chemistry, or physics. As a rule, professional schools do not specify an undergraduate major, but do specify minimum essential requirements, including courses in general chemistry, organic chemistry, mathematics, biology, and physics.

High standards of undergraduate scholarship are demanded for consideration. Students should contact either co-chair of the Pre-Professional Advisory Committee for advisement if considering this career choice. The placement of Bloomsburg University graduates in professional schools, especially those in medicine and dentistry, has been noteworthy. More than 85 percent of the students recommended by the Pre-Professional Advisory Committee have gained acceptance to professional schools. A number of required courses are taught in the Department of Biological and Allied Health Sciences. Students interested in pursuing a medical career must follow a degree program that includes science courses required for entrance into medical school. A strong program of liberal arts courses is highly recommended by American medical schools.

The Pre-Professional Advisory Committee bases recommendations on the student's academic record, resume, performance on required standardized tests, and faculty evaluations. By the time a student in the program attains junior standing, chance of acceptance to a professional school is excellent. The Pre-Professional Committee is composed of five professors from the Department of Biological and Allied Health Sciences and the Department of Chemistry. In addition to providing advisement, the committee is responsible for evaluating credentials of students who seek the committee's recommendation. Three levels of recommendation are offered by the committee: strongly recommended, recommended, and recommended with reservations. The latter endorsement indicates that a student falls short of one or more of the measured criteria. The majority of students recommended by the Pre-Professional Committee are either strongly recommended or recommended. Students not seeking the committee's evaluation can receive a realistic assessment of their credentials and letters of recommendation from faculty. However, this route for seeking acceptance is not the most desirable.

Each student is assigned a major advisor, who is a faculty member with special insight into the professional field selected by the student and the requirements necessary for acceptance by professional schools. In addition, any member of the Pre-Professional Advisory Committee can offer guidance to the students.

Placement of Bloomsburg University students in professional schools, especially those in medicine and dentistry, has been noteworthy. Some former students lead their classes in academic standing at these schools. The classroom and laboratory preparation the students received and the close faculty supervision offered to them during their undergraduate years at Bloomsburg University are believed to be major factors for success.

Many students opt to attend professional schools in Pennsylvania, for example: Penn State Hershey, University of Pennsylvania, Thomas Jefferson University, University of Pittsburgh, Temple University, Allegheny University, Philadelphia College of Osteopathic Medicine, Lake Erie College of Osteopathic Medicine, and the Pennsylvania College of Optometry. However, many Bloomsburg Alumni have attended other professional schools such as Georgetown University School of Medicine, Kansas City College, Fairleigh Dickinson, West Virginia University, and the University of LTIM in Germany.

Pre-professional students enrolled in the Department of Biological and Allied Health Sciences pursue the Bachelor of Science degree in biology. Required courses are taken in biology, chemistry, physics and mathematics. Many other useful biology elective courses are also available. Highly recommended biology electives for premedical preparation include

the following courses: Comparative Vertebrate Anatomy, Embryology, Vertebrate Histology, Immunology, Medical Parasitology and Writing in Biology. Pre-professional students are strongly encouraged to become computer-literate. Fluency in a foreign language can also be useful.

A carefully-chosen internship or independent research project can be of value in preparation for professional school. Students must also perform volunteer or observational activities at a hospital or an office of an appropriate health professional.

The general education requirements can be fulfilled by taking courses in the humanities and social sciences. Humanities courses are offered in the departments of Art, English, Language and Cultures, Music, Philosophy, Speech and History. Social science courses are offered in the departments of Anthropology, Economics, Geography, Political Science, Psychology and Sociology. The curriculum at Bloomsburg University challenges one to learn more about the world so that he or she can help change it for the better by responsible citizenship and generous, professional service.

Supplemental information

The Department of Biological and Allied Health Sciences maintains a website at http://departments.bloomu.edu/biology/

Interdisciplinary Studies

Humanities

Administered by: Department of Philosophy
College: Liberal Arts
Campus address: 219 Bakeless Center for the Humanities
Telephone number: (570) 389-4410
Fax number: (570) 389-3026
Adviser: Steven Hales
Degree awarded: Bachelor of Arts

About the Program

Interdisciplinary studies in the humanities, the natural sciences and mathematics and social sciences offer opportunities for students to follow a less conventional curriculum according to their preferences. A student fulfills 54 semester hours of general education requirements and then chooses to complete the prescribed core courses in the humanities, the social sciences or the natural sciences and mathematics. He or she completes a total of 48 semester hours in the area of his or her core curriculum, with free electives sufficient to meet the 128-semester hour requirement for graduation.

Students interested in the Broad Area Program should contact the program's adviser, Scott Lowe, in the Department of Philosophy.

Required Courses

In addition to 54 semester hours of general education requirements, the student completes a core of 33 semester hours, plus 15 hours of humanities electives to complete a total of 48 semester hours of study. The balance of the university's 128-semester hour requirement for a bachelor's degree comes from elective courses.

20.302 Advanced Composition
20.363 Shakespeare
26.102 Introduction to Theater Arts
25.321 Argumentation
28.111 Introduction to Philosophy
28.212 Logic
Art history elective
Music history/literature/theory elective
History - choose two courses
Languages and Cultures option:
Choose from:
Intermediate foreign language course
Foreign literature course (in original or translation)
Foreign culture and civilization course

Natural Sciences and Mathematics

Administered by: Department of Physics and Engineering Technology
College: Science and Technology
Campus address: Hartline Science Center
Telephone number: (570) 389-4153
Fax number: (570) 389-3028
Adviser: Nathaniel Greene
Degree awarded: Bachelor of Science

About the Program

The Natural Sciences and Mathematics program, leading to a bachelor of science degree, encompasses an interdisciplinary mix of courses in biology, chemistry, physics, geology, mathematics and computer science. Initial enrollment in this major is recommended for students who would like to graduate with a degree in one of the sciences, but have not yet decided which major to pursue.

The science and math core courses enable the student to easily change major to Biology, Chemistry, Physics, Health Physics, Geology, Earth Science, Mathematics or Computer and Information Science.

Completion of the Natural Sciences and Mathematics program is best suited to students with broad academic interests who plan to seek an interdisciplinary scientific career.

To earn a degree in Natural Sciences and Mathematics, students must complete 53 semester hours of general education requirements (15 of which are met by the major), 41-42 semester hours of core courses, 21-29 additional semester hours needed to complete the equivalent of two approved academic minors in the sciences or mathematics and free electives sufficient to meet the 128-semester hour requirement for graduation.

Required Courses

General education requirements of the university apply to this major, with the exception that all 12 semester hours of the Group C distribution requirement may be drawn from the core courses of the major.

The following specific core courses are required.

53.125 Analysis I
53.126 Analysis II
56.121 Introduction to Computer Science or 56.116 Algorithmic Processes

54.211 General Physics I or 54.111 Introductory Physics I
54.212 General Physics II or 54.112 Introductory Physics II
52.115 Fundamentals of Inorganic Chemistry
52.231 Organic Chemistry I or 52.116 Chemical Principles and Measurements
50.114 Concepts in Biology I
50.115 Concepts in Biology II
51.101 Physical Geology
51.111 Physical Geology Laboratory
51.102 Historical Geology
51.112 Historical Geology Laboratory

Students are also required to complete additional semester hours so as to satisfy the equivalent of two academic minors, chosen from the following:

Minor in Mathematics, Statistics or Computer Science (12-15 semester hours)
Minor in Physics or Electronics (10 semester hours)
Minor in Chemistry (11-13 semester hours)
Minor in Biology (14 semester hours)
Minor in Geology (12 semester hours)

Social Sciences

Administered by: Department of Anthropology
College: Liberal Arts
Campus address: 150 Centennial Hall
Telephone number:(570) 389-4859
Adviser: David Minderhout
Degree awarded: Bachelor of Arts

About the Program

Interdisciplinary studies in social sciences offer opportunities for students to follow a less conventional curriculum according to their preferences. A student fulfills 53 semester hours of general education requirements and then chooses to complete the prescribed core courses in the social sciences. The student completes a total of 24 semester hours in the area of his or her core curriculum, with free electives sufficient to meet the 128 semester hour requirement for graduation.

Students interested in the Broad Area Program should contact the program's adviser, David Minderhout, in the College of Arts and Sciences.

Required Courses

In addition to 53 semester hours of general education requirements, the student completes a core of 24 semester hours, plus two minors in the social sciences to complete a total of 60 semester hours of study. The balance of the university's 128-semester hour requirement for a bachelor's degree comes from elective courses.

46.200 Principles of Cultural Anthropology
40.211 Economics I
40.212 Economics II
48.101 General Psychology
45.211 Principles of Sociology
40.101 World Physical Geography or 41.102 World Cultural Geography
44.101 Elements of Political Science or 44.120 U.S. Government
A three-credit statistics course
In addition, each social science major must complete two minors (18 credits each) in the social sciences: anthropology, economics, geography (i.e., environmental planning), political science, psychology and sociology.

Minor in Legal Studies

Administered by: Department of Finance and Business Law
College of Business
224 Sutliff Hall
Telephone: (570) 389-4760
Fax: (570) 389-2071
Program coordinator, e-mail: Bruce Rockwood, rockwood@planetx.bloomu.edu
Advisory board: Danny Robinson, English; Scott Lowe, Philosphy; Richard Micheri, Political Science; Sandra Kehoe-Forutan, Geography and Geosciences; Mary Harris, Educational Studies and Secondary Education; Laura Davis, Finance and Business Law

About the program

The minor in legal studies promotes the interdisciplinary study of law, enabling undergraduate students in any major to understand and make use of the diverse perspectives on law and the legal system in our complex and rapidly changing society. Legal studies enable graduates to become more effective citizens and participate in the shaping and application of law in the United States and around the world. It enhances the ability of graduates to integrate legal and other methodologies in gathering and evaluating data, making effective arguments, reaching consensus and solving the problems of the future.

The minor recognizes and capitalizes upon the contributions of faculty at Bloomsburg whose teaching and scholarship addresses topics in law and the humanities and social sciences and the impact of law on business, education and society.

Faculty in English, philosophy, political science, geography and earth science, education and finance and business law serve on the interdisciplinary advisory board.

Required courses

The minor in Legal Studies consists of 21 semester hours, 15 of which must be taken at Bloomsburg

University. Required, but not a prerequisite for other courses, is:

98.331 Law and the Legal Environment

Take at least one course from each of the following four groups: law and the humanities, law and the social sciences, rhetoric and theory, and legal regulation doctrine.

Humanities:

20.152 Literature and Society (when focussed on law and legal issues)
98.340 Law and Literature
20.481 Special Topics in English
98.499 Special Topics in Law

Social Sciences:

44.244 Introduction to Criminal Justice
44.446 Constitutional Law I
44.447 Constitutional Law II
44.448 The Judicial Process
44.487 International Law and Organization
45.342 Penology
48.254 Psychological Aspects of Social Issues

Rhetoric, theory and jurisprudence:

25.321 Argumentation
28.292 Contemporary Moral Problems
28.305 Philosophy of Law
28.307 Contemporary Political Philosophy

Legal environment, regulation and doctrine:

27.310 Media Law
41.301 Water Resources Management
41.302 Land Business Management
98.332 Business and Commercial Law
98.407 International Legal Environment
98.450 Legal Environment
98.460 Employment and Discrimination Law
48.499 Special Topics in Law

Electives - Two courses from the following options, totaling six semester hours:

Any two additional courses from two of the four categories above;

An independent study course, internship in legal studies, honors seminar or international exchange course or program, with the approval of the Legal Studies Minor coordinator.

Two courses in the first year of law school at Widener School of Law, Harrisburg, if a participant in the "3+3" B.A./J.D. program. See coordinator for details.

New courses are periodically offered on an experimental or permanent basis, or as Honors seminars. Check with the coordinator when considering the program for current offerings and how best to plan your curriculum.

Minor in Women's Studies

Administered by: College of Liberal Arts
Campus address: 117 Bakeless Center for the Humanities
Telephone number: (570) 389-2728
Fax number: (570) 389-2094
Program Coordinator: Janice Broder

About the Program

The Women's Studies minor is an interdisciplinary minor consisting of 18 semester hours, including an introductory course (20.288 Feminist Reading of Culture), a 400-level capstone seminar and four other courses as follows: one course fulfilling a diversity requirement, one course at the 200 level, one at the 300 level and one at either the 300 or 400 level. Courses vary by semester and may be offered in the Departments of Anthropology; Biological and Allied Health Sciences; Communication Studies and Theatre Arts; English; Health and Physical Education; History; Philosophy; Political Science; Psychology; Sociology, Social Welfare and Criminal Justice and those identified as interdisciplinary studies.

Courses that count toward the Women's Studies Minor include:

09.230 Human Sexuality
20.287 Black Women Writers
20.288 Feminist Reading of Culture
20.388 Gender, Race and Class
25.494 Gender Issues in Communication
25.492 Feminist Discourse
28.308 Feminist Philosophy
42.329 The American Woman
42.469 Women and Gender in European Intellectual History I
44.377 Feminist Political Theory
44.470 Women and Gender in European Intellectual HIstory II
45.231 Marriage and Family
45.320 Sociology of Women
48.350 Psychology of Sex and Gender

Career Concentration in International Business

Administered by: Department of Finance and Business Law
Advisor: Bruce L. Rockwood
Campus Address: 228 Sutliff Hall
Telephone: (570) 389-4760
e-mail: rockwood@planetx.bloomu.edu

The globalization of the world's economy is a reality. The 100 largest industrial corporations are represented by a variety of countries and regions of the world. Many U.S. corporations derive most of their

profits from international operations and multinational corporations operate without clear ties or obligations to any one country. World trade, finance and currency flows are guided by the WTO, the decisions of the G-7 and the IMF. Business is conducted in many languages and disputes are resolved in many transnational forums. As a result, future business leaders in all fields must possess the knowledge and business tools to participate successfully in this internatinal and multicultural environment.

The career concentration in international business requires the completion of 18 credit hours of related course work plus demonstrated proficiency in a foreign language (which may be English for international students for whom English is a second or foreign language).

Requirements

Required courses include:
93.456 International Management
96.413 International Finance
97.380 International Marketing
98.407 International Legal Environment

These courses may also be applied to completing majors or minors in business as requirements, electives and/or diversity courses.

Elective credits include:
40.433 International Economics
40.434 Economic Growth of Underdeveloped Areas
44.280 International Relations
Or other 300/400 level courses in economics or political science with the approval of the advisor.
Or an internship experience and/or course work while participating in a foreign exchange program, with the approval of the advisor or appropriate department chair.

Language competancy: a student must satisfy a foreignlanguage competency to the intermediate level, either by completing up to a Level IV in course work or demonstrating proficiency by examination in the foreign language. Any courses taken are in addition to the 18 credit hours in the concentration and may also count toward the students humanities general education requirement.

The career concentration is an interdisciplinary program designed to assist students develop appropriate skills and knowledge to preare for their entry into and mobility within professions or careers realted to international business. Completion of the concentration will be recognized on the student's official transcript.

Honors Program

Administered by: Honors Advisory Committee
Academic Affairs
Campus address: B12 Luzerne Residence Hall
Telephone number: (570) 389-4713
Fax number: (570) 389-4766
Program director: Emeric Schultz
Advisory Committee
Janet Bodenman, Robert Campbell, Nancy Coulmas, Helmut Doll, James Dutt, Ervene Gulley, Julia Kipe-Nolt Andrea Pearson, Viola Supon, Philip Tucker, Faith Warner and two student representatives

About the Program

The Bloomsburg University Honors Program offers opportunities for an enriched college experience to students seeking academic challenge.

The Honors Program's goals are: to challenge students to perform at the highest level of excellence

to encourage independent thinking and learning

to create a supportive environment that encourages the aspirations and achievements of students and fosters their dignity, self esteem and sense of initiative

to encourage creativity, intellectual independence, analytical thinking and problem solving and the growth of communication skills through a strong emphasis on reading, writing and research

to provide opportunities for students to develop a broader perspective on national and global issues

to provide forums for symposia, experiential learning and independent study

to create a meaningful learning community

to develop students' leadership potential

to enable students to engage in a rigorous, coherent, integrated academic experience with a high degree of student-faculty interaction

The Honors Program encourages students to explore opportunities for post-graduate work and professional study. The Honors Program is proud of the high rate of acceptance of Bloomsburg honors students to professional and graduate programs.

Typically, honors classes are smaller, offering students opportunities to discuss in greater depth the subject being taught. Honors classes are often enriched through field trips, guest speakers, films and special projects.

New freshmen applying for admission to the program must have a minimum of 1100 SAT and rank in the top 20 percent of their high school class. Admittance to the program for students already at Bloomsburg is based on academic performance at Bloomsburg University.

The Honors Program awards merit scholarships on a competitive basis to entering freshmen. Some upper-level competitive merit scholarships are also available each year. Many honors students also qualify for other merit scholarships, such as the Mitrani and Presidential awards.

Honors students at Bloomsburg take 25 hours of honors courses that include honors general education courses, honors upper division seminars and two semesters of honors independent study culminating in an honors thesis.

Required Courses

The student can take up to 34 hours of honors work but only 25 are required and courses (except the senior honors independent study) can be taken at any time during the student's enrollment at Bloomsburg.

To graduate with honors, the student must take at least one honors humanities, one honors math/science class with a laboratory component, one honors social science class and one 300-level honors seminar plus 08.300 Introduction to Honors Research, plus two semesters of honors independent study.

Freshmen entering the program will automatically be placed in 20.104 Honors Composition for fall semester of their freshman year.

Honors curriculum - The student will be required to take 25 hours of honors credit distributed among the following classes, with additional requirements as indicated: Choose one of the following two courses to fulfill general education requirements for humanities courses:

08.101 Honors Humanities I

08.201 Honors Humanities II

Choose one of the following two courses, with a laboratory component that may be exempted by the director:

08.110 Honors Math/Science I

08.210 Honors Math/Science II

Choose one of the following two courses to fulfill general education requirements for social science courses:

08.130 Honors Social Science I

08.230 Honors Social Science II

08.300 Introduction to Honors Research

Choose one of the following four courses to fulfill general education requirements in these areas:

08.301 Honors Seminar on Values

08.302 Honors Seminar on Diversity

08.303 Honors Seminar, Quantitative and Analytical Reasoning

08.304 Honors Seminar, Interdisciplinary Studies

Course numbers for the following two courses depend on the program in which the student is completing a degree. Business, Humanities and Social Sciences independent studies are scheduled under Code 09, while Biology, Chemistry, Geology, Mathematics and Professional Studies use their own course numbers. Consult an adviser.

Supplemental information

http://facstaff.bloomu.edu/dspringe/Honors/Honors%20website.htm

Air Force ROTC

Administered by: United States Air Force
Address: AFROTC Det 752
Wilkes University
Wilkes-Barre PA 18766-0001
Telephone number: 1-800-945-5378, ext. 4860
Fax number: (717) 831-7886
Department chair: Lt. Col. Scott R. Papp
Co-adjutant instructors in Aerospace Studies: Lt. Col. Scott R. Papp, chairperson; Maj. Gregory Myers, Maj. David Palmer, Capt. Marin Bangest

About the Program

The Air Force Reserve Officer Training Corps (AFROTC) program at Bloomsburg University is offered through a crosstown agreement with AFROTC Det. 752, Wilkes University. It permits students to earn commissions as officers in the United States Air Force while pursuing a university degree. Students may enroll in either the four-year or two-year program. Students with three years remaining until graduation may re-enroll concurrently in the freshman and sophomore Aerospace Studies courses and can complete the four-year program in three years.

General Military Course (4-Year Program Only) - The first two years of the four-year program constitute the General Military Course (GMC) GMC courses are open to any university student. Students enrolling in these courses do not incur any military service obligation, with the exception of Air Force scholarship recipients who incur a commitment at the beginning of their sophomore year. The GMC curriculum consists of four one-semester hour aerospace studies courses, plus a non-credit leadership laboratory each semester that introduces students to U.S. Air Force history and environment, customs, courtesies, drill and ceremonies and leadership skills. Course for the GMC curriculum are normally offered on the Bloomsburg campus each Tuesday. Those who have questions may call (570) 389-2196.

Professional Officer Course (2 and 4-Year Programs) - The final two years of the four-year program comprise the Professional Officer Course (POC). It consists of four three-credit aerospace studies courses, plus a non-credit leadership laboratory each semester. POC cadets earn a $150-per-month, tax-free subsistence allowance during the academic year and incur a military obligation. To be accepted into the POC, students must pass a physical examination and an officer qualification test, as well as meeting certain academic standards. Four-year cadets must also complete a four-week field training program; two year applicants must complete a five-week field training program, both of which are administered the summer before POC entry. In addition, all POC cadets must complete a course in mathematical reasoning prior to being commissioned.

Uniforms - All uniforms, equipment and textbooks required for AFROTC are supplied by the U.S. Air Force. All cadets are required to pay a nominal deposit that will be refunded when the cadet returns all uniform items in satisfactory condition at the completion of or withdrawal from the AFROTC program.

Scholarships - The U.S. Air Force offers many 2 to 5-year full and partial tuition scholarships for which qualified students may compete if they enroll in AFROTC. All scholarship awards are based on individual merit, regardless of financial need, with most scholarship recipients determined by central selection boards. Scholarship selection boards for students already in college are held in January and July each year. Since scholarship applicants must meet certain academic, physical fitness and medical requirements to be considered by the scholarship boards, contact the aerospace studies department early, preferably two to three months before boards convene, to apply. High school students wishing to compete for AFROTC college scholarships must complete and submit an application by December 1 of their senior year.

Commissioning - Students who satisfactorily complete the POC curriculum requirements are commissioned as second lieutenants in the U.S. Air Force and will serve on active duty in a career specialty they have chosen, consistent with USAF needs. Qualified students may compete for duty as pilots, navigators, missile operations, space operations, nurses, engineers, meteorologists, computer analysts, lawyers, security police or any of a number of other career fields.

For information, call the Aerospace Studies Department at Wilkes University at 1-800-945-5378, ext. 4860/4861 or on the web at http://wilkes.edu/~afrotc. For specific questions or registration, contact

Maj. David Palmer at (570) 389-2196 (e-mail palmer@wilkes.edu

Courses Offered

General Military Courses - The general military courses (GMC) constitute a two-year program for freshmen and sophomores and are designed to provide general knowledge of the role organization, missions and historical development of U.S. Air Power. Students enrolled in the GMC, who are not on Air Force scholarships, incur no military obligations.

61.110 / 61.120 Evolution of USAF Air and Space Power I/II (1) - Survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems and an introduction to communication skills. 61.151 is mandatory for AFROTC cadets and it complements this course by providing cadets with followership experiences.

61.151 Leadership Laboratory (0) - The first two years of the Leadership Laboratory include a study of Air Force customs and courtesies, drill and ceremonies, issuing military commands, instructing, directing and evaluating the preceding skills, studying the environment of the Air Force officer and learning about the opportunity available to commissioned officers.

61.210 / 61.220 Foundations of the United States Air Force I/II (1) - Facilitates the transition for Air Force ROTC cadet to Air Force ROTC candidate. Topics include Air Force Heritage, Air Force leaders, quality Air Force and introduction to ethics and values, introduction to leadership, group leadership problems and continuing application of communication skills. 61.151 is mandatory for AFROTC cadets and it complements this course by providing cadets with their first opportunity for applied leadership experiences in class.

AFROTC Field Training

61.230 AFROTC Field Training (1-4) (4 Weeks) - Provides leadership and officership training in a military environment, which demands conformity to high physical and moral standards. Within this structured environment, cadets are screened for officer potential as measured against field training standards. Motivation and professional development is achieved through various programs such as flight orientation, marksmanship and survival training. Prerequisites: 61.110 , 61.120 , 61.210 , 61.220 and interview by professor of aerospace studies.

61.330 AFROTC Field Training (1-4) (5 Weeks) - Provides leadership and officership training in a military environment, which demands conformity to high physical and moral standards. Within this structured environment, cadets are screened for officer potential as measured against field training standards. Motivation and professional development is achieved through various programs such as flight orientation, marksmanship and survival training. Prerequisite: interview by professor of aerospace studies.

Professional Officers Courses - The Professional Officer Courses (POC) constitute a four-semester program, normally taken during a student's junior and senior years, leading to commissioning as an Air Force officer. The POC concentrates on concepts and practices of management and leadership, national defense policy and communication skills.

61.151 Leadership Laboratory (0) - The last two years of Leadership Laboratory consists of activities classified as advanced leadership experiences. Involves planning and controlling military activities of the cadet corps; preparation and presentation of briefings and other oral and written communications; and providing of interviews, guidance and information that will increase the understanding, motivation and performance of other cadets.

61.310 / 320 Air Force Leadership Studies (3) - Study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics and communication skills required of an Air Force junior officer. Case studies examine Air Force leadership management situations as a means of demonstrating and exercising practical application of the concepts being studied. 61.151 is mandatory for AFROTC cadets and complements this course by providing advanced leadership experiences in offer-type activities. Prerequisite: AFROTC approved membership in the POC or permission of the instructor.

61.410 / 421 National Security Affairs I/II (3) - Examines the national security process, regional studies, advanced leadership ethics and Air Force doctrine. Several topics focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. 61.151 is required for all AFROTC cadets and complements this course by providing advanced leadership experiences. Prerequisite: AFROTC-approved membership in the POC or permission of the instructor.

Army ROTC

Administered by: Department of the Army
Campus address: Army ROTC
Telephone number: (570) 389-2123
Fax number: (570) 389-2523
Department chair: Maj. Robert Boehnlein
Instructors: Co-adjunct instructor: Capt. Robert Haldeman

About the Program

Bloomsburg University students can qualify for a commission in the U.S. Army, Army Reserve or National Guard through the on-campus Reserve Officers' Training (ROTC) program while simultaneously pursuing a degree. Students take the first two years of the ROTC incurring no military obligation. Opportunities also exist for attending Airborne, Air Assault and Northern Warfare Schools.

Army ROTC provides a four-year curriculum open to both men and women regardless of academic major or area of study. All equipment, clothing and books are provided free of charge. The program is divided into two parts, the Basic Course and the Advanced Course. The Basic Course consists of four courses given during the freshman and sophomore years. During this period, classes include such subjects as military history and organization, traditions, leadership development, time management and adventure training.

The Advanced Course consists of four courses given during the junior and senior years. This portion of the curriculum concentrates on practical application of leadership skills such as tactics, training, ethics and continued leadership development.

Students receive academic credit for all ROTC courses. The basic program does not require the student to make any commitment to the U.S. Army and allows the student to develop an understanding of the role of the commissioned officer within the Army. Coursework provides training in leadership and management skills which help the individual develop the ability to communicate effectively, think analytically and make independent and responsible decisions.

Two, three and four year academic scholarships are available. Benefits include full tuition and fees, a flat fee for books and $150 a month during the academic year. Students enrolled in the advanced program also receive the $150 a month regardless of whether or not they were awarded a scholarship. During the summer between the junior and senior year, advanced camp cadets attend a five-week paid internship at Fort Lewis, Washington.

Veterans can receive constructive credit for the first two years of ROTC and are eligible to enter directly into the Advanced Course. There are a variety of options available to qualify students for the Advanced Course who did not take ROTC their first two years. Students belonging to the Army Reserve or National Guard are also eligible for the Simultaneous Membership Program.

Army ROTC also offers a ranger team for students who wish to gain more experience in outdoor activities such as orienteering and survival skills.

Students who successfully complete the ROTC curriculum receive a commission as a Second Lieutenant in the U.S. Army, Army Reserve or National Guard. Time served on active duty varies, dependent upon the type of program the student elects. Students can be guaranteed Reserve or National Guard duty if they desire.

For more information about the ROTC program, call (570) 389-2123 or (570) 389-2523.

Courses Offered

Basic Course - Freshman and Sophomore Years - Note: Leadership laboratories consist of adventure/ survival training, land navigation, first aid and dismounted drill exercises which cannot be conducted in the classroom.

67.110 Introduction to Military Science (1) - Provides an overview of the organization of the ROTC program. Introduces skills such as rappelling, marksmanship, military customs, preparing military correspondence and practical field training. One one-hour class per week, 12 hours laboratory time per semester

67.120 Introduction to Military Issues (1) - Provides a background in basic skills essential to leaders. Skills may include marksmanship, tactical movement, first aid and communication skills. One

one-hour class per week, 6 evening laboratories per semester

67.210 Applied Leadership and Management I (1) - Provides an overview of the Army rank structure and a specific survey of the junior officer's duties and responsibilities within that rank structure. Practical training consists primarily of advanced land navigation skills as well as rappelling and practical field training. One one-hour class per week, 12 hours laboratory time per semester

67.220 Applied Leadership and Management II (1) - Presents the fundamentals of small-unit leadership and mission planning techniques, to include the reverse planning process and problem-solving techniques. Students learn through case studies how to evaluate different leadership styles and techniques. One one-hour class per week, 12 hours laboratory time per semester

67.230 ROTC Basic Camp (4) - Sophomore summer semester course offered in lieu of the Basic Course for students who want to enter the Advanced Program. The camp is five weeks in duration and students are paid at the rate of half the basic pay for a second lieutenant.

Advanced Course - Junior and Senior Years - Note: Students gain further practical leadership training during the leadership laboratories while performing in leadership positions and conducting training.

67.310 Advanced Military Science I (3) - Provides a detailed study of the leadership techniques and the principles introduced in 67.220. Course places students in role-model situations to provide first-hand experience in problems of small-unit leadership. One 3-hour class per week, 12 hours laboratory time per semester

67.320 Theory and Dynamics of the Military Team (3) - Practical application of the skills learned in 67.310. Students learn how to apply planning and management skills properly in conjunction with small-unit tactics. One 3-hour class per week, 12 hours laboratory time per semester

67.330 ROTC Advanced Camp (6) - A six-week practical application and evaluation phase required of each cadet prior to commissioning. Advanced camp places cadets in leadership positions where they must put into practice the techniques learned on campus in both tactical and nontactical situations.

67.410 Advanced Leadership and Management I (3) - Presents advanced leadership and management skills required of a manager in a military environment. Students perform roles in management of a military organization using skills in administration, training, conduct of meetings, briefings and logistics. One 3-hour class per week, 12 hours laboratory time per semester

67.420 Advanced Leadership and Management II (3) - Acquaints students through a series of case studies and role playing simulations with the high ethical standards required of a manager and leader. Students learn the basic procedures of military law and their application in a military environment. Students continue to perform roles in management of a military organization, using skills developed in prior military science courses. One 3-hour class per week, 12 hours laboratory time per semester

Course Descriptions

DVS (01) Developmental Instruction

Administered by Department of Developmental Instruction

01.011 Reading I (Summer) (3) - Designed to improve a student's reading ability to a level where he/she can compete at the next level. Instruction given in a laboratory and lecture format. Weekly contacts provide individualized prescriptions. Three semester hours toward full-load status; grade counted in GPA. Does not apply toward graduation.

01.025 Reading II (3) - Course presents major components of the reading process and emphasizes basic reading skills. A prerequisite for College Reading and Study Skills for students scoring below the established cutoffs on the Nelson Denny Reading Test. Three semester hours towards full-load status; grade counted in GPA. Does not apply toward graduation.

01.041 Writing I (Summer) (3) - Fundamentals of standard written English for students who test extremely low on SAT-V and whose writing samples confirm need. Emphasis on language activities such as conferencing, revising and editing of papers and reading response journals to improve basic skills in context and reduce anxiety about writing. Numerous and varied short writing assignments. Three semester hours towards full-load status; grade counted in the GPA. Does not apply toward graduation.

01.060 Writing II (3) - Required of students whose SAT-V scores fall below a standard set by the university and whose writing samples confirm need. Students refine basic writing skills in context of varied writing assignments that address given rhetorical situations. Assignments call for specific evidence and responsible generalization from that evidence. Classwork may include conferencing, collaborative work, student presentations, reading and discussion as well as writing. Three semester hours towards full-load status; grade counted in GPA. Does not apply toward graduation.

01.071 Pre Algebra (Summer) (3) - Geared for students with inadequate arithmetic skills. Study skill techniques and problem-solving strategies explored. Emphasizes basic computer literacy and uses computer-assisted instruction. Three semester hours toward full-load status; grade counted in GPA. Does not apply toward graduation.

01.080 Introductory Algebra (3) - Recommended for students with minimal algebraic skills as evidenced by student preparation and results obtained in diagnostic tests. A program designed for each student may include operations of rational numbers, ratio, proportion, percent, geometric concepts, basic algebraic concepts and skills. Concepts may include beginning linear equations. Three semester hours toward full-load status; grade counted in GPA. Does not apply toward graduation.

01.090 Intermediate Algebra (3) - Emphasizes intermediate algebraic skills necessary if success is to be obtained in College Algebra. Topics include linear equations and functions, exponents and polynomials, factoring, rational expressions and quadratic equations. Provides concepts and skills necessary for college-level math courses that build on a limited algebraic background. Three semester hours toward full-load status; grade counted in GPA. Does not apply toward graduation.

01.095 Introductory Science (Summer) (3) - Acquaints the student with scientific terminology and methodology; familiarizes the student with the study skills unique to the mastery of science; prepares the student for subsequent courses in science; and makes the student more comfortable with the nature and characteristics of science. Three semester hours toward full-load status; grade counted in GPA. Does not apply toward graduation.

01.099 Intensive English Seminar (Summer) (6) - Designed for entering international students who score at least at the ACTFL level 1+ on a departmentally-administered oral placement test, but who have low TOEFL scores or who wish to improve English skills prepatory to enrollment in other classes. Provides 90 hours of conversation and acculturation in the company of native English speakers, together with some

practice in writing and grammar. Credit does not apply toward graduation.

01.100 College Study Skills (1) - Designed to provide, formulate and apply the methods and models of learning strategies. Principle focus on content area reading and study skills. Outside readings and discussion focus on the nature of learning and the individual's responsibility to learning. Product and process discussed and compared to various approaches to learning. Applies toward graduation. Usually restricted to the summer freshmen program or offered upon special request.

01.120 College Reading and Study Skills (3) - Develops the complex reading and study skills essential for college learning. Focuses on content area reading and study strategies, reading flexibility and critical reading skills. Outside readings focus on the nature of learning and the individual's responsibility to learning. Students may be required to use the reading lab for computerized vocabulary lessons and speed reading exercises. Applies toward graduation.

HPE (05) Health, Physical Education and Athletics

Administered by Department of Health, Physical Education and Athletics

05.112 Varsity Athletics (1) - Open to any student who is a member in good standing of a Bloomsburg University athletic team. Course is graded pass/fail.

05.113 Varsity Athletics II (1) - Open to any student who is a member in good standing of a Bloomsburg University athletic team. Course is graded pass/fail.

05.149 Aquatics (1) - Provides an opportunity for non-swimmers to make a proper physical and mental adjustment to water. Introduces basic skills as provided by the American Red Cross with specific emphasis on becoming safe in, on or about a body of water.

05.150 Aquatics (1) - Contains same content as 05.149 but adapted for beginning skills.

05.155 Swimnastics (1) - Assists students to attain and maintain physical fitness through water activities.

05.200 CPR and Safety (1) - Designed for completion of Red Cross CPR certification and to develop a safety awareness expertise for accident prevention. Fee may be required.

05.220 International Folk Dance (1) - Teaches the basic elements of folk dancing that can be combined to form limitless numbers of dances. A wide variety of dances will be taught incorporating these elements.

05.214 Fencing (1) - Lecture aspect covers a study of the history of fencing, the weapons and equipment involved, rules of the sport and safety procedures. Emphasis on learning and practicing the skills (encompassing practice bouts) and a tournament.

05.217 Bicycling (1) - An introductory course for novice cyclists who have access to a variable speed bicycle. Local touring is part of the course. Must provide bicycle and helmet.

05.219 Tennis (1) - A beginning course that teaches basic stroke execution, strategy and court etiquette.

05.220 International Folk Dance (1) Teaches the basic elements of folk dancing that can be combined to form limitless numbers of dances. A wide variety of dances will be taught incorporating these elements.

05.221 Jazz Dance (1) - Develops fundamentals of jazz dance.

05.222 Creative Dance (1) - Develops the individual's capability for communication of thoughts, feelings and ideas through the medium of dance. Acquaints students with the basic elements of dance and guides them toward technique mastery with emphasis on expressive or creative movement.

05.224 Fitness Dance (1) - Attempts to provide a method of cardiovascular endurance in a particular interest area.

05.225 Beginning Ballet (1) - Develops the fundamentals of beginning ballet dancing. Elements, skills and the language of ballet will be introduced. This history and popularity of this art form along with the personal and creative benefits from ballet are included.

05.226 Jogging/Walking (1) - Explores the relationship of physical activity (jogging/walking) to the components of wellness and healthy lifestyles. Also provides sound exercise principles for successful, personalized fitness programs.

05.228 Gymnastics (1) - A co-ed introductory course that works primarily on floor exercise and includes instruction on a variety of apparatus including: the balance beam, pommel horse, parallel bars.

05.229 Water Polo (1) - Develops skills, understanding and appreciation of water polo as recreational aquatic sport. Provides activity and instruction in individual fundamentals and their incorporation into a team concept. Recommended for students with basic swimming ability.

05.230 Weight Training and Fitness (1) - Develops knowledge, skill and appreciation of weight training and conditioning programs.

05.231 Archery (1) - Course develops knowledge of, skill in and appreciation of target archery as a recreational pursuit.

05.232 Bowling (1) - Students learn the mechanics of bowling in this beginner's course that meets off-campus. Students begin with appropriate ball selection, learn acceptable styles, practice proper etiquette and bowl under the instructor's close supervision. Fee required.

05.233 Badminton (1) - Deals with the strokes, strategies and game of badminton from a beginner's viewpoint. Also valuable to the intermediate player.

05.234 Golf (1) - An introductory course that develops basic skills. Rules, techniques, etiquette and an emphasis on skill practice are stressed. Fee may be required.

05.235 Riflery (1) - Develops the skills, safety, understanding and appreciation of riflery as a recreational pursuit.

05.236 Volleyball (1) - Develops the skills, understanding and appreciation of volleyball as a recreational activity as well as a vigorous, competitive sport.

05.238 Racquetball-Handball (1) - An introductory course that teaches history, etiquette, strokes, serves and strategy in singles and doubles.

05.239 Square Dancing (1) - Develops skill in square and folk dances. Covers the sociological, physiological and psychological values of square dancing. Students acquire a repertoire of western square dance moves and dance techniques.

05.240 Slimnastics and Fitness (1) - Develops an awareness and understanding of physical self and capabilities; teaches students how to improve their physical condition. Includes exercise and body mechanics.

05.241 Judo Self-Defense (1) - Provides a better understanding of the sport and a competency of judo and self-defense techniques. Should be used as an elective within the physical education service program requirements.

05.243 Backpacking (1) - Reviews backpacking equipment and first aid procedures; includes how to select trails, menus and cooking methods; teaches safety procedures; discusses how to adjust to the seasons and how to protect the environment.

05.244 Orienteering (1) - Practical application of the knowledge and skills needed to satisfactorily follow a designated course through the wilderness with use of a watch, a compass and a map.

05.245 Canoeing (1) - Offers instruction in the basics of canoeing, including skills that can be used recreationally in one's lifetime. Lake and river canoeing will be taught and experienced.

05.247 Rock Climbing (1) - Provides rock climbing experiences for the beginning rock climbing enthusiast. Introduces basic knowledge, skills and practical application of climbing. Serves as a foundation for further experiences in this area of recreation.

05.248 Basic Sailing (1) - A beginning course that includes terminology, maneuvering under normal and severe weather conditions, seamanship, boating and safety. Swimming ability required.

05.250 Lifeguarding (2) - Provides an opportunity to attain an American Red Cross Lifeguarding Certificate. CPR is taught as part of this course.

05.251 Techniques of Coaching and Officiating Baseball (3) - Classroom-laboratory provides an overview of baseball administration organization, fundamental skills, drills and techniques of umpiring.

05.252 Techniques of Coaching and Officiating Basketball (3) - Instruction in techniques of coaching, player-coach relationship, team strategy, program organization and officiating.

05.253 Techniques of Coaching and Officiating Football (3) - Instruction in techniques of coaching, player-coach relationship, program organization and administration and officiating.

05.254 Techniques of Coaching and Officiating Field Hockey (3) - Instruction in techniques of coaching and officiating all the phases of field hockey.

05.256 Techniques of Coaching and Officiating Cross Country, Track and Field (3) - Analysis of technique and the development of personal skills. Knowledge provided for development of a track program. Discusses rules, starting, officiating, scoring and facility use.

05.257 Techniques of Coaching and Officiating Wrestling (3) - Gives prospective coaches an insight into problems and situations that may be encountered; prepares the individual to teach as well as coach wrestling.

05.260 Techniques of Coaching and Officiating Swimming (3) - Presents techniques of coaching, swimming, diving; covers rule interpretations and duties of officials.

05.265 Basketball (1) - Provides activity and instruction in the development of individual offensive and defensive fundamentals and their incorporation into a team concept. Reviews basic strategy and current trends at all competition levels.

05.270 Exercise and You (2) - Studies appropriate physiological functions, exercise physiology, mechanical implications and fitness measurement. Reviews procedures and practical application through programmed exercise. Successful completion of course fulfills two credits of physical education requirement. (3 contact hours).

05.271 Intermediate Archery (1) - Provides the opportunity for the student to develop shooting skills.

05.272 Intermediate Bowling (1) - Attempts to develop advanced skill and knowledge of bowling. Fee required.

05.273 Intermediate Golf (1) - Provides instruction in the techniques and strategy involved in improving the individual skills of the student. Fee may be required.

05.274 Intermediate Tennis (1) - Focuses on improving tennis skills.

05.275 Intermediate Volleyball (1) - Studies the development and history of volleyball. Attempts to improve fundamental skills, team play and strategy through participation.

05.276 Intermediate Judo (1) - Provides an opportunity to develop higher levels of skill competencies in judo.

05.277 Advanced Sailing (1) - Intended for students who have sailing experience. Includes maneuvering, race tactics, sail tune, severe weather conditions, docking and anchoring. Prerequisites: Sailing and swimming ability required.

05.290 Special Topics (1-3) - Topics announced in the scheduling bulletin prior to each semester.

05.298 Fitness and Wellness (3) - Provides learners with the tools for lifelong healthful living. Personal health profiles, mental health, personal fitness programs, stress management, nutritional and environmental health topics are explored. Successful completion of course fulfills one credit of the physical education requirement.

05.305 Aquatic Fitness Programming (2) - Develops fitness management leadership skills in an aquatic setting; covers physiological principles of exercise applied to swimming and other water activities. No prior swimming experience necessary.

05.306 Psychology of Sport (3) - Aims to familiarize the student with psychological components of human performance related to sport and exercise. Focuses on sport participation and includes psychological assessment, intervention techniques and a brief introduction to the predominant research methods used in sport psychology. Course has particular value to coaches, teachers, psychologists and exercise specialists and other sport-affiliated professions.

05.308 Exercise and Mental Health (3) - Provides a strong base of knowledge of theory, research and practice in exercise and mental health. Also provides prospective fitness and exercise professionals (exercise science) with essential information and suggestions of practical value in leadership roles in exercise, wellness, health promotion, corporate fitness, cardiac rehabilitation and other areas.

05.309 Decisions for Healthy Behavior (3) - Focuses on personal health issues, the consequences of decisions made about health choices and the societal implications, locally and globally, of those decisions. Approved for general education requirement.

05.311 Methods, Materials in Elementary School Physical Education (3) - Provides principles and procedures to meet the needs and interests of elementary-age children in the area of physical education.

05.320 Health and Safety in the Elementary School (3) - Covers health knowledge, training and health appraisal techniques for teaching elementary school health; the elementary school health program; and safety education in the elementary school.

05.321 First Aid Safety (3) - Provides training in first aid and safety. Red Cross standard, advanced and cardiopulmonary resuscitation certifications may be earned. One credit may be applied to the Fitness and Recreational Skills area. .

05.330 Introduction to Coaching (3) - An overview of basic theories and coaching applications in sport philosophy, sport psychology, sport pedagogy, first aid and sport management resulting in American Coaching Effectiveness Program Certificate.

05.331 Recreation Education (3) - Presents discussion of and practice in, recreation activities used in school and playground situations. Emphasizes techniques of leadership, recreation planning, legal liability and trends in recreation programming.

05.333 School Camping and Outdoor Education (3) - Acquaints students with the scope of organized camping and the acquisition of and practices in the basic skills required of individuals involved in camping and outdoor education training. Requires field experiences.

05.334 Women in Sport (3) - Surveys aspects of the historical and contemporary role of women in sport. Encourages an awareness in students regarding the differences between sport for men and women in various contexts, including social, psychological and biophysical. By examining the past and current practices and cultural norms in light of evolving research findings, students are expected to increase their understanding of issues germane to sport. Approved as a cultural diversity course.

05.370 Measurement and Evaluation in Human Performance (3) - Acquaints future exercise science majors with techniques of evaluating and measuring the progress of physical fitness and exercise testing components. Includes descriptive statistics, knowledge tests, grading, physical performance tests and tests of sport skills. Prerequisite: 53.114 College Algebra or consent of the instructor.

05.397 Adult Health Development Program (3) - An intergenerational and multicultural health program that trains students to work one-on-one with older adults to promote health and well-being.

05.401 Methods in Fitness Dance (3) - Introduces exercise science majors to the teaching principles and current techniques involved in aerobic-dance and step dancing. Includes methods of designing physical and motivational programs to teach in corporate or similar fitness areas.

05.414 Exercise Prescription and Progrmming for Special Populations (3) - Provides students with a basic overview of theoretical, scientific and applied perspectives of exercise prescriptions of special populations. Practical experience, physical fitness programs and modified fitness programs will be introduced and incorported in working with special populations. Prerequisites: 05.278, 05.476.

05.430 Current Issues in Health Promotion (3) - Assesses major problems which concern communities today: drugs, sexually transmitted diseases, pollution, alcohol and suicide.

05.450 ECG Interpretation/Exercise Testing (3) - Provides students with both theoretical and practical knowledge of exercise testing in a research/clinical environment. Students gain knowledge in basic electrocardiogram interpretation for the normal and the diseased heart. A survey of cardiorespiratory structure and function will be provided. Prerequisite: 50.174 or equivalent or permission of the instructor.

05.451 Kinesiology: The Analysis of Human Motion (3) - Introduces students to the fundamentals of human movement. After a survey of the musculoskeletal

system, students will engage in a detailed analysis of the primary articulations. The fundamentals of biomechanics will be examined to provide students with an appreciation of movement. Prerequisites: 50.173 and 50.174.

05.452 Cardiac Rehabilitation (3) - Provides student with both a theoretical and practical knowledge of cardiac rehabilitation. Students study the etiology, epidemiology, patient differences, logistical and administrative considerations, treatments, as well as the education of the cardiac patient.

05.476 Exercise Physiology (4) - Study of adult physiological functions under stress and the adjustment and regulatory activities of the body during exercise; development of a working knowledge of assessments, motor characteristics and physical performance. Prerequisites: 50.173 and 50.178.

05.477 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. Prerequisite: 05.476.

05.498 Internship in Exercise Science (6-15) - Provides the student with a practical on-site work experience in which technical skills and abilities are applied. Site is selected by the student with the approval of the major director. Required experience is designed to be the culminating experience of undergraduate course work and facilitates the transition from the role of student to employee. Prerequisites: 50.173, 50.174, 05.476, 05.477.

05.500 Instrumentation and Laboratory Techniques (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 Research Methods in Exercise Science (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 ECG Interpretation and 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 if inquiry in exercise science and integrates and extends the information covered in the prerequisite courses.

05.551 Mechanics of Human Movement (3) - A quantitative approach to movement analysis. The mechanical principles and laws that govern motion will be reviewed, studied and applied to the human body as it engages in exercise, sport performance and daily living tasks. Prerequisite: 05-451.

05.553 Exercise in Chronic Disease Management (3) - The purpose of this course is to examine the use of exercise as a diagnostic, evaluative and rehabilitative tool for individuals with chronic diseases or disabilities. The underlying physiologic causes of various diseases and the identification of clinical symptoms will be examined, as well as the utility of exercise training to monitor and evaluate clinical progress. Prerequisites: 05.575, 05.576 or permission of the instructor.

05.555 Physiology of Training (3) - This course will examine the physiologic adaptations associated with increased maximal oxygen consumption and submaximal, prolonged exercise performance. Emphasis will be placed on an examination of potential mechanisms associated with exercise-induced adaptations. The physiology of strength development and associated mechanism will also be explored. Prerequisites: . 05.575, 05.576 or permission of the instructor.

05.557 Ethical and Legal Issues in Conducting Research (3) - The purpose of this course is to identify ethidal and legal issues that may emerge during the process of conducting research in Exercise Science. A historial view of the development of ethical codes will be studied which relate to the formation, conduct, analysis and presentation of research problems. Prerequisite: 05.510 or permission of the instructor.

05.559 Scientific Evaluation of the Elite Athlete (3) - This course is designed to provide students with both a theoretical and practical knowledge of the evaluation procedures used to profile the elite athlete. Students will have the opportunity to visit the various laboratories located within an Olympic Training Center and discuss specific testing and training procedures with the Center's professionals. Prerequisites: 50.173, 50.174, 05.510, 05.500, 05.576, 05.575 or permission of the instructor.

05.561 Exercise Science and Aging (3) - This course is designed to provide students with both a theoretical and practical knowledge of the relationship between exercise sicence and the aging process. Following classroom instruction students will visit selected senior citizen facilities and have an opportunity to work directly with older adults. Prerequisite 05.575, 05.576 or permission of instructor.

05.575 Exerecise Physiology I (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.

05.576 Execise Physiology II (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.

05.577 Worksite Health and Fitness Programming (3) - Detailed study of the information and expertise pertaining to health fitness assessment and exercise programming, in accordance with requirements for nationally accredited certification examinations (e.g., American College of Sports Medicine Health Fitness Instructor certification).

HON (08) Honors Courses

Administered by Honors Advisory Committee, Academic Affairs

08.101 Honors Humanities I (3) - Allows freshmen and sophomore level students to focus on a specific topic or related topics in the humanities for in-depth study and analysis. Topics vary from semester to semester. Requires extensive reading on a chosen topic, the development of the students' own ideas on the topic and the expression of those ideas in written and oral form. Fulfills general education requirement for humanities.

08.110 Honors Math and Science I (3-4) - Allows students to focus on a specific topic or related topics in math or science for in-depth study and analysis, including laboratory experience. Topics vary from semester to semester. Requires extensive reading on a chosen topic, the development of the students' own ideas on the topic and the expression of those ideas in written and oral form. Fulfills general education requirement for math/natural science.

08.130 Honors Social Science I (3) - Allows students to focus on a specific topic or related topics in the social sciences for in-depth study and analysis. Topics vary from semester to semester. Requires extensive reading on a chosen topic, the development of the students' own ideas on the topic and the expression of those ideas in written and oral form. Fulfills general education requirement for social science science and approved as a diversity course.

08.201 Honors Humanities II (3) - Allows freshmen and sophomore level students to focus on a specific topic or related topics in the humanities for in-depth study and analysis. Topics vary from semester to semester. Requires extensive reading on a chosen topic, the development of the students' own ideas on the topic and the expression of those ideas in written and oral form. Fulfills general education requirement for humanities.

08.210 Honors Math and Science II (3-4) - Allows students to focus on a specific topic or related topics in math or science for in-depth study and analysis, including laboratory experience. Topics vary from semester to semester. Requires extensive reading on a chosen topic, the development of the students' own ideas on the topic and the expression of those ideas in written and oral form. Fulfills general education requirement for math/natural science.

08.230 Honors Social Science II (3) - Allows students to focus on a specific topic or related topics in the social sciences for in-depth study and analysis. Topics vary from semester to semester. Requires extensive reading on a chosen topic, the development of the students' own ideas on the topic and the expression of those ideas in written and oral form. Fulfills general education requirement for social science.

08.300 Introduction to Honors Research (1) - Serves as an introduction to research and includes guest lectures from library staff, university faculty across the disciplines and from other university personnel concerned with undergraduate research. Required of all honors students before beginning honors research. The student chooses an honors mentor and begins planning research. In the pass/fail course, the student must produce a proposal for honors thesis research that meets the approval of the Honors Advisory Committee.

08.301 Honors Seminar on Values (3) - Features study of a selected topic that will change with each offering. Upper division seminar focuses on values and ethical issues and may be taught by professors from any of the colleges or Arts and Sciences divisions. Seminar fulfills the general education requirement for values courses.

08.302 Honors Seminar on Diversity (3) - Features study of a selected topic that changes with each offering. Upper division seminar focuses on diversity issues and may be taught by professors from any of the colleges or Arts and Sciences divisions. Seminar fulfills the general education requirement for diversity courses.

08.303 Honors Seminar on Quantitative and Analytical Reasoning (3) - Features study of a selected topic that changes with each offering. Upper division seminar focuses on diversity issues and may be taught by professors from any of the colleges or Arts and Sciences divisions.

08.304 Honors Interdisciplinary Seminar (3) - Features study of a selected topic that changes with each offering. Upper division seminar focuses on diversity issues and may be taught by professors from any of the colleges or Arts and Sciences divisions.

IDS (09) Interdisciplinary Studies

Administered by College of Liberal Arts

09.100 University Seminar (1) - Promotes a successful transition to college life for new freshmen through the presentation of critical information about the university's academic program.

09.111 Introduction to the Peoples of the Third World (3) - Examines the peoples of the Far and Middle East, Africa and Latin America; their art, literature, philosophy, cultural geography and history, sketching their importance in the world.

09.211 History of Natural Scientific Thought (3) - Reviews the historical development of the natural sciences and mathematics, the nature of scientific and mathematical thought and methods, characteristics of these disciplines and their significance to human progress.

09.213 Science, Technology and Human Values (3) - Compares the interaction of science and technology with human values. Studies past, present and future technological developments and their impact on personal and social values.

09.230 Human Sexuality (3) - Presents a two (2) gender perspective of the roles of sexuality in the life of humans. Considered are anthropological, biological, psychological and sociological aspects of sexuality and their relation to popular culture and diversity. Addresses current public health issues, ethics, responsible decision-making and values.

09.231 Technical Writing (3) - Presents the principles of technical writing in the physical, natural and social sciences and in technology and industry. Promotes effectiveness in communicating technical information to specialized and general audiences. Uses seminar approach involving class participation and individualized instruction.

09.311 Seminar in American Studies I (3) - Provides a thorough appreciation of our varied heritage and research materials and resources available for deepening the knowledge of this growing area of inquiry.

09.312 Seminar in American Studies II (3) - continuation of 09.311.

09.487 THIS Internship Experience (9) - Internship provides outstanding students with enriching academic experience as an intern in the executive or legislative branches of state government or with state boards, agencies or commissions.

09.488 THIS Research Project (3) - The student intern completes an individualized directed project involving substantial analysis and research. The project is related to the internship experience.

09.489 THIS Academic Seminar (3) - Student interns participate in a seminar coordinated by the resident director. The seminar is structured to integrate the student's work experience with a rigorous academic component and an exposure to multiple facets of state government.

09.491 Honors Independent Study in Humanities I (1-3) - An independent study course in which, under the guidance of a faculty mentor, the student completes the initial project(s) in the first stage of his/her proposed honors work.

09.492 Honors Seminar in the Humanities (3) - Allows for continued in-depth study of a particular research project of the student's choice and provides honor students the opportunity to discuss with peers and interested faculty concepts in the humanities related to the project and to the student's major field. Seminars organized around general themes selected by the humanities honors committee and announced in advance.

09.493 Honors Independent Study in the Humanities II (1-3) - Independent study in an area previously approved as part of the student's overall honors program.

09.495 Honors Seminar in the Natural Sciences and Mathematics (1) - Offers a cross-disciplinary perspective to students in the honors program with emphasis on student presentation and discussion of important topics in a student's area of expertise.

09.496 Honors Independent Study in the Social Sciences I (1-3) - Involves the student's selection of an honors adviser and project, initial exploratory reading and a proposal for a major Honors Independent Study Project. Reserved for students who qualify for and wish to pursue an honors course of study in their last two years. Usually taken in the junior year.

09.497 Honors Seminar in the Social Sciences (3) - Allows for continued in-depth study of a particular research project and provides honor students the opportunity to discuss with peers and interested faculty concepts in the social sciences which relate to the research project and the student's major field. Focus of the seminar is interdisciplinary.

09.498 Honors Independent Study in Social Sciences II (3) - Provides for an on-site work experience and training program designed to give selected interns an opportunity to apply theoretical and descriptive knowledge acquired in multiple humanities disciplines. Requires approval of the internship coordinator and the dean of Arts and Sciences.

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 administrated 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)

FRE (10) French

Administered by Department of Languages and Cultures

10.100 Foundations of French Language and Culture (3) - Seeks to develop novice proficiency with emphasis on intercultural communication in the context of the Francophone world. Language laboratory activities required.

10.101 French I (3) - Seeks to develop the four language skills and acquaint students with elements of francophone culture. For students with no more than two years of French. Practice in the language laboratory required.

10.102 French II (3) - Continuation of 10.101. Prerequisite: 10.101 or equivalent.

10.203 French III (3) - Continuation of development of the four language skills. Emphasis on reading. Study of francophone culture. Practice in the language laboratory. Prerequisite: 10.102 or equivalent.

10.204 French IV (Fall) (3) - Continuation of 10.203. Emphasis on culture and oral communication skills. Practice in the language laboratory. Prerequisite: 10.203 or equivalent.

10.205 Applied Phonetics and Pronunciation (3) - Analyzes French sound system. Drills on pronunciation and intonation. Selections of prose, poetry and songs for imitation. Not offered every semester. Prerequisite: 10.102 or equivalent.

10.206 Structure of the French Language (3) - Thorough study of grammar and syntax and use of idioms through applied exercises. Introduction to French morphology. Not offered every semester. Prerequisite: 10.204 or equivalent.

10.207 Conversation: French Daily Life and Customs (3) - Prepared and free speaking activities about everyday life and customs in francophone countries. Not offered every semester. Prerequisite: 10.204 or equivalent or concurrently with 10.204 with consent of the chairperson.

10.211 Foundations of French Culture and Civilization (Fall) (3) - Reviews major developments of French culture from an historical point of view. Taught in English; knowledge of French unnecessary. Special projects for French majors. Approved as a diversity course.

10.212 France Today (3) - Presents major aspects of life in France today. Taught in English; knowledge of French unnecessary. Special projects for French majors. Not offered every semester. Approved as a diversity course.

10.281 - 10.289 Special Topics (1-3) - Provides knowledge and training in fields usually not covered in regular courses. Content determined by instructor and varies each time course is offered. Topics may include French for travelers, French gastronomy, Quebec culture. Not offered every semester.

10.290 French Studies Abroad (1-6) - Prerequisite: Minimum two semesters of French or equivalent or consent of the chairperson.

10.295 Art and Culture of France (3) - Provides a study-tour of France with attention to French art as seen in relation to its social and cultural environment. Visits to places of artistic and cultural interest in and around Paris and the provinces. Not offered every semester. Prerequisite: Consent of the instructor.

10.309 Commercial French (3) - Acquisition of French business language and terminology in reading, writing and speaking. Includes cultural content of francophone culture. Provides an introduction to business correspondence. Not offered every semester. Prerequisite: 10.204 or equivalent.

10.331 Selected 20th Century Writers (Fall) (3) - Students study French for reading and cultural knowledge; selected modern works. Prerequisite: 10.204 or equivalent.

10.401 Advanced French Language (3) - Presents a thorough review of phonology, morphology, syntax and semantics. Practical application in advanced speaking including activities with development of cultural proficiency. Not offered every semester. Prerequisite: 10.206 or consent of the chairperson.

10.402 Contemporary Issues in Francophone Media (3) - Presents further development of language fluency through discussion of current topics and issues selected from francophone newspapers and magazines. Not offered every semester. Prerequisite: 10.207 or equivalent.

10.409 Commercial French II (3) - Studies French business life aiming at preparing students for internships in business in France, Quebec or a branch of a French company in the U.S. Reviews business correspondence and cultural content. Not offered every semester. Prerequisite: 10.309.

10.422 Masterpieces of French Literature (3) - Studies the most significant writers and playwrights of France. Not offered every semester. Prerequisite: 10.206 or consent of the chairperson.

10.423 Black Francophone Writers and Culture (3) - Presents major aspects of life in Black francophone countries and major writers in those countries. Taught in French. Not offered every semester. Prerequisite: 10.204 or consent of the chairperson.

10.490 Independent Study in French (1-9) - Provides for individual study of a particular aspect of French civilization, language or literature under faculty supervision. Prerequisites: Consent of the instructor and the chairperson.

GER (11) German

Administered by Department of Languages and Cultures

11.100 Foundations in German Language and Culture (3) - Seeks to develop novice proficiency with emphasis on intercultural communication in the context of the German-speaking world. Language laboratory activities required.

11.101 German I (3) - Develops the four language skills and acquaints students with elements of German-speaking cultures. For students with no more than two years of German. Requires practice in the language laboratory.

11.102 German II (3) - Continuation of 11.101. Reading and writing given additional emphasis. Prerequisite: 11.101 or equivalent.

11.121 German Authors of the 20th Century I (3) - Examines works of major German authors such as Hesse, Brecht, Mann, Kafka, Durenmatt and Boll. Taught in English; knowledge of German unnecessary. Readings in German and special projects for German majors. Not offered every semester.

11.122 German Authors of the 20th Century II (3) - Continuation of 11.121. Taught in English; knowledge of German unnecessary. Readings in German and special projects for German majors. Not offered every semester.

11.203 German III (3) - Development of the four language skills. Basic grammar reviewed and new grammatical concepts presented. Reading and study of the culture given additional emphasis. Not offered every semester. Prerequisite: 11.102 or equivalent.

11.204 German IV (3) - Continuation of 11.203. Emphasizes culture and communication. Not offered every semester. Prerequisite: 11.203 or equivalent.

11.205 Applied Phonetics and Pronunciation (3) - Analysis of the German sound systems. Drills on pronunciation and intonation. Selections of prose, poetry and songs for imitation. Prerequisite: 11.102 or two years of high school German. Not offered every semester.

11.206 Grammar and Composition (3) - In-depth study of German grammar. Stresses application of grammatical principles in controlled and free written composition. Not offered every semester. Prerequisite: 11.204 or equivalent.

11.207 Conversation: Daily Life and Customs in German-Speaking Countries (3) - Emphasizes student participation in prepared and free-speaking activities on daily life in German-speaking cultures. Outside readings and oral reports assigned. Grammar reviewed when necessary. Not offered every semester. Prerequisite: 11.204 or equivalent or concurrently with 11.204 with consent of the chairperson.

11.211 German Culture and Civilization I (3) - Provides an understanding of the geography, government, customs, education, arts and history of the German-speaking countries, as well as a vivid sense of the current scenes in these countries. Taught in English; knowledge of German not required. Special projects for German majors. Not offered every semester. Approved as a diversity course.

11.212 German Culture and Civilization II (3) - Continuation of 11.211. Taught in English; knowledge of German not required. Not offered every semester. Approved as a diversity course.

11.281-11.289 Special Topics (1-3) - Provides knowledge and training in fields not usually covered in regular courses. Content is determined by instructor and varies. Not offered every semester.

11.290 German Studies Abroad (1-6) - Prerequisite: Minimum of two semesters of German or consent of the chairperson.

11.309 Commercial German (3) - Acquisition of German commercial language and terminology in reading, writing and speaking. Background of business life in Germany today, in German culture and society. Not offered every semester. Prerequisite: 11.206 or equivalent.

11.331 Selected 20th Century Writers (3) - Current German writers for reading and cultural knowledge. Development of the four skills continues. Not offered every semester. Prerequisite: 11.204 or equivalent.

11.402 Contemporary Issues in German Media (3) - Further language development, especially of conversation, through discussion of current topics and issues selected from German language newspapers and magazines. Not offered every semester. Prerequisite: 11.207 or equivalent.

11.403, 11.503 Workshop(3) - Presents selected materials for practical use. Offered on demand only. Prerequisite: 11.206 or 11.207 or consent of the instructor.

11.420 Seminar: Mass Culture and High Culture (3) - Readings and discussion of cultural issues from 1870 to 1933. Background in culture, society and methods of cultural critique. Not offered every semester. Prerequisite: 300 level German or consent of the instructor.

11.422 Masterpieces of German Literature (3) - Examines selected masterpieces of German literature from the Middle Ages to the present with excursions in historic and socio-cultural contexts. Prerequisite: 11.206 or permission of the instructor. Not offered every semester.

11.490 Independent Study in German (1-9) - Provides for individual study of a particular aspect of German civilization, language or literature under supervision of a faculty member. Prerequisite: Consent of the instructor and the chairperson.

SPN (12) Spanish

Administered by Department of Languages and Cultures

12.100 Foundations in Spanish Language and Culture (3) - Seeks to develop novice proficiency with emphasis on intercultural communication in the context of the Spanish-speaking world. Language laboratory activities required.

12.101 Spanish I (3) - Develops the four language skills; acquaints students with elements of Hispanic culture. For students with no more than two years of Spanish. Requires practice in language lab.

12.102 Spanish II (3) - Continuation of 12.101. Reading and writing given additional emphasis. Prerequisite: 12.101 or equivalent.

12.203 Spanish III (3) - Continued development of skills and culture. Increased emphasis on reading and writing.

12.204 Spanish IV (3) - Continuation of 12.203. Prerequisite: 12.203 or equivalent.

12.205 Phonetics: Theory and Practice (3) - Seeks to improve student's ability to communicate effectively in spoken Spanish. Provides a detailed study of Spanish sound and intonation patterns through group and individual practice. Attends to individual pronunciation problems. Not offered every semester. Prerequisite: 12.102 or equivalent.

12.206 Structure of the Spanish Language (3) - Study of Spanish grammar and syntax through applied exercises and introduction to Spanish morphology. Not offered every semester. Prerequisite: 12.204 or equivalent.

12.207 Conversation: Hispanic Daily Life and Customs (3) - Emphasizes student participation in prepared and free-speaking activities about everyday life and customs in Spanish-speaking countries. Not offered every semester Prerequisite: 12.204 or equivalent or concurrently with 12.204 with consent of the chairperson.

12.208 Conversation for Health Professionals (3) - Emphasizes development of speaking and comprehension for communication with Spanish-speaking health care clients. For health services students and other interested persons. Not offered every semester. Prerequisite: 12.204 or equivalent.

12.211 Spanish Culture and Civilization (Fall) (3) - Provides an understanding of Spain through geography, education, customs, fine arts and history. Taught in English; knowledge of Spanish not required. Special projects for Spanish majors. Approved as a diversity course.

12.212 Spanish-American Culture and Civilization (Spring) (3) - Provides an understanding and appreciation of the present and past life of the Spanish-American Republics. Studies Aztec, Maya and Inca cultures using films and outside readings. Taught in English; knowledge of Spanish language not required. Approved as a diversity course.

12.214 The Hispanic World Today (3) - Provides an understanding and appreciation of the present Spanish-speaking world, in both Spain, Spanish-American countries and Spanish-speaking groups in the U.S. through geography, history, economics, politics, education, customs and fine arts. Taught in Spanish for Spanish majors and other interested people. Not offered every semester. Prerequisite: 12.204 or consent of instructor.

12.281-12.289 Special Topics (1-3) - Provides knowledge and training in fields not usually covered in regular courses. Content is determined by instructor and varies. Topics may include Spanish for Travelers and Women in Spanish Literature. Not offered every semester. Prerequisite: Varies according to the nature of the topic.

12.290 Spanish Studies Abroad (1-6) - Prerequisite: Minimum two semesters of Spanish or consent of the chairperson.

12.306 Structure and Composition (3) - Review of syntax and structure with application in composition. Not offered every semester. Prerequisite: 12.206 or consent of instructor.

12.309 Commercial Spanish (3) - Acquaints students with basic skills in Spanish trade correspondence and commercial reading. Emphasizes vocabulary and commercial idioms. Stresses elementary knowledge of commercial life and methods. For business students and others who desire to enhance their knowledge of Spanish. Not offered every semester. Prerequisite: 12.204 or an equivalent proficiency.

12.331 Selected 20th Century Writers (3) - Reading and discussion of selected modern works. Not offered every semester. Prerequisite: 12.207 or an equivalent proficiency.

12.402 Issues in the Hispanic Media (3) - Provides for further development of language fluency through discussion of a variety of topics and current issues in Hispanic media. Practice in advanced conversation emphasized. Not offered every semester. Prerequisite: 12.207 or an equivalent proficiency.

12.421 Hispanic Prose (3) - Reading and discussion of prose works by selected Spanish and Spanish American writers, concentrating on 20th century authors. Taught in Spanish. Not offered every semester. Prerequisite: 12.207 or an equivalent proficiency.

12.422 Hispanic Theater and Poetry (3) - Reading and discussion of plays and poetry by selected Spanish and Spanish American writers, concentrating on 20th century authors. Taught in Spanish. Not offered every semester. Prerequisite: 12.207 or an equivalent proficiency.

12.430 Short Story (3) - Acquaints students with the short story as an expression of culture by Spanish, Spanish American, Chicano and Puerto Rican authors and sensitizes students to cultural values in

the Hispanic world. Not offered every semester. Prerequisite: 12.207 or an equivalent proficiency.

12.490 Independent Study in Spanish (1-9) - Provides for individual study of a particular aspect of Hispanic civilization, language or literature under the supervision of a faculty member. Prerequisites: Consent of the instructor and the chairperson.

RUS (13) Russian

Administered by Department of Languages and Cultures

13.101 Russian I (Fall) (3) - Develops the four language skills and studies elements of Russian culture. Requires practice in the language laboratory. Also offered in spring on demand.

13.102 Russian II (Spring) (3) - Continuation of 13.101. Prerequisite: 13.101 or equivalent.

13.103 Russian III (3) - Continued development of four skills. Emphasis on reading and culture. Not offered every semester. Prerequisite: 13.102.

13.104 Russian IV (3) - Continuation of 13.103. Not offered every semester. Prerequisite: 13.103.

13.290 Independent Study in Russian (1-9) - Individual study of a particular aspect of Russian civilization, language or literature under faculty supervision. Prerequisite: Consent of the instructor and the chairperson.

ITL (14) Italian

Administered by Department of Languages and Cultures

14.101 Italian I (3) - Develops the four language skills and studies the Italian culture. Stresses basic grammar. Not offered every semester.

14.102 Italian II (3) - Continuation of 14.101. Emphasizes reading and writing. Not offered every semester.

CHI (16) Chinese

16.105 Chinese I (3) - Basic elements of Mandarin Chinese, with emphasis on spoken language. Introduces the Chinese culture. Requires practice sessions in language lab.

16.106 Chinese II (3) - Continuation of 16.105. Begin study of the Chinese characters. Requires practice sessions in language laboratory. Prerequisite: 16.105 or equivalent.

16.211 Foundations of Chinese Civilization (Fall) (3) - Chinese culture and civilization in historical perspective, with emphasis on art and philosophy. Taught in English. Approved as a diversity course.

16.212 China Today (Spring) (3) - Chinese culture and civilization today, with focus on art, political philosophy, customs and new directions. Taught in English. Approved as a diversity course.

16.400 Study Abroad (1-8) - By consent of the chairperson.

LAT (18) Latin

18.101 Latin I (3) - Develops reading and writing skills; emphasizes correct classical pronunciation. Introduction to Roman culture and civilization. Not offered every semester.

18.102 Latin II (3) - Continuation of 18.101. Develops reading and translation skills; teaches classical references through selected readings. Not offered every semester. Prerequisite: 18.101 or equivalent.

ENG (20) English

Administered by Department of English

When 20.203 is listed as a prerequisite, any 100-level or 200-level literature course may be substituted as the prerequisite.

20.101 Composition I (3) - Study and practice of the principles of composition to improve proficiency in writing skills.

20.111 Language and Social Interaction (3) - A study of varieties of language, verbal and non-verbal and their communicative and social functions.

20.112 Practical Grammar and Usage (3) - A study of grammatical forms, rules and accepted usage of current written standard English, with practical application to improve diction, sentence structure and style.

20.131 The Bible as Literature (3) - Examination of literary types found in the Old and New Testaments and their profound influence on Western culture.

20.151 Introduction to Literature (3) - Exploration of literature as experience and the techniques by which it communicates in short story, novel, drama and poetry.

20.152 Literature and Society (3) - Readings selected for consideration of purposes, characteristics, issues and values of specific areas (such as business, psychology or science) from a humanistic perspective.

20.153 Folklore (3) - A survey of such traditional forms of oral literature as epic, ballad, folksong, folktale and superstitions examined in terms of origin, transmission and influence on literature.

20.154 Folklore of the American West (3) - A study of folklore genres, including legends, tall tales, ballads and customs of Native Americans, English, French and Spanish of the Trans-Mississippi West.

20.156 Popular Literature (3) - Study of one type of popular literature (such as detective fiction, science fiction,

literature of terror or popular drama) and examination of its forms, conventions and ideas. Course content varies with each presentation of the course.

20.200 Writing Proficiency Examination (3) - A series of compositions written under examination conditions on topics provided by the staff. Faculty consultations and a writing laboratory are available for students in the course. Not for English majors. Prerequisite: 20.101.

20.201 Composition II (3) - Intermediate-level study and practice in composition, reinforcing and expanding basic writing skills. Instruction in short and long essays and in research-supported writing. Prerequisite: 20.101 or consent of department chairperson.

20.203 Approaches to Literary Study (3) - An introduction to writing about literature; a consideration of research techniques and types of literary analysis. Satisfies requirement for Composition II. Required for all English majors. Prerequisite: 20.101 or 20.104; open to all students. When 20.203 is listed as a prerequisite, any 100-level or 200-level literature course may be substituted as the prerequisite.

20.204 Introduction to Creative Writing (3) - An introductory course that covers theory and methods of creastive writing in prose and poetry forms. Students create and revise their own imaginative works using models by established writers, exercises and peer and instructor comments. Prerequisite: 20.101 or permission of the instructor.

20.205 Honors Composition (3) - Similar to 20.101 but offered only to freshmen exempted from 20.101 on the basis of admission criteria. Study and practice in short and long essays and in research-supported writing. Students who successfully complete 20.104 are exempt from a second writing course requirement.

20.226 European Literature I (3) - Major Continental literary works in translation from the classical Greek period through the Renaissance, including Biblical backgrounds.

20.227 European Literature II (3) - Major Continental literary works in translation from the 17th century to the present.

20.236 American Literature I (3) - Survey of American literature from its colonial beginnings through the Civil War.

20.237 American Literature II (3) - Survey of American literature from the Civil War through the modern era.

20.246 British Literature I (3) - Survey of British literature from Beowulf through Samuel Johnson.

20.247 British Literature II (3) - Survey of British literature from the Romantics through the modern era.

20.256 Non-Western Literature I (3) - Study of a literature or literatures outside the traditions of European-American cultures. Approved for diversity requirement.

20.257 Non-Western Literature II (3) - Study of a literature or literatures outside the traditions of European-American cultures, differing from 20.256 by either the literature(s) or the works studied. Approved for diversity requirement.

20.280 Poetry (3) - Exploration of the nature of poetry in terms of its aims, forms and substance.

20.287 Black Women Writers (3) - Introduces students to a wide range of black women writers from the United States, Caribbean and Africa. Approved for diversity requirement.

20.288 Feminist Reading of Culture (3) - Teaches students to "read" culture through a wide range of "texts," including television and film and to analyze sexism, racism, classism and homophobia. Approved for diversity requirement.

20.300 Writing Children's Literature (3) - Approaches to and practice in writing children's books for publication. Consideration of various literary types and techniques with discussion of field research in writing nonfiction, fiction and poetry for children. Prerequisite: 20.384 or 20.385 or consent of the instructor.

20.301 Creative Writing: Fiction (3) - Original creative work in fiction; critical analysis by the instructor and the class in group discussion. Prerequisite: permission of the instructor.

20.302 Creative Writing: Non-fiction (3) - Advanced study of writing nonfiction prose: form, style, audience, editing, evaluation. Prerequisite: 60 semester hours.

20.303 Creative Writing: Poetry (3) - Lecture and discussion concerning the fundamental theory and techniques of poetry writing together with writing and evaluation of poems in a workshop situation. Prerequisite: permission of the instructor.

20.306 Theory and Practice of Writing (3) - Introduction to new theories of writing and the teaching of writing including both study of and practice in the methods the theories require. Recommended for secondary education students in English, but open to all students interested in advanced work in writing. Prerequisite: 45 semester hours.

20.311 Structure of English (3) - Study of the sound patterns, morphology, word formation processes, semantics and syntax of modern English and of children's acquisition of their first language. Prerequisite: 45 semester hours.

20.312 History of the English Language (3) - Survey of the major developments in the English language from its Anglo-Saxon origins to the present. Prerequisite: 60 semester hours or consent of the instructor.

20.334, 20.335 Studies in American Literature (3) - Major American writers instrumental in shaping and interpreting the American experience. Writers vary with each presentation of the course. Prerequisite: 20.203.

20.341 Medieval Literature (3) - Major works of the Old and Middle English periods (the former in translation) that relate to a common theme, period or genre (such as drama or metrical romance), generally excluding the works of Chaucer. Prerequisite: 20.203.

20.342 The Renaissance (3) - The poetry and nondramatic prose of the 16th and 17th centuries (to 1660), excluding the works of Milton. Prerequisite: 20.203.

20.344 Restoration and Eighteenth Century (3) - The prose, poetry and drama of the period from 1660 through the end of the 18th century.

20.345 Romantic and Victorian Literature (3) - The poetry and prose of the late 18th and 19th centuries.

20.346, 20.347 Studies in British Literature (3) - Major writers instrumental in shaping and interpreting the British experience. Writers vary with each presentation of the course. Prerequisite: 20.203.

20.363 Shakespeare (3) - Study of Shakespeare's plays with emphasis on Shakespeare as poet and playwright and attention to conditions of the Elizabethan theater and history of the Shakespearean text. Prerequisite: 20.203.

20.364 Chaucer (3) - Chaucer's major poetry (with practice in speaking and reading Middle English) including consideration of the medieval social and intellectual contexts of his work. Prerequisite: 20.203.

20.365 Milton (3) - The poetry and prose of John Milton considered in the contexts of his age, his puritanism and his learning. Prerequisite: 20.203.

20.370 The English Novel (3) - History and development of the novel in England from its inception to the end of the 19th century. Prerequisite: 20.203.

20.372 Modern Novel (3) - Major modern novels, with emphasis on developments in fictional art. Writers vary with each presentation of the course. Prerequisite: 20.203.

20.374 Short Story (3) - The history, characteristics and techniques of the modern short story. Prerequisite: 20.203.

20.375 Renaissance Drama (3) - The plays of Shakespeare's predecessors and contemporaries and those of later Jacobean and Caroline dramatists. Prerequisite: 20.203.

20.377 Modern Drama (3) - Major Continental, English and American plays from Ibsen to the present with emphasis on contemporary attitudes, themes and style. Prerequisite: 20.203.

20.379 Modern Poetry (3) - A survey of contemporary poetry and poetic movements. Prerequisite: 20.203.

20.384 Literature for Children (3) - Studies the development of literature for children, including consideration of criteria for selecting literature for the classroom and library and methods for presenting literary works in an elementary classroom. Prerequisite: 60 semester hours.

20.385 Literature for Young Adults (3) - Critical discussion of literature aimed at young adult readers or popular with them, by such writers as S.E. Hinton, Robert Cormier, Judy Blume and Paul Zindel. Consideration of literary works for the secondary classroom with attention to the subject of censorship. Prerequisite: 60 semester hours.

20.386, 20.387 Studies in Contemporary Literature (3) - Study of a topic, author or movement significant in post-World War II literatures. Course content will vary. Prerequisite: 20.203.

20.388 Gender/Race/Class (3) - Analyzes identity-construction and cultural processes in constructing categories of gender, race and class. Approved for diversity requirement. Prerequisite: 20.203 or permission of instructor.

20.391 Literature and Film (3) - Film translations of literary texts, focusing on cinematic techniques, genre constructions, the formal codes and conventions of film, and critical vocabulary.

20.411 Modern Linguistic Theory (3) - A survey of modern developments in linguistics, including transformational-generative grammar; applications of theory to patterns of language acquisition; current adaptations of theory for presentation as grammar in schools. Prerequisite: 60 semester hours.

20.413 Language in American Society (3) - Review of social, political and philosophical perspectives on the historical development and current status of English and other languages in American society. Prerequisite: 60 semester hours.

20.431 American Romanticism (1820-1865) (3) - An advanced course in the significant literary and cultural movements and writers of the period 1820-1865. Special emphasis given to the works of Irving, Cooper, Emerson, Hawthorne, Poe, Thoreau, Melville, Douglass, Whitman and Dickinson. Prerequisite: 45 semester hours, including 20.203.

20.432 American Realism (1865-1914) (3) - Study of American literature between the Civil War and 1914. Content varies, but will include Twain, Howells, James, Wharton, Crane and Dreiser. Prerequisite: 45 semester hours, including 20.203.

20.433 American Modernism (1914-1945) (3) - Consideration of significant fiction, drama and poetry written between 1914 and 1945, with emphasis on writers and texts reflecting the social, political, intellectual and artistic diversity of the period. Prerequisite: 45 semester hours, including 20.203.

20.434 Contemporary American Literature (3) - Consideration of significant fiction, drama and poetry since World War II, with emphasis on writers and texts reflecting the social, political, intellectual and artistic diversity of the period. Prerequisite: 45 semester hours, including 20.203.

20.436 African-American Literature (3) - A detailed study of one of the three major areas in African-American literature: the African-American novel, the Harlem

Renaissance or African-American Writers. Prerequisite: 45 semester hours, including 20.203.

20.481 Special Topics (3) - Study of a topic in literature; topic varies with each presentation of the course.

20.488, 20.489 Seminar (3) - An opportunity to explore, at an advanced level, a literary or linguistic subject not offered in regularly scheduled courses. Content determined by the instructor. Prerequisite: 60 semester hours.

20.492 Literary Theory and Criticism (3) - Study of traditional literary criticism from Aristotle to the present, as well as of contemporary trends in literary theory, at an advanced level. Prerequisite: 60 semester hours.

20.493 Bibliography and Literary Research (3) - Investigation of methods of literary scholarship and study of book history and production with practice in preparing specialized bibliographies and planning scholarly projects. Prerequisite: 60 semester hours.

20.494 Rhetoric of Literature (3) - Study of major rhetorical devices, the nature and range of rhetorical designs; identification of these language devices in drama, prose and poetry; and discussion of their effects on the reading audience. Prerequisite: 60 semester hours.

20.495 Independent Study in English (3-6) - Prerequisite: 60 semester hours.

20.496 Literary Study Abroad (3) - A travel-study course for English majors and non-majors, concentrating on a writer or literary problem in the perspective of the relevant disciplines. Includes meetings with writers and scholars and the use of on-site resources. Area of emphasis determined by the instructor.

20.497 English Internship (1-12) - A work-study program. Open to English majors; others by departmental consent. Prerequisite: 60 semester hours completed.

(23) 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-person 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).

COM (25) Communication Studies

Administered by Department of Communication Studies and Theatre Arts

25.103 Public Speaking (3) - Introduces students to the essentials of effective oral communication and techniques for acquiring it and provides practical experience wherein these principles and techniques may be applied.

25.104 Interpersonal Communication (3) - Introduces students to the process of interpersonal communication. Students explore the role of conversations and relationships to enhance their participating in daily interactions and their critical awareness of the process.

25.108 Forensic Practicum(0-1) - Participation in forensics: debate or individual speaking events. Grades are awarded each semester. May be repeated for maximum of 3 semester hours of credit. First semester register for 25.108.01. Second semester register for 25.108.02. Participation for two semesters for one semester hour of credit.

25.205 Understanding Social Influence (3) - Highlights major trends in the study and practice of influence-seeking communication from the ancient Greek sophists to the contemporaries and the post modern.

25.206 Oral Interpretation of Literature (3) - Provides practice in skills necessary for conveying intellectual and emotional meanings in poetry and prose read to an audience.

25.207 Investigating Communication (3) - Introduces students to topics that communication scholars study, research questions that are typically posed, planning and design of studies, various methodologies, analysis of results and how to report these results in a meaningful manner.

25.210 Organizational Communication (3) - Explores the theoretical and the practical aspects of how communication patterns develop in organizations and what effect these patterns have on various organizational processes and outcomes.

25.215 Communication Theory (3) - Surveys the dominant theories of interpersonal relationship management, both general theories and those specific to particular interests.

25.218 Discussion (3) - Presents a survey of and practice in types and patterns of public discussion and study of informal discussion characteristics and application. .

25.220 Intercultural Communication (3) - Explores communicating in cultural contexts and general principles for communication across cultures with the goal of becoming competent communicators. Approved for diversity requirement.

25.306 Computer Applications for Professional Communicators (3) - Introduces students to how computers are used in the field of communication. Students learn how to design and present effective electronic presentations, the theory and procedures

of desktop publishing and how to use the Internet. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.307 Communication for Business Professionals (3) - Studies business and professional communication, salesmanship (selling skills and methods), conference and interviewing. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.309 Gender Issues in Communication (3) - Presents a broad range of theories concerning the nature of differences in communication behavior between the sexes and the presumed origins of such differences. Examines communication theories about relationships between the sexes in families and other intimate associations, in business roles and in society at large. Primary focus is on contemporary U.S. society, but some historical and cross-cultural contrasts will be explored. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.313 Communication and Conflict (3) - Analyzes the role of communication in the generation, process and management of destructive and constructive conflict on interpersonal, small group organizational and societal levels. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.315 Persuasion (3) - Examines the way people use symbols to influence other people. Provides practice in presenting and evaluating persuasive messages. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.321 Argumentation (3) - Examines basic principles of argument and evidence. Provides practice through presentation and refutation of arguments in debates on controversial issues. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.406 Evaluating Communication (3) - Provides an intensive examination of the philosophy, theory and practice of rhetorical criticism — the analysis, interpretation and evaluation of communication designed to influence human thought and/or action. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.407 Interviewing (3) - Students explore the interview as a specific communication event, with its own rules, procedures and strategies. Acquaints students with a variety of interviewing contexts, such as selection, performance appraisal, informational, helping, sales and health care, by blending current theory and research with practical skills and applications. Students prepare and conduct interviews and receive feedback on oral and written performances. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.413 Community Leadership (3) - Identifies the communication skills that leaders need to influence the information environment and the collective action of organizational members. Special attention is given to the flexibility necessary for functional leadership in a diverse society. By developing communication skills, students are empowered to accept leadership positions in personal, business, community, government and media contexts. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.417 Evaluating Media Influence (3) - Develops and applies a media perspective for criticism. Examines the ways in which the structural and formatting tendencies of communication technologies privilege different perceptual modes, behaviors and lifestyles. Students explore and examine the ways in which each medium of communication structures and formats experiences and understandings. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.419 Communication in the Family (3) - By promoting awareness of family communication issues and practices and providing training in relationship enhancement, the course offers students the knowledge and skills necessary to build, adjust and maintain more functional family interaction processes. Considers the communication processes within the family as well as the extent to which they influence or are influenced by larger social systems. Special attention given to the diversity of family experience. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.423 Communication Training in Organizations (3) - Advanced presentation skills for students exploring career opportunities as communication trainers in an organization or as independent training consultants. Includes information about such topics as needs assessment and task analysis, theories of adult learning, systems for developing instructional objectives, preparation and presentation of workshop sessions and evaluation of outcomes. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.424 Corporate Communication (3) - Advanced writing skills for students exploring career opportunities as a publicist or corporate writer in an organization or as an independent communication consultant. Includes information about organizational planning, audience analysis, professional guidelines and writing standards, qualitative and quantitative research, design and layout of publications and use of computers in publication and presentation.

Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.425 Communication in Relationships (3) - Acquaints students with the theories and methods used to examine the processes of communication in interpersonal relationships. Students review general principles of human communication, address communication skills considered important for effective communication in relationships, analyze communication behavior in the formation, maintenance and dissolution of interpersonal relationships, explore interpersonal communication theory in specific settings and discuss several philosophical orientations to interpersonal communication. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.426 Leadership and Team Building (3) - An intensive survey of theory and research pertaining to working in small groups. Includes a focus on practical knowledge required to become a productive participant and leader in small group contexts. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.470 Independent Study (1-3) - Provides for individual work and study in one of the areas of rhetoric and communication. Student finds a faculty sponsor, prepares a written proposal that requires departmental recommendation and the dean's approval, arranged through the chairperson. See section on Independent Study.

25.492 / 25.493 / 25.495 Advanced Studies in Communication (3) Investigates significant aspects of communication studies. Topics vary by semester and include nonverbal communication, political communication and cultural foundations of the information society. Consult the schedule booklet or the listed instructor for further information. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.494 Advanced Studies in Communication: Diversity Focus (3) - Investigates significant aspects of communications studies. Topics are approved as diversity courses. Consult the schedule booklet or the listed instructor for further information. Prerequisites: 25.103 or 25.104; at least one of 25.205, 25.210, 25.215 or permission of the instructor.

25.497 Internship in Communication (3-12) - Integrates classroom experience with practical work experience in industrial, business or government work settings. Students must establish academic integrity of their proposed experience and its relevance to coursework in the major. Contact departmental internship coordinator to obtain detailed information and forms.

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.

THE (26) Theatre Arts

Administered by Department of Communication Studies and Theatre Arts

26.101 Career Seminar: A Theatre Life in Bloom (2) - Presents an introduction tothe theater professions and to general theater practice. Individual goal-setting for participation in the major and in the profession. Required for theater majors.

26.102 Introduction to Theatre Arts (3) - Presents a survey of the literature, production and criticism of the theater. Required for theater majors.

26.108 Theatre Practicum (0-1) - Participation in plays: acting or technical work. Grade awarded each semester. Participation for two semesters for 1 semester hour of credit. May be repeated for maximum of 3 semester hours.

26.112 Fundamentals of Acting (3) - Introduces the theories and techniques of acting. Provides for individual and group exercises.

26.200 Voice and Movement (3) - Second in a series of courses designed for performance training. Explores theconcepts of kinesthetic awareness, proper use of the voice for the state and vocal interpetarion of text.

26.202 Understanding Plays: Script Analysis (3) - An introduction to the tools and methods used to develop an approach to understanding plays. Provides the basis for theatrical criticism and for an aesthetic appreciation of theater through

development of the critical skills of script analysis expressed in both written and oral form.

26.209 Theatrè Appreciation (3) - Presents a survey of all aspects of theater: acting, criticism, design, directing, history and production.

26.211 Theatre Production/Stagecraft (3) - Studies basic stagecraft: scene construction, painting, drafting and crewing of a show. Laboratory work required.

26.215 Theatre History I (Spring) (3) - Surveys structures, production practices, plays and the theater's function in societies from ritual beginnings through the 19th century.

26.219 Children's Theatre (3) - A survey of history, theory and production of theater for young audiences.

26.270 Fundamentals of Theatre Design (3) - An introduction to the elements and design for theatrical production, including scenery, costumes, make-up, lighting and sound. First in a series of courses designed for training in design technology for theater. For theater majors and other interested students.

26.277 Costume Construction (3) - Introductory studio course in the tools and techniques of producing costumes for the stage. Provides a basic working knowledge of the construction of costumes. For theater majors and other interested students.

26.311 Screen Design (3) - An introduction to basic movements and the methods, approaches, tools, materials and visual concepts of scene design.

26.312 Intermediate Acting (3) - Explores the relationship between the personalized actor, his/her ensemble of fellow artists and the script. Prerequisite: 26.112

26.314 Theory of Stage Lighting and Design (3) - Provides for intensive study of theory and design of lighting of a production supplemented by applied work on productions. Laboratory hours required.

26.321 Theatre and Stage Management (3) - Prepares students for professionalism in production of plays and the management of a theater company.

26.325 Theatre History II (3) - Provides an intensive examination of structure, production practices, plays and the theater's funciton in societies from the Renaissance to the mid 19th century. Required course for theater majors as well as a course for others interested in the art form of the theater and its history. Prerequisite: 26.215.

26.340 Scriptwriting (3) - Studies dramatic structure, types and styles of drama. Students are required to write scripts for stage, film, radio or television. Prerequisite: One writing course or consent of the instructor.

26.370 Stage Makeup (3) - Studio course covering aspects of stage maekup from basic modeling with paint to creating complex characterizations. Provides a basic working knowledge of the design and application of makeup for the stage. For theater majors and other interested students. Prerequisite: 26.270

26.377 Costuming for the Stage (3) - The study and application of costume design for the theater including methods, tools, materials and visual concepts.

26.401 Career Seminar: A Life in the Theatre (2) - Peparation for the move from college to the professional theater environment. Portfolio presentation. Evaluation of professional goals to the theater. Required for theater majors. Prerequisite: 26.101, senior standing, permission of the instructor.

26.411 Play Directing (3) - An overview of the principles and techniques of directing and the collaborative process with an introduction to script analysis needed for concept development. Prerequisite: One course in theater. Prerequisites: 26.112 or 26.270 and one other design or performance course.

26.416 Modern Theatre (3) - Continues the study of theater history from 19th century through the theater of today. Prerequisite: 26.215 or consent of instructor.

26.412 Advanced Acting (3) - Character analysis based on scriptwork. Students begin to focus on particular areas of development. Prerequisites 26.112, 26.312

26.470 Independent Study (1-3) - Provides for individual work and study in one of the areas of theater. Student finds faculty sponsor and prepares a written proposal, which requires departmental recommendation and dean's approval, arranged through the chairperson. See Independent Study.

26.490 Seminar: Theatre (3) - Provides for a concentrated study of an individual artist, a period or a movement in theater. Offered on demand. Prerequisite: 9 semester hours in theater or consent of the instructor.

26.491 Seminar in Technical Theatre and Design (3) - Provides opportunities for advanced studies and application of special topics as selected by the instructor. Examples might include advanced studies in lighting, costume or scene design or technical theater management. Prerequisites: 26.270 and one other design or technical course and permission of the instructor.

26.492 Seminar in Performance Studies (3) - Provides opportunities for advance studies and application of special topics as selected by the instructor. Examples might include advanced studies in audition techniques, acting styles or performance theory. Prerequisites: 26.112, 26.312 and permission of the instructor.

MSC (27) Mass Communications

Administered by Department of Mass Communications

Note: Prerequisites may be waived by an instructor subject to the concurrence of the departmental chairperson.

27.110 Mass Communications and the Popular Arts (3) - A comprehensive overview of mass communications and their relative impacts on society and culture. Covers magazines, newspapers, motion pictures, radio, television, public relations, advertising, ethical codes and media regulations.

27.190 History of Film (Spring) (3) - An overview of the history and growth of the motion picture. Studies film genres, historical figures, technicians and performers. Students must view approximately 15 films during the course in laboratory showings.

27.230 Newswriting (3) - Outlines the "theory" and techniques of news reporting; the historical development of reporting, its practices and principles and the organizational patterns of news stories and gathering of news. An elementary outline of defamation and libel is included. Student should be able to type 30 to 40 words per minute before enrolling in this course.

27.241 Mediagraphics (3) - Computer-generated design and layout problems and applications for printed and visual material including newspaper and magazine pages as well as advertising layouts and visual presentations for video and television material.

27.251 PR: Theory and Practice (3) - An introduction to the development, principles, theories and practice of public relations as a social and organizational implement. Looks briefly at the communication process, publicity, community relations and public affairs practice.

27.261 Principles of Advertising (3) - Introduces students to the basic objectives and procedures of advertising in a modern economy. Examines the variety of components and methods used to achieve specific objectives in advertising campaigns and the type of instruments used for advertising.

27.271 Media Operations (3) - Concentrates on the knowledge and physical use of technical requirements that operate the growing range of equipment needed to produce contemporary radio, television and video programs.

27.275 Cinema Appreciation (Fall) (3) - Examines film form, theory and criticism to bring about a better understanding and greater appreciation of the motion picture. Enhances the visual appreciation required in modern media. Approximately 15 films viewed.

27.297 Mass Communications Practicum (3) - Requires participation in film, television, radio or print productions in any of the sequences offered in the department or other departments on campus having similar needs relevant to mass communications.

27.310 Media Law (3) - Surveys legal restraints that influence the nature and content of mass media messages and business practices. Covers historical developments, criminal libel, sedition, defamation, privacy, copyright, obscenity, shield law, freedom of information, free press-free trial, unique broadcast policies, advertising and antitrust problems.

27.315 Social Foundations of Mass Communications (3) - An interdisciplinary study of the historical, philosophical, social, economic and legal foundations of American mass media as a base for study of contemporary mass media. Examines media from the perspective of journalists, owners, audience and government.

27.334 Editing (3) - Designed to improve writing for newspapers, magazines and brochures. Indicates particular types of styles most used; emphasizes good, tight copy in news stories; offers practice in headline writing and some elementary layout and design including photo editing. Suggests some defenses to possible defamation and libel problems for copy editors. Prerequisite: 27.230.

27.340 Feature Writing (3) - Outlines basic requirements for feature-type articles for newspapers and magazines. Studies various techniques used to gather information and to develop a range of feature articles. Includes practical work as well as the study and discussion of published articles and marketing strategies. Prerequisite: 27.230.

27.352 Publicity and Public Relations (3) - Comprehensive study of various publicity techniques used in public relations efforts of business, government and nonprofit organizations. Students prepare press releases, public service announcements, speeches, slide programs or other appropriate communication vehicles. Prerequisite: 27.251.

27.360 Mass Media Processes and Effects (3) Locates specific issues in mass media exposure, identifying various ways in which individuals and the whole body of society depend on information provided by the mass media. Prerequisite: junior standing.

27.366 Design in Advertising (3) - Principles of advertising layout and design in print and broadcasting. Includes hands-on experience in layout, typography and paste-up in addition to theory. Prerequisite: 27.261.

27.367 Television Acting and Directing (3) - Provides instruction in acting and directing for television. Includes laboratory hours. Prerequisite: 27.271.

27.371 Broadcast Journalism (3) - Studies technical elements of broadcast writing, script formats and nondramatic material; provides opportunities to study, write and announce news, commercials and other broadcast material. Prerequisite: 27.271 and 27.230.

27.375 Broadcast Programming and Management (3) - Studies television and radio management and programming; examines each medium as a business and the elements of success or failure. Studies some basic economics of media and methods of handling

this material as well as codes, laws and community interests. Prerequisite: Junior standing.

27.390 Film and Video Production (3) - Reviews the basic processes of filmmaking in an introductory but comprehensive manner. Concentrates on making short silent films and requires laboratory hours and field work by arrangement. Students provide their own film stock for shooting and pay film processing costs. Prerequisite: 27.271.

27.420 Audience Analysis (3) - Explores the theoretical distinction between the social world of actual audiences and the discursive constructs of mass media audiences. Charts the development of an ethnographic understanding of mass media audiences that focuses on the diverse, the particular and unpredictable in everyday life. Stresses design and construction of various research methods on mass media audiences. Prerequisites: junior standing.

27.435 Journalism Seminar: Special Topics (3) - Studies a variety of ethical and practical problems in journalism. Topics may vary each semester. May be repeated with different topics to a maximum of three seminars with approvals of adviser and chairperson. Prerequisite: 27.230.

27.440 Public Affairs Reporting (4) - An advanced reporting course on the role of public affairs in news reporting in mass media. Concentrates on a number of governmental "beats" most susceptible to news generation. Students learn basic abilities consistent with entry-level professional reporting requirements in public affairs coverage, including courts, police and government. Prerequisite: 27.340.

27.446 Magazine Editing and Production (4) - Acquaints students with principles and techniques of magazine production including manuscript selection and editing, advertising, design, production, circulation, promotion and various business operations. Study of the nature of magazines as part of a mass communications system. Each semester students produce a community/regional consumer magazine. Prerequisites: 27.334, 27.340 or consent of the instructor.

27.455 Public Relations Cases and Problems (3) - A study of the use of publicity as a particular element of public relations. Examines specific publicity cases and requires practical hands-on production of written material. Prerequisite: 27.352.

27.466 Advertising Media and Campaigns (3) - Study of the use of advertising media, methods of selection and the skills and background required for media buying and traffic planning. Basic principles and applications of advertising research and campaign planning, preparation and presentation are taught in a problem-solving format. Prerequisite: 27.366.

27.478 Independent Study (1-3) - Provides for individual work and study in an area of mass communications concentration. Students find a faculty sponsor/adviser and prepare a written proposal, which must have departmental approval and approval of the dean, College of Arts and Sciences.

27.480 Telecommunications Production Workshop: Special Topics (3) - A practical workshop program in which telecommunications majors undertake specific instruction on the technical aspects of their major. Topics may change from semester to semester and students may be required to work on specific projects, such as telethons or television news, as part of their workshop programs. Workshops may be repeated provided topics change. Instructor's and department chairperson's approvals required.

27.482 Mass Communications Seminar (3) - A seminar program that studies ethical and social problems resulting from the pervasiveness of new technologies. Topics may change from semester to semester. Students may repeat seminars, subject to a change in topic and with the approvals of the instructor and department chairperson.

27.485 RTF Authorship Theory and Practice (3) - A study of the construction of documentary and dramatic material in terms of telecommunications/film semiotics with an overall survey of production and business problems. A project course designed primarily for film, television and radio majors moving into mass communications production seminars. Prerequisite: 27.271.

27.497 Mass Communications Internship (3-9) - Open to junior and senior majors with a GPA of 2.75 in the major, although consideration will be given for other practical experience students may have. May include on-campus or off-campus study of a particular project arranged by the student, adviser and department chairperson. Interns are expected to have completed several of their basic specialist courses prior to applying for internships. Projects must be submitted in writing at least a month before the project is expected to begin and must be approved by the student's adviser and department chairperson. Course may be repeated within catalog regulations. Internships will become a compulsory part of the mass communications program. Credit is based on 3 semester hours for each 10 hours of work undertaken per week per semester. Limit is 9 total semester hours for internships. Special arrangements must be made for summer internships.

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.

PHL (28) Philosophy

Administered by Department of Philosophy

28.110 Critical Thinking (3) - Designed for students to learn how to think critically. Emphasis is on the construction and evaluation of arguments. Surveys several forms of argument including inductive, deductive, analogical and legal reasoning.

28.111 Introduction to Philosophy (3) - Presents reflective inquiry into selected problems of general philosophic interest. Considers the types of knowledge, individual and social values, the nature of reality and the existence of God.

28.270 Logic (3) - The study of formal deductive reasoning, course covers the nature of argument, Aristotelian term logic, stentential logic, predicate logic and quantification and proof theory. Students construct formal proofs and translate from natural language into logical formulas.

28.290 Medical Ethics (3) - Investigates moral issues that arise in such medical contexts as human experimentation, death and dying, medical care and its distribution, genetic engineering and the definition of health and illness.

28.292 Contemporary Moral Problems (3) - Investigates some of the major contemporary (and perennial) moral problems: abortion and the rights of the fetus; pornography and its control; crime and its punishment; obedience to laws; discrimination based on race and sex; decision-making procedures; social justice; drugs, suicide and euthanasia; freedom and its limits.

28.295 Business Ethics (Spring) (3) - Review of moral canons in relation to business practice. Moral concepts are applied in analyzing situations. Utilitarianism, Kantianism and contemporary Egalitarianism are introduced as aids in decision making. General principles and concrete cases considered.

28.297 Ethics (3) - Studies ethical theory focusing on such issues as ethics as a branch of knowledge, egoism vs. altruism and role of intentions and consequences in moral judgments. Reviews theories such as relativism, utilitarianism and Kantianism. Investigates concepts of "rights" and "justice.".

28.321 Plato and Aristotle (Fall) (3) - Studies the origins of Western philosophy in ancient Greece. Examines Plato's philosophical writings in light of pre-Socratic speculation on one hand and in terms of Aristotle's criticisms and developments on the other.

28.324 Descartes to Kant (Spring) (3) - Examines the writings of the 17th and 18th century philosophers: Descartes, Hobbes, Locke, Berkeley, Hume, Kant and others. Topics include: the nature of reality, the sources and limits of knowledge, the relation between mind and body and the possibility of a rational basis for religious belief.

28.328 Existentialism (Spring/even-numbered years) (3) - Studies the writings of philosophers and theologians such as Kierkegaard, Nietzsche, Husserl, Sartre and Tillich. Major themes include human subjectivity, human freedom, alienation and meaning.

28.329 20th Century Philosophy (Fall/odd-numbered years) (3) - Examines 20th century philosophical movements. Emphasizes the relation between language and philosophy, particularly views about truth, free will, the nature of morality and religion and the nature of mind.

28.404 Philosophy of the Social Sciences (3) - Examines philosophical problems in the social sciences including objectivity, classification, explanation, the nature of laws and the nature of social facts.

28.405 Philosophy of Law (Fall/even-numbered years) (3) - Examines the theoretical background of the law and legal systems. Encourages students to develop their own views about the proper use of the law. Topics include the concepts of "law" and "legal system", limits of the law and justification of punishment.

28.406 Philosophy of Religion (3) - Presents a critical analysis of the origins and nature of faith. Emphasizes types of religion, evidence supporting religious belief and problems in and challenges to religion.

28.407 Contemporary Political Philosophy (Fall/odd-numbered years) (3) - Studies the nature of the good and just state, the limits and powers of the state. Investigates competing theories of neo-Aristotelianism, utilitarianism, contractarianism, libertarianism, Marxism and anarchism. Addresses questions concerning the obligations of an individual citizen to the state.

28.408 Feminist Philosophy (3) - Explores the major trends in feminist philosophy including liberal, Marxist, socialist, radical and psychoanalytic approaches. Explores such questions as whether women's experience differs from men's and the extent to which male domination informs woman's experience. Considers recent feminist attempts to articulate an emancipating standpoint.

28.418 Contemporary Philosophy of the Mind (Fall/even-numbered years) (3) - Explores the philosophical foundations of the interdisciplinary field of cognitive science. Topics discussed include contemporary scientific solutions to the mind-body problem, the possibility of artificial intelligence and the nature and success of cognitive explanations in psychology.

28.419 Theory of Knowledge (Spring/odd-numbered years) (3) - Inquires into the problem of knowledge, certainty and skepticism. Reviews theory of perception; discusses concepts of meaning and truth.

28.420 Metaphysics (3) - Introduces the main themes and literature in contemporary metaphysics. Issues explored include why there is something rather than nothing? Are there properties, numbers, propositions

and sets? What are holes, surfaces and boundaries? Can an object change its parts and remain the same? Prerequisite: any philosophy course other than 28.110, 28.212 or 28.213 or permission of the instructor.

28.470 Independent Study in Philosophy (3-6) - Provides for individual study of a particular philosophical problem under the guidance of the staff. Emphasizes independent research on topics selected by the student and the faculty member. Course may be taken twice. Prerequisite: 6 semester hours of philosophy. See section on Independent Study.

28.471 Seminar (3) - Studies selected problems in philosophy.

ART (30) Art

Administered by Department of Art.

30.101 Introduction to Art (3) - Examines major works of art and architecture and the cultural forces that shaped them from ancient times to the present, from a global perspective.

30.205 Children's Art (3) - Provides encounters with the art of children and ways to promote attitudes of discovery and invention, with emphasis on growth of expression.

30.385 Philosophy and Psychology of Art (3) - Studies major philosophical points of view governing an understanding and criticism of the arts, past and present.

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)

ARH (31) Art History

Administered by Department of Art

31.215 American Art History (3) - Studies the history of visual arts in America.

31.225 History of Architecture (3) - Presents a study-survey of great architectural works of the past and the present including examples of both East and West.

31.235 Ancient and Medieval Art (3) - Studies the history of the visual arts on the European continent from the prehistoric era up to and including the Late Gothic.

31.236 Art from the Renaissance Through Impressionism (3) - Studies the history of the visual arts beginning with the Italian Renaissance up to and including French painting of the 19th century.

31.324 History of Photography (3) - Surveys the history of photography from its invention in 1839 to the present. Includes development of photography as a medium of asethetic expression, technical evolution of photography and photography's impact on both culture and society.

31.345 Art History of the Near East (3) - Studies the history of the visual arts of the Islamic and the Mesopotamian worlds.

31.346 Art History of the Far East (3) - Studies the history of the visual arts of India, China, Japan and Southeast Asia.

31.355 History of Modern Art (3) - Examines movements in art from mid-19th century France to the contemporary United States.

31.360 Women, Art and Society (3) - Introduces students to the relationships between women and the production and reception of the visual arts in Europe and America from the Middle Ages to the present. Themes include the contributions of women artists to the history of art, the social and cultural forces that shaped representations by and of women, and the means by which images framed attitudes about femininity.

31.365 Italian Renaissance Art (3) - Addresses the painting, sculpture and architecture of the Renaissance in Italy with a view toward historical and social context, patronage and theory.

31.366 Northern Renaissance Art (3) - Introduces students to the history of the visual arts in Northern Europe from c. 1375 to 1575, during the period termed "The Renaissance." Examines major trends in painting, manuscript illumination, sculpture, printmaking and architecture in France, the Netherlands and Germany and explores the social and cultural factors that shaped the arts of the period.

31.373 Romanesque and Gothic Art (3) - Introduces students to the history of the visual arts in northern Europe from c. 1050 to c. 1400 during the periods termed "Romanesque" and "Gothic." Examines major trends in painting, architecture, sculpture, drawing, manuscript illumination, metal and ivory work, stained glass and tapestry and explores the social and cultural factors that shaped the arts of these periods.

31.375 Independent Study in Art History (3) - Research and scholarship on a selected, approved topic in art history under the supervision of a faculty member, resulting in a publishable paper.

31.390 Foreign Study Italy (3) - An examination of the art of Italy, particularly the Renaissance, with special reference to its physical and historic context, through studying original works of art in Italy, on site whenever possible. Summer only.

31.395 Visual Aesthetics (3) - A seminar emphasizing artistic relationships and theories of aesthetics and art criticism.

31.450 Perspectives on Museums (3) - Addresses the social and cultural history of art museums from the late Middle Ages through the present. Introduces the basic purposes and responsibilities of museum - collecting, preserving and interpreting - and the duties of museum staff. Explores museum ethics, training, exhibitions and technology.

31.460 Research and Writing in Art History (3) - Sharpens research and writing skills for students by preparing an art history research paper that is substantial in content and length, reliant on primary visual and textural material, consistent with current art historical methodologies, and professionally crafted and presented. Oral presentations address research problems and their possible solutions.

31.451 The Museum Exhibition (3) - Provides hands-on experience by organizing and installing an exhibition in Haas Gallery of Art. Trains students in gallery design, handling and assessing physical conditions for works of art, writing educational materials, providing public functions such as tours and critically evaluating installations in other museums.

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 European Art History (3) - Research focuses on specific topics relating to visual arts in Europe.

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. 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 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.

31.592 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.

ARS (32) Art Studio

Administered by Department of Art

Level I courses are open to all students

32.111 Drawing I (3) - Examines various approaches toward drawing and explores the use of a variety of drawing materials. Studio practice and class critiques address each person's power of observation, craftsmanship, self-expression and growth.

32.151 Three-Dimensional Design (3) - Introduction to the basic elements and principles of design such as the organization of visual elements and color, with emphasis on three-dimensional design.

32.152 Two-Dimensional Design (3) - An introduction to the basic elements and principles of design such as the organization of visual elements and color, with an emphasis on two-dimensional design.

32.195 Computer Art Graphics (3) - An introductory course exploring the potential of the computer as a tool to create fine art. Stresses images based on current computer technologies and use of software and computers to create new kinds of images. Emphasis on using technologies with a fine arts approach.

32.201 Ceramics I (3) - Introduces the processes of making and firing ceramic objects.

32.202 Ceramics II (3) - Affords students the opportunity to become more involved by selecting their own methods of work. Prerequisite: 32.201.

32.210 Life Drawing (3) - Examines various approaches to drawing the figure. Students study anatomy and continue to develop technical facility with a variety of media. Contemporary and historical figurative concerns are examined.

32.212 Drawing II (3) - Continues exploration of attitudes and materials stressing composition and form. Includes work from the human skeleton and linear perspective. Prerequisite: 32.111.

32.221 Fabric Design I (Fall) (3) - Introduction to a variety of methods, approaches, tools, materials and visual concepts in designing with fibers.

32.222 Fabric Design II (Fall) (3) - Continuation of 32.221 with limited areas of concentration selected by each student. Professional methods, approaches and attitudes discussed. Prerequisite: 32.221.

32.231 Painting I (3) - Introduction to the methods, materials and concepts of painting. Provides exploration of and increased sensitivity to one's environment through color. Prerequisite: 32.111

32.232 Painting II (3) - Devotes attention to the development of the technical skill inherent in the formation of images. Includes the study of the landscape as a concept in painting. Prerequisite: 32.231.

32.241 Sculpture I (3) - Explores three-dimensional artistic expression with an emphasis on introducing students to basic sculptural materials.

32.242 Sculpture II (3) - Promotes continued development in the use of materials and processes; strives for unique individual expression. Prerequisite: 32.241.

32.251 Weaving I (Spring) (3) - Provides an introduction to weaving including foot-powered looms and off-loom techniques. Weaves, fibers, spinning and looms will be part of the studio experience. Prerequisite: 32.152 or consent of instructor.

32.252 Weaving II (3) - Requires a loom-controlled sampler plus continued experience in weaving techniques and artistic decision dealing with fibers. Prerequisite: 32.251.

32.261 Graphics I: Printmaking (3) - Introduction to the methods, materials and concepts of graphic art through exploration of basic printmaking techniques.

32.262 Graphics II: Printmaking (3) - Emphasis on color printmaking and color registration procedures. Provides a concentration in serigraphy and intaglio techniques. Prerequisite: 32.261.

32.275 Crafts I (3) - Introduction to a varied array of crafts, methods, tools, materials, techniques and artistic concepts.

32.276 Crafts II (3) - Provides a continued exploration of selected in-depth crafts processes and concepts on a more professional basis. Prerequisite: 32.275.

32.281 Photography I (3) - Introduction to black and white photography as a medium of visual expression. Technical emphasis on fundamental camera and exposure controls and introduction to darkroom printing techniques. Photographic style, composition and theory discussed. Students must have a 35mm camera and provide their own film and paper.

32.282 Photography II (3) - Continues exploration of black and white fine art photography. Emphasis on refining exposure and printing skills. Introduces zone system metering, medium format photography and alternative photographic processes. Students must have a camera and provide their own film and paper. Prerequisite: 32.281.

32.283 Introductory Color Photography (3) - Introduces students to color photography as a significant medium of communication and aesthetic expression and to the theory and processes involved in producing color photographs. Introduction to alternative color photographic processes will also be taught. Prerequisite: 32.281

32.303 Ceramics III (3) - Provides student an opportunity to specialize through the pursuit of making an art object. Prerequisite: 32.202.

32.304 Ceramics IV (3) - Requires students to be responsible for making, firing and showing their own wares. Prerequisite: 32.303 and permission of the instructor.

32.313 Drawing III (3) - Entails studio practice, outside assignments and critiques in pursuit of self-discovery and personal expression. Each student completes an individual project. Prerequisite: 32.212.

32.314 Drawing IV (3) - Continues studio practice and outside assignments Critiques stress individuality and deep involvement of personal expression. Each student pursues an individual project. Prerequisite: 32.313 and permission of the instructor.

32.323 Fabric Design III (Fall) (3) - Provides a continuation of Fabric Design II with concentration in one area selected by the student. Focus is on refining one's craft, visual perception and professional attitude. Prerequisite: 32.222.

32.324 Fabric Design IV (Fall) (3) - Presents a continuation of Fabric Design III with each student functioning in a highly independent and professional manner in one area. Prerequisite: 32.323 and permission of the instructor.

32.333 Painting III(3) - Provides development toward maturity of study and statement. Includes study of the figure as a concept in painting. Prerequisite: 32.232.

32.334 Painting IV (3) - Provides advanced work planned for individual needs. Paintings are structured from experiences based on previous development. Prerequisite: 32.333 and permission of the instructor.

32.343 Sculpture III (3) - Focuses on the expansion of expression and its relationship to sculptural processes. Prerequisite: 32.242.

32.344 Sculpture IV (3) - Enables advanced, independent work toward a maturing, personal expression in sculpture. Prerequisite: 32.343 and permission of the instructor.

32.353 Weaving III (Spring) (3) - Provides continued experience in weaving techniques with emphasis on in-depth production, two-dimensional or three-dimensional. Prerequisite: 32.252.

32.354 Weaving IV (Spring) (3) - Develops an individualistic approach to weaving with emphasis on in-depth production. Prerequisite: 32.353 and permission of the instructor.

32.363 Graphics III: Printmaking (3) - Exploration of mixed media printmaking methods and concepts. Emphasizes photographic and lithographic techniques. Prerequisite: 32.262.

32.364 Graphics IV: Printmaking (3) - Exploration of experimental printmaking. Emphasis on personal expression. Prerequisite: 32.363 and permission of the instructor.

32.383 Photography III (3) - Requires students to develop personal photographic projects to produce during the semester. Emphasizes individual exploration of black and white photographic materials and processes. Students must provide a 35 mm camera, film and paper. Prerequisite: 32.282.

32.384 Photography IV (3) - Requires students to produce personal photographic projects resulting in final portfolios and an exhibition of fine art photographic prints. Students must provide a 35mm camera, film

and paper. Prerequisite: 32.383 and permission of the instructor.

32.475 Independent Study in Studio Arts I (1-3) - Allows individualized independent study in a selected studio area. Amount of course credit awarded is determined by the instructor on the basis of the substance and depth of the project to be undertaken. Prerequisite: Satisfactory completion of four levels of a studio area or its equivalent.

32.476 Independent Study in Studio Arts II (1-3) - Extension of 32.475 Independent Study in Studio Arts I.

32.480 Internship in Art (3-6) - Provides upper-level art majors with an opportunity to acquire meaningful experiences in practical work situations outside the regular courses prescribed by art curriculum (e.g., museum curator, designers, merchandising operations, artists).

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 experimentations 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-evaluation 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.

MUS (35) Music

Administered by Department of Music

Courses are offered each semester unless otherwise noted

35.101 Music Listening (3) - Provides an approach to music listening through study of basic vocal and instrumental styles. Analysis of various masterpieces, composers and musical forms. Requires no previous musical experience. Recommended first-course in non-applied music.

35.103 Fundamental Musicianship (Spring) (3) - Explores personal music understanding and development through elementary terminology, symbols, theory, music reading, playing and chording of simple instruments. Suggested for students with little musical background as preparation for applied study and courses 35.201, 35.210 and 35.320. Recommended first-course in applied music.

35.104 Jazz in America (Spring) (3) - Provides an approach to jazz listening through the study of jazz vocal and instrumental styles from diverse origins to the present and beyond. Analysis of various masterpieces, composers, performers and musical forms.

35.106/ 35.306 Maroon and Gold Band (0-1) - Performs music of varied styles and periods. Marching band each fall, Concert band each spring. Requires 5 hours per week each fall and 4 hours per week each spring. Band front by audition.

35.107/ 35.307 University-Community Orchestra (0-1) Performs music appropriate to the symphony orchestra. Requires 3 hours per week. Rehearses Monday evenings. Election for wind and percussion players requires permission of the instructor.

35.108/ 35.308 Concert Choir (0-1) - Performs choral music of varied styles and periods. Membership by audition only. Requires 4 hours per week.

35.109/ 35.309 Women's Choral Ensemble (0-1) - Performs varied styles from popular to masterworks. Requires 3 hours per week. No audition required.

35.110/ 35.310 Husky Singers (0-1) - Performs varied music for men's chorus. Requires 2 hours per week. No audition required.

35.111/ 35.311 Chamber Singers (0-1) - Performs music of many styles and periods, Renaissance to present. Open to singers from other university vocal ensembles. Requires 3 hours per week. Membership by audition only.

35.112/ 35.312 Jazz Ensemble (0-1) - Performs jazz, swing and other forms representing the big band style. Requires 3 hours per week. Election requires permission of the instructor. Audition may be necessary.

35.201 Sight Singing (Fall) (2) - Development of the musical ear through progressive training. Recommended elected by music majors simultaneously or as a single course by non-music majors. Requires 2 hours. Prerequisites: 35.103, 35.210 or consent of the instructor.

35.203 Class Voice (Fall) (2) - Provides group voice instruction for the beginner. Emphasizes fundamental singing techniques and solo performance. Requires 3 hours per week.

35.204 Class Piano I (2) - Provides group piano instruction for the beginner. Emphasizes solo playing, sight-reading and creative accompaniment. Requires 3 hours per week. Limited seating.

35.205 Class Piano II (Spring) (2) - Develops independence in solo playing and accompanying. Continuation of 35.204 or students with demonstrated abilities. Requires 3 hours per week. Consent of instructor.

35.206 Class Strings (Fall, odd-numbered years) (2) - Provides learning of fundamental string skills and information related to string instruments. Requires 3 hours per week. Prerequisite: 35.103 or consent of instructor.

35.207 Class Brass (Spring/even-numbered years) (2) - Provides group brass instruction for the beginner or the brass player who wishes to double. Emphasizes fundamental technique and elementary performance.

Requires two hours per week. Prerequisite: 35.103 or consent of instructor.

35.210 Music Theory I (Fall) (3) - Studies harmony, voice leading and written harmonization. Requires 3 hours per week. Prerequisite: 35.103 or consent of instructor.

35.211 Music Theory II (Spring) (3) - Continues Music Theory I with the study of seventh chords and common-chord and chromatic modulations. Includes melodic and rhythmic dictation and keyboard realization. Requires 3 hours per week. Prerequisite: 35.210.

35.212 Class Piano III (Spring) (2) – Continuation of 35.205 or students with demonstrated ability or potential. Requires 3 hours per week. Limited seating.

35.213/ 35.313 Violin (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at one semester hour each election. Consent of instructor.

35.214/ 35.314 Viola (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at one semester hour each election. Consent of instructor.

35.215/ 35.315 Violoncello (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.216/ 35.316 Double Bass (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.217/ 35.317 Organ (1) - Private instruction for those who have previously studied organ or who have strong piano backgrounds. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.219 Basic Audio Recording (Fall) (3) - Provides a theoretical and practical approach to audio recording. Studies equipment and procedures used in professional recording studios. Reserved for music majors and minors in the audio/video recording track and/or permission of the instructor.

35.230/ 35.330 Voice (1) - Private instruction for students with demonstrated vocal abilities. One-half hour per week. May be repeated at 1 semester hour each election. Prerequisite: 35.203 except music majors and declared music minors.

35.235/ 35.335 Piano (1) - Private instruction for students with previous piano study. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.240/ 35.340 Trumpet (1) - Private instructions for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.241/ 35.341 Horn (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.242/ 35.342 Trombone (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.243/ 35.343 Baritone (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.244/ 35.344 Tuba (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.251/ 35.351 Flute (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.252/ 35.352 Oboe (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.253/ 35.353 Clarinet (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.254/ 35.354 Bassoon (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.255/ 35.355 Saxophone (1) - Private instruction for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.256/ 35.356 Percussion (1) - Private instruction with snare, timpani and mallets for students with demonstrated ability or potential. One-half hour per week. May be repeated at 1 semester hour each election. Consent of instructor.

35.270/ 35.470 Violin for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.271/ 35.471 Viola for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.272/ 35.472 Violoncello for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.273/ 35.473 Double Bass for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in

Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.274/ 35.474 Organ for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.275/ 35.475 Voice for Music Majors (2) - Two weekly half-hour lessons for students electing the applied voice specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.276/ 35.476 Piano for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.277/ 35.477 Trumpet for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.278/ 35.478 Horn for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.279/ 35.479 Trombone for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.280/ 35.480 Baritone for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.281/ 35.481 Tuba for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.282/ 35.482 Flute for Music Majors (2) - Two weekly half-hour lessons for students electing applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.283/ 35.483 Oboe for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.284/ 35.484 Clarinet for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.285/ 35.485 Bassoon for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.286/ 35.486 Saxophone for Music Majors (2) - Two weekly half-hour lessons for students electing the applied specialization within the Bachelor of Arts in Music program. May be repeated at 2 semester hours each election for a maximum of 16 semester hours.

35.300 Music Theory III (Fall/odd-numbered years) (3) - Continuation of music theory. Includes formal analysis, design, original composition, harmonic dictation and perception skills. Requires 3 hours per week. Prerequisite: 35.211.

35.301 Music Theory IV (Spring/even-numbered years) (3) - Continuation of music theory. Reviews 20th century compositional practice. Includes analysis and composition. Requires 3 hours per week. Prerequisite: 35.211.

35.302 Piano Proficiency (1) - Provides opportunity for majors in music to gain proficiency at the keyboard. May be repeated.

35.303 Seminar in Piano Accompanying (2) - Provides instruction, coaching, systematic score study and critical performing experience for pianists. Requires 3 hours per week and includes performing. Offered as needed. Prerequisite: Consent of the instructor.

35.304 Special Topics in Music Performance (3) - Provides a unique experience in performance or the study of performance practice. Instructor develops a one-time-only study. Information is available by contacting the Department of Music. Offered as needed.

35.305 Special Topics in Music Appreciation (3) - Provides a study of music beyond currently available course topics. Instructor develops a one-time-only study. Information is available by contacting the Department of Music. Offered as needed.

35.318 Jazz Improvisation (Spring) (3) - Offers the student beginning concepts in jazz improvisation through a practical approach to melody creation, jazz theory, listening and transcription of examples from such jazz legends as Charlie Parker, Dizzy Gillespie, Joe Pass, J.J. Johnson, Herbie Hancock and Charles Mingus. Prerequisite: instrumental or vocal training suggested as performance is an integral part of the course.

35.320 Music in the Elementary School (3) - Provides students with practical skills, theoretical background and musical knowledge that will enable them to teach general music effectively in the elementary classroom. Section 01 designed primarily for elementary education majors, Section 02 for Music Education majors. Limited seating.

35.321 Music History to 1750 (Fall/even-numbered years) (3) - Emphasizes understanding and appreciation of music from antiquity to 1750 through listening and development of a technical vocabulary. Prerequisite: 35.101 or consent of instructor.

35.322 Music History-1750 to Present (Spring/odd-numbered years) (3) - Provides an overview of music history from the Classical era to the present time. Includes discussion of composers and significant persons, works and development of forms and genres during this time frame. Prerequisite: 35.101 or consent of instructor.

35.324 American Music (Fall/even-numbered years) (3) - Studies works of selected American composers with reference to characteristics indigenous to American music. Prerequisite: 35.101.

35.325 Opera and Music Theater (Spring/even-numbered years) (3) - Studies major works of the lyric stage. Emphasizes listening to and reading works of opera, operetta and the popular theater. Prerequisite: 35.101.

35.327 Survey of Popular Music (Fall/odd-numbered years) (3) - Analyzes factors and elements of American popular music with emphasis on developments in the 20th century. Includes a chronological study of jazz, balladry, spiritual, country-western, theater, film and rock in comparative listening situations. Prerequisite: 35.101.

35.328 Choral Conducting and Methods (Spring/odd-numbered years) (3) - Examines the development of techniques and abilities for participating in and supervising choral ensembles. Stresses tone production, proper breathing, choral conducting and reading of appropriate literature. Prerequisite: 35.211.

35.329 Instrumental Conducting (Spring/odd-numbered years) (2) - Develops skills in baton technique and score reading with emphasis on practical application in instrumental organizations. Laboratory course with three 50-minute sessions per week. Prerequisites: music major and 35.211.

35.350 Seminar in Music Theater (3) - Studies the Broadway musical with special emphasis on works currently in production. Offered in conjunction with music theater productions during spring and summer semesters. Prerequisite: 35.101.

35.410 Music Theory V, Counterpoint (Fall/even-numbered years) (2) - Continuation of music theory. Studies melodic writing in two and three voices using 18th century style. Requires 2 hours per week. Prerequisite: 35.211.

35.411 Music Theory VI, Orchestration (Spring/odd-numbered years) (2) - Continuation of music theory. Examines instrumental transposition, idioms, score writing and analysis. Requires 3 hours per week. Prerequisite: 35.211.

35.430 Seminar in Music History I (Fall/even-numbered years) (2) - Emphasizes development of skill in independent research in areas of music history for majors in music electing the music history specialization. Prerequisite: 35.321, 35.322.

35.431 Seminar in Music History II (Spring/odd-numbered years) (1) - Continuation of 35.430 with emphasis on academic research and musicology for majors in music electing the music history specialization. Prerequisite: 35.430.

35.497 Internships in Music (3-15) - Provides for extended off-campus field experience to be arranged by the major in music, a faculty adviser and an off-campus agency. Requires consent of music department during pre-scheduling. Offered as needed.

35.498 Independent Study in Music (1-3) - Provides for a student project of a creative nature in music history, education or performance. Requires consent of music department during prescheduling.

ECN (40) Economics

Administered by Department of Economics

40.121 Principles of Economics I (3) - Studies macroeconomics: nature of the economic problem; economic concepts; institutional framework; supply, demand and the price system; national income accounting; determination of output and employment levels; consumption, saving and investment behavior; inflation and unemployment; business cycles; monetary and fiscal institutions and theory; economic growth.

40.122 Principles of Economics II (3) - Studies microeconomics: supply, demand, the price system; cost and productions analysis, theory of consumer behavior and the firm; output and price determination, resource allocation and determination of factor incomes under perfect and imperfect markets; current economic problems and international economics. Prerequisite: 40.121.

40.156 Business and Economic Mathematics (3) - Presents an introduction to basic mathematical tools most frequently employed in economics and business, e.g., systems of linear equations, inequalities, elements of linear programming, matrix algebra, logarithms, mathematics of finance and differential and integral calculus.

40.221 Intermediate Macroeconomic Theory (3) - Stresses the national income analysis; theory of income determination, employment and price levels; monetary and fiscal institutions; theory and policy; investment, interest and demand for money; business cycles; inflation and unemployment; national debt; macroeconomic equilibrium; prices, wages and aggregate supply, economic growth, foreign trade and balance of payments; economic policy. Prerequisites: 40.121, 40.122, 40.156.

40.222 Intermediate Micro-Theory and Managerial Economics (3) - Reviews the theory of consumer behavior and the firm; output and price determination under different market systems; pure competition, pure monopoly, oligopoly and monopolistic competition; production and cost analysis; allocation of resource and distribution of income; comparison of behaviors of competitive, monopolistic and oligopolistic product and resource markets; constrained and nonconstrained optimization techniques and their applications to business decisions and business practices; welfare economics. Prerequisites: 40.121, 40.122, 40.156.

40.256 Business and Economics Statistics I (3) - Organizing and presenting data, descriptive statistics, elements of probability and probability distributions, sampling and sampling distributions, estimation and hypothesis testing, analysis of variance and Chi-square, introduction to regression and correlation as applied to business and economic problems. Prerequisite: 40.122.

40.313 Labor Economics (3) - Presents the economics of the labor market, the supply of and demand for labor, the nature of theory and wages, productivity and inflation, unionism, theories of the labor movement, collective bargaining and public policy. A major focus is the relationship between labor markets and gender and racial issues. For each of the economic issues, the implications with respect to gender and race will be examined. The economic analysis and empirical data presented in the course will emphasize differences by race and gender. Prerequisite: 40.122.

40.315 Business and Government (3) - Surveys government policies for maintaining competition, for substitution regulation in place of competition and for substituting public for private enterprise; tests of various government policies in light of economic theory and historical experience. Prerequisite: 40.122.

40.316 Urban Economics (3) - Applies economic theory and recent empirical findings to urban resource use. Analyzes problems of unemployment, housing, education, transportation, pollution and equal opportunity. Prerequisite: 40.122.

40.317 Population and Resource Problems (3) - Reviews classical theories of population growth; recent economic models of population correlating natural resources; capital accumulation and technological change; and population problems in North America, European and developing countries. Analyzes recent trends in birth and death rates as factors in population growth. Studies measures of population and labor force, their distribution by age, sex, occupation, regions; techniques for projecting population levels. Course is not offered on a regular basis. Prerequisite: 40.122.

40.322 Contrasting Economics (3) - Outlines theories of capitalism and socialism with a special emphasis on Marxian theory. Compares theoretical and actual performance of capitalism, socialism and communism. Prerequisite: 40.122.

40.323 History of Economic Thought (3) - Surveys economic theories propounded in the past and their effect on present-day thinking about economic, business and political systems. The surplus value theory; economic planning as part of government responsibility; relation of family budgets to Engel's Law; government responsibility for employment and rent control. Prerequisite: 40.122.

40.324 Economic History of the Western World (3) - Presents a comparative analysis of the economic theory of the United States and Europe with particular attention to the interplay of changes in business, financial and labor institutions, products and production, adaptations to resource differences and conflicting economic doctrines. Prerequisite: 40.122.

40.326 Public Finance (3) - Analyzes revenues and expenditures of local, state and national government in light of micro and macrotheory; criteria and models of government services; subsidies, etc., the principles of taxation, public borrowing and public debt management; impact of fiscal and budgetary policy on resource and income allocation, internal price and employment stability; the rate of growth and world economy. Prerequisite: 40.122.

40.327 Money and Banking (3) - Reviews the historical background and the development of monetary practices and principles of banking; special attention given to commercial banking and credit regulations and current monetary and banking development. Prerequisite: 40.122.

40.329 Environmental Economics (3) - A study of the economics of environmental quality. Examines environmental facts and social circumstances with particular emphasis on market and non-market solutions to the environmental problems. Topics include the private market and its efficiency, externalities, environmental quality as a public good, income distribution effects of government environmental quality as a public good, income distribution effects of government environmental programs; water resources and water quality, problem of air quality and quality of life and other environmental problems; prohibitions on and regulation of polluting activities, taxes, subsidies and effluent charges; population, economic growth and environmental quality. Prerequisite: 40.122.

40.333 International Economics (3) - Addresses the pure theory of international trade. Outlines the gains from trade; free trade and protection; balance of payments; foreign exchange and capital movements; the dollar and the international monetary system and international liquidity shortage. Prerequisite: 40.122.

40.334 Economic Growth of Underdeveloped Areas (3) - Presents studies of stagnating economies; theories

of underdevelopment; operative resistances to economic growth; the role of capital, labor, population growth and technological advance; development planning and trade in development settings. Prerequisite: 40.122.

40.356 Business and Economic Statistics II (3) - Probability distributions; regression and correlation analysis; analysis of variance and designs of experiments; time series analysis and index numbers, non-parametric methods; modern decision theory and Bayesian statistics; computer application. Prerequisites: 40.122, 40.256.

40.456 Introduction to Econometrics (3) - Applies modern statistical methods to economic problems; time series and cross-sectional analysis of measurements of demand and costs; macroeconomics models; income distribution and growth model. Prerequisites: 40.122, 40.256.

40.460 Advanced Political Economy (3) - Applies economic and political models of social decision making to historical problems from local through international levels. Presents an evaluation of market; political and mixed techniques in particular areas from the 18th through the 20th centuries. Prerequisite: 40.122.

40.470 Senior Seminar (3) - Discusses the current literature on economic theory and economic policy. Students read one journal article a week on which they write a report and make a seminar presentation. Prerequisite: Senior standing or consent of the instructor.

40.490 Independent Study in Economics (1-3) - Provides students with an opportunity to receive individualized instruction as they pursue in-depth inquiries into previously specified subject matter of special interest within the field of economics. Topic and outline must be developed with a faculty sponsor and approved by the department during the preceding semester of residence.

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.

GEO (41) Geography

Administered by Department of Geography and Geosciences

41.101 World Physical Geography (3) - Studies Earth-sun relationships, land masses, oceans, landforms, weather and climate and natural resources as elements and controls related to the adjustments humans make to their environment.

41.102 World Cultural Geography (3) - Demonstrates the relationship of humankind, land, culture and economic activities.

41.105 Environmental Issues and Choices (3) - Examines contemporary environmental resource issues within a values, ethics and decision-making framework.

41.125 Weather and Climate (3) - Studies the interrelationships between the elements of weather and climate; elaborates on the functional application of these elements through a study of climatic realms.

41.200 Geography of United States and Canada (3) - Presents a spatial analysis of the United States and Canada emphasizing such concepts as environmental perception and sequent occupancy; considers salient problems within geographic regions in terms of genesis and potential for solution.

41.201 Geography of Europe (3) - Studies Europe's physical characteristics, topography, transportation systems, resources, populations and trade.

41.202 Geography of Latin America (3) - Examines Latin America as a major geographic region in terms of those economic, racial and cultural forms that have provided regional unity and diversity.

41.203 Geography of Australia (3) - A regional and spatial analysis of Australia within a physical, cultural, economic and environmental context. Examines

Australia's historic and contemporary role within the Asian-Pacific sphere.

41.204 Geography of South Asia (3) - Provides a survey of the physical and human geography of South Asia, particularly India, Pakisan, Bangladesh, Nepal and Sri Lanka. Examines the major environmental, economic and cultural geography patterns, processes and issues.

41.221 Economic Geography (3) - Reviews major economic activities; focuses on significant characteristics, location theory and spatial patterns.

41.242 Map Skills (3) - Uses a variety of published maps for interpreting and interrelating past and present physical and cultural phenomena with a view toward the future.

41.250 Elements of Planning (3) - Acquaints students with the philosophy of planning, the roles of the planner and planning objectives.

41.258 Environmental Conservation (3) - Identifies resource management and environmental problems and offers possible alternative solutions for these problems.

41.264 Applied Cartography (4) - Studies fundamental principles, use of graphic media, methods of construction, use and interpretation of maps, models, charts and diagrams, utilized in geography and in urban and regional planning.

41.281-289 Special Topics in Geography (3) - Presents areas of geographic interest to a general audience.

41.301 Water Resources Management (3) - An examination of contemporary water resource issues related to environmental planning and management.

41.302 Land Resources Management (3) - An examination of selected land-related issues and problems with the objective of identifying appropriate management techniques.

41.303 Soil Resources Management (4) - Provides a thorough background to the geoenvironmental aspects of soil such as its nature and properties, factors of soil formation, classification and geographical distribution. Examines the interpretation of soil surveys and their role in land use and resource planning, conservation and management and environmental quality.

41.304 Environmental Valuation (3) - Provides a conceptual and methodological framework for evaluating environmental resources. Emphasis is on quantitative valuation techniques that help separate facts from emotion in complex environmental problems. Prerequisite: 41.105 or permission of the instructor.

41.305 Environmental Risks and Hazards (3) - Explores the human and environmental contributions to the generation and management of risks and hazards originating from extreme natural events and technological failures. Contemporary public policy issues at the local, national and international levels are reviewed with an emphasis on geographic themes in hazards and emerging management technologies. Prerequisites: 41.101 or 51.107.

41.310 Population Geography (3) - Analyzes physical, human and economic factors that influence the changing pattern of the political map of the world.

41.315 Geography of Recreation, Tourism and Sport (3) - Explores the array of contemporary issues involving land, leisure and recreational planning.

41.342 Geographic Information Systems (3) - Presents an introduction to computer-assisted analysis of geographic data. Emphasizes GIS applications in management of natural resources, environmental assessment and urban and regional planning. Laboratory projects provide opportunities to develop computer expertise. Prerequisite: 41.242 or 41.264 or consent of the instructor.

41.350 Advanced Planning (3) - Presents the development of skills and techniques used in analysis, plan preparation, goal setting and implementation of urban and regional planning processes and activities. Prerequisite: 41.250 or consent of instructor.

41.363 Urban Geography (3) - Provides a conceptual and methodological framework in which to view the process of urbanization.

41.462 Techniques of Geographic Measurement (3) - Data handling and map symbolizatioon emphasized in this spatial analysis course. Topics in descriptive and inferential statistics are explored with an emphasis on applications to problems with spatial dimensions. Prerequisite: 41.242 or consent of the instructor.

41.475 Independent Study in Geography (1-3) - Provides independent, investigative research oriented to studies of specific geographical problems. Prerequisite: Open to juniors and seniors majoring in geography.

41.496 Internship in Geography (3-12) - Provides for on-site work experience in an appropriate agency or business. Internship is intended to integrate classroom learning with practical work experience emphasizing the functions, projects and responsibilities available at the internship site. Prerequisites: Major in Geography, Option I, appropriate completion of course requirements in the option and consent of the instructor.

41.497 Internship in Planning (12) - Involves the placement of a student who is enrolled in the course of study in urban/regional planning or environmental planning into a planning office for twelve weeks during a summer. The student is actively involved in the functions and activities of that planning office during that time.

41.498 Applied Planning Seminar (3) - Provides an opportunity for reporting and analyzing experiences in internship. Integrates and utilizes practice in the development of land use from an urban or environmental perspective. Taken in coordination

with the internship in planning (41.497) or geography (41.496).

HIS (42) History

Administered by Department of History.

Prerequisites are subject to modification by the instructor

42.100 Transatlantic World in the 20th Century (3) - Represents an analysis comparing and contrasting the experiences of Americans and Western Europeans in the 20th century. Focuses on the decay of Western traditions, the dilemma of the individual in an increasingly complex society and the rise of "technocratic" civilization. Provides insight into roots of current events, promotes sense of historic awareness beyond the national level and enhances appreciation of basic similarities and differences among Americans and Western Europeans.

42.112 Origins of the Modern World (3) - Describes the political, economic, social, intellectual and military developments that shaped the story of mankind from the early Renaissance to the early 19th century.

42.113 The Modern World (3) - Reviews the political, economic, social, intellectual and technological elements of 19th and 20th century history, showing the progress of the Western tradition and the growing importance of the non-Western world.

42.121 United States History Survey: Colonial Period to 1877 (3) - Presents a chronological history to 1877 with emphasis on foreign affairs and the evolution of politics, economs, society and culture.

42.122 United States History Survey: 1877 to the Present (3) - Presents political, social, cultural, intellectual, economic and foreign affairs developments of the United States from Reconstruction to the present.

42.133 The Ancient and Medieval Worlds (3) - Surveys from the Ancient Near East to the fall of the Roman Empire in the West, emphasizing Greece, Rome and the rise of Christianity; a study of the people and countries of the West that emerged after the fall of the Roman Empire, with emphasis on feudalism, manorialism and the medieval church.

42.141 The Modern Far East (3) - Focuses on modern China and Japan and closely studies the value system of these peoples as reflected in their politics, arts and communications in the 19th and 20th centuries. Particular attention paid to the interaction between the old models provided by Confucianism and Buddhism with the models provided by the West during modernization. Not offered every semester. Approved for diversity requirement.

42.142 Latin America: From European Colonization to the Present (3) - A concise introductory survey of Latin American history from 1492 to the present, stressing the significant economic and social factors in its evolution. Not offered every semester. Approved for diversity requirement.

42.143 Black Africa (3) - Presents a survey of the transformation of the societies of Sub-Saharan Africa from colonialism to national independence. Approved for diversity requirement.

42.144 Islamic and Hindu Worlds: Middle East, India and Malaysia (3) - Introductory course surveying the religious, cultural, economic and political history of the Middle East, North Africa, the Indian subcontinent, the Malay Archipelago and their bearing on contemporary Third World problems. Not offered every semester.

42.208 Contemporary Issues in U.S. History (3) - Examines selected issues of social, political or foreign affairs within a historical context, describing the origin, evolution, current significance and importance in American society. The issues may vary each semester.

42.210 Values in Conflict in 20th Century History (3) - Presents select American conflicts in the 1960s involving values of the individual and the civilization; resolutions achieved are reviewed and evaluated. The selection of conflicts varies each semester. Approved for diversity requirement.

42.215 Global Issues in History: A Conflict of Values (3) - Introduces the historical and global nature of many of today's critical issues that have far reaching consequences. Population explosion, famine in the underdeveloped world, energy crisis, terrorism and the spread of nuclear weapons are illustrative of some of the issues that will be examined. Attention will be given to defining values as related to these issues.

42.222 Business History of the United States (3) - Focuses on the evolution of business from 1600 to the present, entrepreneurial leadership of major businessmen and the history of major modern industries.

42.223 Economic History of the United States (3) - Focuses on the changing nature of the American economy. This course covers three time periods: the commercial-agricultural age, the industrial age and the modern managerial age. Examines agriculture, banking, business administration, commerce, labor, manufacturing, mining and transportation, social and political factors that contributed to changing economic relationships in the United States.

42.224 The Immigrant Experience (3) - Provides an overview of cultural diversity in American society by focusing on the history of immigration from the colonial period to the present. Students examine ethnicity in America through the study of political, economic, religious and social issues; industrialization and urbanization; attitudes of nativism, discrimination and racism; and powerful influences of immigrant kinship networks, ethnic community associations, cultural traditions,

religious institutions and ethnic group identity. Lectures include new historical interpretations of cross-cultural relationships and new assimilation theories. Not offered every semester. Approved for diversity requirement.

42.226 Popular Culture in America (3) - Review of major forms of popular culture in America from colonial beginnings to the present, telescoped to permit fullest presentation of the period since 1920. Course blends continuity of values and ideas in American culture with dynamics of change to which the culture constantly adjusts. Not offered every semester.

42.228 African-American History (3) - Examines the nature and meaning of the African-American experience in the United States surveyed from its beginnings to the present. Reviews black creative expressions in the visual arts, music, literature, philosophic thought and social history. Approved for diversity requirement.

42.229 Modern World Leaders (3) - Studies significant world leaders in religion, politics, war and culture and their impact on world history. Focuses on different leaders each time offered and covers a selected period from the Renaissance to the present. Analyzes the conditions which helped produce these leaders and ends by discussing reasons for their success or failure. Includes only leaders who have made a significant contribution outside their national boundaries.

42.250 History of Science(3) - Studies historical development of the sciences and the nature of scientific thought and method; provides understanding of the characteristics of the sciences as well as their significance to human progress from antiquity to the present. Not offered every semester.

42.260 Sport and Society in America (3) - Presents a cultural approach to organized sport in the United States; proceeds from the premise that sport mirrors the values, states of technology and the conditions of society. Emphasizes the rise of the institution of sport and its impact on business, commercialism, leisure, affluence, urbanism, nationalism and the problems of governance and law. Not offered every semester.

42.281 Military History I (3) - Studies organized warfare from its origins to the last campaign of Napoleon I, concentrating on strategy and tactics. Examines moral and social problems raised by warfare. Not offered every semester.

42.282 Military History II (3) - Studies organized warfare and the theory of war from the Napoleonic age to the present, concentrating on strategy and tactics. Examines the socio-political background, especially of the two world wars and the age of guerrilla warfare. Not offered every semester.

42.315 Origins of Civilization: The Ancient Near East (3) - Surveys known origins of civilization in the Neolithic, Bronze and Iron ages in Mesopotamia, Egypt, Anatolia and Syria-Palestine, with some attention to India and China. Not offered every semester. Prerequisite: 42.133 or consent of the instructor.

42.318 Early England: The Making of an Island State (3) - Reviews political, economic, social and cultural life in England to the Glorious Revolution. Not offered every semester.

42.319 Modern England: The First Industrial Empire (3) - Examines political, social, economic and cultural development in England from the Glorious Revolution to the present with emphasis on the development of democracy, the Industrial Revolution and the growth and decline of the British Empire. Not offered every semester.

42.320 French Revolution and Napoleon (3) - Analyzes 1789-1815 era in France and assesses its significance for the history of France and the world. Not offered every semester. Prerequisite: 42.112 or consent of the instructor.

42.324 Revolutionary Europe and the Rise of Modern Traditions, 1600-1789 (3) - Discusses the rise of the modern state; the political, intellectual, social, economic and cultural aspects of the eras of the Scientific Revolution and Enlightenment; the establishment of European world hegemony and a world economy; the diplomatic and military interaction of the European states. Not offered every semester.

42.326 Europe 1789-1914 (3) - Analysis of Europe's "long nineteenth century." with particular emphasis on the nexus of political and social history. Not offered every semester.. Prerequisite: 42.113 or consent of the instructor.

42.327 Europe in the Age of Total War, 1914-1945 (3) - Examines origins of World War I and alliance systems that fought it, diplomacy, military strategy, tactics of the war and the peace treaties of 1918-1920, plus the rise of Mussolini, Stalin, Hitler and the lesser dictators along with the international crises that finally culminated in the outbreak of World War II. Course stresses ideological and global pattern developments. Not offered every semester.

42.328 Cold War Europe, 1945-Present (3) - Surveys European powers in the late 1930s with emphasis on the forces leading to war; military and diplomatic developments of World War II and the causes of the East-West rift; the reconstruction of democratic Europe and formation of the Soviet bloc; European integration and political trends in both power systems. Not offered every semester.

42.329 The American Woman (3) - Studies the history of women in America from colonial times to the present; topics include women's work, family life, politics, sexuality, education, feminism and reactions against it and the many facets of women's public and private roles in the nation's history. Approved for diversity requirement.

42.335 History of Christianity (3) - Promotes student analysis of the ancient, medieval and modern roots of contemporary Christian denominations and movements. Primary and secondary historical sources are discussed seminar-style in order to critically examine important ideas, personalities and historical conditions of Christianity. Prerequisite: Any course in history or consent of the instructor.

42.336 Medieval Europe (3) - An analysis of European history from 300 to 1400, focusing on political, social, religious and intellectual trends during the period. Feudalism, church history and commercial relations receive particular emphasis. Examines the status of women in medieval society. Prerequisite: 42.112.

42.337 Europe in the Renaissance and Reformation (3) - A detailed analysis of European history from 1300 to 1650, focusing upon the intellectual and artistic movement known as the Renaissance and the religious upheaval associated with the terms "Reformation" and "Counter-reformation." Political, social, intellectual and religious trends are highlighted. Prerequisite: 42.112.

42.346 Modern European Intellectual History (3) - Relates changes in currents of thought during the period to political, economic and social developments. Special attention given to interpretations of major intellectual movements. Not offered every semester.

42.347 History of the Holocaust (3) - Focuses upon the major theme-the genesis and implementation of the planned destruction of European Jewry from 1933 to 1945; briefly traces the history of anti-Semitism and evaluates scope of prejudice, discrimination and genocide in contemporary civilization. Includes an analysis of literature of the Holocaust and evaluation of the Holocaust's impact on modern-day Israel or the world Jewish community. Not offered every semester.

42.356 Russia to 1917 (3) - Analysis of Russian political and social history from the ninth century to 1917, with emphasis on the 18th and 19th centuries. Not offered every semester.

42.372 Colonial America and the War of Independence (3) - Reviews European colonization in North America with major attention to the establishment and development of England's colonies, an emerging American society and problems which created conflict between the Americans and the British resulting in the American War of Independence. Not offered every semester.

42.374 U.S. Social History (3) - Focuses on everyday life in the past and how ordinary people made history and were affected by historical change. Emphasis on family life, as a way of exploring issues of race, gender and ethnicity. Prerequisites: 42.121 and/or 42.122.

42.379 The New Nation: United States, 1781-1845 (3) - Reviews the impact of the democratic experiment on government, the economy, culture and society. Among subjects studied are political parties, railroads, popular music and anti-slavery. Not offered every semester.

42.381 Civil War, Reconstruction and Industrialization: United States, 1845-1896 (3) - Surveys the causes of the Civil War, the war itself, reconstruction and industrialization. Topics include politics, ideology, military technology and tactics, race and gender issues, the economy, labor, immigration and popular culture. Prerequisite: 42.121.

42.383 Shaping of Contemporary America, 1896-1941 (3) - Examines during these years major changes: imperialistic adventures, reluctant but expectant involvement in World War I, the "flaming '20s," and the nation's greatest depression. Out of these emerges the modern mass-centered welfare state. Not offered every semester.

42.385 Recent American History: 1941 to the Present (3) - Examines the major political, economic, social-cultural and intellectual developments in the United States from 1941 to the present. Cold War, Korea and Vietnam, turmoil of the 1960s, nuclear concerns and the role of the individual in an increasingly complex, technological society are some of the major themes examined. Not offered every semester.

42.388 Pennsylvania (3) - Examines major contributions of Pennsylvania to national life, relations between state and national movement. Not offered every semester.

42.391 Diplomatic History of the United States to 1898 (3) - Presents a critical analysis of United States foreign relations from the Colonial Period to the 1898 war with Spain. Not offered every semester.

42.392 Diplomatic History of the United States Since 1898 (3) - Presents a critical analysis of United States foreign relations from the war with Spain in 1898 to present. Not offered every semester.

42.395 African-American Radicalism in the 20th Century (3) - Examines the major black radicals and their philosophies and movements in 20th Century America. Special emphasis will be be placed on the following figures: W.E.B.DuBois, Marcus Garvey, Malcolm X, Stokely Carmichael (Kwame Toure), Angela Davis, Amiri Baraka, the Black Panther Party and Louis Farahkhan of the Nation of Islam. Approved for diversity requirement.

42.397 Independent Study in History (1-4) - The topic selected must be approved by a committee appointed by the chairperson. Independent reading and/or research related to some aspect of history is supervised by an appropriate member of the department. A student may register for this course no more than twice and credits may not exceed 4 semester hours. See the section on Independent Study. Prerequisite: 60 semester hours.

42.398 Research and Writing Skills (3) - Focuses on the development of proficient research and writing skills.

Students learn to fully utilize library and research facilities; develop skills in analyzing and interpreting original/primary research documents; and produce a clear, concise and well-written lengthy formal paper. In addition, students develop an understanding of how and why history is written and revised.

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 of a research paper. Topics vary from semester to semester.

42.416 The Classical World: Ancient Greece and Rome (3) - Covers ancient Greek and Roman history and culture. Greece: emphasis on Aegean civilizations, the age of Pericles and the Hellenistic age after Alexander the Great. Rome: emphasis on early monarchy and republic, imperial expansion, the Pax Romana and the decline and fall of the empire; concluding with the Barbarian age and the rise of Byzantium. Not offered every semester. Prerequisite:42.133 or consent of the instructor.

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, 42.461 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.

42.469 Women and Gender in European Intellectual History I (3) - Investigates the condition of women, of female views concerning that condition and the view of males concerning women, over the course of western history. Women and Gender I covers the ancient, medieval and early-modern periods (c.650 BC - 1650 AD). Prerequisite: two 100-level courses in history or consent of the instructor. Approved for diversity requirement.

42.470 Women and Gender in European Intellectual History II (3) - Investigates the condition of women, of female views concerning that condition and the view of males concerning women, over the course of western history. Women and Gender II covers the Scientific Revolution to the present (c.1550-1995). Prerequisite: two 100-level courses in history or consent of the instructor. Approved for diversity requirement.

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.

42.497 Internship in History (3-12) - Provides a work-study experience jointly administered by an academic faculty member and a sponsoring employer, with about 40 hours of supervised work generating each semester hour. Prerequisite: For history majors, 15 semester hours of history, including 42.398. Other majors may enroll with consent of advisers. Note: A student may not apply more than 3 semester hours of internship toward the fulfillment of the history major, although a student may enroll for more than 3 semester hours of 42.497.

PLS (44) Political Science

Administered by Department of Political Science

44.101 Elements of Political Science (3) - Uses the procedures of political science to study power and examines the processes of politics and the practices of governments, the performance of and the pressures on the political system. For non-majors.

44.108 Contemporary Political Ideologies (3) - An introduction to those political beliefs that shape contemporary politics: nationalism, liberalism, conservatism, socialism, feminism, religious fundamentalism, populism.

44.120 United States Government (3) - Introduces government and politics in the United States, emphasizing constitutional development, political development, civil rights, parties, elections, pressure groups, the Congress, the president, courts and contemporary problems, such as foreign affairs, defense, unemployment and poverty.

44.160 Nations, States and Governments (3) - Presents a comparative study of the governance of countries or nation-states in selected developed and less developed regions of the world.

44.181 Contemporary Issues in World Politics (3) - An introduction to international politics through an examination of such critical problems as war and peace, nation-building, revolution, ethnic conflict and democratization.

44.207 Ethics, Politics and Public Policy (3) - Examination of normative, descriptive and metaethical approaches employed by politicians and policymakers in confronting issues of responsibility and choice in public programs and policies. Focuses on ethical

problems and responses in civic life and emphasizes the ways alternatives impact on society.

44.210 Introduction to Political Theory (3) - An introduction to fundamental political concepts such as liberty, justice, equality, power and authority, as well as the main ideas of some representative political philosophers from Socrates to the present.

44.222 Women and Politics (3) - Emphasizes political systems and the broad range of issues that find women as the recipients of and makers of public action and policy. Examines issues that unify and divide women as they attempt to understand the problems of becoming equal in an unequal society. The role of women in the United States and in other nations is explored. Approved as a diversity course.

44.280 Introduction to International Relations (3) - Examines sources of international conflict and cooperation, power politics in the international arena, problems of collective security, the settlement of disputes, diplomacy and international law.

44.303 Politics and the Arts (3) - Surveys painting, music, films, poetry and novels to show the relationship between these media and political concepts, philosophies and problems.

44.322 Political Violence (3) - Surveys individual, group and mass political violence, concentrating on causes and manifestations. Studies positive and negative effectiveness of political violence with the object of placing the phenomena in meaningful historical and contemporary contexts.

44.326 Parties, Groups and Public Opinion (3) - Examines the development of political parties in the United States; elections, voter behavior and political participation; and the role of interest groups and political propaganda.

44.336 Public Administration Theory (3) - Introductory course to the study of the "management of government business." Examines the multi-dimensional nature of Public Administration by exploring the political, social and economic factors influencing the public sector administration in the United States. Areas of emphasis include principles of public administration organization theory, personnel management, public budgeting, public policy formulation and implementation and collective bargaining in the public sector.

44.363 Soviet and Post Soviet Politics (3) - Studies the history, ideology, institutions and policies of the Soviet and post-Soviet political systems.

44.366 Political Systems of Western Europe (3) - Examines democracy as practiced in Western Europe; the politics and governments of Great Britain, France and Germany.

44.371 Political Systems - Africa (3) - Examines problems of newly independent states, the struggle for independence, attempts to create national unity and create political stability, economic and political development, the role of the military in politics and politics in the Republic of South Africa.

44.375 Multiculturalist Theory (3) - Treats the issues of concern generated from an attention to and appreciation of, our diverse cultural identities. As a theory course, it approaches multiculturalism as a new attempt to respond to the challenges that difference poses in democratic theory. .

44.376 Government and Politics of the Middle East (3) - Introduces the political history and governments of particular states in the region and considers their interactions regionally and internationally. Considers in particular the importance of Islam in politics, the Arab-Israeli conflict, the Iranian revolution, the Iraqi wars.

44.377 Feminist Political Theory (3) - Explores various strands of feminist political thought and approaches to philosophical critique. The primary aim of the course is to familiarize students with the contributions made by feminists to the field of political theory and to provide students with the basic tools with which to read, understand, critique and write in acknowledgement of these contributions.

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 contempoary 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.

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; collective bargaining in the public sector 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 institutional 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 the substance, methods and purposes of U.S. foreign policy, including the determinants of policy, policymaking 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 problems in government and politics in an attempt to review and unify theories and methods of political science. Emphasizes individual research projects.

44.497 Internship in Political Science (1-15) - Provides for on-site work experience and training designed to give an opportunity to apply the theoretical and descriptive knowledge acquired in the classroom. The student is supervised by an instructor and an on-site person. A paper is required.

SOC (45)Sociology

Administered by Department of Sociology, Social Welfare and Criminal Justice

45.133 Introduction to Social Work and Social Welfare (3) - A survey of the social work profession and the United State social welfare institution. Includes ideologies, historical perspectives, values and generalist social work practice in various social welfare fields with an emphasis on human diversity and a commitment to social and economic justice..

45.211 Principles of Sociology (3) - Introduces the basic concepts, theories and perspectives in sociology. Sociology is the scientific study of the influence of groups, institutions and cultures upon individuals. For example, the extent to which race, gender, class, religion and education affect the behavior and opportunities of individuals is probed.

45.213 Contemporary Social Problems (3) - Examines social issues such as plant closings and unemployment, the impact of multinational corporations on the economy and the environment, mobility, aging, family problems - sex roles, abuse, incest, divorce, alcohol and drug abuse, social change and disorganization, racism, sexism, employment discrimination, crime, alienation and poverty.

45.215 Racial and Ethnic Minority Groups (3) - Presents a sociological examination of some of the major racial, ethnic and religious minorities and their divergent heritages in the contemporary American scene. Prerequisite: 45.211.

45.217 Sociology of Sport (3) - An introduction to and critical examination of the role of sports in society. Focuses on the reciprocal impact of sports and various institutions of society. Students examine the sociological perspective on sports as a human activity.

45.231 Marriage and Family (3) - Provides a sociological examination of the traditional and changing institutions of marriage and the family in contemporary society. Focuses on family and marital interaction, roles and interpersonal familial relations.

45.236 Child Welfare (3) - Examines child welfare services, issues and the institutions which affect the social functioning of children. Course is not in the social welfare degree program.

45.242 Juvenile Delinquency (3) - Examines social pressures operative upon children in American society, which leads to formation of delinquent personality. Consideration of treatment and prevention, juvenile courts, clinics and correctional institutions, evaluation of theories, concepts and relevant empirical research.

45.244 Introduction to Criminal Justice (3) - Offers a comprehensive survey and basic understanding of the role and function of the criminal justice field. Attention is given to crime and criminal law, law

enforcement, police, courts, corrections and juvenile justice.

45.255 Research Methods for Social Inquiry (3) - Surveys quantitative research techniques and includes an introduction to the use of computers in social science research. Some qualitative methods are explored. Prerequisite: 45.211.

45.260 Basic Social Statistics (3) - Presents principles and techniques of statistical analysis used by sociologists and others in social sciences: descriptive tables and graphs, measures of dispersion, significance tests, correlation and regression. Students collect and analyze data using computers. Emphasis on understanding concepts underlying statistical analysis in order to permit intelligent use and interpretation of statistics. Prerequisites: 45.211 and 45.255.

45.297 Introductory Practice Experience in Social Welfare (3-6) - The primary goal of this courses is to initiate the preparation of the baccalaureate generalist social worker with a foundation of social work knowledge, values, ethics and skills. The beginning integration of ecological systems theory into generalist social work practice occurs in this course. Prerequisite: 45.133.

45.316 Urban Sociology (3) - Presents a sociological analysis of origin and growth of cities with an emphasis on the dynamic patterns of social interaction in the changing contemporary urban scene. Views cities mainly from a multinational perspective with a special focus on urban regions. Prerequisite: 45.211.

45.318 Social Stratification (3) - Examines the role of social class in terms of structure, function and persistence in any society. Examines classical theoretical statements and evaluates current American class relations in terms of status, power, authority and social mobility. Covers notable studies of the American class system and provides a close look at power relations and styles of life among the various American classes. Prerequisite: 45.211.

45.319 Religion and Society (3) - Examines religion as a means by which people, as members of communities order their lives and endow them with meaning. Topics include ritual and belief systems, the social organization of religion and the relationship between religion and other parts of the social structure.

45.320 Sociology of Women (3) - Explores the development of the traditional roles of women in Western society to the present time including both work and family roles. Included is an analysis of the women's movement as a social movement. The course aquaints students with feminist theory within a sociological perspective. Prerequisite: 45.211 and 45.260 or equivalent.

45.334 Social Work Practice with Individuals and Families (Fall) (3) - Examines the knowledge, values, ethics and skills for professional generalist social work practice with the individual, family, group, organization and comunity problem solving, with strengths perspective and systems/ecological theory is emphasized. Prerequisites: 50.101, 45.211, 48.101, 45.215, 45.133 and 45.297 (may be taken concurrently) Fall semester only.

45.341 Criminology (Fall) (3) - Discusses the major sociological theories of crime and justice. Presents the scope of crime in the United States and other countries. Probes each major type of crime, namely, homicide, rape, white-collar crime, political crime organized crime, property crimes, drug crimes, prostitution and pornography. Describes and analyzes law enforcement system. Prerequisite: 45.211, 45.244

45.342 Penology (Spring) (3) - Penology studies the social rationales, methods and consequences of punishing and rehabilitating law breakers. Includes a social history of prisons, jails and punishment, the interpersonal dynamics within the institution, the inmate social order, causes of riots, treatment programs and alternative models and policies. Prerequisite: 45.211, 45.244

45.343 Victimology (Spring) (3) - Examines the short-term and long-term effects of victimization on individuals and groups from such crimes as family violence, rape, street crime, business fraud, corporate negligence and political wrong doings. Prerequisite: 45.211, 45.244

45.345 Medical Sociology (3) - Facilitates student's ability to understand, analyze and evaluate sociological factors in relation to illness, medical behavior and health care systems. Prerequisite: 45.211 or consent of instructor.

45.376 Science and Society (3) - Explores science as the organized activities of an occupational community. Examines the development of science as an institution, its social organization in modern society and its internal and external politics. Prerequisite: 45.211 or consent of instructor.

45.400 Sociology of Mass Communication (3) - An in-depth discussion of the cognitive and behavioral affects of mass media, especially television on audiences, the social structure of the communications industry, particularly its influence on media content and the political use of mass media. Students critique latest research articles in the field. Prerequisites: 45.211 and junior status.

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.

45.443 Sociology of Deviant Behavior (Fall) (3) - Evaluates the presence and function of deviance in society. Includes mental illness and various types of crime

and stigmatized behavior. Examines how it 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. Prerequisite: junior year standing (or 65 semester hours or more). .

45.450 Social Work Practice with Small Group (3) - Provides the entry-level generalist social work practitioner with a beginning understanding of the effective use of the problem solving process using group work as an intervention strategy at the micro, mezzo and macro levels. Offered fall semester only. Prerequisites: 50.101, 45.211, 48.101, 45.215, 45.133 and 45.297 (may be taken concurrently).

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.

45.452 Social Work Practice With Organizations and Communities (Spring) (3) - The primary goal of this course is to provide the entry-level generalist social work practitioner with a beginning understanding of the effective use of the problem solving process at the macro level of intervention. The student will be provided with opportunities to apply curriculum content to work with communities and organizations. Prerequisites: 50.101, 45.211, 48.101, 48.110, 45.215, 45.133, and 45.297 (may be taken concurrently).

45.453 Social Welfare Policy (3) -Examines historical and current aspects of social welfare policy and services within the context of the generalist social work practice. The focus includes: framworks for social policy analysis; the political/organizational processes for influencing policy; and a policy advocacy/ problem-solving frmework for social pratice. Prerequisites: 45.133, 45.215 and 45.297 (may be taken concurrently), 40.211, 44.120. Offered spring semester only.

45.457 Sociology of Community (3) - Reviews and examines theories and research of communities. Gives special emphasis to the American community. Prerequisite: 45.211.

45.461 Social Problems in Rural-Urban Communities (3) - Focuses on social problems peculiar to and characteristic of rural and small urban communities. An eclectic theoretical interpretation will be made of the major social problems. Emphasizes problems which result in the dysfunctioning of patterned social relationships.

45.462 Sociological Theory (3) - Examines classical forms of social theory from the 19th century and their impact on the development of theory in the 20th century. Studies the views of Max Weber, Emile Durkheim and Karl Marx on the social structure, social organization, economy and human condition as well as their influence on contemporary perspectives, namely, the conflict and functional approaches, sociology of knowledge, phenomenological sociology and symbolic interactionism. Prerequisite: 45.211.

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.

45.466 Social Research (3) - Stresses design and construction of major research methods and procedures used in social research. Special emphasis on survey research. Prerequisites: 45.211, 45.260 or consent of the instructor.

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. Prerequisite: 45.211.

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.

45.470 Senior Seminar (3) - Provides for individual research projects and reports with-in selected areas of interest such as the family, criminology, social services and special populations. Usually offered in the spring semester. Prerequisites: Senior status; 18 semester hours of sociology and social work; and consent of the instructor .

45.471 Independent Study in Sociology (3) - Allows student to pursue individualized instruction in-depth with a faculty member in a specific area of the field not covered in current courses. Prerequisites: 45.211 and consent of instructor, chairperson and members of the department.

45.474 Contemporary Environmental Issues (3) - Examines some major human problems that lead to environmental deterioration, parti-cularly water, air and noise pollution, energy and other resource depletion and increasing population density. Prerequisite: 45.211.

45.477 Community Land Use Planning (3) - Introduces the community planning process and the theoretical perspectives relevant to community land use planning. Examines selected substantive planning problem areas in the local community. Students formulate, develop and present a community land use plan. Prerequisite: 45.211.

45.478 Sociology of Work (3) - Presents a sociological examination of work and the milieu of the worker. Studies formal and informal work organizations, job satisfaction and dissatisfaction, structure and organization of industrial and post-industrial societies and relationship between work organizations within communities and society. Prerequisite: 45.211.

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. Prerequisite: 45.211 or consent of instructor. Offered in spring semester only.

45.495 Criminal Justice Internship (1-15) - An on-the-job apprenticeship in which students are exposed to the responsibilities, skills and activities necessary to accomplish jobs in criminal justice agencies, including public and private, local, state and federal, investigatory and correctional agencies. Prerequisite: 45.244.

45.496 Sociology Internship Program (1-15) - Designed primarily for the junior or senior working in a specific institutional field and/or college-approved, off-campus activities related to student's chosen professional field. Prerequisites: Consent of the instructor and department chairperson.

45.497 Social Welfare Internship (10-15) - Provides the social welfare major with the opportunity to integrate and apply knowledge, theory and understanding extracted from the foundation courses. The student engages in supervised, direct service activities to develop competancy as professional generalist social work practitioner Prerequisites: 45.133, 45.297, 45.255, 45.260, 45.215, 45.334, 45.450, 45.452 and 45.453.

45.498 Integrative Methods Seminar in Social Work and Social Welfare (3) - Taken concurrently with 45.497 for integration of theory and practice. Internship work issues and assignments are discussed and evaluated in relation to relevant research and to the sixteen program objectives and corresponding seven internship course objectives. Prerequisites: 45.133, 45.297, 45.255, 45.260, 45.215, 45.334, 45.450, 45.452 and 45.453.

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.

ANT (46) Anthropology

Administered by Department of Anthropology

Effective Fall 2001

46.101 Introduction to Anthropology (3) - A beginning course for students with no background in anthropology. Provides an overview of peoples and cultures of the world today and of the past as well as the fossil evidence for human evolution. Topics may include living primates, magic and religion and kinship, marriage and sex roles. Not for students who have taken 46.200, 46.210 or 46.220.

46.102 Anthropology and World Problems (3) - Explores the origins of global problems and evaluates the variety of cultural solutions to those problems. Investigates cultural values and solutions of tribal peoples holistically and compares them to those of industrialized nations in terms of their consequences and implications. Approved as a diversity course.

46.200 Principles of Cultural Anthropology (3) - Provides a cross-cultural study of all human behaviors in contemporary cultures. Topics surveyed include socialization; language; sex, age and kinship roles; religion and magic; marriage and the family; political and economic behavior; cultural change; and the arts. Anthropological methodology and the concept of culture also are stressed. Approved as a diversity course.

46.210 Prehistoric Archaeology (3) - Provides a worldwide examination of human prehistory from the origins of

humankind to the development of early writing. Focuses on regional differences and similarities in key evolutionary transitions including sedentary lifeways, urban origins and the rise of states.

46.220 Human Origins (3) - Studies the emergence and development of humans, the biological basis of human culture and society and the origin of the social units of fossil humans.

46.260 Men and Women: An Anthropological Perspective (3) - A cross-cultural and evolutionary perspective on sex role behavior in past and contemporary cultures. Examines sex roles in nonhuman primates and humans. Examines sex roles in hunting and gathering, horticultural, pastoralist, peasant and other preindustrial societies are described as well as sex roles in modern industrial societies. Covers genetic and environmental theories of sex role behavior. Prerequisite: 3 semester hours of anthropology. Approved as a diversity course.

46.290 Race and Racism (3) - Studies race from holistic and cross-cultural perspectives. Explores biological nature of race through investigation of human evolution. Considers socio-cultural aspect through a comparative study of racial categories in cultures and societies worldwide. Approved as a diversity course.

46.300 Archaeological Method and Theory (3) - Explores the modern theoretical foundations of archaeology. Students read and discuss original contributions to the field and learn methods in preparation for actual fieldwork. Prerequisite: 46.210 or consent of the instructor.

46.301 Field Archaeology (3-6) - Provides field investigation of various prehistoric cultures in northeastern United States. Students learn excavation and recording techniques, visit important sites during field trips and become part of a unique community that studies our past.

46.310 Aztecs and Mayans (3) - Surveys the prehistoric cultures of Mexico and Central America. Emphasis on the development of Aztec and Mayan civilizations. Approved as a diversity course.

46.311 Archaeology of Northeastern North America (3) - Surveys the prehistoric cultures of the area from arrival of the first inhabitants through early historic times. Provides a laboratory for the study of broader issues of socio-cultural processes. Prerequisite: 46.210 or consent of the instructor.

46.312 South American Archaeology (3) - A survey of prehistoric cultures of South America. Emphasizes the civilizations of the Andean zone and the role played by the Amazonian region in the development of Andean Cultures. Prerequisites: 46.101 or 46.200 or 46.210 or consent of the instructor. Approved as a diversity course.

46.320 Contemporary World Cultures (3) - Presents a comparative analysis of selected non-European societies in contrasting cultural and natural areas. Indicates stresses on the natural and social environment; national character; religion and world view; and literary, artistic and musical expression. Approved as a diversity course.

46.333 Ethnic Identity in the United States (3) - Explores the varieties of ethnic experience in the United States. A uniquely anthropological perspective is utilized to give students a sense of how a cultural-ethnic identity is formed and maintained in our society. Special attention paid to Italians and Latinos (including Puerto Ricans) as examples of extremely different immigrant experiences. Prerequisite: 46.200. Approved as a diversity course.

46.340 Native North America (3) - Surveys native cultures of North America in prehistoric and early historic periods. Prerequisites: 46.200, 46.210, 46.220 or consent of the instructor. Approved as a diversity course.

46.350 Medical Anthropology (3) - Studies of cross-cultural concepts of health, illness and curing as well as health care delivery in industrialized cultures. Includes the topics of divination and diagnosis, sorcery and witchcraft in healing, public health and preventive medicine, alcoholism and drug use and the medical knowledge of tribal and peasant societies. Approved as a diversity course.

46.360 Pseudoscience (3) - Sharpens critical thinking skills and deepens understanding of human belief systems and ethics by examining how science operates and evaluating extraordinary ideas that claim to be scientific. Investigates scientific-creationism, ESP, UFOs, fantastic archeology, dowsing and others.

46.370 Indigenous Cultures of Modern Mexico (3) - Presents an introduction to the indigenous cultures of modern Mexico, including Nahua, Otomi, Purépecha, Huastec, Zapotec, Mixtec and Maya. Focus is both historical and contemporary. Treats such subjects as religion, sacred and secular rituals, customs, folk art, sociopolitical organization, economics and culture change from an anthropological perspective. Prerequisite: 46.101 or 46.102 or 46.200 or 46.310 or 46.430 or 46.333 or 46.340 or consent of instructor.

46.385 Anthropology Research and Writing Skills (3) - Familiarizes students with information sources in anthropology. Students learn how to access those sources and to write and present research paper in anthropology. Basics of statistical analysis are covered. Students write, revise and present a research paper on an anthropological topic. Prerequisite: 46.200, 46.210, 46.220.

46.390 Socialization of the Child (3) - Examines life experience and adjustment of the individual through infancy, middle childhood and youth. Reviews contrasting methods of introducing children to adult economic, social and religious activities. Prerequisite: 46.200. Approved as a diversity course.

46.405 Primates (3) - Studies the various phenomena affecting primate behavior; ecology, social life and socio-cultural adaption, with emphasis on the development of socio-biological traits relating to human origins. Prerequisite: 9 semester hours of anthropology or 46.220 or any biology course.

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. Approved as a diversity course.

46.460 Applied Anthropology (3) - Provides an introduction to and critical evaluation of the various specializations, ethical issues, career opportunities, methods and theoretical orientations of applied anthropology, which involves the application of anthropological knowledge to identify and solve human problems. The course will utilize a holistic perspective throught he synthesis of applied specializations in cultural, biological, linguisitc and archaeological anthropology. Prerequisites: 46.200, 46.210, 46.220 or consent of the instructor.

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. Approved as a diversity course.

46.466 Independent Study in Anthropology (3) - Independent study by a student with faculty guidance of a particular research problem in anthropology. The research problem either extends current course content or deals with an area not covered in the current course offerings in anthropology. A problem is chosen by the faculty member and the student working together.

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.

46.475 Field Methods in Cultural Anthropology (3) - Provides class discussion and field experience in participatant observation. Experience in interviewing, surveying, kinship charting, mapping, studying complex organizations and writing ethnographic field reports.

46.480 Religion and Magic (3) - A comparative analysis of the origins, forms, elements and symbolism of religious beliefs and behavior; the role of religion in society with particular reference to nonliterate societies. Anthropological theories and methods of religion, historical and contemporary. Approved as a diversity course.

46.495 Special Topics in Anthropology (3) - Provides for instruction and student research within selected areas of interest not available in other courses. Prerequisite: 18 semester hours of anthropology or consent of the instructor.

46.497 Internship in Anthropology (3-15) - An on-site training and learning experience in anthropology that provides opportunities to apply theoretical and descriptive knowledge of archaeology, cultural anthropology and physical anthropology in private and government institutional settings.

PSY (48) Psychology

Administered by Department of Psychology

48.101 General Psychology (3) - Studies psychology as a system of scientific inquiry into the nature and behavior of humans. Presents major concepts, principles and processes concerned with human functioning in individuals and social settings.

48.131 Psychology of Adjustment (3) - Examines the personal and social meaning of psychological adjustment. Emphasizes stress and coping concepts and psychosocial competence in adulthood.

48.160 Basic Statistics (3) - Introduces fundamental statistical concepts and principles providing a foundation for research methodology for students who need not be mathematically inclined. Discusses computation, interpretation and application of commonly used descriptive, correlation and inferential statistical procedures for analyzing data.

48.210 Life-Span Psychology (3) - Examines the psychology of human development from conception to death. Discusses traditional topics and issues in developmental psychology such as cognition and personality, but within a life-span developmental perspective. Prerequisite: 48.101.

48.211 Child Psychology (3) - Studies normal development and the interrelationships among various aspects of biological, cognitive, personality and social factors. Emphasizes prenatal to adolescent development. Prerequisite: 48.101.

48.212 Adolescence (3) - Studies developmental, personal and social issues confronting adolescents as they emerge from childhood and strive for adulthood. Prerequisite: 48.101.

48.251 Psychological Foundations of Education (3) - Examines principles of psychology as applied to the classroom. Emphasizes learning processes as affected by environmental, experiential and developmental factors. Prerequisite: 48.101.

48.253 Social Psychology (3) - Studies interpersonal behavior with emphasis on affiliation, interpersonal perception and attraction, group behavior and conformity, attitude change and compliance. Prerequisite: 48.101.

48.254 Psychological Aspects of Social Issues (3) - Examines the application of psychological theories and

techniques to existing social issues and their relationship to alternative ethical viewpoints regarding social issues selected by the instructor for study. Prerequisite: 48.101.

48.281 Experimental Psychology: Methodology (3) - Introduces experimental design, statistical analysis and issues of control and confounding. Covers one, two and three factor designs. Surveys classic experimentation as well as issues in social, developmental, educational and clinical psychology from an experimental perspective. Prerequisites: 48.101 and 48.160 (with a minimum grade of C in each).

48.282 Experimental Psychology: Applications (3) - Deals with the application of experimental principles in a laboratory setting. Students learn APA writing format and statistical and graphic computer packages. Extensive writing or research reports required. Extensive laboratory research required. Students apply concepts of experimental design in a variety of research projects with human subjects. A five-week experience with rats as subjects is required. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C.

48.311 Adulthood and Aging (3) - Studies normal adult development and the interrelationships among various aspects of biological, congnitive, personality and social factors. Topics include self concept, intelligence, relationships (both romantic and familial), work, retirement, physical aging, and death and dying. Prerequisite: 48.101.

48.321 Psychological Tests and Measurements (Fall) (3) - Introduces the logic of psychological measurement including the applied and practical aspects of psychological testing with emphasis on reliability, validity and test norms. Provides background for test evaluation. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C or consent of the instructor.

48.335 Abnormal Psychology (3) - Surveys the description, causation, prevention and treatment of maladaptive behavior and psychological disorders. Considers biological, psychological and social factors. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C, 48.282.

48.336 Theories of Personality (Fall) (3) - A critical study of theories explaining development, structure and organization of personality. Considers personality from psychoanalytic, social, individual, self and learning points of view. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C, 48.282 or consent of the instructor.

48.340 Community Psychology ((3) - Surveys theory, research and action concerning the relationships between the individual and community life. Topics include the psychological sense of community, human diversity, promotion of health and socioemotional competence, citizen participation, community change and methods of community research. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C and 6 additional semester hours in psychology..

48.341 Theory and Practice of Academic Psychology (3) - Sharpens and expands knowledge of the basic principles of psychology. Provides an intensive review of the content taught in General Psychology and requires students to lead discussion groups. Prerequisites: Junior standing; 48.101, 48.160, 48.281, 48.282 and consent of the instructor.

48.342 Theory and Practice and Academic Psychology II (3) - Provides students who have completed Theories and Practice of Academic Psychology an opportunity to continue to develop skils related to leading discussions, presenting material and assessing and evaluation. In addition these studentw will also mentor students taking Theories and Practice for the first time. Does not fulfill a requirement for the major. Prerequisite: 48.341.

48.350 Psychology of Sex and Gender (3) - Examines the theoretical and research issues in psychological experiences of males and females. Views gender role development and implications for the daily lives of men and women from historical, biological, psychoanalytic, learning, sociological and anthropological perspectives. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C.

48.356 Psychology of Motivation (Fall) (3) - Surveys the fundamental determinants of human and animal activities. Studies theories, research methodologies and experimental evidence related to the activation and the direction of behavior. Prerequisites: 48.101, 48.160, 48.281 or consent of the instructor.

48.360 Cognitive Psychology (3) - Examines the major theoretical perspectives and research in the area of cognition and presents the ways in which mental processes such as memory, perception, language and problem solving may be empirically studied. Prerequisites: 48.101, 48.160, 48.281, all with minimum grade of C, 48.282.

48.375 Psychology of Learning (Fall) (3) - Examines the theoretical and experimental bases of learning in animal and human behaviors. Emphasis is on classical and operant conditioning and the experimental analysis of behavior. Prerequisites 48.101, 48.160, 48.281, 48.282 or consent of the instructor.

48.380 Behavioral Neuroscience (Spring) (3) - Studies the relationship between psychological processes and physiological activity. Reviews neurological and biochemical bases of behavior with emphasis on the synergistic functions of the nervous, sensory and hormonal systems. Prerequisites: 48.101, 48.160, 48.281, 48.282 or consent of the instructor.

48.401 History of Psychology (3) - Studies the historical development of modern psychology and compares

present-day models of behavior within an historical framework. Prerequisites: 90 semester hours and completion of one of the following courses: 48.360, 48.375, 48.380, 48.335, 48.436 or consent of the instructor.

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. Prerequisites: 48.101 and consent of the instructor.

48.436 Theories of Personality (3) - A critical study of theories explaining development, structure and dynamics 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.

48.439 Introduction to Clinical Psychology (3) - Surveys clinical psychology and the role of the clinical psychologist in community and hospital mental health programs, clinical assessment and diagnosis. Examines concepts in and models of psychotherapy. Prerequisites: 48.101, 48.335 or 48.436 or consent of the instructor.

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 (Spring, odd-numbered years) (3) - Presents an advanced consideration of the planning, conduct and evaluation of research in the behavioral and biological sciences, employing parametric and nonparametric 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 Liberal Arts.

48.476 Principles of Behavior Modification (3) - Studies the application of learning principles to change behavior in both individual and group settings. Prerequisites: 48.101 or consent of the instructor.

48.497 Practicum in Psychology (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.

48.577 Principles of Behavior Modification (3) - Studies the application of learning principles to change behavior in both individual and group settings. Prerequisites: 48.101 or consent of the instructor.

BIO (50) Biology

Administered by Department of Biological and

Allied Health Sciences

50.101 General Biology I (3) - Presents major concepts and principles of biology relating to humans. Lecture and discussion. Not applicable to biology major.

50.102 General Biology II (3) - Studies biology from the ecological, evolutionary and behavioral perspective with emphasis on humankind. Prerequisite: 50.101. Not applicable to biology major.

50.107 Medical Terminology (1) - Studies roots, prefixes and suffixes of medical terms via programmed instruction. Recommended for students in the health sciences. Pass/fail credit only. Not applicable to biology major.

50.114 Concepts in Biology I (4) - Introductory course provides a framework of key biological concepts and unifying themes. Topics include the nature and process of science, the unity and diversity of living things, the chemical basis of life, cell structure and function, principles of inheritance and animal form and function. Laboratory work emphasizes application of biological principles, experimental design, observation, data collection, analysis and interpretation. Three hours lecture/three hours laboratory per week.

50.115 Concepts in Biology II (4) - Continuation of Concepts in Biology I. Introductory course that presents key biological concepts in an evolutionary framework. Topics include: plant form and function, population, community and ecosystem ecology, evolution, systematics and a survey of key phyla of plants, animals and microorganisms. Laboratory work emphasizes application of biological principles, experimental design, observation, data collection,

analysis and interpretation as well as written and oral communication skills. Three hours of lecture/three hours of laboratory per week. Prerequisite: 50.114 or permission of the instructor.

50.173 Anatomy and Physiology I (4) - An introductory course integrating the structure and function of the human body. Covers fundamental principles of anatomy and physiology, the chemical basis of life, cell structure and function, tissues, integumentary system, skeletal system, muscular system, nervous system and special senses. Three hours of lecture/3 hours of laboratory per week. Not applicable to biology major.

50.174 Anatomy and Physiology II (4) - Introductory course integrating the structure and function of the human body. Covers blood and defense mechanisms, cardiovascular system, lymphatic system, respiratory system, digestive system, metabolism, nutrition, urinary system, fluid and electrolyte balance, endocrine system, reproductive system, growth and development and human genetics. Three hours lecture/3 hours laboratory per week. Prerequisite: 50.173 or consent of the instructor. Not applicable to biology major.

50.200 Dendrology (Summer) (3) - Covers the basic principles of dendrology: the identification, biology and economic significance of trees and shrubs. Emphasis is placed on tree species of eastern North American forests. Two hours of lecture and 10 hours of laboratory per week. Summer session only. Prerequisite: 50.115.

50.205 Introduction to Nutrition (3) - A foundation of nutritional concepts and practices that can be applied to personal lives and incorporated into careers. Concepts include nutritional requirements for optimal health and performance throughout the life span, making food choices in the marketplace, analyzing nutritional information in the media and controversial issues in nutrition and health. Not applicable to biology major.

50.211 Invertebrate Zoology (3) - Studies the principal phyla of invertebrate animals in relation to their anatomy, classification and behaviors in the ecosystems in which they participate. Field trip component at Marine Science Consortium, Wallops Island, Va., includes additional student costs. Three hours lecture/2 hours laboratory per week. Prerequisite : 50.115.

50.212 Vertebrate Zoology (Fall) (3) - Studies the biology of vertebrate animals, emphasizing natural history, physiology, morphology, taxonomy and behavior. Reviews evolutionary and ecological aspects of each class. Includes laboratory work with living and preserved specimens to familiarize students with representative individuals of the major classes of this group. Field trip component at the Marine Science Consortium, Wallops Island, Va., includes additional student costs. Two hours of lecture/3 hours of laboratory per week. Prerequisite: 50.115.

50.222 Comparative Biology of Plants (3) - Provides a phylogenetic study of land plants with emphasis on their development, structure, reproduction and selected ecological and paleobotanical aspects. Two hours of lecture/3 hours of laboratory per week. Prerequisite: 50.115.

50.231 Biology of Aging (3) - The biological mechanisms of the aging process are discussed with special emphasis on these processes in humans. Discussions include studies of aging at the molecular, cellular, systems and organism levels of organizations. Three hours lecture per week. Not applicable to biology major.

50.233 Human Genetics (3) - Explores the principles of human genetics and their application to problems in anthropology, biology, medicine, psychology, sociology and special education. Three hours of lecture/discussion per week. Prerequisite: 50.101, 50.114 or consent of the instructor.

50.240 Introductory Microbiology (3) - Presents elementary aspects of morphology, metabolism and cultivation of bacteria, viruses and other microorganisms with consideration of their relationship to public health and various industrial processes. Two hours lecture and 2 hours laboratory per week. Not applicable to biology major.

50.242 Biology of Microorganisms (4) - Introduces the fundamental principles of nomenclature, classification, microscopy, cytology and anatomy, cultivation, growth, metabolism and genetics of the microbial world. Microbial interrelationships and control are integrated into a systematic approach to classical microbiology as it relates to humans and the environment. Three hours of lecture/3 hours of laboratory per week. Prerequisites: 50.115 and 52.115 or 52.118.

50.252 Field Zoology (Summer/odd-numbered years) (3) - Studies animals (mainly vertebrates) with emphasis on field observation and recognition and some collections. Also the class visits various field zoologists' study sites to learn about this profession. Field trip to Wallops Island at additional student cost. Two hours of lecture/3 hours of laboratory per week. Prerequisite: 50.115 or consent of the instructor.

50.253 Freshwater Biology (Summer) (3) - Emphasizes the chemical, physical and biological aspects of freshwater environments. Two hours of lecture/3 hours of laboratory per week. Prerequisites: 50.115 or consent of the instructor.

50.254 Social Implications of Biology (3) - Explores the societal implications of current thought in biology. Addresses values, ethics and responsible decision making. Three hours of lecture and discussion per week. Not applicable to biology major. .

50.263 Field Botany (Summer) (3) - Field identification of local vascular plants, principles of plant systemics, ecology and evolution. Two hours of lecture/3 hours laboratory per week. Prerequisite: 50.115 or consent of the instructor.

50.271 Cell Biology (4) - Examines the structure and function of the cell and its organelles. Emphasis on general principles and processes by which all cells function. Three hours of lecture/3 hours of laboratory per week. Prerequisites: 50.115 and 52.115 or 52.118.

50.290 Writing in Biology (3) - Provides experience in types of communication useful in a natural science with a basis in experimentally acquired information. Emphasizes types of written communication; includes oral presentations. Prerequisites: 20.101 or 20.104 and 50.114. Word processing skills are highly recommended.

50.331 Embryology (3) - Reviews the patterns, processes and principles of animal development. Laboratory studies emphasize descriptive embryology of a number of representative vertebrates with emphasis on amphibian, avian and mammalian development. Field trip component at Marine Science Consortium, Wallops Island, Va., includes additional student costs. Two hours of lecture/3 hours of laboratory per week. Prerequisite: 50.115 or consent of the instructor.

50.332 Genetics (3) - Addresses mechanisms of heredity in animals and plants; Mendelian inheritance, linkage, probability, crossing over, chromosomal modifications, nucleic acids and gene action. Three hours of lecture/2 hours of laboratory per week. Laboratory hours will vary. Prerequisite: 50.271.

50.333 Molecular Biology (3) - Investigates the practical and theoretical aspects of molecular biology and gives students an opportunity to explore otogenic and developmental problems from a molecular perspective. Topics include information processing from DNA to proteins, regulation of gene expression, DNA mutability and repair and genetic engineering. Two hours lecture/discussion, three hours of lab per week. Prerequisites: 50.271, 50.242, 52.131.

50.342 Medical Bacteriology (4) - Provides a study of bacteria capable of causing disease in humans. Emphasizes laboratory aspects of bacterial disease but includes pathogenicity, identification, diagnosis, treatment and prevention. Three hours of lecture/3 hours of laboratory per week. Prerequisites: 50.242 and 50.271.

50.343 Immunology (3) - Introduction to components and functions of human immune system; application of immunology to infectious disease, blood transfusion organ transplantation and cancer; consideration of conditions involving the immune system such as immunodeficiencies (AIDS), allergies and autoimmune diseases. Prerequisites: 50.271; and a background in genetics organic/biochemistry and/or infectious diseases recommended.

50.350 Plant Pathology (3) - Examines the nature of vascular plant diseases, the biology of plant pathogens and the impact of diseases on human affairs. Lecture stresses principles of plant pathology: disease and pathogen classification, modes of pathogenesis, host response to disease and disease control. Laboratory stresses identification of plant pathogens and disease symptoms, histology of diseased tissues and research techniques. Three hours of lecture/2 hours of laboratory per week. Prerequisites: 50.242 and 50.271; or consent of the instructor.

50.351 General Ecology (3) - Introduces principles and concepts pertaining to energy flow, limiting factors, habitat studies, succession patterns and population studies at the species, interspecies and community level. Field trip component at the Marine Science Consortium, Wallops Island, Va., may incur additional student costs for food and lodging. Two hours lecture/3 hours laboratory per week. Prerequisite: 50.115 or consent of the instructor.

50.361 Comparative Vertebrate Anatomy (3) - Presents a comparative study of the chordates emphasizing the vertebrate classes. Attention given to structure, morphogenesis, functional adaptations and evolutionary trends. Laboratory emphasis is placed on the lamprey, shark and cat. Field trip component at Marine Science Consortium, Wallops Island, Va., includes additional student costs. Two hours of lecture/3 hours of laboratory per week. Prerequisite: 50.115 or consent of the instructor.

50.364 Vertebrate Histology (3) - Studies the structure and function of vertebrate cells and tissues from various body systems. Laboratory studies include the use of prepared microscope slides and color photomicrographs. Two hours lecture/3 hours laboratory per week. Prerequisite: 50.271 or consent of instructor.

50.366 Anatomy and Physiology: Head, Neck and Thorax (Spring) (3) - Focuses on the anatomy, physiology and development of the head, neck and thorax. Emphasizes the organ systems that relate to the hearing and speech mechanisms. Three hours lecture/2 hours laboratory per week. Preference given to students in communication disorders. Not applicable to biology major.

50.380 Biology Seminar (1) - Emphasizes preparation and presentation of biological topics in both oral and written formats. Prerequisite: junior standing or minimum of 64 semester hours completed.

50.390 Independent Study in Biology I (1-3) - Acquaints students with techniques of scientific research, data collection and analysis by engaging in a program of research with the aid of a faculty member. Research culminates in a scholarly paper written by the student that presents findings of the laboratory or field

investigation in a form suitable for publication. Refer to section on cooperative education, internship and independent study Prerequisite: junior standing.

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: 50.233 or 50.332, 53.141 or consent of the instructor.

50.430 Evolution (3) - Studies the major concerns of the theory of evolution and contributions toward their solutions made by genetics, paleontology, systematics and ecology. Three hours of lecture per week. Prerequisites: 50.332 or 50.351 or permission of the instructor.

50.432 - Microbial and Molecular Genetics (3) - A study of macromolecules, macromolecular complexes, protein synthesis and gene regulation using viruses, bacteria and lower eukaryotes. Topics include DNA/ chromosome structure, genetic recombination, plasmids, transposons, recombinant DNA and genetic analysis. Three hours of lecture and two hours of laboratory per week. The laboratory hours will vary. Prerequisites: Two of the following: 50.242, 50.332, 52.341; or permission of instructor.

50.441 Cytogenetics (3) - Examines structure and behavior of chromosomes and their effects on development. Describes human genetic syndromes and the effects of chromosome abnormalities. Explores relationships between chromosomes, oncogenes and cancer. Laboratory studies include cell culture methods, microscopic techniques and karyotype preparation. Two hours of lecture/2 hours of laboratory per week. Prerequisites: 50.233 or 50.332 and 50.271; or consent of the instructor.

50.442 Virology of Mammals (3) - Introduces viral structure, classification, replication, genetics and pathogenesis. Studies entail the diagnosis, prevention and treatment of viral infection and families of viruses that cause disease in humans and other mammals. Includes such current topics as AIDS and tumor virology. Prerequisites: At least one course from 50.332, 50.342, 50.343, Chemistry 52.341; background in microbiology recommended.

50.450 Mycology (3) - A critical survey of the kingdom Fungi, with emphasis on the Ascomycota, Basidiomycota and Deuteromycota. Lectures cover the topics of morphology, physiology, biochemistry, cytology, genetics, systematics, ecology and evolution. Laboratory stresses comparative morphology of higher fungi, laboratory techniques and field mycology. Two hours of lecture/3 hours of laboratory per week. Prerequisites: 50.271; one course in genetics recommended; or consent of the instructor.

50.451 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 their impact on the environment. Brings scientific principles and theory to bear on problems of management for preserving the richness of life on earth. Three hours of seminar per week. Prerequisites: 50.115; 50.351; 41.105 or consent of the instructor.

50.542 Limnology (summer) (3) - Chemical, biological and physical aspects of freshwater lakes, ponds and streams. Includes laboratory and field investigations. Prerequisite: 50.351.

50.453 Neotropical Biology (3) - Studies the biology of the neotropics with an emphasis on the Central or South American neotropics. Students will deliver a seminar, write a term paper, participate in class discussions, turn in a field trip notebook and study selected readings in neotropical biology. A one to two week trip to the neotropics is required and students will incur travel expenses exclusive of tuition and fees of approximately $2,000. Prerequisites: 50.115; 50.351; 41.105 or consent of the 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.

50.459 Ornithology (3) - Studies the biology of birds including bird identification in the field by song and sight, anatomy, physiology, behavior, ecology and other aspects. Two hours of lecture/3 hours of laboratory per week. Some study off-campus may be required. The field trip component at Marine Science Consortium, Wallops Island, Va., includes additional student costs. Prerequisite: 50.115 or consent of the instructor.

50.460 Population Biology (3) - Presents selected themes in the biology of animal, plant and fungal populations. Topics include: population structure and dynamics, population genetics, population ecology and

speciation. Fundamental principles and current models and hypotheses will be stressed, along with treatments of research techniques, computer modeling and potential for future research. Three hours of lecture/discussion per week.

50.461 Animal Behavior (3) - In depth introduction to modern ethology. Emphasizes current models of animal behavior and theoretical foundations of ethology. Research and project oriented. Students may incur additional cost due to the field trip component at Marine Science Consortium, Wallops Island, Va. Three hours of lecture/2 hours of laboratory per week.

50.462 Plant Anatomy (3) - Outlines recent concepts of plant anatomy and historical consideration of classical researchers. Reviews the structure, function, growth and morphogenesis of the vascular plants. Addresses composition and growth of meristems and the phenomena of subsequent tissue differentiation. Describes anatomical organization by developmental and comparative methods in order to explain important cell, tissue and organ relationships. Two hours of lecture/3 hours of laboratory per week. Prerequisite: 50.115.

50.470 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, the proper handling of specimens and methods of professional patient interviewing. Five hours per week. Prerequisite: 50.115 and 52.11 or 52.216 or consent of the instructor. Completion of additional coursework in biology recommended.

50.472 Animal Cell Physiology (3) - Examines the principles of physics and chemistry as they relate to biological processes of animal cells. Relates the structure and properties of certain organic molecules to the structure of biological membranes and the functions of different organelles. Emphasizes the role of membrane transport processes to the maintenance of the cell's physiochemical environment. Uses intermediary metabolism and bioenergetics to present the role of chemical messengers in the regulation of cell processes. Prerequisites: 50.271, 52.132, 52.216 or permission of the instructor.

50.473 Systemic Physiology (3) - Examines how normal body function is maintained by the precise control and integration of the specialized activities of the various organ systems. Three hours of lecture/ 2 hours of laboratory per week. Prerequisites: 50.271, 52.131, 52.216 and 50.371 or 50.174.

50.474 Vertebrate Systems Physiology (3) - Studies the major organ systems and how they work together to maintain body conditions compatible with life. Uses human systems to explain function, but includes examples from other vertebrates to broaden students' understanding of the variety of mechanisms used to maintain homeostasis. Mechanisms by which the systems' functions are integrated in the whole organism are emphasized. Three hours lecture and discussion per week. Prerequisites: 50.271, 52.116, and 52.131, or permission of the instructor. Competence in college algebra.

50.476 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: 54.112 and 50.371 or 50.473.

50.477 Plant Physiology (3)- An introduction to plant function including discussions of water relations, carbohydrate metabolism and translocation, photosynthesis, mineral nutrition, plant growth hormones and growth and development. Three hours lecture per week. Prerequisites: 50.271, 52.131, junior standing or consent of the instructor.

50.478 Microbial Physiology (3) - Studies life processes of microorganisms, including how they maintain homeostasis in response to changing environmental conditions. Examines general similarities as well as significant differences between microbial groups. Covers principles of nutrition and growth, substrake uptake and transport systems. Discussion of energy-yielding metabolism in microorganisms will highlight the diversity of systems. Outlines precursor and macromolecule synthetic pathways and their regulation, with emphasis on industrial applications. Three hours of lecture per week. Prerequisites: 50.242, 50.271, 52.216.

50.479 Integrated Physiology Laboratory (1) - Provides hands-on investigations of physiological principles across taxonomic groups and all organizational levels. Investigates evolutionary adaptations to various physical problems and reinforces awareness of the unity of living systems. Emphasizes the application of the scientific method and provides opportunities for independent investigation. Four hours laboratory per week, including one hour discussion. Offered each semester. Prerequisites: 50.271, 52.116, and 52.131 or permission of the instructor. Students need an understanding of college algebra. Pre or Co-requisite: 50.472, 50.474, 50.478, or 50.477.

50.490 Internship in Biology and Biology Research (3-15) - A work-study program open only to juniors and seniors majoring in biology and allied health sciences. No

more than 15 semester hours in Cooperative Education and/or internship may be taken. .

50.493 Honors Independent Study I - Biological Research (3) - Consists of a laboratory or field investigation of a particular problem or topic in biology. The study will be conducted under the supervision of a biology faculty member. The course is open to students enrolled in the B.A. and B.S. in biology degree programs. Refer to section on cooperative education, internship and independent study. Prerequisite: 50.380 and admission to the Honors Program.

50.494 Honors Independent Study II - Biological Research (3) - Consists of a laboratory or field investigation of a selected problem or topic in biology. The study will be conducted under the supervision of a biology faculty member. This course completes the requirements for Biology Honors research. Prerequisite: 50.493.

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 extant 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 - Microbial and Molecular Genetics (3) - A study of macromolecules, macromolecular complexes, protein synthesis and gene regulation using viruses, bacteria and lower eukaryotes. Topics include DNA/ chromosome structure, genetic recombination, plasmids, transposons, recombinant DNA and genetic analysis. Three hours of lecture and two hours of laboratory per week. The laboratory hours will vary. Prerequisites: Admission to the M.S. or M.Ed. Program in Biology, or permission of instructor.

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.

50.552 Limnology (summer) (3) - Chemical, biological and physical aspects of freshwater lakes, ponds and streams. Includes laboratory and field investigations. Prerequisite: 50.351.

50.553 Neotropical Biology (3) - Studies the biology of the neotropics. Students will deliver a seminar, write a term paper, participate in class discussions, turn in a field trip notebook and study selected readings in neotropical biology. A one to two-week trip to the neotropics is a required part of this course, with travel expenses exclusive of tuition and fees of approximately $2,000.

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 $75 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) - Explores cellular function in molecular terms. Topics include: membrane physiology, interactions between cells and their environment, aerobic respiration, photosynthesis, cytoplasmic membrane systems, cytoskeleton and cell motility, gene expression and its control, cellular reporduction, cell signalling and techniques in cell and molecular biology. 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.

ESS (51) Geology and Earth Science

Administered by Department of Geography and Geosciences

51.100 Environmental Geology (3) - Application of geologic knowledge to environmental concerns. Emphasizes energy, soil, mineral and water resources along with Earth processes that are hazardous to humans. An afternoon field trip with a nominal fee is required.

51.101 Physical Geology (3) - Studies the landscape in relation to the structure of the earth's crust; agents at work to change landforms; classification and interpretation of rocks. One semester hour optional lab; an afternoon field trip is required.

51.102 Historical Geology (3) - Examines the evolution of earth and life on earth as interpreted from rock and fossil evidence; particular emphasis is on the geologic history of North America. One semester hour optional lab; afternoon field trip is required.

51.103 Dinosaurs (3) - Designed to use a single broad topic of current popular interest as the basis for exploration of important concepts and/or themes in Earth's history. Dinosaurs and their relatives will be used to illustrate origination and extinction of species through time as well as interaction of organisms with each other and the environment.

51.106 The Planets (3) - Introduces students to the origin, evolution and geology of the solar system, paying particular attention to the terrestrial planets and icy satellites of the outer planets. Emphasis on results returning from recent and current planetary missions.

51.107 Natural Disasters (3) - Principles of Earth's internal and external processes are explored through an examination of their manifestations as naturally-occurring disasters and the resultant impact on human life and property.

51.111 Physical Geology Laboratory (1) - Presents an introduction to the practice of fundamental geology laboratory techniques including qualitative and quantitative analysis. Two hours of laboratory per week. It is recommended that course be taken concurrently with 51.101.

51.112 Historical Geology Laboratory (1) - Provides an interpretation of Earth's history through the identification and evolution of the rock and fossil record and through the interpretation of geologic maps. Two laboratory hours per week. It is recommended that course be taken concurrently with 51.102.

51.255 Meteorology (3) - Studies the atmosphere via the use of gas laws and the underlying principles of atmospheric change. The field trip component incurs an additional cost to students of approximately $20 for airfare.

51.259 Oceanography (3) - Provides an introduction to the geologic, chemical and physical aspects of the ocean basins. Emphasizes wave motion, topographic features, ocean basin structure, current circulation and methods of investigation. A weekend field trip is encouraged.

51.260 Earth Materials (4) - Explores the origin, occurence and identification of the common materials and of igneous, sedimentary and metamorphic rocks, with emphasis on practical means of recognition. Three hours lecture, two hours laboratory per week. Prerequisite: 51.111.

51.261 Mineralogy (Fall) (4) - Reviews the origin, occurrence and identifying characteristics of common minerals. Stresses megascopic and microscopic techniques. Three hours of class, 2 hours of laboratory per week. Prerequisite: 51.101 and 51.111 or permission of the instructor.

51.262 Petrology (Spring) (4) - Presents megascopic and petrographic analysis and identification of rocks with emphasis on field occurrences and associations. Three hours of class, 2 hours of laboratory per week. Prerequisite: 51.261.

51.265 Geomorphology (Fall) (4) - Study of the origin of landforms with emphasis on the geologic processes and structures that generate the landforms and applications of landform analysis. Two-day weekend field trip is required. Three hours of class, 2 hours of laboratory per week. Prerequisites: 51.101 and 51.111 or consent of instructor.

51.320 Remote Sensing of the Earth (3) - Studies the use of remote sensing technology to explore for, monitor and manage Earth's natural resources. Two hours of class, 2 hours of laboratory per week. Prerequisite: 53.112 or higher or consent of the instructor.

51.355 Synoptic Meteorology (3) - Presents observation and analysis of data for understanding and predicting the complexities of the atmosphere. Prerequisite: 51.255 or consent of instructor.

51.360 Introduction to Paleontology (4) - Introduces students to modern concepts and methods in paleobiology using examples from various groups of organisms important in the fossil record. Field trips and laboratory work are an integral part of this course. Prerequisite: 51.102, 51.112 or 50.211 or consent of the instructor.

51.369 Structural Geology (Spring) (4) - Analyzes rock deformation based upon the principles of rock mechanics and the utilization of data from field investigations. Three hours of class, 2 hours of laboratory per week. Prerequisites: 51.101 and 51.111 or consent of instructor.

51.370 Surface Hydrology (Fall) (3) - Study of water movement upon and within the Earth with emphasis on calculations used in flood forecasting, surface water supply and groundwater supply. Two hours of class, 2 hours of laboratory per week. Prerequisite: 51.101 or 51.105.

51.451 Field Techniques in Earth Science (Summer) (6) - Provides intensive field and laboratory training in the use of equipment and techniques in geology, hydrology and cartography. Field trips are integral, vital parts of the course. Prerequisite: 15 semester hours in earth science courses or consent of the instructor.

51.460 Aqueous Geochemistry (4) - Introduces students to basic geochemical properties of surface and groundwater as well as controls on the geochemistry of natural waters. An emphasis is placed on the methods of sampling and analysis of natural waters for chemical species pertinent to environmental and pollution studies. Three hours lecture and two hours laboratory. Prerequisite: 51.261 and 51.216 or permission of the instructor.

51.410 Volcanoes (1) - Explores the composition and processes of the Earth as it relates to the occurrence and activity of volcanoes around the world. Considers styles and hazards of eruptions, the state of prediction and the formation of lava and volcanic rocks. Recommended for in-service and pre-service teachers. Does not satisfy general education requirements. Summer only, three hour class per day for one week.

51.468 Stratigraphy and Sedimentation (Fall) (4) - Studies processes and agents which erode, transport and deposit sediments and the geologic interpretation of the resulting rocks. Three hours of class, 2 hours of laboratory per week. Prerequisite: 51.101 and 51.111, 51.102, 51.112 or permission of the instructor.

51.470 Groundwater Hydrology (Spring) (3) - Covers well hydraulics exploration techniques, groundwater flow theory, development of groundwater supplies and prevention or correction of groundwater pollution. A one- or two-day field trip required. Two hours of class, 2 hours of laboratory per week. Prerequisites: 51.101 and 51.111 and 51.365.

51.475 Independent Study in Earth Science (1-3) - Provides an opportunity for student research in various areas of earth science. Research is conducted under the supervision of a faculty member. See subsection of the catalog on Independent Study. Prerequisite: 21 semester hours in earth science.

51.480 Applied Geophysics (4) - Examines the theory and application of geophysical methods for exploring the Earth's subsurface environment. Emphasis on those tools used by agencies or companies involved in resource and environmental assessment. Three hours of lecture and two hours of laboratory per week. Prerequisites: 51.101, 53.123 and 54.111 or permission of the instructor.

51.490 Special Topics in Geology (3) - Study of a particular concept, problem or special topic or new ideas in any

area of earth science. Topic chosen through common interests of the instructor and each student. .

51.493 Senior Research in Geosciences (3) - Provides for library and/or field research in geology. Prerequisites: 51.261, 51.262, 51.468 or consent of the instructor.

51.511 Volcanoes (1) - Explores the composition and processes of the Earth as it relates to the occurrence and activity of volcanoes around the world. Considers styles and hazards of eruptions, the state of prediction and the formation of lava and volcanic rocks. Recommended for in-service and pre-service teachers. Does not satisfy general education requirements. Summer only, three hour class per day for one week.

CHM (52) Chemistry

Administered by Department of Chemistry

Effective Fall 2001

52.100 Chemistry and the Citizen (3) - Discussion of chemical principles, the importance of chemistry, the use of chemicals and their impact on society and the environment. Three hours of class per week.

52.101 Introductory Chemistry (3) - Presents an introduction to chemistry for students with little or no background in chemistry. Surveys the principles of chemistry with emphasis on the fundamentals of chemical and physical measurements and calculations. Three hours of class per week. Not intended as a beginning course for science majors.

52.108 Physiological Chemistry (Spring) (4) - Surveys the essentials of organic and biochemistry. Includes bonding, structure, nomenclature organic functional group reactions and metabolism of biomolecules. Three hours class, two hours of laboratory per week. Prerequisite: 52.101.

52.115 Fundamentals of Inorganic Chemistry (4) - Introduces descriptive inorganic chemistry and the chemical principles necessary to understand the descriptive material. First half of two-semester sequence for natural science or mathematics majors. Partially fulfills core requirement in inorganic chemistry for American Chemical Society. Three hours of lecture/3 hours of laboratory per week. Prerequisite: High school chemistry or equivalent recommended.

52.116 Chemical Principles and Measurements (4) - Second semester of introductory chemistry for natural science and mathematics majors. Surveys principles of chemical stoichiometry, intermolecular forces, kinetics and thermodynamics as they apply to phase, electrochemical and acid-base phenomena. Laboratory work illustrates chemical principles and emphasizes common chemical measurements. Three hours of lecture and 3 hours of laboratory per week. Prerequisite: 52.115 plus high school Algebra II or equivalent.

52.230 Fundamentals of Organic Chemistry (4) - Emphasizes structure, stereochemistry, functional group organization, physical properties and classical reactivity of organic compounds. Three hours of lecture and 3 hours of laboratory per week. Prerequisite: 52.116.

52.231 Organic Chemistry I (4) - Emphasizes structure and bonding, sterochemistry, nomenclature, physical and chemical properties and modern spectroscopy of alkanes, haloalkanes, alcohols and ethers. Three hours of lecture and four hours of lab per week. Prerequisite: 52.116

52.232 Organic Chemistry II (4) - A continuation of organic topics, building on 52.231, with emphasis on the synthesis and reactions of aromatics, aldehydes, ketones, carboxylic acids, there derivatives, amines, heterocycles and alkaloids. Three hours of lecture, four hours of lab per week. Prerequisite: 52.231

52.281 Introduction to Scientific Literature (Spring) (1) - Stresses the use of the library and scientific journals to facilitate the formulation of scientific research proposals and presentations. Experience gained in using the literature to design a senior research project and to make presentations to an audience of faculty and peers. One hour class per week. Prerequisite: Advanced standing as a natural science major.

52.321 Analytical Chemistry I (Fall) (3) - Introduces fundamental principles of chemical analysis utilizing classical wet chemistry and modern instrumental techniques. Stresses laboratory skills in the analysis of common commercial or environmental materials. Two hours of lecture and 4 hours of laboratory per week. Prerequisite: 52.216.

52.322 Instrumental Analytical Chemistry (4) - Presents the theory and laboratory applications of common methods of instrumental analysis. Topics include spectrophotometry, chromatography, mass spectrometry, nuclear magnetic resonance and electrochemistry. A laboratory centered course. Three hours of lecture and 4 hours of laboratory per week. Prerequisites: 52.321 and 52.362 completed or concurrent.

52.341 Biochemistry (4) - Emphasizes structure, reactivity and metabolic reactions of the naturally occurring biomolecules. Discusses selected topics from the various metabolic pathways (both anabolic and catabolic). Introduces biochemical techniques encountered by the modern biochemist. Three hours of lecture and 4 hours of laboratory per week. Prerequisites: 52.232 or 52.230.

52.361 Physical Chemistry I (Fall) (4) - Studies thermodynamics; Gibbs free energy and equilibrium; kinetic theory of gases and solutions; chemical kinetics. Three hours of lecture and 4 hours of laboratory per week. Prerequisites: 52.115, 52.216, 53.225, 54.212.

52.362 Physical Chemistry II (Spring) (4) - Continuation of 52.361; Schrodinger quantum mechanics, solid state, molecular orbital theory; spectroscopy. Three hours of lecture and 4 hours of laboratory per week. Prerequisite: 52.361.

52.371 Introduction to Polymer Science (3) - An introduction in polymer chemistry, studying the different methods of polymer synthesis and characterization of macromolecules. Emphasis on the molecular structure of these materials and how it relates to physical properties. Prerequisite: 52.232 or 52.230.

52.442 Biochemistry II (4) - Continuation of 52-341; amino acid metabolism, photosynthesis, nucleotide metabolism, replication, transcription, translation, control of gene expression, molecular physiology. Laboratory to emphasize enzyme isolation and molecular biology techniques. Three hours of lecture and 3 hours of laboratory per week. Prerequisites: 52.341 or equivalent or consent of the instructor.

52.452 Advanced Inorganic Chemistry (Spring) (4) - Theories and principles of inorganic chemistry; coordination chemistry organometallic chemistry, systematic analysis of periodic relationships and properties of important elements. Three hours of lecture and 4 hours of laboratory per week. Prerequisites: 52.115; 52.362 concurrent.

52.482 Advanced Topics in Chemistry (3) - Advanced course dealing with specialized topics of interest to students in ACS degree track. Subject matter varies. Course may be taken more than once provided subject matter is not repeated. Prerequisite: Consent of the instructor.

52.491 Independent Study I: Special Topics in Chemistry (1-3) - Entails a directed laboratory or library oriented investigation of one or more topics of mutual interest to student and instructor.

52.492 Independent Study II: Introduction to Research (1-3) - Requires a search of chemical literature and a written survey report of the search. A detailed plan of research (to be implemented in 52.493) is developed in a second written report. Prerequisite: approval of chemistry department.

52.493 Independent Study III: Chemical Research (3) - Investigations of selected chemical problems for advanced students. Approximately 120 hours per semester. Prerequisites: 52.492, approval of chemistry department.

52.494 Honors Independent Study IV: Chemical Research (3) - The third semester of a laboratory investigation of selected problems under the supervision of a chemistry faculty member. Approximately 120 hours per semester. Prerequisite: enrollment in the honors program.

52.498 Internship in Chemistry (3-15) - A work-study program, this course is not applicable toward a major or minor in chemistry. Prerequisites: approval of chemistry department; junior or senior standing.

MAT (53) Mathematics

Administered by Department of Mathematics

and Computer Science

53.101 Mathematical Thinking (3) - Presents mathematical topics and applications in a context designed to promote quantitative reasoning and the use of mathematics in solving problems and making decisions. Suitable for majors in humanities, education and others seeking a broad view of mathematics. No background in algebra required.

53.111 Finite Mathematics (3) - Presents an introductory development of counting techniques, probability spaces and game theory. Prerequisite: two years of high school algebra or equivalent.

53.112 Trigonometry (3) - Studies elementary algebraic functions and relations, exponential and logarithmic functions, circular functions and inverse functions and their applications. Prerequisite: 53.114 or two years of high school algebra or high school trigonometry or their equivalent.

53.113 Pre-Calculus (3) - Studies elementary algebraic functions and relations, exponential and logarithmic functions, circular functions and inverse functions and their applications. Prerequisite: 53.114 or two years of high school algebra or the equivalent.

53.114 College Algebra (3) - Studies fundamental algebraic concepts and develops the mathematical and computation skills necessary to apply algebraic techniques to problems in business, economics, the social and natural sciences and the liberal arts. Prerequisite: 1 1/2 years of high school algebra or the equivalent. Not open to students with a C- or higher recorded for 53.113, 53,123 or 53.125.

53.118 Applied Matrix Algebra (3) - Introduces vectors, matrices, linear equations and linear programming with applications to the social and biological sciences and business. Prerequisite: two years of high school algebra or equivalent.

53.123 Essentials of Calculus (3) - Presents the basic concepts of elementary calculus in a nonrigorous approach for students who are not mathematics majors. Pertinent topics in the real number system, analytic geometry, functions and limits prepare the student for the study of the basic techniques of applications of differentiation and integration. Course is not for chemistry, mathematics or physics majors. Prerequisite: At least two years of high school algebra or 53.114 or consent of the instructor.

53.125 Analysis I (3) - Designed to meet part of the major-level mathematics requirement; first in the sequence of four calculus courses. Provides the basic tools for differentiation and the beginnings of integration for

functions of a single variable. Prerequisite: placement test or 53.113. TI-89 graphical calculator is required.

53.126 Analysis II (3) - Studies techniques of integration, functions, infinite series, Taylor's theorem, some special differential equations and polar coordinates. Prerequisite: 53.125. TI-89 graphical calculator is required.

53.141 Introduction to Statistics (3) - Presents the concepts necessary to use and understand basic statistical techniques. Topics include: descriptive statistics, probability, random variables, sampling distributions, hypothesis tests, confidence intervals and analysis of variance. Prerequisite: High school algebra.

53.185 Discrete Mathematics (3) - An introduction to set theory, logic, combinatorics and graph theory for those interested in mathematics or computer science. Not usually taken during the freshman year. Prerequisite: 53.125 or consent of instructor.

53.201 Theory of Arithmetic (3) - Presents the language of sets, the four elementary operations through the real number system and the elementary theory of numbers. Course is open only to majors in elementary education, special education or communication disorders.

53.202 Geometry and Statistics for Elementary Education Majors (3) - Presents the content of geometry and beginning probability and statistics for the elementary curriculum.

53.225 Analysis III (3) - Presents infinite sequences and series, power series, Taylor and Maclaurin series, three dimensional vector analysis and partial derivatives. Prerequisite: 53.126.

53.226 Analysis IV (3) - Presents an introduction to the differentiation and integration of real valued functions of several variables. Presents curves and parametric equations, surfaces, Taylor's, Stoke's and Green's theorems, functions between Euclidean spaces and multiple integrals. Prerequisite: 53.225.

53.231 College Geometry (3) - Presents elementary geometry from an advanced standpoint. Discusses incidence in the plane and in space, congruence, inequality and similarity concepts. Studies properties of circles, polygons and spheres. Prerequisite: High school geometry, 53.185.

53.240 Statistical Methods (Fall, even-numbered years) (3) - Presents common statistical techniques with emphasis on applications. Topics include: confidence intervals, hypothesis test, regression analysis and analysis of variance. Strongly encourages use of statistical software, especially SAS. Prerequisite: 53.141 or 53.241 or consent of the instructor.

53.241 Probability and Statistics (3) - Calculus-based study of probability and statistics. Topics covered include: descriptive statistics, probability, discrete and continuous random variables, common distributions, sampling destributions, estimation procedures and inferential statistics. A more rigorous course than 53.141. Prerequisites: 53.126 (or concurrent) and 53.185.

53.243 Nonparametrics Statistics (3) - Presents standard nonparametric statistical procedures. After a brief review of hypothesis testing fundamentals, topics such as goodness-of-fit tests, one and two-sample procedures for location parameter, tests of randomness and association analysis are covered. Prerequisites: 53.123 or 53.125 and 53.141 or the equivalent.

53.303 Mathematical Problem Solving for Teachers (3) - Examines mathematical problem solving, number sense, pattern recognition and mathematical reasoning. Basic problem solving, use of manipulatives and assessment are covered. Games involving mathematical problem solving are examined and designed. Requires off-campus observations and testing. For elementary and secondary education majors. Prerequisite: 53.201.

53.310 Introduction to Abstract Algebra (3) - Provides an introduction to the language and methods of abstract mathematics. Subjects include sets, relations, rings, functions, groups and fields. Prerequisites: 53.185 with a minimum grade of C- and 53.225.

53.311 Algebra for Secondary School Teachers (Fall/even-numbered years) (3) - Presents topics of elementary algebra from an advanced viewpoint. Considers topics of contemporary school mathematics programs. Intended for students in secondary education majoring in mathematics. Prerequisite: 53.310.

53.314 Linear Algebra (3) - Studies abstract vector spaces, linear transformation, matrices, determinants, inner product spaces and related topics. Prerequisites: 53.185 and 53.126.

53.322 Differential Equations (3) - Studies elementary ordinary differential equations, infinite series and power series solution, some numerical methods of solution and LaPlace transforms. Prerequisite: 53.225.

53.331 Modern Geometry (Spring/odd-numbered years) (3) - Presents non-Euclidean geometrics and their development from postulate systems and a formal approach to projective geometry. Prerequisite: 53.231.

53.340 Statistical Software (Fall, even numbered years) (3) - Provides an introduction to the most widely-used statistical software packages in government and industry. Students gain practical experience by solving real-world statistical problems encountered by various government agencies and private companies. Graphical and numerical descriptive procedures and inferential statistical techniques will be discussed. Prerequisite: 53.240.

53.342 Design and Analysis of Experiments (Spring, odd-numbered years) (3) - Basic experimental statistics

including methods of estimation and hypothesis testing, analysis-of-variance procedures, principles 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. Prerequisite: 53.141 or 53.241 or consent of the instructor.

53.343 Applied Regression Analysis (Fall, odd-numbered years) (3) - A basic course in multiple linear regression methods including weighted least squares, stepwise regression, residual analysis and applications to mathematical models. Treats problems which involve the use of computing equipment. Prerequisite: 53.141 or 53.241 or consent of the instructor.

53.360 Number Theory (3) - Presents the theory of numbers. Includes the topics of Euclidean algorithm, congruences, continued fractions, Gaussian integers and Diophantine equations. Prerequisites: 53.185 and 53.225.

53.361 Coding and Signal Processing (Spring) (3) - A mathematical approach to codes and ciphers. Includes security codes, coding for efficiency in computer storage, error-correcting codes. Signal processing, including the Fourier transform and digital filters. Individual projects required. Prerequisites: 53.126 and 56.116 or 56.122.

53.373 Numerical Methods in Computing (Fall) (3) - Analysis and application of various methods of numerically solving problems in the areas of nonlinear equations; systems of equations, interpolation and polynomial approximation; numerical integration; approximation theory; and differential equations. Students design and execute algorithms on the computer for specific numerical procedures. Prerequisites: 56.121 and 53.126.

53.374 Introduction to Discrete Systems Simulation (Spring/ odd-numbered years) (3) - Studies the ways that systems can be moduled for computer solution. Emphasizes stochastic behavior by discrete random processes and the simulation tools for their solution. Prerequisites: One course each in calculus, programming and statistics.

53.381 Introduction to Operations Research (Fall/odd-numbered years) (3) - A survey of the methods and models used in applying mathematics to problems of business. Topics drawn from decision making, linear and dynamic programming, networks, inventory models, Markov processes and queuing theory. Prerequisites: 53.118 and 53.123 or 53.225.

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, 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) - A rigorous treatment of complex numbers and an introduction to the theory of functions of a complex variable. Central topics are the complex number system, analytic functions, harmonic functions and conformal mappings. Additional topics may include power series, contour integration, Cauchy's formula and applications. Prerequisites: 53.226, consent of instructor.

53.441 Mathematics and Sports (3) - Links between mathematics, statistics and sports; includes data analysis and modeling related to the various facets and types of sports using certain mathematical and statistical techniques. Sports used as examples include basketball, tennis, volleyball, track and weightlifting.

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 Braching processes and their applications to various phenomena in engineering, management, physical and social sciences. Prerequisite: 53.241.

53.462 Introduction to Mathematical Statistics (Fall, even-numbered years) (3) - An introductory study of mathematical statistics including distributions of functions of random variables, interval estimation, statistical hypotheses, analysis of variance and the multivariate normal distribution. Prerequisite: 53.241.

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.

53.472 Matrix Computation (Spring/odd numbered years) (3) - Presents a computer-oriented analysis of matrices. Includes Gaussian reduction, LDU factorization, special reduction techniques for tridiagonal matrices, iterative methods and a study of the matrix eigenvalue problem. Prerequisites: 53.225 and 53.373.

53.491 Special Topics in Mathematics (3) - Presents an area of mathematics which is not available as a regular course offering. Prerequisite: Consent of the instructor.

53.492 Independent Study in Mathematics (1-3) - Provides for directed study of a particular area of mathematics as mutually agreed upon by the student and the instructor. Emphasizes individual scholarly activity of the highly motivated student.

53.493 Honors in Independent Study in Mathematics (3) - For students who have demonstrated a high level of interest and ability in mathematics and have mastered the required course work. Students investigate research problems selected under the supervision of a faculty member of the Department of Mathematics and Computer Science. Prerequisite: Admission to the Honors Program in natural sciences and mathematics.

53.497 Internship in Mathematics (2-12) - Provides mathematics majors with an opportunity to acquire meaningful and professional on-site training and learning experiences in mathematics at an industrial, private or business workplace. Note: a student may, with departmental approval, apply a maximum of 3 credits of internship toward the fulfillment of the mathematics major. Each academic credit requires 40 hours of supervised work and the limit is 12 total semester hours for internships. Prerequisites: students must establish adequate course preparation for the proposed internship. Internship applications must be submitted one month before the internship begins and must be approved by the department chairperson.

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, 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) - A rigorous treatment of complex numbers and an introduction to the theory of functions of a complex variable. Central topics are the complex number system, analytic functions, harmonic functions and conformal mappings. Additional topics may include power series, contour integration, Cauchy's formula and applications. Prerequisites: 53.226, consent of instructor.

53.441 Mathematics and Sports (3) - Links between mathematics, statistics and sports; includes data analysis and modeling related to the various facets and types of sports using certain mathematical and statistical techniques. Sports used as examples include basketball, tennis, volleyball, track and weightlifting.

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 Braching processes and their applications to various phenomena in engineering, management, physical and social sciences. Prerequisite: 53.241.

53.462 Introduction to Mathematical Statistics (Fall, even-numbered years) (3) - An introductory study of mathematical statistics including distributions of functions of random variables, interval estimation, statistical hypotheses, analysis of variance and the multivariate normal distribution. Prerequisite: 53.241.

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.

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53.492 Independent Study in Mathematics (1-3) - Provides for directed study of a particular area of mathematics as mutually agreed upon by the student and the instructor. Emphasizes individual scholarly activity of the highly motivated student.

53.493 Honors in Independent Study in Mathematics (3) - For students who have demonstrated a high level of interest and ability in mathematics and have mastered the required course work. Students investigate research problems selected under the supervision of a faculty member of the Department of Mathematics and Computer Science. Prerequisite: Admission to the Honors Program in natural sciences and mathematics.

53.497 Internship in Mathematics (2-12) - Provides mathematics majors with an opportunity to acquire meaningful and professional on-site training and learning experiences in mathematics at an industrial, private or business workplace. Note: a student may, with departmental approval, apply a maximum of 3 credits of internship toward the fulfillment of the mathematics major. Each academic credit requires

40 hours of supervised work and the limit is 12 total semester hours for internships. Prerequisites: students must establish adequate course preparation for the proposed internship. Internship applications must be submitted one month before the internship begins and must be approved by the department chairperson.

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

53.574 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)

PHY (54) Physics

Administered by Department of Physics and Engineering Technology

54.101 Basic Physical Science (3) - An introductory integration of concepts and principles from chemistry, physics and astronomy, with consideration for the nature of scientific thought and the interaction of science with human and community concerns. For nonscientists.

54.103 Principles of Physical Science (3) - An integrated physical science course emphasizing laboratory experience. Provides an introduction to the basic concepts of physical science by studying such topics as the structure and properties of matter, motion and forces, energy, light and sound, electricity and magnetism and astronomy. For elementary and special education majors. Four hours class/ laboratory per week.

54.104 Elementary Electronics (3) - An introduction to basic electronics that gives students in nonphysical science areas some theoretical and practical knowledge of electronic circuits, instruments and devices. No experience of physics or electronics required.

54.105 Energy: Sources and Environmental Effects (3) - Explains energy in elementary scientific terms and examines present national and international energy situations in regard to sources, utilization and environmental effects. Surveys fossil fuels and nuclear, solar, geothermal and other energies with respect to availability and promise for the future.

54.106 The Science of Sound (3) - Provides an introduction to the principles of sound and its reproduction for students in nonphysical science disciplines. Knowledge of basic algebra required, but no experience in physics or electronics necessary.

54.107 Applied Physics for Health Sciences (4) - Studies selected principles of physics with applications to the processes and instrumentation of medical technology. Examines mechanics, fluids, kinetic energy and heat, optics, electricity and magnetism, electronics, atomic structure, radiation and data acquisition and readout. Six hours per week: 3 classes, 3 laboratories.

54.110 Introduction to Astronomy (3) - Surveys the physical state of the universe and the variety of objects it comprises: solar system, stars and galaxies. Provides a descriptive account of the present state of our knowledge of the cosmos and an understanding of how such knowledge is obtained. Intended for nonscience majors.

54.111 Introductory Physics I (4) - Presents an approach to selected topics such as mechanics, heat, kinetic theory, molecular theory of gases, wave motion and sound. Not intended for students specializing in physics or chemistry. Six hours per week: 3 classes, 3 laboratories.

54.112 Introductory Physics II (4) - Studies electricity, magnetism, light, relativity, quantum and atomic theory, structure of matter, nuclear physics and particle physics. Continuation of 54.111. Six hours per week: 3 classes, 3 laboratories. Prerequisite: 54.111 or consent of instructor.

54.210 Observational Astronomy (3) - Provides hands-on experience in observations of the night sky. Focuses on the interpretation of astronomical measurements, including the students' own telescopic observations of stars, planets, nebulae and other objects. Open to non-science majors. Prerequisite: 54.110 or consent of instructor.

54.211 General Physics I (4) - An introduction to physics using calculus. Studies mechanics, the physics of fluids, kinetic theory, heat and thermodynamics. Appropriate for physical science or mathematics majors. Six hours per week: 3 classes, 3 laboratories. Prerequisite: 53.125 or concurrent registration.

54.212 General Physics II (4) - Studies wave motion, sound, geometrical and physical optics, electricity and magnetism. Continuation of 54.211. Six hours per week: 3 classes, 3 laboratories. Prerequisites: 53.126 or concurrent registration;.54.211 or 54.111 with consent of instructor.

54.301 Mechanics: Statics (3) - Introduces the fundamentals of statics, with an emphasis on vector methods, at a level appropriate for physical science majors and for students considering a career in the engineering field. Prerequisites: 53.126 or concurrent registration;.54.211 or 54.111 with consent of instructor.

54.302 Mechanics: Dynamics (3) - Introduces the fundamentals of dynamics, with an emphasis on vector methods, at a level appropriate for physical science majors and for students considering a career in an engineering field. Prerequisites: 53.225 or concurrent registration; 54.212 or 54.112 with consent of the instructor.

54.310 Modern Atomic Physics (3) - Presents some of the basic concepts and phenomena that constitute modern physics, including studies of the quantum nature of radiation, atomic structure and spectra, X-rays, relativity, wave-particle duality, the uncertainty principle and a brief introduction to nuclear physics and radioactivity. Prerequisite: 54.212 or 54.112 with consent of instructor, 53.126.

54.314 Electricity and Magnetism (3) - Studies electric and magnetic fields and potentials, electric and magnetic properties of matter, electrodynamics and electromagnetic waves. Prerequisites: 54.212 or 54.112 with consent of instructor, 53.225.

54.315 Electronics (4) - Presents the theory and application of semiconductors with special emphasis on circuitry. Studies basic electronic instrumentation as related to the gathering, processing and display of scientific

data in any discipline. Six hours per week: 3 classes, 3 laboratories. Prerequisite: 54.112 or 54.212.

54.316 Digital Electronics (3) - An introduction to the techniques and devices of digital electronics. Includes practical experience of the building and testing of digital circuits. Supplies the background necessary for the understanding of microprocessors and computer circuits. Prerequisite: junior standing or consent of instructor.

54.317 Computer Electronics (3) - An introduction to the electronics and operation of digital computers. Intended for students with a background in digital circuitry. Includes practical experience of the operation and interfacing of microprocessors and other devices. Prerequisite: 54.316 or consent of instructor.

54.318 Optics (4) - Presents a combination of geometrical optics including lens theory with physical (wave) optics including diffraction, interference, polarization, lasers and coherent light. Six hours per week - 3 classes, 3 laboratory. Prerequisite: 54.212 or 54.112 with consent of the instructor.

54.320 Nuclear Radiation I (2) - Presents a laboratory-oriented course using modern nuclear electronics and detectors for measuring and analyzing nuclear radiation. Four hours per week: one class, 3 laboratories. Prerequisite: 54.310 or concurrent registration.

54.330 Radiation Physics (3) - Presents properties and models of nuclei, radioactive decay, radiation and its interaction with matter and nuclear applications. Prerequisite: 54.310 or concurrent registration.

54.341 Astrophysics: Galaxies and Cosmology (3) - Focuses on objects outside of our own galaxy, discusses emission mechanisms from other types of galaxies including normal spirals, seyferts and quasars. Structure of the universe as a whole is described using various cosmological models. Prerequisites: 53.126 and 54.112 or 54.212.

54.360 Health Physics (3) - Presents a study of the principles of health physics, including biological effects of radiation, dosimetry, radiation measurement and radiation protection. Prerequisite: 54.310 or concurrent registration.

54.400 Advanced Physics Laboratory (2) - Presents the basic tenets of lab work in physics, involving considerations of experimental error, proper research and preparation of an experiment. Includes experiments primarily from the areas of atomic physics, electricity, magnetism and optics. Four hours per week: one class, 3 laboratories. Prerequisites: 54.310.

54.420 Nuclear Radiation II (2) - A laboratory course which presents advanced techniques of nuclear measurement and includes applications involving environment monitoring and health physics. Four hours per week: one class, three laboratories. Prerequisite: 54.320 or consent of instructor.

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 Schroedinger'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.

54.460 Applied Health Physics (3) - Presents advanced topics involving health physics principles and radiation protection standards as applied to science, industry and medicine. Prerequisite: 54.360 or consent of instructor.

54.490 Seminar in Physics (1) - A selected topic in physics is studied and prepared in a form suitable for presentation. Student attends and participates in physics seminars and makes a presentation in the same semester of enrollment in the course.

54.491 Independent Study in Physics (1-3) - Investigates an area of special interest and value to the student, under the direction of a faculty member, following a plan approved in advance by the department chairperson. May be partly interdisciplinary and may involve limited experimental work.

54.493 Independent Research (1-3) - Provides for an application of theoretical and/or experimental research methods to a special problem. May be interdisciplinary. Requires the preparation of a report and a plan, approved in advance by the department chairperson, which is acceptable to the student and the supervising faculty member.

54.494 Honors Independent Study in Physics (3) - Provides the qualified student with an opportunity to participate in an advanced experimental or theoretical investigation of a current problem in physics, under the supervision of a physics faculty member having expertise in the student's proposed research area.

MRS (55) Marine Science

Administered by Department of Biological and Allied Health Sciences and Department of Geography and Earth Science

Marine Science Courses are offered during the summer at the Marine Science Center in Wallops Island, Virginia. Bloomsburg University and other institutions are members of the consortium that operates the center. Courses are offered which satisfy requirements for biology majors, for earth science majors and for general education. Specific courses satisfy requirements for the Marine Biology Option in Biology. Other courses provide earth science majors experiences which are not available on the main campus. For more information, contact the Marine Science coordinators in the Departments of Biological and Allied Health Sciences and Geography and Earth Sciences.

55.110 Introduction to Oceanography (3) - An introduction to the marine sciences with an emphasis on physiography of ocean basins, wave motion, tides, current circulation patterns, near-shore processes, physical and chemical nature of sea-water and methods of investigation.

55.211 Field Methods in Oceanography (3) - Familiarizes students with the dynamic marine environment and with work on board a research vessel. Introduces the use and application of standard oceanographic instruments and sampling devices. Independent research is promoted and encouraged. Prerequisite: 51.259 or 55.110.

55.221 Marine Invertebrates (3) - A study of the life, history, habits origin, development, physiology, anatomy and taxonomy of the main phyla of invertebrates. A phylogenetic sequence is followed to show interrelationships among the phyla. Special emphasis is given to the Atlantic marine invertebrates. Laboratory and field work deal with collection, preservation and identification of local species. Prerequisite: 50.110, 50.120 or consent of the instructor.

55.241 Marine Biology (3) - A study of plant and animal life in the marine environment. Emphasis on physical and chemical environmental factors affecting the biota in the intertidal, open water and benthic habitats. Common biota characteristics of each habitat will be investigated in terms of their natural history, morphology and ecological relationships. Prerequisite: 50.110, 50.120 or consent of the instructor.

55.250 Wetlands Ecology (3) - Biological, chemical and geological characteristics of coastal wetlands. Considers the structure and function of wetlands, human impacts on wetlands and approaches for wetland management and restoration. Laboratory consists of field exercises in the study of wetlands. Prerequisite: 50.110, 50.120.

55.260 Marine Ecology (3) - Interrelationships among animals, plants and physical and chemical aspects of the environment studied, with stress on adaptations for survival that are unique to the marine environment.

55.270 SCUBA Diving (3) - Basic SCUBA diving coupled with advanced techniques. Leads to open-water certification. Prerequisite: Swimming Proficiency and physicians certification of fitness for SCUBA are required.

55.300 Behavior of Marine Organisms (3) - Concepts of ethology; discussion and observation of the influence of external and internal factors on the regulation; and control of behavior of organisms living in the marine coastal environment. Prerequisite: 50.110.

55.320 Marine Microbiology (3) - A survey of methods and concepts of marine microbiology. Focus on the technical aspects of sample collection, microbial ecology of the marine environment, enrichment culturing and methods of enumeration and identification with emphasis on marine bacteria. Prerequisite: 50.110, 50.120.

55.330 Tropical Invertebrates (3) - Introduction to tropical invertebrates, using a variety of collection and observation methods to sample nearshore and reef areas. Emphasis on systematics and ecology using the communities approach. One week at Wallops Island, Va., for intensive review of general systematics and ecology of marine invertebrates; then two weeks in Florida sampling and identifying species and describing ecological communities. Course is a sequel to marine invertebrates or a landlocked invertebrate zoology course or a thorough landlocked zoology course. Prerequisites: 55.221 or 50.211.

55.331 Chemical Oceanography (3) - A field-based study of ocean, bay and estuarine environmental chemistry. Develops and awareness of the relationships between chemical, geological and biological environments. Investigates the chemical compositions of waters and substrata and biogeochemical processes and cycles. Prerequisite: 52.215.

55.342 Marine Botany (3) - Taxonomy, physiology, ecology and economic importance of marine and coastal plants as exemplified by those found on the Delmarva Peninsula. Laboratory techniques include collecting, preserving, identifying and analyzing plants and plant materials, appropriate instrumentation to be used. Emphasis on in-the-field studies and laboratory analyses. Prerequisite: 50.110, 50.120.

55.343 Marine Ichthyology (3) - A study of the internal and external structure of fishes, their systematic and

ecological relationships and their distribution in time and space. Prerequisite: 50.110, 50.120.

55.345 Ornithology (3) - Introduces avian fauna of the sea coast and enables comparison with inland species. Field work provides visual and vocal identification; lecture material includes information on distribution, behavior, physiology and anatomy of birds. Prerequisite: 50.110, 50.120.

55.362 Marine Geology (3) - Structure and sedimentology of ocean basins and shores. Presents methods of geological exploration in the marine environment, features of ocean basins and theories of ocean basin evolution. Prerequisite: 51.101, 51.102, 51.111, 51.112 and 51.259 or 55.110.

55.364 Physical Oceanography (3) - A study of the physical properties of the oceans including: mass and energy budgets; theory of the distribution of variables; cause, nature, measurement, analysis and prediction of tides, currents and waves; and basic instrumentation in field work. Prerequisite: 51.259 or 55.110 or 53.125 and 54.112 or permission of instructor.

55.394 Comparative Physiology of Marine Organisms (3) - This course will provide an introduction to the physiology of marine organisms utilizing a comparative approach. The lecture will introduce the topics of respiration, circulation, metabolism, osmoregulation, thermoregulation, locomotion and sensory systems by drawing comparisons between the mechanisms and strategies utilized by a wide range of marine organisms. Laboratory and field work will focus on the physiological responses of marine plants and animals to common environmental stresses such as salt load, temperature variation, depletion of dissolved oxygen and tidal flux. This will be accomplished through measurements and observations in the field, as well as through experimental manipulations in a laboratory setting. Prerequisite: 50.110, 52.115, 52.131, 55.241 or permission of instructor.

55.430 Coastal Sedimentation (3) - A study of depositional environments of marine dominated shorelines, sediments, sedimentation processes, sedimentary facies, models of rock record growth, barrier island dynamics and development of tidal deltas. 51.101, 51.102, 51.111, 51.112 or permission of instructor.

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. Prerequisites: 50.110, 50.120.

55.432 Marine Evolutionary 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.

55.441 Biology of Molluscs (3) - An evolutionary, functional and ecologic approach to studying the second largest group of animals and perhaps the most diverse in terms of morphological, ecological and behavioral variations. Prerequisites: 50.110, 50.211 recommended.

55.459 Coastal Geomorphology (3) - Study of coastal geomorphology with an emphasis on Late Cenozoic and Pleistocene sea and lake-level changes in response to world-wide glaciation. Students participate in field studies of Pleistocene deposits and the weathering and erosion of these deposits. Prerequisite: 51.101, 51.102, 51.111, 51.112 .

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. Prerequisite: 50.110, 50.120, 50.242. Recommended: 51.259 or 55.110.

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. Prerequisite: 50.110 and Basic SCUBA Certification (NAUI, PADI, SSI).

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. Prerequisite: 50.110, 50.120 and SCUBA and/or snorkeling experience.

55.492 Marine Mammals (3) - A study of the distribution, population ecology, behavior, physiology and adpatations of marine mammals. Student projects entail collecting physiological and behavioral data at field sites and at facilities studying marine mammals. Prerequisite: 50.110, 50.120, 50.212 or 50.361 recommended; preferences given to undergraduate senior students in registering.

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.

CPS (56) Computer Science

Administered by Department of Mathematics, Computer Science and Statistics

56.110 Introduction to Computer Science (3) - Presents an introduction to computers and data processing - what they are, how they function, how they are controlled and how they are used in problem solving. Basic concepts include hardware, I/O systems, data communication and storage, flow charting and programming in BASIC on a microcomputer. Hands on experience with word processing, spreadsheets and data base software is required. Not appropriate and credit for 56.110 will not be given to a student who has taken Computer and Information Systems 92.150.

56.116 Algorithmic Processes for Computers (3) - Emphasizes concepts of FORTRAN 77; input and output, program documentation and control, structured programming, extended modes of arithmetic, character strings and program development and execution. May not be used toward the Computer Science major. Prerequisite: Programming experience or consent of the instructor.

56.121 Computer Science I (4) - A programming course for students with no prior programming experience. Teaches students how to write programs to solve problems using C++ language. Problem solving methods are presented and some basic object-oriented programming design issues are discussed. Students given extensive "hands-on" experience with guidance from the instructor Prerequisite: 56.110 or the equivalent.

56.122 Computer Science II (4) - A continuation of Computer Science I. Emphasizes software engineering principles in the context of programming. Elementary program performance analysis is performed. Class covers searching and sorting algorithms. Pointers and dynamic structures: linked lists, stacks, queues and binary trees will also be studied. Advanced object oriented design methodologies and recursion will be introduced. Prerequisite: 56.121.

56.221 Computer Science III (4) - Increases the students breadth and flexibility as a programmer and is a prerequisite for most 300 and 400 level courses in computer science. Covers C and C++ languages as well as editing, compiling and debugging in a Unix environment. Introduces nonlinear data structures

and hashing and emphasizes object oriented programming and design. Prerequisite: 56.122.

56.240 Assembly Language Programming (Fall) (3) - Advanced topics in programming with a microcomputer, introductory concepts of microcomputer architecture, operating systems and machine and assembly language for microprocessors. Prerequisite: 56.122.

56.250 Programming Language Paradigms (3) (Spring) - Gives an introduction to the functional, logical and object oriented programming language paradigms. Entering students should already have at least one year of experience with a block structured procedural language. Course gives students a better understanding of programming languages in general and will specifically lead to an understanding of how to use a specific language from three different programming language paradigms to solve programming problems. Prerequisite: 56.221.

56.305 Computer Applications in Secondary School Mathematics (Spring/odd-numbered years) (3) - Studies the theory, design and usage of a computer as an instructional or training tool. Uses microcomputer to demonstrate and develop software applications. Prerequisite: 56.121.

56.323 Artificial Intelligence (3) (Fall, even numbered years) - Provides an understanding of the philosophy, content, methods, successes and failures of artificial intelligence. Course includes history of artificial intelligence, knowledge representation, game playing, expert systems, logic and theorem proving, search strategies, natural language processing, neural networks, genetic algorithms and problem solving. Prerequisite: 56.221

56.330 Digital Design (Spring) (3) - Design of combinational and sequential circuits. Coding, various instruction formats and representation of data. Memory, central processors, input-output devices. Introduction to computer architecture. Characteristics and features of some existing computer systems. Prerequisites: 56.122, 53.185, 56.240

56.350 Organization of Programming Languages (Fall) (3) - An introduction to the issues of programming languages: syntax, semantics, parsing, language specification and analysis. Emphasis on the run-time behavior of programming language constructs. Prerequisite: 56.250.

56.355 Analysis of Algorithms and Data Structures (Spring) (3) - A detailed analysis of algorithms and data structures. Examination of theoretical and experimental performance of algorithms and data structures. Particular attention to algorithms for searching and sorting and techniques for implementing and manipulating various data structures: stacks, queues, trees, graphs and files. Prerequisites: 56.221, 53.185, 53.126.

56.356 Windows Programming (Spring/even-numbered years) (3) - Introduces object oriented programming including the concepts of objects, windows environment, inheritance, encapsulation, polymorphism and event driven programming. Participation in the development of a large scale application project is required. Prerequisite: 56.221 or 56.250.

56.357 Principles of Database Design (Fall, even-numbered years) (3) - Considers the principal functions of a database management system. Basic concepts used by all database models will be taught. Details of the hierarchical, network and relational database models will be studied in detail. Course examines query languages in general and uses a data manipulation language (DML) and studies its applications. Students implement a relational database management system that involves execution of operations such as an intersection, union, difference, join and multijoins of relations. Study of a commercially available DML prepares students for a career dealing with database systems. Prerequisite: 56.221.

56.373 Numerical Methods in Computing (Fall) (3) - An analysis and application of various methods of numerically solving problems in the areas of nonlinear equations; systems of equations, interpolation and polynomial approximation; numerical integration; approximation theory; and differential equations. Students use a computer to design and execute algorithms for specific numerical procedures. Prerequisites: 56.121 or 56.116, 53.126.

56.375 Local Area Networks (3) (Fall, odd-numbered years) - Examines in detail key local area network standards and the fundamental concepts of local area network (LAN) technology. Provides an understanding of network architecture, data transmission methods and major LANs currently in use. Investigation of LAN protocols, topologies and network operating systems includes hands on experience in installing and demonstrating peer-to-peer and client-server LANs. Prerequisite: 56.240 or permission of the instructor.

56.386 Concurrent Programming and Foundations of Operating Systems (3) (Fall) - Studies the foundation of modern operating systems and concurrent programming problems associated with these systems. Students write and test their solutions to problems. Covers problems and possible solutions encountered in the development of all modern systems. Prerequisite: 56.221.

56.410 Computer Graphics (Spring/even-numbered years) (3) - Presents the basic principles for design, use and understanding of graphics systems. Hardware and software components of graphics systems examined with a major emphasis on creating and manipulating graphics displays using a software graphics package; the package includes standard computer graphics

algorithms. Two and three dimensional graphics, animation, color, hidden line and hidden surface algorithms studied in depth. Prerequisites: 56.221; 53.225 or 53.314 recommended.

56.430 Computer Architecture (Spring/ odd-numbered years(3) - Examines design issues for modern, high-performance computer systems. Topics include bus structures, memory heirarchies, RISC and CISC instruction-set paradigms, pipelining and superscalar processor designs, microprogrammed control and input/output and bandwidth issues. Prerequisite: 56.330.

56.444 Introduction to Parallel Processing (Fall/odd-numbered years)(3) - Provides an overview of parallel processing, parallel architectures, design and analysis of parallel algorithms. Focuses on the development and performance evaluation of parallel algorithms on parallel architectures. Prerequisite: 56.221.

56.450 Compiler Construction (Spring/odd-numbered years) (3) - An introduction to the construction of compilers and interpreters. The compiler is broken down into phases of scanning, parsing, semantic analysis, optimization and code generation. Studies the relevant theory in the phases as students program a compiler. Prerequisites: 56.350 and 56.221.

56.471 Numerical Analysis (Alternate years) (3) - Provides a computer-oriented analysis of algorithms of numerical analysis. Topics include nonlinear equations, interpolation and approximation, differentiation and integration, matrices and differential equations. Prerequisites: 56.373, 53.322.

56.491 Special Topics in Computer Science (3) - Presents an area of computer science which is not available as a regular course offering. Prerequisite: Consent of the instructor.

56.497 Internship in Computer Science (2-12) - Provides computer science majors with an opportunity to acquire meaningful and professional on-site training and learning in computer science at an industrial, private or business workplace. Note: a student may, with departmental approval, apply a maximum of 3 credits of internship toward the fulfillment of the computer science major. Each 1 academic credit requires 40 hours of supervised work and the limit is 12 total credit hours for internships. Prerequisites: students must establish adequate course preparation for the proposed internship. Internship applications must be submitted one month before the internship begins and must be approved by the department chairperson.

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.

Instructional Technology

Administered by Department of Instructional Technology

57.540 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.

(58) Electrical and Electronic Engineering Technology

Administered by Department of Physics and Engineering Technology

58.101 Introduction to Electrical and Electronics Engineering Technology (EEET) (1) - History of engineering and technology, electrical and electronic engineering technology (EEET) as a career, technology areas within EEET, organizational structure of industries, oral and written communication skills, review of mathematical skills, graphical representations of data, use of scientific calculator and personal computer, electronic instruments, industrial

automation, seminars by engineering technologists, and visits to local industries. One hour lecture per week.

58.180 Computer Aided Design and Engineering Graphics (3) - Provides hands-on introduction to computer-aided design with an emphasis on basic engineering graphics. Culmination of course is a team design and construction project.

58.141 Electric Circuit Analysis (4) - Electric circuit analysis including computer simulation and hands-on laboratory experience using modern electronic equipment. Resistance, inductance and capacitance. Analysis of dc and ac circuits including network theorems, R-L and R-C transients, and R-L-C resonance. AC power, power factor and three-phase power. Three hours lecture and three hours lab per week.

58.321 Manufacturing Processes (3) - Studies the various types of manufacturing processes and the design of parts and assemblies to insure their manufacturability. Includes PCB artwork and fabrication, process design and evaluation using SPC techniques, quality control, reliability and visits to area manufacturing facilities. Two hours lecture and three hours lab per week.

58.231 Electrical Machines and Power Systems (4) - Fundamentals of electrical machines, transformers and power systems. DC generators and motors, ac power, three-phase circuits, single-phase and three-phase transformers, three-phase induction motors, synchronous generators and motors, single-phase motors, stepper motiors, electronic control of motors, and electric utility power generation, trnsmission and distribution. Three hours lecture and two hours lab per week.

58.300 Career Orientation (1) - Studies all aspects of seeking employment including interviewing, resume writing and choosing appropriate jobs fo the cooperative education experience. One hour lecture per week.

58.331 Linear Signals and Systems (2) - Introduces the theory of linear signals and systems, including functional representations, spectra, linear filters, transforms, digital sampling, discrete signals, digital filters and state variables. Two hours lecture per week.

58.241 Electronic Instrumentation and Data Aquisition (3) - Design and application of electronic instrumentation systems. The course is centered on understanding sensors and transducers, signal conditioning and transmission methods and application of sensors and transducers to real world situations. Use of microcomputer systems for data acquisition, processing and control. Two hours lecture and three hours lab per week.

58.380 Cooperative Education in Industry I (0) - Provides an on-the-job professional experience in an industrial setting.

58.431 Industrial Process Control (3) - Fundamentals of open-loop and closed-loop control, feedback control concepts, controller design, process cotrol using microcomputers, PLCs, sensors and transducers, instrument control and supervisory control. Two hours lecture and three hours lab per week.

58.441 Communications Systems (3) - Presents the theory and application of modern communications systems, including types of modulation, noise, multiplexing, multiple access and digital signaling. Use of modern software package for communication systems design and analysis. Two hours lecture and three hours lab per week.

58.451 Digital Signal Processing (3) - Fundamental principles associated with the processing of discrete-time signals. Common applications such as waveform generation, FIR and IIR digital filtering, and DFT and FFT-based spectral analysis and filtering. Architecture, instruction set and hardware and software development tools associated with a fixed-point general-purpose DSP VLSI processor. Two hours lecture and two hours lab per week.

58.461 Radio Frequency Effects and Measurements (4) - Electronic instrumentation and techniques for measurement at radio frequencies of such quantities as power, impedence, standing wave ratio, frequency, voltage and current. Receiver and antenna measurements, Smith charts, impedance matching and radio frequency shielding. Two hours lecture and two hours lab per week.

58.480 Cooperative Education in Industry II (0) - Provides on-the-job professional experience in an industrial setting.

(59) Natural Sciences and Mathematics

59.498 Natural Sciences and Mathematics Internship (1-9) - Internship provides on-site work experience and training program to give selected intern an opportunity to apply the theoretical and descriptive knowledge acquired in multiple natural sciences and mathematics disciplines. Requires approval of the internship coordinator and the dean of Arts and Sciences.

EDF (60) Educational Studies

Administered by Department of Educational Studies and Secondary Education

60.201 Field Studies in Education I (1) - Fifteen hour field experience to observe various teaching-learning situations. Weekly on-campus seminars.

60.204 Educational Computing and Technology (3) - Introduction to computer technology and the school setting that utilizes computers. Prerequisite: 45 semester hours.

60.205 Career Development and Life Planning (3) - Provides students with career information, values clarification and decision-making skills needed to develop sensitivity to these issues in light of the increasing complexity of the occupational experience.

60.251 Psychological Foundations of Education (3) - A systematic analysis of theories of human motivation, development and learning related to the teaching-learning process. Psychological systems are compared and evaluated in terms of their philosophical bases, ideological commitments and as criteria for the development of models for educational policy and practice.

60.291 Principles of Teaching (3) - An introduction to the teaching process. Various instructional techniques, methodologies and approaches are explored. Topics include: developing instructional objectives, sequencing learning activities, applying the various taxonomies, conducting micro-teaching, discipline strategies, questioning techniques and mastery teaching. Class term project includes unit lesson plan and evaluative instrument. Prerequisites: 60.201, 60.251.

60.301 Field Studies in Education II (1) - Thirty hour field experience with involvement in a school setting. Develop lesson plans and teach two lessons under supervision. Produce reflective journal. Remaining time spent in weekly campus class seminars.

60.302 Research Literacy (3) - Provides an introduction to research methods and techniques. Gives the student the basic understanding to be a better consumer of research, to be more aware of the value of research and to be able to carry out beginning-level research projects.

60.311 Classroom Measures and Assessment (3) - Reviews principles of evaluation; grading; representative standardized tests; vocabulary of measurement, test construction and interpretation; informal and formal measurement in the cognitive, affective and psychomotor areas and alternative forms of assessment. Prerequisite: 45 semester hours, 60.291.

60.350 Instructional Design Systems (3) - For preservice teachers and others who will create a community of learners integrating technology into the K-12 classroom. Uses hands-on experiences, virtual meetings, web-based resources to develop classroom activities to create a virtual learning community. Prerequisite: 30 credits.

60.351 Virtual Learning Communities (3) - For preservice teachers and others who will act as learning mentors and instructional designers. Uses hands-on experiences with the aid of cognitive strategies to develop classroom activities that promote how students know and how instructional planning can be better designed for learning. Prerequisite: 30 credits.

60.393 Social Foundations of Education (3) - An integrated multidisciplinary study of education focusing on the relationships among social conditions, social values and educational policies. The course focuses on those aspects and problems of society that need to be taken into account in determining educational policy, especially as this policy concerns the social role of the school.

60.406 Multicultural Education (3) - Studies school situations that reflect the cultural diversity of the nation and the world in their social and school goals and curricular and instructional aims and practices. Offers strategies for accommodating to the cultural norms, values, attitudes, behavior, language and learning styles of students and for teaching all students to understand and respect their own and other cultures.

60.427 Classroom Management and Effective Discipline (3) - Focus on strategies for effective discipline and classroom management. Methods of planning for the beginning of the year and for establishing an effective classroom atmosphere that promotes learning throughout the year are reviewed. Current models and major theories of discipline are reviewed and evaluated. Prerequisites: 60.251, 60.291, 60.201, 60.301 .

60.431 Independent Study (1-3) - Requires consent of the department chairperson to schedule.

60.441, 60.442, 60.443 Workshop in Education (1-6) - Studies selected areas of education including research by individual students in a special teaching field.

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.

60.497 Teaching in Education: First Experience (6) - The secondary student teaching assignment is determined by the student's area of specialization. Provides opportunities for direct participating experiences. Places students in classrooms with public or private school teachers. The student's major determines their assignment: K-6 - one experience in a primary level and one experience in an intermediate level of a public school; N-K-3 - one experience in a preschool situation and one in a primary level of a public school or two experiences in a primary level of a public school.

60.498 Teaching in Education: Second Experience (6) - The secondary student teaching assignment is determined by the student's area of specialization.

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.

60.504 Technology for Teachers (3) - A hands-on introduction to the use of technology in the public school classroom. Teachers will be introduced to the computer, computer-related technologies, communication technologies, and new and emerging audio-visual technologies in creating technology learning environments. Consideration will be given to the use of technology as a communication medium. Teachers will learn to use Instructional Systems Design models in the planning, delivery and evaluation of technology practices in the schools.

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.

60.550 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.

60.565 Advanced Foundations of Education (3) - This course will provide a systematic analysis of theories of human development, learning and motivation realted to the teaching and learning process. Students will investigate and evaluate psychological principles and theories and their implications for classroom decision making. themes underlying effective educational practices will be addressed, including interaction, cognitve processes, relevance, classroom climate, challenge, expectations and diversity.

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.

ELE (62) Early Childhood and Elementary Education

Administered by Department of Early Childhood and Elementary ducation

62.121 Introduction to Early Childhood Education (3) - Examines the historical and philosophical foundations of early childhood education. Analyzes current trends and practices for teaching children from birth to age 6.

62.302 Teaching of Science in the Elementary School (3) - Emphasizes the major methods and materials used

in elementary school science. Prerequisite: 64 semester hours.

62.304 Environmental Education for the Elementary School Teacher (3) - Provides learning experiences for the elementary school level in environmental education programs.

62.310 Teaching Fine Arts in the Elementary School (3) - Provides competencies in the selection and implementation of materials and procedures for teaching literary, visual and performing arts to elementary school children. Emphasizes comprehension and integration of fine arts into all areas of the school curriculum. Prerequisite: 45 semester hours.

62.322 Seminar in Learning Experiences with Young Children (3) - Outlines physical, mental, emotional and social levels of children from birth to age 8, with attention to environmental factors that foster child growth. Examines prenatal, infant-toddler, preschool and kindergarten programs to meet the needs of this age child and to provide the background of experience needed for later ventures into reading, art, arithmetic, science, social studies, music, literature, physical education and health and safety. Prerequisites: Psychology 48.101, 48.211.

62.371 Teaching Reading in the Elementary School (3) - Examines developmental reading from readiness through sixth grade. Prerequisite: 45 semester hours.

62.373 Diagnostic and Inclusionary Practices (3) - Presents diagnostic and remedial procedures emphasizing both standardized and informal techniques. Prerequisite: 62.371.

62.376 Language Experiences for Children (3) - Explores the language development of children and factors that influence skill in effective communication development from nursery school through sixth grade. Provides a background for students in language arts and literature for children. Prerequisite: 45 semester hours.

62.389 Individualized Instruction Activities in the Elementary School (3) - Emphasizes procedures for helping individuals learn the informal school concept and rearranging the elementary classroom into an efficient and effective learning area with emphasis on a language arts center, mathematics center, science centers and social studies centers. Prerequisite: 45 semester hours.

62.390 Teaching Social Studies in the Elementary School (3) - Emphasizes methods and materials appropriate for teaching elementary school social studies in contemporary society. Prerequisite: 64 semester hours.

62.391 Teaching Language Arts in the Elementary School (3) - Emphasizes methods and materials designed to help elementary school children develop communication skills for today's complex society. Includes all areas of a modern language arts curriculum. Prerequisite: 64 semester hours.

62.398 Teaching Mathematics in the Elementary School (3) - Outlines mathematical methods, materials, understandings and attitudes essential in the teaching of contemporary programs in the elementary school. Prerequisite: 64 semester hours.

62.400 Workshop in Teaching Mathematics in Early Childhood and Elementary Education (1-6) - Presents a workshop format to provide individual or group study of problems concerned with teaching mathematics at early childhood and elementary levels.

62.410 Methods and Materials in Early Childhood Education I (3) - Provides teachers with a workshop experience in infant daycare centers and nursery schools. Provides methods and materials that teachers can use and construct in their centers and classrooms. Examines theories of Bruner, Piaget, Froebel, Montessori and Vygotsky. Prerequisites: 62.121, 62.322.

62.420 Methods and Materials in Early Childhood Education II (3) - Provides teachers with a workshop experience in infant daycare centers and nursery schools. Provides methods and materials that teachers can use and construct in their centers and classrooms. Examines theories of Bruner, Piaget, Froebel, Montessori and Vygotsky. Prerequisites: 62.121, 62.322.

62.431 Independent Study in Elementary and Early Childhood Education (1-3) - Individual projects in education. Requires consent of the department chairperson.

62.450 Methods of Teaching Foreign Languages in the Elementary School (3) - Examines factors influencing second language acquisition and addresses a variety of strategies designed to teach foreign languages in the elementary school. Special focus on integrating the foreign language syllabus within the elementary school curriculum. Culture, art, music and dance included. Prerequisites: 60.291, 200-level foreign language or equivalent.

62.497 Teaching Literacy and Literature in Diverse Classrooms (3) - Explores literacy development to create a positive literacy learning environment for diverse learners. Prerequisites: Language Arts and 64 credits.

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 children birth through age eight 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.

62.526 Methods and Materials in Science and Mathematics (3) - Offers an approach to curriculum in which mathematics and science content, skills and methods of instruction are integrated. Particular attention given to creative, integrated activities and learning situations that range from individual inquiry to group interactions.

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.

62.537 Methods and Materials in Language Arts and Social Studies (3) - Offers an approach in curriculum in which social studies and language arts content, skills and methods of instruction are integrated. Particular attention given to creative, integrated activities and learning situations that range from individual inquiry to group interactions.

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 development 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 proposal required, and consent of program coordinator and department chairperson required.

62.595 Individualized Instruction - Principles and Practices for the Classroom (3) - Analyzes 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 components of a balanced literacy program; designed to develop a knowledge base and instructional competence with literacy instruction for inclusive classrooms.

63.541 Reading Assessment and Intervention (3) - Focuses on informal and formal assessment techniques with an emphasis on using assessment to design appropriate intervention programs and techniques; topics include miscue analysis, running records, informal reading inventories, and standardized testing.

63.543 Reading Practicum I (3) - Students tutor struggling readers who experience problems in one or more of the following areas: decoding, fluency, comprehension, or study skills. Parent involvement and parent training is included as part of the tutoring process. Prerequisites: 63.540, 63.541, 63.548 plus consent of program coordinator.

63.544 Reading Practicum II (3) - Students work in teams to teach small groups of struggling readers in an intensive, 3-week summer tutorial program. Focuses on designing instruction and developing materials to match children's reading levels and learning styles. Prerequisites: 63.540, 63.541, 63.543, 63.548, plus consent of program 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.

63.548 Reading Instruction for the At-Risk Learner (3) - Emphasizes methodology related to improving the reading skills of at-risk learners; focuses on developmentally appropriate practices, developmental stages of word knowledge, adapting instruction for diverse learners, and teaching ESL children.

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 setting.

63.550 Literature, Literacy and Culture (3) - Explores the role of literature in improving students' reading, writing, and language growth in grades K-12. Focuses on the role of multicultural literature in promoting cross-cultural understandings in a student-centered language arts program. Specific topics include selecting literature, developing thematic units, organizing the classroom, implementing literature circles, and evaluating students' literacy growth.

63.551 Early Literacy Learning (3) - Inservice teachers learn how to implement principles and practices of guided reading in K-3 classrooms. Focuses on conducting on-going literacy assessments, organizing instruction, developing literacy centers, using leveled texts, and meeting the needs of all learners in the classroom.

TCH (65) Secondary Education

Administered by Department of Educational Studies and Secondary Education

65.351 Teaching Communication in the Secondary School (Fall) (3) - Prerequisites: 60.201, 60.251, 60.291, 60.301, 60.393; junior standing in an area of concentration in secondary education.

65.352 Teaching Mathematics in the Secondary School (Spring) (3) - Prerequisites: Prerequisites: 60.201, 60.251, 60.291, 60.301, 60.393; junior standing in an area of concentration in secondary education.

65.353 Teaching Science in the Secondary School (Fall) (3) - Prerequisites: 60.201, 60.251, 60.291, 60.301, 60.393; junior standing in an area of concentration in secondary education.

65.358 Teaching Foreign Language in the Secondary School (Spring) (3) - Prerequisites: 60.201, 60.251, 60.291, 60.301, 60.343, junior standing in an area of concentration in secondary education.

65.355 Teaching Social Studies in the Secondary School (Fall) (3) - Prerequisites: 60.201, 60.251, 60.291, 60.301, 60.393; junior standing in an area of

concentration in secondary education 65.358 Teaching Foreign Language in the Secondary School (Spring) (3) - Prerequisites:60.201, 60.251, 60.291, 60.301, 60.393; junior standing in an area of concentration in secondary education.

65.374 Teaching Reading in Academic Subjects (3) - Understanding techniques for developing reading skills applicable to the secondary school. Emphasis on readiness, comprehension, silent reading and oral reading through secondary school academic subjects. Prerequisite: 45 semester hours.

65.411 Seminar in Secondary Education (3) - Activities center around concerns and problems encountered in secondary education. The range of activities is determined by individual need and by levels of professional competency including diagnosis, mutual development of objectives and self evaluation.

65.431 Independent Study in Secondary Education (1-3) - Requires consent of department chairperson 79.312 Internship in Education (1-15) - A work study program in an education-related setting applicable to fulfilling free electives in teacher education degree.

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.

65.597 Graduate Practicum (6) - This is a six-credit, 16 week student teaching experience thatis part of the secondary certification track of the curriculum and instruction master's program. It includes all of the required INTASC standards and the framework for teaching and learning now required by both the National Council of Accreditation of Teacher and the Pennsylvania Department of Education. Required for teacher certification.

Military Science

Administered by Academic Affairs

67.110 Introduction to Military Science (1) - Provides an overview of the organization of the ROTC program. Introduces skills such as rappelling, marksmanship, military customs, preparing military correspondence, and practical field training. One hour class per week, 12 hours laboratory time per semester.

67.120 Introduction to Military Issues (1) - Provides a background in basic skills essential to leaders. Skills may include marksmanship, tactical movement, first aid, and communication skills. *One hour class per week,12 hours laboratory time per semester.

67.210 Applied Leadership and Management I (1) - Provides an overview of the Army rank structure and a specific survey of the junior officer's duties and responsibilities within that rank structure. Practical training consists primarily of advanced land navigation skills as well as rappelling and practical field training. Two hour class per week, 12 hours laboratory time per semester.

67.220 Applied Leadership and Management II (1) - Presents the fundamentals of small unit leadership and mission planning techniques, to include the reverse planning process and problem-solving techniques. Students learn through case studies how to evaluate different leadership styles and techniques. Two hour class per week, 12 hours laboratory time per semester.

67.230 ROTC Basic Camp (4) - Sophomore summer semester course offered in lieu of the Basic Course for students who want to enter the Advanced Program. The camp is six weeks in duration and

students are paid at the rate of half the basic pay for a second lieutenant.

67.310 Advanced Military Science I (3) - Provides a detailed study of the leadership techniques and the principles introduced in 67.220. Course places students in role model situations to provide first-hand experience in problems of small unit leadership. One 3-hour class per week, 12 hours laboratory time per semester.

67.320 Theory and Dynamics of the Military Team (3) - Practical application of the skills learned in 67.310. Students learn how to apply planning and management skills properly in conjunction with small unit tactics. One 3-hour class per week, 12 hours laboratory time per semester.

67.330 ROTC Advanced Camp (6) - A 35-day practical application and evaluation phase required of each cadet prior to commissioning. Advanced camp places cadets in leadership positions where they must put into practice the techniques learned on campus in both tactical and nontactical situations.

67.410 Advanced Leadership and Management I (3) - Presents advanced leadership and management skills required of a manager in a military environment. Students perform roles in management of a military organization using skills in administration, training, conduct of meetings, briefings, and logistics.

67.420 Advanced Leadership and Management II (3) - Acquaints students through a series of case studies and role playing simulations with the high ethical standards required of a manager and leader. Students learn the basic procedures of military law and their application in a military environment. Students continue to perform roles in management of a military organization, using skills developed in prior military science courses. One 3-hour class per week, 12 hours laboratory time per semester.

SPE (70) Special Education

Administered by Department of Exceptionality Programs

70.101 Introduction to Exceptional Individuals (3) - Reviews all major areas of exceptionality (visually impairments, mental retardation, hearing impairments, communication disorders, behavior disorders, learning disabilities) and acquaints the student with social, sociological, psychological, medical, historical, legal, economic and professional aspects of these conditions. Reviews current research and the latest techniques for facilitating meaningful interactions with these individuals.

70.202 Technology for Exceptionalities (3) - Provides the special education major with an introduction to technology as it is being applied to meet the needs of individuals with exceptionalities and special education teachers. Computers, as well as other technological devices, are studied in relation to use as prosthetics, instructional tools, administrative tools and environmental interfaces.

70.206 Introduction to Early Intervention (3) - An overview of the field of early intervention (EI), including historical perspectives, philosophies of EI, influences of disabilities on the development of young children, early intervention models and intervention strategies.

70.240 Foundations of Special Education (3) - An introduction to the history, causes and characteristics of mental retardation, physical disabilities and learning disabilities. A presentation of diagnostic materials and techniques as well as various approaches, programs and services will be given.

70.250 Behavior Disorders (3) - Deals with inappropriate behaviors emitted by children and youth and the techniques and strategies that may be used to modify these behaviors. Covers psychological disorders, research related to aggressive and withdrawn behavior and techniques and materials used in social curriculum. Examines group and individual problems at all school levels .

70.340 Educating Individuals with Moderate/Severe Disabilities (3) - The course presents an orientation to the nature and needs of educating individuals with moderate and severe disabilities. Theory and techniques for individual assessment, curriculum development and instructional strategies are provided. Content will focus on the dynamics of including students into the home, school and community. The course will provide students with an opportunity to appoy knowledge through a field-based experience.

70.353 Assessment and Planning (3) - Provides information and experience with formal and informal assessment devices and procedures, their usages and appropriateness. Covers gathering information about the learner prior to instruction concerning appropriate instructional tasks, sensory channels, interest areas and social skills. Covers ways of developing informal assessments, gathering observational information, storing information and planning for instruction.

70.357 Vocational Programming (3) - Develop a philosophy of vocational education for individuals with disabilities, acquire knowledge of programs and strategies to develop students' prevocational and vocational skills, learn information about and gain experience with curriculum materials and assessment procedures and develop strategies in transition planning.

70.375 Individual Project (3) - Project planned according to interests and needs of the individual student, in any of the following suggested areas: library research, curriculum study or internship in special aspects of educational programs.

70.401 Student Teaching With Exceptional Individuals (12) - Provides opportunities for each student to test and experiement with educational theory. The student teaching progrm requires one full semester to com-

plete. Two assignments of eight to nine weeks are required. These assignments include two different exceptionalities, if possible, and two different chronological age groups. Placements may be in full-time, part-time or inclusionary settings. Students are responsible to perform in the following areas: diagnosing, planning, teaching, evaluating pupils' progress and clerical tasks. The student will systemactically assume the role of the cooperating teacher. Prerequisite: Concurrent with 70.461.

70.407 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: 70.206.

70.408 Experiences in Early Intervention (1-6) - Provides students with the opportunity to apply theory, best practices and knowledge in early intervention environments with identified families and children, ages birth-6, with disabilities. Prerequisites: 70.206, 70.407.

70.433 Language Arts for Students with Special Needs (3) - Provides 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 is stressed. Students will prepare a portfolio of resources and best practices for teaching language arts to students with special needs.

70.450 Elementary Methods for Individuals with Mild Disabilities (3) - Provides a summary of the learning characteristics and instructional needs of students with mild disabilities. Learning theory, effective teaching strategies, classroom management and interaction with parents, paraprofessionals and professionals will be discussed.

70.451 Secondary Methods for Individuals with Mild Disabilities (3) - Familiarizes students with a variety of instructional techniques used to enhance the learning process of individuals with disabilities at the secondary level. Covers information pertaining to current issues in secondary special education and their impact on service delivery.

70.461 Problems in Special Education (3) - Presents instruction in the development of effective teaching individuals with exceptionalities. Focuses on problems in the education of this population. Discusses its relationship to teaching as each problem is defined. Helps the future teacher meet practical problems in guiding the individual with exceptionalities in learning experiences at school. Prerequisite: Concurrent with 70.401.

70.496/70.497/70.498 Special Workshop I, II, III (1-6) - Temporary special workshop seminars designed to focus on contemporary trends and problems in the field of special education. Lecturers, resource speakers, team teaching, field experience and practicum, new media technology-related techniques are utilized. Workshops usually are funded projects.

70.501 Administration and Supervision in Special Education (3) - This course presents an examination of the functions and responsibilities of the Administrator of Special Education. This includes functions in the areas of leadership, guidance, control, direction and management of spedical education programs and services within educational organizations. Understanding administrative theory and its application to current issues within the domain of special education will provide a framework for this course. School law, teacher recruitment, professional development, organization and integration of special education and ancillary services, evaluation of instruction, public relations and special education finance will be addressed.

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 families and children, ages birth-6, with disabilities. Prerequisites: 70.506, 70.507.

70.516 Psychology of Exceptional Individuals (3) - Symptomatology, personalty formation and developmental and therapeutic consideration for the individual with exceptionalities.

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 students with moderate disabilities. Students evaluate, design, and implement a math program for elementary, middle school and/or secondary students based upon Pennsylvania academic standards for mathematics. Math educa-

tion software, manipulatives, games, and materials will be evaluated and utilized.

70.540 Educating Individuals with Moderate/Severe Disabilities - (3) Presents an orientation to the nature and challenge of educating individuals with moderate/severe disabilities. Theory and techniques for individual assessment, curriculum development and instructional strategies are provided. Content focuses on the dynamics of integrating students into home, school and community environments. Provides students with an opportunity to apply knowledge through a field-based experience.

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 the key aspects of transition will be highlighted.

70.533 Language Arts for Students with Special Needs (3) - Provides 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 of 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.

70.547 Technology and Exceptional Individuals (3) - Provides an introduction to technology as it is being applied to meet the needs of individuals with exceptionalities. 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 Elementary Methods for Individuals with Mild Disabilities (3) - Provides students with an understanding of learning theory, classroom and behavior management and effective teaching strategies in a variety of curricular areas. Students will also discuss current issues dealing with the education of elementary students with mild disabilities. Strategies for interaction with parents and professionals will be covered.

70.551 Secondary Methods for Individuals with Mild Disabilities (3) - Familiarizes 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 Special Project (3) - Designed to further a student's own interest and competency in an area of special education for the individual with exceptionalities. Library research or individual project involving service to the individual with exceptionalities may be agreed upon and conducted under supervision of a faculty member.

70.559 Seminar in Special Education (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.

70.565 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 individuals with exceptionalities. Student spends a minimum of eight hours per week in practicum and meets regularly in a seminar fashionwith the university instructor.

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.

SPA (72) Audiology and Speech Pathology

Administered by Department of Audiology and Speech Pathology

72.200 Introduction to Audiology (3) - Introduces the causes, evaluation techniques and rehabilitative procedures for various types of hearing problems; related auditory, speech, psychological and educational factors; the roles of parent, educator and specialist in the rehabilitation program. Presents hearing conservation procedures used in schools and industry.

72.220 Phonetics (3) - Studies of the physiological, acoustical, perceptual and descriptive aspects of speech and sound production. Primary emphasis on description, classification and transcription of speech sounds. Provides a base of knowledge for diagnosis and treatment of phonetic and phonological disorders of communication.

72.240 Normal Language Acquisition (3) - Focuses on current information and theory regarding normal language acquisition.

72.300 Auditory Training and Speech Reading (3) - Presents current teaching methods for educating children and adults with moderate and severe hearing losses. Prerequisite: 72.200.

72.310 Speech Science (3) - Speech science is the study of the physiology of speech production, the acoustical characteristics of speech and the processes by which listeners perceive speech. Prerequisites: 72.220, 50.366.

72.320 Assessment and Remediation of Language Disorders (3) - Prepares students for the clinical application of language analysis procedures drawn from linguistics, psycholinguistics and sociolinguistics and to apply knowledge from these areas to the management of language disorders. Studies various intervention models. Prerequisites: 72.152, 72.220, 72.240.

72.330 Assessment and Remediation of Speech Disorders (3) - Considers the major theoretical approaches to assessment and treatment of speech disorders. Students engage in clinical observation, examination of standardized tests and procedures used in the differential diagnosis of disorders in the areas of articulation, phonology, fluency and voice. Provides training in the administration of therapy programs. Prerequisites: 72.152, 72.220.

72.340 Applied Behavioral Analysis for Speech and Language (3) - Applies the psychology of learning to communicative behavior and clinical problems. Presents current educational and therapeutic trends and practices.

72.350 Diagnosis and Evaluation in Speech-Language Pathology (3) - Provides a foundation for diagnosis and evaluation of speech and language disorders. Focuses on the psychometric issues of tests and interpretation of test scores. Critical evaluation of tests, particularly with diverse populations, will be addressed. Students will acquire skills in test administration, scoring and interpretation, clinical report writing and conferencing skills.

72.430 Fundamentals of Audiology (3) - Presents a synopsis of primary concepts in diagnostic and rehabilitative audiology. Relates the possible implications of audiological topics to speech pathology, education of the hearing impaired, reading, nursing and special education.

72.450 Clinical Observation (3) - Students develop the skills of a trained observer and participate in observations of the practice of audiology and speech-language pathology. Observations are conducted on and off campus.

72.460 Psycholinguistics (3) - Presents the study of language as a psychological phenomenon. Areas of study include language acquisition, meaning, biology of language, sociolinguistics, nonverbal communication, animal communication and application of psycholinguistics to communication disorders. Prerequisites: 72.152, 72.240.

72.468 Speech Habilitation in the Schools (3) - Examines the profession of speech/language pathology in a school setting as it interfaces with the other school-related disciplines. Emphasizes facilitation of communication among the disciplines.

72.480 Internship in Speech-Language Pathology (3-6) - Students gain practical experience by working in clinical or school settings as observers and aides to CCC-certified speech-language pathologists who are engaged in assessment and/or remediation of communication disorders. Students select sites with the collaboration of the course instructor and contract to complete a variety of learning activities while at site.

72.482 Undergraduate Audiology Internship (3-6) - Students gain practical experience in audiology by observing and helping certified audiologists engaged in providing clinical services. Students select sites with the collaboration of the course instructor and contract to complete a variety of learning activities at the site.

72.492 72.592 Workshop in Audiology and/or Speech Pathology (1-6) - 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 included.

72.493, 72.593 Workshop in Audiology and/or Speech Pathology (1-6) - 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 included.

72.494, 72.594 Workshop in Audiology and/or Speech Pathology (1-6) - 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 included.

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 electrophysiologic 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: Auditory 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 habilitative procedures.

72.518 Seminar in Audiology: Theoretical and Clinical Masking (3) - Neurophysiological and acoustic basis of problems of masking in auditory 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.

72.534 Central Auditory Processing Disorders (3) - Describes the various aspects of central auditory processing an disorders. Students learn about the underlying processes of auditory processing in the central nervous system, including a review of several evaluation and remediation approaches used in the management of clients with central auditory disorders.

72.535 Clinical Physiological Methods in Audiology: ABR, EcochG (3) - Study of the electrophysiology techniques used to assess and diagnose cochleare and retrocochlear pathology and brainstem, spinal and nerve integrity. Review of theories and clinical applications of auditory brainstem-evoked potentials, electrocohleaography, SSEP and VEP.

72.550 Adult Aphasia (3) - Studies language disorders in brain-injured adults. Areas of concentration include history of aphasia, neurological 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) - Prepares speech pathology graduate students for serving individuals with communication disorders in all aspects of clinical management in the Bloomsburg University speech, Hearing and Language Clinic. Allows students to develop necessary competancies in preparation for culminating experience (externship prior to graduation) in the professional community. Students earn a minimum of 150 hours of direct contact time with children and adults having various communication disorders over the three consecutive semesters.

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.

72.564 Provides an overview of orofacial disorders with emphasis on cleft lip and palate and subsequent impact on speech production. Embryological development and etiological factors are presented. The effects of cleft lip and palate on speech, hearing and language are described. Procedures for diagnosis and treatment of communication disorders and related management issues will be discussed.

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 Clinical Instrumentation in Speech Pathology (1) - Provides the student with background information and experience with advanced clinical instrumentationn used in the assessment and treatment of patients with speech, voice and swallowing disorders. In addition, clinical experiences applying clinical instrumentation discussed in the lectures will also be implemented as possible.

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.

HRL (74) Studies in Hearing Loss

Administered by Department of Exceptionality Programs

74.153 Introduction to Sign Language (3) - A study of sign language vocabulary and fingerspelling techniques used in communication with members of the deaf community. Emphasizes developing expressive and receptive skills.

74.201 History, Education and Guidance of the Deaf/Hard of Hearing (3) - Explores hearing loss with emphasis on the history of educational procedures and guidance in communicative, psychological and vocational habilitation.

74.305 Introduction to Instructional Methods for the Deaf/ Hard of Hearing (3) - Introduces the design of instructional procedures and methods of implementing curricula for education of the deaf/hard of hearing. Discusses and demonstrates traditional and innovative approaches to teaching.

74.380 Phonetics (3) - Studies of the physiological, acoustical, perceptual and descriptive aspects of speech and sound production. Primary emphasis on the description, classification and transcription of speech sounds. Provides a base of knowledge for the diagnosis and treatment of phonemic and phonological disorders of communication. Prerequisites: 74.153, 74.201, 72.200, junior or senior standing.

74.390 Directed Project in Communication Disorders (3) - Gives students the opportunity to carry out special in-residence or field projects in professional service programs under the direction of the faculty or designated practitioners. A detailed project plan must be submitted for faculty approval prior to registration.

74.400 Communication Disorders Workshop (3) - Specialized study of communicatively handicapped persons, new technology in the field of communication disorders.

74.462 Problems in Education of the Deaf/Hard of Hearing (3) - Addresses the educational problem of hearing loss and the function of teachers in public and private educational settings.

74.469 Experience in Education of the Deaf/Hard of Hearing (1-3) - Provides experience working under supervision with deaf and hard of hearing children in a demonstration classroom or field facility. Prerequisite: Consent of the instructor.

74.480 Independent Study and Research (1-3) - Permits students to work under faculty guidance when particular needs cannot be met by regularly scheduled courses. Learning experiences may include library research or creative academic projects. Nature and scope of the project determine semester hours awarded.

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.

74.560 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 Education of 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.

74.575 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.

74.580 Independent Study and Research (3) - Permits students to work under close faculty guidance 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)

ITR (75) Interpreter Training

Administered by Exceptionality Programs

75.154 American Sign Language I (3) - A study of American Sign Language (ASL) including the history of ASL and its recognition as a language. Focuses on development of expressive and receptive conversational ASL skills. Prerequisite: 74.153 or equivalent skills; instructor permission required.

75.155 American Sign Language II (3) - A continuation of ASL I with emphasis placed on more complex grammatical structures and conversational fluency. Prerequisite: 75.154.

75.254 The Deaf Culture (3) - Involves study and analysis of the deaf community. Emphasis on research and discussion of social, psychological and personal aspects of the members of the deaf community.

75.255 American Sign Language III (3) - Continuation of ASL II. Major focus on the study of ASL sign principles and linguistic structure of the language to continue building expressive and receptive ASL skills. Prerequisite: 75.155.

75.256 American Sign Language IV (3) - A continuation of ASL II. Focuses on more advanced linguistic aspects of ASL and a synthesis of all concepts previously learned. Prerequisite: 75.255.75.260 Interpreting in the Educational Setting (3) - Study of interpreting within a variety of educational settings including postsecondary, secondary and elementary areas. Topical areas include: recent legislation on the status of interpreters, characteristics of various meetings and visually coded English Sign Systems.

75.301 Introduction to Interpreting for the Deaf (3) - Focuses on topics such as the Registry of Interpreters for the Deaf, various kinds of certification, establishing the interpreting situation and the mental processes involved in interpreting and transliteration. Emphasis on ethical behavior. Prerequisite: to be taken concurrently with 75.256.

75.302 Interpreting English to American Sign Language (3) - Focuses on building expressive interpreting skills. Experience gained through laboratory work and classroom discussions when interpreting situations for observation and practice are presented. Emphasizes professionalism, principles and ethics. Prerequisite: 75.301 or permission of the instructor.

75.303 Transliterating English to Sign Language (3) - Focuses on building transliteration skills. Experience gained through laboratory work and classroom discussions when transliteration situations for observation and practice are presented. Emphasizes professionalism, principles and ethics. Prerequisite: 75.301 or permission of the instructor.

75.304 Oral Interpreting/Transliterating (3) - Identifies information and techniques and the utilization of skills required for effective oral interpreting and transliterating. Includes use of personal characteristics to facilitate speech reading and the identification of the needs of the hearing impaired individual during interpretation. Prerequisites: 75.153 and 75.301.

75.401 Sign to Voice Interpreting (3) - Emphasis on classroom discussion and laboratory work

developing skills of comprehending the signed message, forming syntactically and contextually correct English interpretations and the proper use of the voice. Prerequisite: 75.301 or permission of the instructor.

75.415 Practicum in Interpreting (3) - Involves the placement of the student in interpreting situations on and off campus to gain "on-the-job" experience. Requires a minimum of 120 interpreting hours.

PRS (79) Professional Studies

Administered by the Departments of Early Childhood and Elementary Education, Educational Studies and Secondary Education and Exceptionality Programs

79.312 Internship in Education (1-15) - A work study program in an education-related setting applicable to fulfilling free electives in teacher education degree programs.

79.320 Field-Based Inclusion Practicum (6) - Provides application of theories in learning, assessment, classroom management and teaching strategies to inclusive school settings. Topics include building home/school partnerships, environmental/curricular adaptations, instructional support teams, collaboration, cooperative learning, mastery learning, classroom management, whole language, curriculum-based assessments, peer coaching. Prerequisite: junior or senior status.

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.

HLT (80) Health Sciences

80.400 Health Sciences Internship (3-6) - Provides the opportunity to apply acquired knowledge in an on-site practicum experience under the supervision of an appropriately credentialed preceptor. Open to students in the health sciences. Prerequisite: senior standing.

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.

NUR (82) Nursing

Administered by Department of Nursing

Courses within the nursing curriculum are restricted to students in the B.S.N. program, except for 82.217 Alcohol: Use and Abuse which is a values or free elective open to all students.

82.200 Nursing Placement (Variable) - A number used to transfer in advanced placement credits resulting from NLN Mobility II Profile tests or ANA certification examinations which may be taken by registered nurses.

82.204 Critical Evaluation of Research in Nursing (1) - Introduces research methods and techniques. Focuses on the student as a consumer of research with emphasis critiquing research studies for application and the ethics of research with human subjects. For Non-Matriculating RNs.

82.205 Research Application in Nursing (1) - Focuses on the contribution of research to the discipline and the consumer's role in applying research findings. Emphasizes identifying researchable problems and improving practice through application of research findings. Prerequisites: 82.204, statistics course. For Non-Matriculating RNs.

82.206 Proposal Writing in Nursing (1) - Focuses on the research process in identifying a researchable problem and formulating a beginning level research prospectus. Emphasizes conceptualization of a design to study a research problem. Prerequisite: 82.204, 82.205, statistics course or consent of instructor. For Non-Matriculating RNs.

82.210 Professional Nursing (3) - Introduces the student to the Bloomsburg University undergraduate nursing program and the concepts and processes of professional nursing. Defines and discusses mission, philosophy and conceptual model of the curriculum. Presents and integrates major concepts of the program. Students develop the view of person as a holistic open-system who is growing and developing across the life span. Explores the person's environment as related to nursing practice. Nursing roles are introduced and examined. Laboratory activities furnish opportunities to develop skills in group dynamics, communication and teaching. The nursing process is applied as the student demonstrates the teaching role with clients in the community. Prerequisites: 45.211 or 45.213 or 46.200; 48.101, 48.210, 50.173, 50.174, 52.101, 52.108, concurrent 50.240; sophomore nursing student status.

82.211 Nutrition (3) - Provides an introduction to the basic principles of nutrition and ways in which nurses apply these principles to promote an optimal level of wellness for all individuals. Addresses nutritional components of holistic nursing care including health promotion, nursing clinical practice and dietary modifications to treat disease. Prerequisites: 82.210, 82.212, 82.214, concurrent 50.240, 82.213 and 82.215.

82.212 Pharmacology (3) - Provides a foundation in pharmacology for pharmacologic content integration throughout the curriculum. Explores the legal, social, ethical, historical and political dimensions of pharmacotherapeutics. Prerequisites: 50.173, 50.174, 52.101, 52.108, 45.211 or 45.213 or 46.200, 48.101, 48.210, concurrent 50.240, 82.210, 82.214; sophomore nursing student status.

82.213 Foundations of Nursing Practice (5) - Focuses on the application of nursing process to promote optimal levels of functioning of the adult and older adult. Students apply theory to the care of the individual client as they begin to assume the nursing roles of practitioner, teacher, leader/manager and consumer of research. Students expand their knowledge and application of major nursing concepts as they provide health care to clients in non life-threatening situations. Laboratory simulations and computer instruction enable the student to develop psychomotor skills basic to nursing practice. Instructional strategies include clinical experiences with clients in community and hospital settings. Prerequisites: 82.210, 82.212, 82.214, 50.240, concurrent 82.215 and 82.211.

82.214 Health Assessment (3) - Introduces techniques and principles of health assessment for adult clients. Communication and interviewing skills are reinforced throughout the course. Health patterns of adults are assessed. Validation of health histories and practice of review of systems and basic assessment skills will occur in the simulated learning laboratory. Prerequisites: prior to or concurrent with 82.210 and 82.305 (RNs only).

82.215 Pathophysiology for Nursing Practice (3) - Assists the student to apply the physiological principles as a means of understanding pathological conditions. Pathophysiological disruptions to system functioning are presented. The impact of these disruptions on the individual are discussed. Students develop an understanding of the signs and symptoms associated with selected pathophysiological disruptions as a basis for determining nursing care needs. Prerequisites: prior to or concurrent with 82.213 and 82.211.

82.217 Alcohol: Use and Abuse (3) - Provides comprehensive overview of alcohol use and misuse in the American population. Because alcohol is a leading public health problem in the U.S., this course is intended for students in all disciplines. Examines the nature of alcohol problems as well as socio-cultural attitudes towards drinking. Explores alcohol's effects on the body. Discusses the impact of alcoholism on adolescents, professional workers, women, the elderly and the family. Examines prevention, intervention and referrals. An overview of treatment and rehabilitation that includes spiritual, moral and legal aspects.

82.305 Role Development for the Nurse Generalist (RN) (3) - Resocializes the registered nurse for professional practice. Introduces the purpose, objectives and conceptual framework of the Department of Nursing's program. Through increased knowledge and integration of varied professional nursing concepts, the student develops the roles of practitioner, teacher, leader/manager and consumer of research. Prerequisites: Current state RN license; 50.173, 50.174, 50.240; 45.211 or 45.213 or 46.200; 48.101, 48.210; 48.160 or 53.141; 52.101, 52.108; and requirements under the articulation model.

82.306 Introduction to Nursing Research (3) - Introduces students to the concepts, skills and processes of research in nursing. The contributions of selected nursing theorists are explored as frameworks for nursing inquiry. Students evaluate research critically and examine its importance to the discipline of nursing. Prerequisite: 48.160 or 53.141; junior standing; 82.305 (if RN) or consent of instructor. (Spring semester only)

82.307 Geriatric Nursing (3) - Focuses on the physiological, psychological and social aspects of aging with emphasis on the assessment of problems and appropriate nursing intervention. Prerequisite: junior or senior standing or RN.

82.310 Family Nursing (2) - Focuses on the concept of family as an open system and use of the nursing process to assess and promote family health across its lifespan. Students analyze the structures and functions of the family in contemporary U.S. society as a basis for determining health care needs. The role of the environment and sociocultural factors are explored as they influence the family's various functions. Stresses the nurse's role in assisting the family to assume responsibility for meeting the needs of members. Prerequisite: junior standing in nursing program, 82.213, concurrent with 82.311 or 82.312 fall semester only.

82.311 Adult Health I (7) - Focuses on the application of the nursing process to promote and restore the health of older adults with chronic or potentially life-threatening illnesses. Students apply developmental theory related to the older adult while providing health care. Increasing independence in nursing roles occurs as students collaborate with health care providers in a variety of settings. Prerequisite: 82.213, junior standing..

82.312 Maternal and Child Health Nursing (8) - Focuses on family-centered nursing and application of the nursing process to promote and restore health with women, neonates, children and their families. Students apply a variety of family and developmental theories to nursing practice with clients in community and hospital-based settings. Health education that encourages responsibility for health promotion is discussed. The role development of the student is enhanced through interactions with a variety of health care providers in a collaborative effort to meet the health needs. Prerequisite: 82.213, junior standing.

82.313 Special Topics (1-6) - Presents a diversity of topics focusing on contemporary trends, issues and problems relevant to the principles and practice of professional nursing in the health care system. .

82.405 Independent Study (1-6) - Requires investigation of an area of special interest and value to the student under the direction of a faculty member following a plan approved by the department chairperson. Course may be interdisciplinary. Prerequisite: junior or senior standing or consent by department.

82.410 Community Health Nursing (5) - Focuses on the use of the nursing process, demography, epidemiology, program planning and evaluation to assist communities with the promotion, restoration and maintenance of health. The impact of multiple systems on health and healthcare delivery are identified as students collaborate with clients, support systems other providers, public health agencies and the community as a whole. Role development will be fostered through independent and interdependent activities with culturally diverse groups and organizations. Approved as a cultural diversity course. Prerequisites: 82.306, 82.310, 82.311, 82.312, (82.305 - R.N.s only)

82.411 Psychiatric/Mental Health Nursing (5) - Focuses on the application of diverse theories, psychobiological concepts and epidemiological principles to students' use of nursing process to promote, maintain and restore the health of a culturally diverse client population in a variety of mental health care settings. Students employ a "therapeutic use of self" and function in independent and interdependent roles as they collaborate with client, support systems and other providers to deliver holistic and humanistic care. Prerequisites: 82.306, 82.310, 82.311, 82.312.

82.412 Adult Health Nursing II (7) - Focuses on meeting the health care needs of a diversity of adult clients with complex needs. Students employ developed skills in critical thinking to problem-solve and make decisions. Students use nursing process, therapeutic skills and technology in assisting these clients to attain an optimal level of functioning. They collaborate with clients and the interdisciplinary team to promote, maintain and restore optimal health to a variety of clients. Learning experiences are provided in order for students to continue to develop proficiency as a practitioner, teacher, leader/ manager and consumer of research. Course promotes integration of values into professional behaviors and accountability for personal and professional growth. Prerequisites: 82.306, 82.310, 82.311, 82.312. (82.305 for RNs).

82.414 Nursing Management/Leadership (4) - Focuses on management principles, including leadership theories and concepts, decision-making processes, budgeting guidelines and case management concepts. Content on public policy and health care economics is incorporated. Principles from this course are integrated into concurrent clinical courses to enhance professional role development. Prerequisites: 82.306, 82.310, 82.311, 82.312, senior nursing major status.

82.451, 82.551 Transcultural Health Issues (3) - Provides students with a global perspective of transcultural health issues. Students analyze the cultural, social, educational, economic, political and environmental forces that contribute to health on an international level. Compares major cultural and ethnic determinants of health in developed and developing countries will be compared, addresses approaches used by diverse cultures in various countries in solving their health care problems and examines research on transcultural health issues. Evaluates the role of major international health organizations dealing with cultural and ethical issues in world health. Prerequisites: junior, senior or graduate standing. Approved as an interdisciplinary and cultural diversity course.

82.460 Health Concerns in the Classroom (3) - Focuses on health problems of the school-age population and the educator's role in the classroom management of these problems. Health mandates, acute and chronic health conditions of childhood and adolescence, and strategies for maintaining a healthy classroom environment are presented, including the medically fragile child in the classroom.

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 concepts 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 selected 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 interventions. 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, review and critique of relevant literature, selection of a conceptual or theoretical framework and identification of an appropriate research design and methodology 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 individuals response to the pharmocologic 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 socio-cultural 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 clinical 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: 82.501, 82.502, 83.503 and candidacy for MSN degree..

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: 82.501, 82.502, 83.503 and candidacy for MSN degree..

82.513 Management and Organizational Behavior in Nursing Administration (6) - Applies managerial theories and concepts to nursing administration. Focuses on the synthesis and utilization of managerial principles, organizational behavior, management information systems, operations management and financial accounting in nursing administration for the delivery of effective health care. Fall semester only. Prerequisites: 40.512, 91.504, 91.524, 93.501, 93.566, 82.501, 82.502, 83.503, 82.520. Two hours/ week, practicum for 12 hours/week.

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 (6) - 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 as 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.

82.560 Health Concerns in the Classroom (3) - Focuses on health problems of the school-age population and the educator's role in the classroom management of these problems. Health mandates, acute and chronic health conditions of childhood and adolescence, and strategies for maintaining a healthy classroom environment are presented, including the medically fragile child in the classroom.

82.590 Thesis (6) - Available as an elective. Prerequisite: see clinical option advisor.

MDT (86) Medical Technology

Administered by Department of Biological and Allied Health Sciences

86.401 Clinical Microbiology (6-10) - A lecture and laboratory study of bacteria, fungi, parasites and viruses which cause disease in humans, their clinical pathology and related diagnostic laboratory procedures.

86.402 Clinical Hematomology/ Coagulation (6-10) - A lecture and laboratory study of hematopoiesis and blood coagulation. Students acquire an understanding of the theory of hematological tests, skills in the performance of these tests, knowledge of blood disorders and insight into the significance of test results.

86.403 Clinical Chemistry for Medical Technologists (6-10) - Lecture and laboratory study of enzymes, carbohydrates, lipids, proteins, nitrogenous end products, electrolytes, acid-base balance, body fluids, toxicology, endocrinology and urinalysis. Lecture series includes anatomy, physiology, methods of analysis and clinical significance of each biochemical determination. Laboratory study includes standardization and quality control of procedures using spectrophotometry, chromatography, electrophoresis and automated techniques.

86.404 Clinical Immunohematology (3-6) - Lecture and laboratory study of blood groups, genetics, antigens and antibodies and their interaction as related to safe transfusion, prediction of immune incompatibilities and probability of parentage. Donor collection, processing, blood component preparation and therapy also studied.

86.405 Clinical Immunology/Serology (2-4) - Lecture and laboratory study of immunological concepts and theory and their relation to serologic reactions and clinical interpretations.

86.406 Clinical Seminar (1-6) - Covers courses not included above, such as orientation, laboratory management, education, clinical microscopy and/or areas unique to the individual hospital program. .

BUS (90) General Business

Administered by Department of Business Education and Office Information Systems

90.101 Introduction to Business (3) - Provides a study of business and its environment organization, operation and interrelationships with government and society. Business majors develop a broad base for further study in a specific area in business, while other majors become familiar with the American enterprise system and the functions and issues facing business today. Prerequisite: Not open to business administration degree students with 6 or more semester hours in business.

90.333 Business Communications and Report Writing (3) - Applies theories and principles of effective communication to solve common business problems. Psychological and organizational strategies are used in writing business reports and other documents. Prerequisite: junior or senior standing.

90.341 Principles of Selling (3) - Includes a study of selling as a profession, preparation for successful selling, steps and procedures associated with the sales process and special selling topics. Students apply sales principles and techniques while conducting sales presentations. Prerequisite: junior standing.

90.350 Valuing Diversity in Business (3) - A study of the challenges and opportunities presented to businesses in the United States by an emerging multicultural society. Explores cultural heritage, values, beliefs and prejudices and the effects of privilege and oppression upon individuals organizations and businesses, as well as possible solutions.

90.402 Methods of Teaching Business Education (3) - Emphasizes a variety of methods and materials for teaching certification areas of business education. Must be scheduled the semester prior to student teaching and concurrently with 90.403. Classroom discussions closely correlate with the experiences of 90.403. Prerequisite: Admission to teacher education.

90.403 Business Education Field Experience (1) - Initiates an awareness of the teaching and learning atmosphere of the professional teacher in the classroom. Students provided opportunities to undertake the responsibilities assigned to a classroom teacher, including assuming some of the teaching role competencies. Must be scheduled the semester prior to student teaching. Prerequisite: Admission to teacher education.

90.404 Professional Semester in Business Education (12) - Includes orientation experiences to observe the operation of a school and specific classes as well as 16 weeks of participatory teaching experiences correlated with classroom studies under full-time supervision. Must be scheduled concurrently with 90.406.

90.406 Clinical Studies in Business Education (3) - Presents seminars on principles of education for business teachers, methods of teaching business subjects, strategies and problems of classroom teaching. Classroom discussions closely correlated with the experiences of 90.404.

90.431 Independent Study in Business (1-3) -Topic and outline of project must be approved by the department chairperson and dean of the college. Prerequisite: Open to seniors only.

90.432 Internship in Business (1-6) - Provides students with opportunities to acquire practical experiences in work situations in office systems. Prerequisites: Approval by department chairperson; GPA of 2.50 and 80 semester hours earned.

90.460 Business and Office Workshop (1-3) - Students acquire an awareness and understanding of the knowledge pertaining to the professional development and improvement of business skills, the enhancement of business and office education as a professional responsibility and their role in the business world.

90.498 Special Topics in Business Education and Office Systems (1-3) - A study of the aspects of business education or office systems. Not available as a regular course offering.

90.560 Business and Office Education Workshop (1-3) - 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.

ACC (91) Accounting

Administered by Department of Accounting

91.220 Financial Accounting (3) — Familiarizes students with a basic understanding of generally accepted accounting principles and their applications. Includes sole proprietorship, partnership and corporate accounting. General ledger and/or spreadsheet computerized accounting required. For non-accounting majors only.

91.221 Principles of Accounting I (3) — Presents the accounting cycle covering both service and merchandising activities of a sole proprietorship; special journals and special ledgers, accrued and deferred items and receivables and inventories. General ledger and/or spreadsheet computerized accounting is required.

91.222 Principles of Accounting II (3) — Further develops the accounting cycle; recording, summarizing, interpreting financial data for partnerships and corporations. Includes cash flow, long-term liabilities, plant assets and payroll accounting. A practice set and general ledger and/or spreadsheet computerized accounting are required.

91.223 Managerial Accounting (3) — Presents volume-cost-profit analysis, special decisions, operational and financial budgeting, control and performance evaluation, job-order and process costing, variance analysis, cost allocation, quantitative decision-making techniques and analysis of financial statements. Students are expected to be proficient in the general use of Lotus 1-2-3 or Lotus 1-2-3 compatible electronic spreadsheets. Students are required to retrieve, modify, complete, save and print electronic spreadsheets dealing with many of the topics. Prerequisites: 91.220 or 91.222.

91.320 International Accounting (3) — Addresses needs of accounting and finance students wishing to become more qualified in accounting on a global perspective. Provides an international accounting component for students who have completed foundation courses. Prerequisites: 91.220 or 91.222. Meets cultural diversity requirement.

91.321 Intermediate Accounting I (3) — Presents the conceptual framework of accounting, accounting environment and information processing system, financial statements and the accounting standards regarding present and future value concepts, cash and receivables, temporary investments, inventories and short-term liabilities. Requires the use of Lotus 1-2-3 to solve computer problems in each chapter. Prerequisite: 91.222.

91.322 Intermediate Accounting II (3) — Presents accounting standards for property, plant and equipment, intangible assets, income recognition, long-term debts by borrower and lender, formation of corporations and stockholders equity, retained earnings, stock rights and options and investments in securities and consolidated financial statements. Requires student to use an approved word processing software package to produce a research paper that analyzes one FASB, reviewing the related accounting literature. Prerequisite: 91.321.

91.323 Intermediate Accounting III (3) Presents accounting standards pertaining to statements of cash flows, pension plans, leases, earnings per share, income taxes, accounting changes and error corrections and financial reporting and changing prices. Use of Lotus 1-2-3 to solve computer problems in each chapter is required.

91.324 Federal Tax Accounting (3) - Introduces basic tax laws pertaining to preparation of individual federal tax returns and supporting schedules. Emphasis on tax law research using federal tax services and contemporary professional literature. Prerequisite: 91.321.

91.342 Auditing Theory and Procedure (3) Outlines principles, standards, procedures and techniques applicable to internal and public auditing; consideration of the audit report and development of working papers for preparation of the report. Use of commercial computer packages to generate audit programs. Use of Lotus templates to work problems and use of word processing package to prepare a research paper. Prerequisites: 91.322, Economics 40.346.

91.348 Cost Accounting (3) — In-depth study of the three major production costs - raw material, factory overhead and labor - for a job order cost system. Prerequisite: 91.321.

91.424 Advanced Federal Tax Accounting (3) Assigns group and individual projects selected from the following areas of advanced tax accounting; partnerships and corporations, Pennsylvania corporate taxes, estates and trusts, reporting to governmental agencies. Includes lectures, discussion of issues and practice in the solution of problems. Prerequisite: 91.324.

91.430 Advanced Accounting I (3) Applies accounting principles to special problems in the consolidation and merger of business enterprises. Includes consideration of the basis for such combinations, consolidated statements on date of acquisition as well as at subsequent dates with special emphasis on design, construction and utilization of integrated microcomputer-generated worksheets and financial statements. Prerequisite: 91.322.

91.431 Advanced Accounting II (3) — Focuses on accounting principles and practices of governments and non-profit institutions. Includes partnerships, estates, trusts and bankruptcy accounting. Prerequisite: 91.322 or consent of the instructor.

91.432 Internship in Accounting (6) — Provides work experience in the accounting profession. Prerequisite: 80 semester hours completed and adequate course preparation for the tasks to be performed.

91.448 Advanced Cost Accounting (3) — Continuation of 91.348, concentrating on process cost, standard cost and budgets. Emphasis on methods used to analyze and interpret cost data. Prerequisite: 91.348.

91.449 CPA Problems (3) — Addresses the application of procedures for the solving of a cross section of complex accounting problems and the discussion of theory and practice. Prerequisites: 91.324, 91.342 and 91.348; senior standing or consent of the instructor.

91.498 Special Topics: Introduction to Healthcare (3) - Introductory management and leadership skills for the health professional, who by education and background is prepared not to manage but to practice a profession, but nevertheless finds her/himself in a management position.

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.

MGT (93) Management

Administered by Department of Management

93.344 Principles of Management (3) - Administrative organizational and behavioral theories and functions of management, contributing to the effective and efficient accomplishment of organizational objectives. Prerequisites: 45 semester hours earned, 40.211.

93.345 Human Resource Management (3) - Equips students with tools and procedures to address human resource issues and problems. Prerequisite: 93.344.

93.346 Labor and Industrial Relations (3) - Describes administration of the relationship between management and the labor force, both where that relationship is governed by a collective bargaining agreement and where it is not. Includes development of the social and legal status of trade unions organizing, negotiations, strikes, grievance procedure and union security. Prerequisite: 93.344.

93.347 Management Science (3) -Covers quantitative models such as linear programming, goal programming, inventory models, forecasting models, PERT/CPM in dealing with the dynamics of manufacturing/service operations in an organization. Prerequisites: 53.141, 40.346, 93.344 and either 40.246 or 53.123.

93.348 Operations Management (3) - Educates and trains students to deal with the operational issues and problems in manufacturing and services. Prerequisites: 53.141, 40.346, 40.246 or 53.123.

93.350 Quality Management (3) - Introduces students to the major concepts and techniques used in quality management and control.

93.355 Managing Multicultural Organizations (3) - Studies the impact of increasing diversity in terms of gender, race, ethnicity and nationality on management practice of multicultural organizations through enhanced decision making. Examines ways in which diversity canb e used to strengthen organizations through enhanced decision making, creativity, innovation, and expanding international and ethnic markets. Examines strategies for building and maintaining functional multicultural organizations by reducing turnover, interpersonal and conflict and communication barriers. The course emphasizes workplace equity. Prerequisite: 93.344.

93.362 Organizational Design (3) - Discusses the differences between micro and macro perspectives in the study of organization and provides a macro view in which the organization is the unit of analyses as opposed to individual members. Provides students with an in-depth understanding of how organizations are formed and how external as well as internal factors influence the structure and design of the organizations. Also explores variables for designing and managing organizations. Prerequisite: 93.344.

93.391 Small Business Management (3) - Introduces environment of small business in the United States. Describes types of small business and problems associated with each type. Covers ownership, start up, franchising, finance, accounting, personnel, risk management, inventory, advertising and marketing and production processes. Special emphasis is given to incentives and legal requirements of Pennsylvania with regard to small businesses. Prerequisites: 91.220, 91.223, 93.344, 96.313, 97.310 and 98.331.

93.432 Internship in Management (3-6) - Integrates classroom experience and practical work experience in industrial, business or government work situations. Allows students to translate academic theories and principles into action, to test career interests and to develop skills and abilities through carefully planned and supervised problems related to the field of management. Prerequisites: 93.344 or approval of internship supervisor, GPA of 2.50, 80 semester hours and major or minor in business administration.

93.440 Small Business Institute Seminar (1-3) - Teams of students work with local businesses in a consultancy capacity to aid small businesses while applying business principles. Work includes analysis of a problem, determination of alternative solutions, recommendation of the optimum course of action by means of an oral presentation to business owners. Prerequisite: GPA of 2.5, 91.220, 91.223, 93.344, 96.313, 97.310 and 98.331.

93.445 Managerial Communications (3) - Prepares students for effective managerial communication by providing preparation in the process and structure of communication in a professional setting. Prerequisites: 20.101, 20.201, 25.103 and 93.344.

93.449 Organizational Behavior (3) - Provides the tools and theories regarding personal, interpersonal and group processes within the organization at the micro level. Prerequisite: 93.344.

93.456 International Management (3) - Develops and understanding of the issues related to international business environment, refines this knowledge by the analysis of current economical, social and political issues that can influience international and global companies and prepares students to analyze international business issues as a manager of a multinational/global company. Prerequisite: 93.344.

93.457 Business and Society (3) - Prepares students to manage social responsibility and ethics issues related to business operations and the interests of multiple stakeholders. Prerequisites: 96 semester hours earned, 20.101, 20.201, 25.103, 93.344, 96.313, 97.310 and 98.331.

93.463 Employee Saffing (3) - Examins the procedures used by companies to recruit and hire employees. Students learn how organizations seek to improve effectiveness by ensuring each job is legally staffed by a fully capable individual. Topics covered include job analysis, employee recruitment, selection techniques, validation procedures and legal restraints on employee selection practices. Prerequisite: 93.345

93.464 Compensation Management (3) - Examines how the development of a firm's compensation system. Students learn how companies design their compensation systems in an effort to enhance their recruiting, motivation and retention of employees. Topics covered include job evaluation, salary surveys, pay-for-performance programs, legal issues, and the design and evaluation of employee benefits packages. Prerequisite: 93.345

93.481 Business Policies and Strategies (3) - Prepares students in the area of strategic decision-making for the total organization through strategic formulation and administration using integrative analysis and strategic planning and process. Prerequisites: 110 semester hours earned, 91.220, 91.223, 93.344, 96.313, 97.310 and 98.331.

93.498 Special Topics - Management (3) - Examines current or advanced issues in the field of management not normally examined in depth in other courses. Prerequisite: approval of the department chairperson.

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).

93.500 Managerial Principles (3) - Focuses on the fundamentals of the practice of management, including administrative, organizational and behavioral theories. Explores the functions of management and the aspects of the organizational environment. Prerequisite: graduate standing.

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).

93.545 Graduate Human Resource Management (3) - Equips students with tools and procedures to address human resource issues and problems.

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).

93.558 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).

93.560 Operations Management: Analyzes 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.

93.581 Strategic Management: Examines complex industrial situations to determine better strategies to ensure a firms 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. Analyzes and investigates 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).

93.583 Human Resources Development: Focuses on current research and theories related to management and development of human resources in organizational settings. Emphasizes theories related to motivation, training and development, leadership, behavior and performance in an organization.

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).

OIS (94) Office Information Systems

Administered by Department of Business Education and Office Information Systems

94.221 Office Systems Concepts (3) - An overview of office systems-technology, people and procedures within organizational and environmental contexts. Major technologies that support information creation, storage, retrieval, manipulation and distribution are covered.

94.302 Business Document Generation (3) - Provides the student with the opportunity to use computer and business applications software to generate business documents and presentations.

94.330 Telecommunications (Spring only) (3) - An introduction to telecommunications in the business environment. Emphasis on application of telecommunications to facilitate information interchange in whatever form the information takes: data, voice, text and image. Prerequisite: Junior standing.

94.340 Network Design and Administration (Spring Only) (3) - Provides a comprehensive and practical knowledge of network management and enhancement. Students get practical experience working with software, hardware, customizing user environments, implementing technology security and enhancing and troubleshooting the computing environment. Prerequisite: 92.150, junior standing and permission of department.

94.405 Training and Development in Office Systems (Fall only) (3) - Application of theories of learning and instructional development to the education and training of employees in office systems. Topics include instructional design, technology and the implementation, evaluation and management of training in an organizational environment. Prerequisite: Senior standing or 64 credits.

94.407 Information and Office Environment Management (Fall only) (3) - Provides acceptable practices in the management of information and the office environment. Students will develop an understanding of the information life cycle, the importance of an ergonimically designed work environment and how information serves as a critical organizational asset. Topics include: records management systems, human factors in the office environment (ergonomics), workflow and spatial design and layout. Prerequisites: 94.221, 94.302, 90.333, senior standing.

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.

FIN (96) Finance

Administered by Department of Finance and Business Law

96.120 Personal Finance (3) - This course presents information that the students of the course will find useful when they move through life, regardless of their respective career choices. The general topics covered will be personal financial planning, consumer credit, insurance (health, disability, liability, home, and automobile), investing principles and sources of capital, and retirement planning and their impact upon individuals and small business owners.

96.313 Introduction to Corporate Finance (3) - Studies financial management in the areas of asset valuation, risk, working capital management, capital budgeting, cost of capital, financial structure, financing sources and dividend policy. Prerequisites: 91.220, 40.346, 40.211 and 40.212.

96.323 Financial Markets and Institutions (3) - Studies short-term money market and long-term capital market instruments, major financial institutions, the relationship between interest rates and security prices and the role of the consumer and government in financial markets. Prerequisite: 96.313.

96.333 Commercial Bank Management (3) - Leads to the understanding of risk management in contemporary banking by studying the historical and contemporary impact of banking regulation, measures of bank performance and bank policy formation. Risk is shown to be managed through Asset/Liability Management (by the use of GAP Analysis), Investment Management, Liquidity Management, Capital Management, and Off-Balance Sheet Management. Prerequisite: 96.313.

96.343 Investment Management (3) - Outlines principles of security investments: descriptions of investments instruments, investment planning, security valuation, portfolio theory and strategy and security markets. Prerequisite: 96.313.

96.413 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, balance-of-payments, exchange rates, governmental regulations and policies, financial management, as well as accounting for international transactions. Prerequisite: 96.313.

96.423 Security Analysis and Portfolio Theory (3) - Detailed analysis of major elements related to determining the earnings and risk potential of securities and study of the underlying principles inherent to portfolio construction. Prerequisite: 96.343.

96.432 Internship in Finance(1-6) - Prerequisites: 96.313, junior or senior standing and GPA of 2.50.

96.440 Introduction to Options and Futures (3) - Detailed analysis of major elements affecting market prices of options and futures contracts and analysis of optimal investment strategies involving these derivative instruments. Prerequisite: 96.343.

96.454 Advanced Corporate Finance (3) - Studies business financial problems and the development of financial decision-making tools and practices as used in the decision-making role of the financial manager. Prerequisite: 96.313.

96.463 Seminar in Finance (3) - Explores a wide range of topics in finance, primarily focused in the area of financial management. Designed primarily for senior finance majors. Prerequisites: 96.313 and 96.343.

96.473 Seminar in Investments (3) - Examines a wide variety of topics in the field of investment management and portfolio theory. Designed primarily for Seniors majoring in finance. Prerequisites: 96.313 and 96.343.

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 finance 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.

MKT (97) Marketing

Administered by Department of Marketing

97.310 Marketing Principles and Practices(3) - Surveys the fundamental features of contemporary marketing systems and the planning required to make available satisfying goods and services to customers at a profit. Explains the role of marketing in society and the institutions which compose the market system. Describes components of the marketing mix-product planning, distribution, pricing and promotion. Prerequisite: 40.121, 40.122.

97.320 Marketing for Nonprofit Organizations (3) - Hospitals, social service agencies, universities, fraternities and sororities, political candidates, governments, churches and libraries are some of the nonprofit organizations which are challenged to effectively solve their marketing problems. Through understanding and by applying marketing theory and methods, students realize how they can aid organizations in developing a better product, price, distribution and promotion decisions for the publics they seek to serve. Prerequisite: 97.310.

97.330 Consumer Motivation and Behavior (3) - Analyzes the role of the consumer as the ultimate buyer of the product and the strategy and forces directed at the consumer by the seller. Topics include models of consumer buying behavior, consumer motivation, interpersonal and intrapersonal influence on the consumer as a decision maker in the market place. Prerequisite: 97.310, 48.101.

97.340 Advertising Management (3) - Studies the advertising element of the marketing/promotional program from a management perspective. Examines advertising's role in business and society. Advertising's use of the communication process is studied from a theoretical and practitioner's perspective. Development of an ad campaign is highlighted with emphasis on management decisions involved in planning and execution. Special attention given to budgeting, copywriting, media analysis and choice. Prerequisite: 97.310.

97.350 Retail Management Concepts (3) - Presents retailing as a dynamic aspect of the marketing/channels distribution system. Consumer/marketing analysis, store location, store layout, merchandising, pricing, promotional issues and problems are considered. Prerequisites: 97.310, 40.122.

97.370 Sales Management (3) - Studies the personal selling element of the marketing/promotional program from a management perspective. Recruiting, selecting, training organizing, motivating, compensating, evaluating and controlling the sales force are treated, as well as management's planning responsibilities which include designing intelligence systems, forecasting and establishing sales territories. Special consideration is given to sales management's inputs and integration with marketing management. Prerequisite: 97.310.

97.380 International Marketing (3) - Applies the managerial process to the development of international marketing programs. Emphasizes the development and determination of objectives and methods of organization including the execution of research, advertising and distribution activities. Considers special problems of adopting marketing principles to fit conditions in different countries. Prerequisite: 97.310.

97.431 Independent Study in Marketing (3) - Develop research skills in an academic and experience-based setting through collaborative research with a faculty member. Apply marketing theory to an employment situation or research objective. Prerequisite: Nine semester hours in marketing.

97.432 Internship in Marketing (1-6) - Develops skills in an experiential setting that are not available in the academic classroom. Students learn to relate marketing principles and practices to an employment situation. Prerequisites: 97.310, 2.0 GPA, 80 semester hours and junior or senior standing.

97.440 Marketing Research (3) - Develops the skills of the scientific marketing research procedure (problem definition, research design, data collection, analysis and interpretation). Applies recent developments in marketing information systems to product planning, advertising research, consumer and competitive analysis. Prerequisites: 97.310, 97.330 and 40.256.

97.460 Marketing Management (3) - Presents an advanced study of the marketing programs from the systems and managerial viewpoint. Applies analytic, communicative and problem-solving skills to evaluation and creative planning in the marketing environment. Uses business marketing cases as a vehicle for developing the marketing executive's abilities. Prerequisites: 97.310, 97.330, 97.340.

97.480 Industrial Marketing Strategy (3) - Strategies for marketing products and services to industrial, commercial and governmental markets. Changing industry and marketing structures are analyzed. Prerequisite: 97.310.

97.490 Contemporary Problems and Issues (3) - Explores major issues, trends and problems characterizing the current marketing environment. Encourages students to do extensive reading in current marketing and other related literature. Theoretical, environmental research and trade-off issues in marketing are assessed. Case study, group projects and group dynamics are used. Prerequisites: senior standing and 6 semester hours in marketing.

97.530 Strategic Buyer Behavior (3) - Covers concepts and theories from the behavioral sciences as they relate to marketing strategy formulation.

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.

BSL (98) Business Law

Administered by Department of Finance and Business Law

98.331 Law and the Legal Environment (3) - Covers the structure of the American legal, constitutional and regulatory system, the nature and sources of law, competing theories of law and the principles of law applicable to business, including administrative law, contracts and the UCC Article 2, torts and products liability, property and criminal law. Students must have earned 30 semester hours before enrolling in this course.

98.332 Business and Commercial Law (3) - Presents basic principles of commercial law (UCC), agency and such topics as debtor/creditor relations, business organizations and ethics. Prerequisite: 98.331.

98.340 Law and Literature (3) - An introduction to law and literature, both as an approach to the reading of legal texts and as a means of addressing issues in law, justice and morality as portrayed in works of fiction and other narratives. Modules include slavery, abortion, the death penalty, Native American law and literature and international law and literature.

98.407 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 structural impediments talks; the GATT; the European Community: multinational corporations; and environmental regulation. Prerequisite: 98.331 or consent of the instructor.

98.432 Internship In Legal Studies (3-6)

98.450 Legal Environment of Business (3) - Advanced coverage of topics in government regulation of business through administrative law, legislation and judicial intervention. May include issues in the law of corporate securities, antitrust, environmental regulations and other aspects of legal regulation of the competitive process. Prerequisites: 98.331 and Economics 40.212.

98.460 Employment Discrimination and Affirmative Action (3) - A survey of major federal laws that address equal opportunity in employment and focuses on types of job discrimination outlawed by Title VII of the 1964 Civil Rights Act. Legal and ethical issues relating to affirmative action programs are discussed, as are state and local laws addressing employment discrimination.

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 lawn and business. Students should contact the instructor prior to enrollment.

Academic Policies and Procedures

PRP 3050 - Field Experiences for Teacher Education

I. Number And Quality Of Field Experiences.

A. A five- to ten-day noncredit field experience for all teacher education students shall occur in the freshman year or at the earliest possible time in case of transfer or non-traditional students. Departments shall review continually and update the nature of this field experience.

B. One credit courses or equivalent experiences shall be required in the sophomore and junior year or at the earliest possible time in the case of transfer or non-traditional students. These courses or experiences shall be supervised by faculty members.

C. A full semester of student teaching shall be required as the senior year field experience or at the earliest possible time in the case of transfer or non-traditional students.

D. Departments shall review continually graduate level field experiences in regard to generic and specific competencies.

II. Supervision Of The Sophomore And Junior Field Experiences.

A. The sophomore and junior level field experiences shall be supervised by a faculty member. The number of students per faculty member shall depend upon the design of the field experience.

B. Departments shall develop formal devices such as logs, observation sheets, workbooks and evaluation forms, to provide documentation. The faculty supervisor and cooperating teacher shall be required to evaluate formally the student.

III. Supervision Of Student Teaching Or Clinical Experiences.

Recognizing that the distance to be traveled and needs of individual students will impact upon the specific requirements placed on supervisors, the following are established as minimum criteria:

A. Supervisors of student teachers shall make a minimum of four visits per half semester, two of which should be formal observations.

B. A visit is defined as a discussion with the cooperating teacher, student teacher, and supervisor concerning the progress of the student teacher. An observation consists of at least a review of the lesson plan, observation of the lesson, and post conference with appropriate feedback.

C. Documentation is required of all observations made by the student teacher supervisors. Three copies of the observation form should be made. The student teacher and cooperating teacher shall be given a copy of the observation form, and the supervisor shall retain a copy for the his/her records.

D. It is required that the cooperating teacher conduct at least two formal observations of the student teacher per week using appropriate observation instruments.

IV. The Relationship Of The Student Teaching/ Clinical Evaluation Form To The Bloomsburg University Teacher Education - Generic And Specific Competencies In Teacher Education.

All teacher education departments shall develop evaluation instruments based on the Bloomsburg University Teacher Education Generic and Specific Competencies in each area of teacher certification.

V. Field Experience Centers.

It is strongly recommended that each teacher education department establish field experience centers which exemplify the teaching principles taught in teacher education programs at Bloomsburg University.

VI. The Nature Of Evaluating And Grading Field Experiences And Student Teaching/Clinical Experiences.

1. Evaluation of students participating in field experiences and student teaching/clinical experiences shall be completed using formal instruments. All instruments shall be based on the generic and specific competencies of Bloomsburg University Teacher Education programs.

2. Each cooperating teacher shall be trained thoroughly in the evaluation process.

3. Letter grades shall be used in all field experiences and student teaching/clinical experiences.

4. Based upon formal evaluation instruments, the supervisor and cooperating teacher shall discuss mutually a letter grade for Student Teaching/Clinical Experiences. The faculty supervisor, however, shall have the final responsibility for the assigning of letter grades.

VII. The Function, Role, And Form Of The Student Teaching Related Experiences.

Each teacher education program shall develop course(s) or equivalent experiences in conjunction with student teaching which will (a) complement the student teaching experience; (b) reinforce previously gained competencies; (c) bridge the gap between theory and

practice; and (d) facilitate the acquisition of new competencies.

VIII. The Training Of Cooperating Teachers.

The teacher education faculty shall develop training program(s) for cooperating teachers. Such programs shall include sufficient content to meet the PDE Program Approval Standards of developing observation and evaluation skills as well as sharing and exchanging ideas. Appropriate procedures shall be utilized to insure local educational agency cooperation and collaboration. Incentives should be developed to encourage cooperating teachers to participate. Members of the teacher education faculty should instruct in such training programs and be granted appropriate compensation. A process for continual renewal and updating cooperating teachers in observation and evaluation methods shall be developed.

PRP 3264 - Student Course Requirements and Progress Information

1. Within the first week of classes each semester, teaching faculty must distribute in writing, at least the following information:

   a. Procedures for determining each letter grade.

   b. Any relationship of class attendance to the course.

   c. Any other course requirements.

   d. Weighted average of requirements for grade computation.

   e. Procedures for making up tests or other work missed through excused absence. (See policy #3506-Class Attendance.)

2. A faculty may post student grades providing that a student has given written permission. The grades must not identify the student. Student confidentiality must be assured when posting grades. Using Social Security Numbers or parts of Social Security Numbers in illegal. If grades are posted, each student should be given unique identifier which is not consistent to student names listed in alphabetical order.

3. At any time during the semester, teaching faculty shall be prepared to inform students of their academic progress, should the student request this. At the end of a semester or summer term, the final grade of each course is recorded on the student's permanent record; a copy of the semester grades is sent to the student at his/her home address or another designated by the student.

PRP 3333 - Undergraduate (Degree and Non-Degree) Admissions Policy

Criteria:

Admission to Bloomsburg University is determined by the applicant's academic and personal qualifications. Decisions are reached without regard to race, age, color, creed, national origin, sex or physical handicap.

Applicants other than those eligible for early admission must be graduates of or seniors in accredited secondary schools or must have secondary school equivalency as determined by the Credentials Evaluation Division of the Pennsylvania Department of Education.

Acceptance is determined by the Director of Admissions upon evaluation of secondary school preparation, achievement, scores on either the Scholastic Assessment Test (SAT) or American College Test (ACT), personal characteristics, and institutional capacity.

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

Procedures:

To be a candidate for admission, one must complete and submit an official application with the appropriate non-refundable application fee to the Office of Admissions. The applicant is responsible for requesting the proper official of his/her secondary school to submit a transcript and personal evaluation to the Director of Admissions.

An applicant must provide scores of the SAT or ACT. It is the responsibility of the applicant to arrange for the test and to request the forwarding of the scores directly from the Testing Service. A photostatic copy of the test report on an official high school transcript is also acceptable. No other standardized test will serve as a substitute for the SAT or ACT.

Special Categories:

Early Admissions - Outstanding high school students may apply for consideration for admission prior to completion of high school. In addition to strong achievement and high aptitude, applicants for early admission must have the unqualified endorsement of the high school to receive consideration.

ACT 101/Educational Opportunity Program (EOP) - Any individual with a high school diploma or certificate of equivalency is eligible to apply for admission to the program.

Non-traditional criteria are applied in estimating potential of an applicant when it appears that the environmental background may have adversely affected grades and/or standardized test scores.

The Director of Admissions may require an applicant for the ACT 101/EOP to file supplementary information as needed for proper consideration.

Students admitted through the ACT 101/EOP are expected to participate in a summer enrichment experience prior to the first

semester of their attendance, where special assistance in tutoring and counseling is given to address specific academic, financial and/or social problems. This requirement can only be altered by the Director of ACT 101/EOP.

Transfer Students - An applicant who was previously enrolled, or at the time of application is enrolled, in another college or university is a transfer student. The criteria and procedures above apply to transfer applicants.

SAT or ACT results are not required from applicants who have successfully completed 30 or more semester hours of college credit.

Transfer applicants must supply an official transcript from each college attended to the Director of Admissions, regardless of whether credit was earned at the other institution(s).

For a transfer student to be considered for admission, he/she must be certified as in good standing academically and otherwise in the college last attended and must have an overall quality point average of 2.0 or better on a 4.0 system for all courses in which passing and/or failing grades were recorded.

Readmission of Former Students - Students, who, having been formally admitted to degree study and attended Bloomsburg University, fail to enroll or withdraw for any academic semester, regardless of the reason, must apply for readmission.

Readmitted students are responsible for the graduation requirements and academic policies which exist at the time of reentrance.

The Director of Admissions may require an applicant for readmission to file a letter containing such supplementary information as needed for proper consideration.

Students under academic dismissal are ineligible for readmission for one calendar year. They should present evidence of successful achievement at another college or university as part of any application for readmission.

Readmitted students who were formerly dismissed for academic deficiency have two final grading periods in which to regain minimum academic progress or good academic standing. These students are not eligible for academic probation and if dismissed the second time may not attend the University for additional degree or non-degree credit study.

Non-Degree Admission - Admission to the non-degree credit program is open to all high school graduates or those holding GED credentials, standardized test scores are not required.

Application forms may be obtained from the Office of Admissions or the Office of Adult Advisement. Non-degree categories with their credential(s) requirement are as follows:

Adults who desire to enroll as part-time students must submit to the Office of Adult Advisement: completed application for don-degree admission. Must submit evidence of high school graduation of GED completion prior to enrolling for a second semester or session.

A student approaching the final year of high school who desires to combine university work with the last year of high school must submit to the Office of Admissions: high school transcript, junior year SAT or Act scores, a letter of recommendation from the high school counselor, and letters of recommendation from two high school instructors in the academic area of intended pursuit, and completed application for non-degree admission.

Students with an earned baccalaureate degree who wish to complete the requirements for Level I or Level II teacher certification. Credential requirement: a transcript from the institution granting the baccalaureate degree and a completed application for non-degree admission

Senior citizens who are retired, over 60 years of age, legal citizens of the U.S. and residing in the Commonwealth of Pennsylvania are eligible to apply for waiver of tuition fees through the School of Extended Programs. Students in this category may be admitted to classes on a seat available basis only. Credential requirement: proof of age, retirement, United States Residency, and a completed application for non-degree admission. Must submit evidence of high school graduation of GED completion prior to enrolling for a second semester or session.

Students seeking enrollment in a certificate program. Credential requirement: official high school transcript of GED, a completed application for non-degree admission, and the signature of the Coordinator of Adult Advisement.

PRP 3343- Evaluation of Undergraduate Transfer Credits

Credit by Transfer:

Transfer students:

Evaluation of credit earned at other institutions for transfer students is recommended by the Admissions office with final approval by the department chairperson.

Credits for acceptable courses transfer. Grades, quality points, and grade point averages do not transfer.

College level courses completed with a grade of C (2.0/4.0) or above from a two-year or four-year institution, accredited by one of the regional accrediting agencies, are usually transferred for a degree student. With the exception of courses covered by the State System of Higher Education Academic Passport Policy, courses taken with a grade of less than C (2.0/4.0) will not transfer to Bloomsburg University.

Transfer credit will be deleted if the student subsequently registers for courses which substantially duplicate the content of courses accepted for transfer.

When the substitution of transfer credit for a required course is in question because the course was taken in an unaccredited institution or because the description of standards of the course are unclear, a student is entitled to an opportunity to validate the course by examination.

Correspondence courses are subject to acceptance to a total that does not exceed fifteen semester hours if taken from a college or university accredited by one of the regional accrediting agencies and acceptable by that institution toward graduation in a baccalaureate degree curriculum.

Courses taken in another institutions on a pass-fail basis are acceptable for transfer as free electives, if they conform to the conditions for such grades at Bloomsburg University. (See Policy 3454)

Enrolled Students:

Degree students of Bloomsburg University may take courses in other accredited institutions and submit the credit for transfer, provided the courses satisfy the criteria stated above. (See Policy 3604 concerning Graduation Requirements).

Credit by Advanced Placement Examinations:

The University will award credit for Advanced Placement Exams (AP exams) upon receipt of verification of a score of 3,4, or 5 by the Office of the Registrar.

Credit by CLEP Examinations:

The University will award credit for CLEP Examinations upon receipt of verification of a score at or above the 50th percentile by the Office of the Registrar. CLEP General Examinations must be taken before matriculating to Bloomsburg University. CLEP Subject examinations may be taken anytime prior to graduation. Acceptance of credit for certain CLEP Examinations is subject to departmental approval.

Credit for Military Experience:

Bloomsburg University may award college credit for educational experiences of students earned while serving in the armed forces of the United States. The registrar makes a recommendation to the chairperson of the student's departmental major based upon the American Council on Education's Guide to the Evaluation of Educational Experiences in the Armed Forces. Recommendations are made provided the credit applies to the student's degree program. The final decision for granting credit resides with the departmental chairperson.

The University will transfer two credits in Physical Fitness 05-100 for completing basic training in the armed forces of the United States.

PRP 3360 - Placement Testing for Developmental Courses

This policy applies to testing that is not a part of course requirements.

Students will be selected for and administered placement tests prior to matriculation based upon their predicted freshman year grade point average (G.P.A.). A predicted freshman year G.P.A. is calculated by the Office of Admissions for each new freshman at the time of application using the high school class rank, SAT Verbal and SAT Math scores. New freshmen with a predicted G.P.A. less than 2.25 will be given placement testing. The specific area(s) of placement testing (mathematics, reading, writing) will be determined by the pattern of SAT scores and high school achievement. Students selectively low in one of the admission testing areas (e.g., below SAT Math of 470, SAT Verbal of 480) will have placement testing in areas which are selectively weak.

Depending on the results of the review of the academic record and the placement test scores, an individualized program including a developmental course(s) may be prescribed. The guidelines for developmental course placement are established by the Department of Developmental Instruction, the Department of English and the Department of Mathematics and Computer Science. The Director of Academic Advisement will provide each student who has been administered a placement test(s) with a report indicating the prescribed program. A copy of this information will also be sent to the student's academic department. If a student is identified for and is placed in a developmental course(s) during the first semester (Fall or Spring) of attendance, the course(s) is considered a prerequisite before additional courses for

credit toward the degree can be taken in corresponding areas (Writing II for English Composition I and Introductory or Intermediate Algebra for all courses that meet the quantitative-analytical reasoning general education requirements). This requirement also applies to summer freshmen during their first academic year semester of attendance. Developmental courses will be provided for all identified ACT 101/EOP freshmen and for other identified freshmen based upon the available seats in the Department of Developmental Instruction courses.

PRP 3361 - Academic Renewal Policy

Academic renewal is a means to allow certain students who have been dismissed from the University to return and not be unduly encumbered by their prior academic record. Academic renewal allows students to have their courses prior to dismissal treated as transfer credits.

An undergraduate student who wishes to apply for academic renewal must meet the following criteria:

1. He or she must have been academically dismissed from the University.
2. He or she must not have been enrolled at the University as a degree student for five or more calendar years.
3. He or she must have been readmitted to the University as a degree student.

An application for academic renewal may be made at the time of readmission and must be completed before the mid-term day of the first semester of attendance after readmission as a degree student. This procedure is not automatic; it must be initiated by the student. It is the advisor's or chair's responsibility to ensure applicants' eligibility for academic renewal as well as its advisability. Academic renewal is done in consultation with the student's academic department and requires the Dean of the College's approval.

Students who have been granted academic renewal have all courses taken prior to academic dismissal treated as follows. Those courses in which a grade of C (2.0) or better were earned and are approved by the academic department are treated as transfer credits for degree completion and not used in computing students' quality point average. Those courses which are not approved or in which a grade of C- or less was earned are not used for degree completion. Students who have been granted academic renewal will have their quality point average computed on the basis of all courses taken after dismissal.

Students who have been granted academic renewal are permitted four course repeats after readmission.

Students who have been granted academic renewal are subject to the academic retention standards that apply to first semester transfer students. If academically dismissed a second time, a renewal student may not attend the university for additional degree or non-degree credit study.

The transcripts of students who have been granted academic renewal will have all courses and grades listed. Courses set aside under the academic renewal will be identified.

A student may be granted academic renewal only once. Once granted, its conditions cannot be altered.

PRP 3407 - Student Responsibility

It is the responsibility of the student to know and observe the academic policies and regulations of the University; to confine registration to courses for which the prerequisites have been satisfied and to meet the requirements for graduation.

PRP 3415 - Registration

A student completes registration before attending classes. Registration is the student's official notification to the university of his/her enrollment for the semester. Normally, it is to be completed before the first day of classes. Students may register late until the close of business on the sixth day of classes after a semester's registration or the first Wednesday following a summer session registration. There is a special fee for late registration unless the student presents a legitimate medical excuse. Students registering for an off-campus course may do so at the first meeting of that class.

PRP 3420 - Choice of Curriculum/ Declaration of Major

The undergraduate curricula are administered by three colleges; the College of Arts and Sciences, the College of Professional Studies, and the College of Business. The requirements for the curricula can be obtained from the dean of the particular college.

When students are admitted they are admitted to a specific major or area of study. They are admitted to the college which houses that major.

When a student makes a tentative choice of a major he/she selects pre-liminary or prerequisite courses with the advice of the major department. In curricula where admission is selective or restrictive at the junior year entry-level, as is the case in several programs, the university is not obligated to admit the student.

PRP 3422 - Double Major Across Colleges

Students electing to major in two departments must have a major advisor in each department, meet all of the major requirements of each department and all of the general education requirements. Double majors in some departments may require more than the minimum 128 credits for graduation.

PRP 3424 - Change of Area of Study

Procedures

A student who wishes to change from one area of study to another must file a request in the Academic Advisement Office.

Permission to enter the new curriculum may require approval of the dean of the college (or his/her designate) in which it is offered. In this case, approval will depend on available space and may depend on recommendations from advisors.

PRP 3434 - Change of Undergraduate Schedule

A student may change his/her semester/summer session schedule prior to the close of the fifth/third day of the semester/summer session. The consent of the advisor is not prerequisite to a change of an undegraduate schedule. Changes are subject to available space in classes to which the student proposes to transfer.

Schedule changes for all students in the Department of Developmental Instruction, with fewer than 32 earned credits require the approval of Department of Developmental Instruction. Schedule changes for students on academic probation, reinstatement, and minimal academic progress require the approval of the academic advisor.

PRP 3439- Student Scheduling Policy

A scheduled class always constitutes an obligation. All registration procedures shall not conflict with this obligation.

It is highly desirable for students to complete English Composition I and II (or their equivalent) by the end of their sophomore year. Advisors and students should make every effort to accomplish this goal.

Seniors will be registered first, followed by juniors, sophomores, and freshmen.

1. Incoming freshmen will be block-scheduled for their first two semesters of attendance. The second semester block will include at least 12 credits. An opportunity for academic advisement and schedule changes will be available during orientation and also during the first semester of enrollment.
2. Department Chairpersons will provide the Office of the Registrar with a list of courses in their respective major programs that they feel such freshmen should have during the first two (2) semesters in college.
3. Such block-scheduling of incoming freshmen for the first semester will be done by the Office of the Registrar prior to the respective orientation sessions. Second semester block-scheduling will be done just prior to the scheduling period for the next semester. Both block-schedules will be prepared by the Office of the Registrar. Changes to freshmen schedules will only be authorized for extenuating circumstances (see below).

Students shall not be required to be at co-curricular activities until after 3:30 p.m. Scheduling activities have precedence over unscheduled meets, practices,etc.

Students off-campus (e.g. student teaching, internships, etc) will prepare schedules that will be processed at the appointed time with those of their peers. Such students will need the supervisor's signature and must mail their schedules to the Office of the Registrar.

Extenuating Circumstances Justifying a Freshman Schedule Change:

1. When a student repeats a course in which a grade of C-, D+, D or E has been recorded the previous term.
2. When a student has withdrawn from college and re-enters the following term.
3. When a student has decided after the registration period to change the major or program of study.
4. When a student has received an incomplete schedule.
5. When changes are made in the master schedule (e.g. courses/sections deleted or added).
6. When a student decides or is chosen to participate in legitimate co- curricular activities after the registration period but before the end of the schedule change period. (Social obligations do not constitute a valid reason for a schedule change.)
7. When a student receives transfer of credit evaluation after the previous registration period.
8. When other circumstances are deemed valid by the appropriate chairperson.

PRP 3442 - Definition of Full-Time Student

An undergraduate/graduate who is enrolled for twelve/nine or more semester credits is classified as a full-time student throughout the semester. One who enrolled for fewer then twelve/nine semester credits is a part-time student. Where the word "student" appears without clarification either by word or context, "full-time student" is implied.

PRP 3446- Undergraduate Satisfactory Progress

1. Criteria For Evaluating Undergraduate Satisfactory Progress

Undergraduate satisfactory progress is evaluated on the basis of two criteria:

a. a student's ability to earn a minimum number of credit hours;

b. a student's ability to maintain a minimum quality point average at the conclusion of each grading period.

Earned Credit Hours

Full-time continuously enrolled undergraduate degree students: to maintain satisfactory progress toward the completion of degree, the student must earn a minimum of 24 credit hours in any given 12 month period (including credit hours earned in developmental studies courses).

Part-time undergraduate degree students: to maintain satisfactory progress within any 12 month period, the student must earn credit hours as prescribed below:

Hours Attempted	
Up to eight credits	One-half of all credit hours attempted must be earned
Nine and above	Two-thirds of all credit hours attempted must be earned

Note: Hours earned for a repeated undergraduate course are not counted twice.

Quality Point Average

All undergraduate degree students: to maintain satisfactory progress, the student must meet the following minimal requirements:

Total number of semester hours earned including transfer credits	Cumulative quality point average required for minimal progress grades of "P"
1 - 16 semester hours	1.25 - 1.99
17 - 32 semester hours	1.65 - 1.99
33 - 48 semester hours	1.85 - 1.99
49 - 64 semester hours	1.95 - 1.99
65 or more semester hours	2.00

While making minimal progress toward academic good standing, a student may schedule no more than 16 semester hours.

A student whose record at any final grading period shows a cumulative quality point average of 2.00 or better is considered in academic good standing.

2. Academic Probation

An undergraduate student in any one of the following categories is permitted to attend on academic probation for one additional grading period (semester or summer) and is limited to a maximum of 16 semester hours:

a. an entering freshman whose quality point average after his/her first grading period is at 1.00 but less than 1.25;

b. a transfer student whose quality point average after his/her first grading period is less than but within 0.25 of the cumulative quality point average required for minimal progress;

c. a student who has been meeting the requirement for at least two consecutive grading periods immediately prior to a grading period in which his/her cumulative quality point average drops below but within 0.10 of the cumulative quality point average required for minimal progress;

d. a full-time freshman or transfer student who was making minimal progress toward good standing at the end of the first grading period following entrance but whose quality point average at the end of the second grading period is below but within 0.10 of that required for minimal progress toward good standing;

e. a full-time student who failed to earn 24 semester hours within one 12-month period;

f. a part-time student who failed to earn the minimum number of semester hours as prescribed above within the given semester.

To be removed from academic probation, a student must earn a minimum of eight semester hours and a minimum quality average as described in the table above. The record of a student in any of these categories is marked "academic probation."

3. Duration Of Degree Work

Full-time undergraduate students are expected to complete their programs of study within five calendar years of continual enrollment.

4. Academic Dismissal

An undergraduate student who is not qualified to attend for a semester on academic probation or who, upon reaching the end of the one probationary semester, does not meet the minimal requirements of earned credit hours and/or quality point average, is excluded from registration, and his/her academic record is marked "academic dismissal." A student under academic dismissal in ineligible to attend courses offered for a period of at least one calendar year. Readmission regulations are stated in the Undergraduate Catalog.

5. Procedures

Students failing to meet the minimal requirements of earned credit hours and/or quality point average will be notified by the Office of the Registrar.

PRP 3449 - Graduate Courses in Senior Year

Seniors needing fewer than 18 semester hours of course work to satisfy requirements for the baccalaureate degree may, with approval of their department chairperson, apply to the Dean of Graduate Studies for permission to supplement their undergraduate courses with graduate courses. Graduate credit for graduate courses completed will be awarded

upon verification of completion of the undergraduate degree.

PRP 3450 - Credit by Examination

A student may petition for the privilege of establishing credit in a course or courses listed in the undergraduate catalogue through a comprehensive examination instead of through registration and class attendance or through independent study of the course content.

A student may not petition for an examination in a course audited, nor in a course from a failing grade has been recorded.

A student must present evidence of equivalent experience if the course involves laboratory or studio work.

The student's petition must be approved in sequence by the department chairperson and the dean of the college.

An examination committee must be appointed by the department chairperson and approved by the dean of the college. Unless the course is an advanced course which is taught by only one member of the faculty, the examination committee must include at least two faculty members.

The examination must cover the course syllabus in a comprehensive manner. Suitable standardized examinations may be used. The examination must be written or, if oral, subject to transcription. Where skill, as in keyboarding or use of applications software is a course requirement, the written and oral aspects must be supplemented by demonstration of skill. A copy of the completed approval form must be placed in the student's advisement file and the original forwarded to the Office of the Registrar.

A fee is charged for courses challenged by institutional examination taken for credit, regardless of the number of credits awarded for that course. Upon receipt of approval, this fee is payable at the College of Business Office. Evidence of payment must be presented to the department before the examination can be administered.

If the student passes the examination, the grade of "P" is assigned for the course. If he/she fails, no record is made. This course does not count in the student's normal quota of pass-fail courses. Suitable adaptations of the above procedures may be used to validate transfer courses taken in non-accredited colleges. No fee is charged for examination to validate such credit. Examinations may be based upon the syllabi of the courses taken in the previous institution or, in case the student wishes to establish equivalency with courses in this university, upon the syllabi of courses offered in this institution.

PRP 3451 - Credit by Examination for RN's

The minimum credit requirement for a baccalaureate degree at Bloomsburg University is 128 semester hours. These credits may be attained through successful completion of courses offered at Bloomsburg University, the transfer of credit, and/or the successful completion of advanced placement examinations. At least 32 of the last 64 semester hours credited toward this degree must by taken in residence at Bloomsburg University. This does not include the credits earned through advanced placement.

A registered nurse holding a current license may petition for the privilege of establishing credit by examination in a course or courses in the Department of Nursing at Bloomsburg University. The Department of Nursing at Bloomsburg University. The Department of Nursing adheres to the policy for credit by examination established by the parent institution (refer to BU undergraduate catalog), emphasizing several very significant factors:

The student must present *evidence of equivalent experience if the course content either through experience other than college attendance or through independent study of the course content.

The student must present *evidence of equivalent experience if the course involves laboratory or studio work.

In addition, the following regulations govern the departmental policy for credit by examination:

1. Role Development for the Nurse Generalist (82.305), Introduction to Nursing Research (82.306), Community Health Nursing (82.410), and Leadership and Management in Nursing (82.413) are required courses and may not be petioned for credit by examination.
2. A petition for credit by examination may be filed on the dates designated by the department if the RN demonstrates evidence of completing the prerequisites to each course.
3. A petition may be filled only once for each course.

*Evidence of adequate experience/equivalent experience: Transcripts and supportive data submitted by the RN will be reviewed on an individual basis to determine whether or not previous theoretical and experiential learning has been validated.

PRP 3452 - Course Repeat

Undergraduate

A maximum of four courses numbered 100 and above in which grades of C-,D+, D or E have been recorded may be repeated. The initial grade remains on the transcript and is part of the student's permanent record. Quality points are awarded for the grade of the repeated course only. The grade of the repeated course

is part of the permanent record and is used to calculate the student's quality point average. Multiple repeats of the same course are considered as one repeat. A course taken at Bloomsburg University in which a grade of C- ,D+, D or E has been earned and repeated at another institution of higher education is included in the permitted maximum number of repeats.

PRP *3454*- Undergraduate Pass/Fail

Introduction. There are two circumstances in which the usual grading scheme (A, A-, B+, etc.) may be replaced by Pass/Fail (P/F). The first is the Pass/Fail Option for Students which may be elected by a student. The rules governing the Pass/Fail Option are under I. The second is Pass/Fail Only Courses which allows a department to offer a course only pass/fail when appropriately approved. Section II below governs Pass/ Fail Only courses.

Pass/Fail Option for Students

After attaining sophomore standing, a degree student may elect courses on a pass/fail basis until the final day of registration in accordance with the following rules:

1. A maximum of two courses (not more than eight semester hours in total) may be included as part of the minimum graduation requirement of 128 semester hours. No more than one Pass/Fail Option course may be taken in any one semester.

2. Courses taken using the Pass/Fail Option must be free electives. No required courses may be taken using the Pass/Fail Option. Required courses are those used to satisfy requirements for majors (including required cognate courses), minors, or general education.

3. The instructor is not informed that the course is being taken on a

Pass/Fail Option basis. Grades are translated later into grades of "P" or "F" with the grade of "P" recorded for a grade of "D" (1.0) or higher and the grade of "F" recorded for "E."

4. A grade of "P" and "F" does not enter the computation of a quality point average.

5. If, subsequent to the completion of a course on a Pass/Fail Option basis, the student should change his/ her major to one in which the instructor's original grade is required, he/she may request that the chairperson of the academic department be notified of the actual letter grade earned.

6. A student who has received a grade of "E" in a course may not take it later on a Pass/Fail Option basis.

7. The student may revoke a decision to take a course on a Pass/Fail Option basis. The revocation must be completed by the close of the business day three weeks after the middle day of the semester. This will allow the pass/fail option to be used again.

Note: The effective date of this policy is the beginning of the 1991-1992 academic year for all entering, re-entering, and transfer students. Other students may choose to abide by these regulations or the pall/fail regulations that prevailed at the time of their entrance into the university.

Pass/Fail Only Courses

1. A department may apply to have one (or more) of its courses to be offered on a Pass/Fail Only basis. (Approval must be given by the college curriculum committee, college dean, university curriculum committee and provost. See the Omnibus Course and Program Development Cover Sheet.)

2. A course that is offered on a Pass/Fail Only basis is exempt from all the restrictions except I4 listed under Pass/Fail

Option for Students. In particular, such a course may be used to meet general education requirements or requirements of a major when appropriately approved). Furthermore, a course which is offered on a Pass/Fail Only basis shall not be included in the two course maximum of the Pass/Fail Option for Students.

3. A grade of "P" and "F" does not enter the computation of a quality point average.

PRP 3456 - Auditing of Courses

A full-time student who is enrolled for less than seventeen hours of course work may, with consent of the Vice President for Academic Affairs and subject to attendance fees, register for one course as an auditor. If the registrant attends at least three-fourths of the regular class meetings the grade of V will be reported by the instructor and the course will be entered on the academic record without credit. No assignments are made to an auditor and no papers or examinations are accepted by the instructor for grading or record either during the period of enrollment or subsequent thereto. An auditor may not participate in laboratory or studio work if such work is part of the course audited.

A part-time student may register as an auditor, subject to the provision that when computing the fee paid by the student the course audited will be counted the same as if it were taken for credit. Individuals who are not enrolled as students may apply for audit privileges through the Dean of Extended Programs. Acceptance depends upon such factors as space in class and educational background.

PRP 3462 - Withdrawal

Undergraduate

After the schedule change period and continuing until three weeks past mid-term, if a student withdraws from a course a grade of "W" will be recorded. As a means of notification of the instructor to the intent to withdrawal, a student is required to obtain his/her instructor's signature on the withdrawal form.

No withdrawals will be permitted after the close of the work day three weeks after the middle day of the semester.

Prior to the last week of classes, in exceptional circumstances, for compelling, justified and documented reasons, the Dean of the College in which the course is being taught may waive these restrictions. Poor academic performance will not constitute grounds for late withdrawal.

A limit of four (4) withdrawals during the degree program shall apply. (Withdrawal from the University is an exception). Faculty are encouraged to include the University late withdrawal policy on the syllabus distributed to students at the beginning of the semester.

This policy will apply to all undergraduate students who are enrolled Fall 1996.

Graduate

The graduate student must apply to the Assistant Vice President for Graduate Studies and Research for permission to withdraw. If this permission is requested before the midterm of the semester, the grade is W. If the withdrawal is after the mid-term of the semester, the grade is W providing the student is passing the course, and E otherwise. The Office of the Registrar establishes the semester's mid-term.

PRP *3463* - Graduate Course Withdrawal

During the Fall and Spring semesters, after the schedule change period and continuing until three weeks past mid-term, if a student withdraws from a course, a grade of "W" will be recorded. As a means of notification to the instructor of the intent to withdraw, a student is required to obtain the instructor's signature and the signature of the program coordinator on the withdrawal form. No withdrawals will be permitted after the close of the workday three weeks after the middle day of the semester. For summer sessions and courses not taught on a regular semester basis, the Registrar will prorate the date appropriately.

Prior to the last week of classes, in exceptional circumstances, for compelling, justified and documented reasons, the Dean of Graduate Studies and Research may waive these restrictions. Poor academic performance will not constitute grounds for late withdrawal. If withdrawal is granted after the deadline, the grade is W providing the student is passing the course, and E otherwise.

A limit of two (2) withdrawals during the degree program shall be permitted. Re-registration for withdrawn courses requires the approval of the program coordinator. Students withdrawing from the university may exceed the two course withdrawal limit. Faculty are encouraged to include the university late withdrawal policy on the syllabus distributed to students at the beginning of the semester.

Refund of tuition for withdrawn courses are prorated based on week of withdrawal. The refund policy is published annually by The State System of Higher Education.

PRP 3506 - Class Attendance

Regular classroom attendance is expected of all students. However, a student will be afforded reasonable assistance by a faculty member when class work is missed as a result of extenuating circumstances beyond the student's control, such as but not limited to:

1. Personal illness
2. Death or critical illness in the immediate family
3. Participation in a college-sponsored co-curricular activity (Mutually satisfactory arrangements for assistance must be made by the student when the activity is announced.)

Instructors are encouraged to use their professional judgment in deciding the legitimacy of each case and may request the student to provide official documentation to verify the reasons for the absence.

The instructor is not required to give makeup examinations or review other class work missed as a result of unauthorized absences other than those authorized by this policy.

A faculty member, with departmental approval, may adopt a reasonable alternative policy if class members are provided that policy in writing during the first week of classes.

PRP 3512 - Academic Integrity Policy

What is Academic Integrity?

Academic integrity refers to the adherence to agreed upon moral and ethical principles when engaging in academic or scholarly pursuits. The university's academic integrity policy is part of an effort to nurture a community where trust, honesty, and personal integrity guide all of our dealings with one another. Personal integrity is vital to our pursuit of educating and becoming educated. This student academic integrity policy is only part of, not the entirety of, efforts to foster a community of trust; trust is built first on our actions toward each other. The responsibility to be honest, fair and forthright with others is a responsibility that each member of the Bloomsburg University community must accept. The conditions of an academic integrity policy spell out the nature of the expectations we have of one another, and explain the sanctions that follow the failure to live up to these expectations. The following policy sets a standard for all of us to live up to and exceed.

What is Academic Dishonesty?

The following types of behaviors are examples of academic dishonesty. This list is not, and cannot be, exhaustive. Students who are unsure if an act is academically dishonest have a duty to consult their professor before engaging in the act.

1. Cheating: (a) Using notes, study aids, or information on an examination which are not approved by faculty; (b) Altering graded work

after it has been returned and submitting the work for regrading; (c) Allowing another person to do one's work and submitting that work under one's own name; (d) Submitting identical or similar papers for credit in more than one course without prior permission from the course instructors.

2. Plagiarism: Submitting material that in part or whole is not one's own work without attributing those same portions to their correct source.

3. Fabrication: (a) Falsifying or inventing any information, data, or citation; (b) Presenting data that were not gathered in accordance with standard guidelines that defined the appropriate methods for collecting or generating data and failing to include an accurate account of the method by which the data were gathered or collected.

4. Misrepresenting Circumstances: (a) Lying; (b) Presenting a professor (verbally or in writing) with false or incomplete information.

5. Impersonation: (a) Representing oneself as another student in an examination; (b) Signing another's name on an attendance roster; (c) In general doing the work required of another student and/or allowing another to do your work.

6. Obtaining an Unfair Advantage:
(a) Stealing, reproducing, circulating or otherwise gaining access to examination material prior to the time authorized by the instructor; (b) Stealing, destroying, defacing or concealing library materials with the purpose of depriving others of their use; (c) Unauthorized collaborating on an academic assignment; (d) Retaining, processing, using or circulating previously given examination materials, where those materials are to be returned to the instructor at the conclusion of the examination; (e) Intentionally obstructing or interfering with another student's academic work; or (f) Otherwise undertaking activity with the purpose of creating or obtaining an unfair academic advantage over other students' academic work.

7. Aiding and Abetting Academic Dishonesty: (a) Providing material, information, or other assistance to another person with knowledge that such aid could be used in any of the violations stated above; or (b) Providing false information in connection with any inquiry regarding academic integrity.

8. Falsification of Records and Official Documents: (a) Altering documents affecting academic records; (b) Forging signatures of authorization or falsifying information on an official academic document, grade report, letter of permission, petition, drop/add form, ID card, or any other official University document.

9. Unauthorized Access to Computerized Academic or Administrative Records or Systems: (a) Altering computer records; (b) Modifying computer programs or systems; (c) Releasing or dispensing information gained via unauthorized access; or (d) Interfering with the use or availability of computer systems of information.

How can faculty encourage Academic Integrity?

It is necessary for the administration and faculty to do all that is possible to encourage high standards of academic integrity. Steps that could be taken include:

1. Course Requirements: Have the syllabus clearly state what is and is not acceptable in the course. This may include a statement of an individual or department's policy on what constitutes plagiarism, the scope of permitted collaboration, testing behaviors, policy on recycling assignments and papers, and missed assignments or exams.

2. University Policy: Briefly review the university Academic Integrity Policy on the first day of class, orally or by reference to a syllabus.

3. Examination Security: Safeguard examinations. In no event should the student be given access to, custody of, or any responsibility over examinations prior to their administration.

4. Examination Environment: Consider preventive techniques, such as alternate seating or alternate exam formats, and reasonable proctorial activities.

5. Availability of Past Examinations and Assignments: Establish individual and/or departmental policies for returning examinations for students to keep, collecting and securing examinations, and/or placing copies of old examinations on reserve in the library.

6. Student Responsibility: Faculty are encouraged to state in all syllabi that students who are unsure if an act is academically dishonest have a duty to consult their professor before engaging in the act.

What happens when a student is suspected of Academic Dishonesty?

The first step in any alleged case of academic dishonesty will be for the faculty member to inform the student that dishonesty is suspected and that steps will be taken to resolve the issue.

If the faculty member would like to resolve the issue informally and if the student accepts the charges and

the penalty, then the faculty member chooses between Options I and II.

Option III is required when the student does not accept the charges or the penalty, or the faculty member believes that a penalty greater than failing the course is appropriate.

If dishonesty is discovered at or after the end of the semester, the faculty will not enter a grade for that student; thus the student will receive an "X" grade. The faculty member will either contact the student directly to set up the initial meeting or contact the Office of Academic Affairs who will notify the student of the need for such a meeting.

Option I: Informal Confidential Resolution

The faculty member may resolve the charge confidentially with the student, discussing the alleged offense and explaining any penalty that might follow; students who dispute the fairness of the charge or penalty may elect to have the matter arbitrated by the Academic Grievance Board.

The professor has a range of sanctions within the boundaries of the course in which the dishonesty occurred. Possible sanctions include verbal and written reprimand, an appropriate additional assignment, lowering the grade on the assignment on which the dishonesty occurred, failing the assignment on which the dishonesty occurred, lowering the course grade, and failing the course.

The faculty member is strongly encouraged to have this agreement in writing, and to keep that document and any evidence in a secure location.

Option II: Informal Resolution with a Filed Report

The faculty member may follow the guidelines given in Option I, Informal Confidential Resolution, and, in addition, file an Academic Integrity Policy Violation Report Form with the Director of Student Standards. The Report Form explains the offense and penalty and includes an acknowledgment by the student of the offense and penalty. The penalty agreed to on the Academic Integrity Policy Violation Report Form will be void if the student has a record of a previous offense. A second or repeat offense requires resolution by the Academic Grievance Board.

Option III: Formal Resolution by the Academic Grievance Board

If the student accepts the charges (1) but does not accept the penalty or (2) has had a previous offense, the sanction will be determined by the Provost (or his/her designee) in consultation with the Director of Student Standards.

If the student does not accept the charges, the case will be arbitrated by the Academic Grievance Board. The faculty member should fill out the Academic Integrity Formal Resolution Notification Form. Once it is determined that a case will be heard by the Academic Grievance Board, the Director of Student Standards will notify all involved parties of the need to convene the Board. The Office of Academic Affairs will provide the student with written notification of the time and place of the hearing and with a copy of any written charges. The hearing will be recorded and a recommendation made to the Provost as to whether a policy violation occurred.

The Provost will make the final determination as to whether academic dishonesty occurred. If the student is cleared of the charges, the initial report form will be destroyed and the student's record will be totally clear of the event. If it is determined that a violation did occur, the Provost will determine the appropriate sanction in consultation with the Director of Student Standards.

The decision of the Provost will be final.

PRP 3516 - Academic Examination Policy

1. Faculty shall give examinations during the regularly scheduled classes of the scheduled classes of the academic year as outlined by the approved University Calendar. The faculty are responsible for determining the length, frequency, form and content of all examinations within the guidelines listed below. Final examinations shall be given, where applicable, only during the designated Final Examination Week after the end of regularly scheduled classes and only at the designated time and place according to the Final Examination Schedule.

2. Faculty shall distribute in writing the requirements for each course within the first week of each academic term. (See policy issuance 3264). In these requirements final examinations shall be worth no less than twenty percent nor more than forty percent of the course grade. No single exam, paper, project, or assignment shall have greater emphasis than the final examination. As a result of this condition, every course must use at least three evaluations for grading purposes.

3. Faculty shall give final examinations which are comprehensive in design, emphasizing subject matter presented over the entire term.

4. Faculty shall return and/or permit students to review all unit tests, quizzes, and other types of evaluations by the last regularly scheduled class in the term. In order to prevent an excessive build-up in the number of unit tests for each student during the last week of classes, faculty are advised to refrain from testing during that week.

5. The Final Examination Schedule shall be prepared by the Office of the Registrar with consultation of the faculty, if necessary, and approved by the Provost and Vice President for Academic Affairs. Regularly scheduled final examination periods shall be 120 minutes in length. Part of the final examination week shall include at least a one-day interval between the last full day of classes and the first

day of scheduled examinations. This time shall be designated as the Reading Period.

6. The following restrictions are imposed on the scheduling of activities during the Final Examination Week.

a. Faculty are not required to be available to students for conference during the final examination week.

b. No examinations shall be scheduled during the Reading Period unless approved by the Provost and Vice President for Academic Affairs.

c. No extra-curricular activities or faculty-administrative activities shall be scheduled except with the consent of the individual involved.

7. The Andruss Library will remain open and other designated study areas will be made available during the Final Examination Period with expanded hours when possible.

8. Unless returned to the student all graded final examinations must be available for student review for at least the next full semester following the final examination.

9. No student shall be required to take more than two final examinations in one day. (See procedure outlined below for rescheduling of final examinations.)

10. Any exceptions to any of the above matters must be made on the basis of the procedures outlined below.

11. In case of non-compliance with the provisions of this policy, a student has the recourse of proper grievance procedures as established by the University and outlined in policy issuance 3592.

12. During Summer Sessions, the last class period of each course shall be designated as the final examination period with the time period for the examination not to exceed 80 minutes unless the arrangements have been worked out in advance so that they can be announced at the first meeting of the class. Except in unusual circumstances, classes in six-week sessions shall have the final examination on the last day of the course. Final examinations for courses scheduled in three-week sessions shall be held during the last of the two class periods scheduled for the last day. Classes in the nine-week session shall hold final examinations on the last scheduled class day with the period extended to 80 minutes for that class.

Procedures

1. Faculty who wish to schedule quizzes, tests or examinations at other times than during their regularly scheduled class periods during the term, may do so only if a make-up opportunity is made available to students. This opportunity must be scheduled at a time mutually acceptable to both student and faculty and may not conflict with the student's other scheduled classes. A faculty member shall not give an examination at a time other than during a regularly scheduled class period unless approval is first obtained from the majority of the faculty members of his/her academic department. Except for abnormal circumstances, this approval should be granted by the end of the first week of classes. Notification of this alternative arrangement shall be given to the appropriate college dean.

2. A faculty member who believes that the content of his/her courses does not lend itself to a scheduled final examination must obtain approval for an alternative arrangement from the majority of the members of his/her academic department and college dean. Notification of the approved arrangement shall be given to the office of the Registrar. Except for abnormal circumstances. This approval and notification shall be made by the end of the first week of classes.

3. To change the requirement specifying that final examinations shall be worth no less than twenty percent nor more than forty percent of the course grade, there must be agreement for the change by the faculty member(s) in charge of the class, the majority of the members of his/her academic department, and the appropriate college dean. Except for abnormal circumstances, the approval and notification to students shall be made by the end of the first week of classes. If approved, the change may remain in effect for the faculty member for the duration of this policy or until the course is resubmitted for course content change.

4. In order to change the time and place scheduled for a final examination, there must be agreement for the change by the faculty member(s) in charge of the class, 100% of the students in the class, and the appropriate College Dean. This change must be made by the middle of the semester. Student opinion in this matter shall be determined by secret ballot with the faculty member in charge of the vote. If for some reason a change is made in the time and date of a final examination that results in a student conflict, the faculty member shall arrange to provide a make-up opportunity during the Final Examination Period. (See below)

5. If the student has a scheduling conflict during the final examination period resulting in an excessive number of final examinations scheduled for one day, the following procedure for rescheduling the final examination shall apply and be completed by at least two weeks before the end of regularly scheduled classes.

The student should select two of the scheduled examinations to be taken during the designated time according to the following priority of choice:

1. courses offered by the major department;
2. additional required courses in the major program;
3. other courses.

The additional final examination(s) should be rescheduled with consultation of the relevant faculty on a mutually convenient time. Assistance in the

rescheduling of examinations may come from such individuals as the student's advisor, department chairperson or academic dean.

PRP 3522 - Grades, Quality Points and Quality Point Averages

The grades given at Bloomsburg University with their commensurate quality points are defined as follows:

A = 4.00 Superior Attainment
A- = 3.67
B+ = 3.33
B = 3.00 Above Average Attainment
B- = 2.67
C+ = 2.33
C = 2.00 Average Attainment
C- = 1.67
D+ = 1.33
D = 1.00 Minimum Attainment
E = 0.00 Failure

The grades given to each student for academic credit at Bloomsburg University are assigned by those faculty who are responsible for the courses in which the student is enrolled. After a grade of A through E has been reported to the Office of the Registrar, it may be changed only through the grievance process (see policy #3592) through the appropriate procedure to correct computational or clerical error (see policy #3636) or in accordance with University Policy on Pass-Fail grades (see policy #3454).

Other grades assigned to students not included in the computation of quality point averages are as follows:

I- Incomplete. This is a temporary grade to be given only when the instructor believes that the student has been unable to complete the course requirements due to circumstances beyond his/her control. Failure of a student to take a final examination or complete other course requirements without prior arrangement with the instructor of legitimate excuse is not a justification for a grade of I.

When the instructor submits the grade of I to the Registrar, it must be accompanied with a formal, written plan for the student to complete the course requirements and the appropriate letter grade that would be assigned if the plan were not completed by the student in the time specified. The plan for the student to complete the course requirements shall be drawn up by the instructor with the acquiescence of the student. Unless specifically stated in the written plan to the contrary, it is assumed that work will be completed prior to the end of the next regular semester. When the plan has been completed by the student, the instructor shall recalculate the grade to be assigned for the course and submit this new grade to the Registrar according to established procedures. A request for an extension of time in the plan to complete course requirements must be initiated by the student prior to the deadline of the plan on file in the Office of the Registrar. The student must present suitable documentation to the instructor indicating that circumstances above and beyond his/her control persist or new circumstances of that nature have developed. It will be granted only upon approval of the instructor and the Dean of the appropriate College.

P- Passed. It is recorded by the Office of the Registrar when the faculty member assigned a passing grade to a student and when the student has elected to take a course on a pass-fail basis in accordance with the provisions of the Pass-Fail policy #3454. The grade of P is also recorded when a student passes a course by proficiency examination. This grade is not used in the computation of a quality point average.

F- Failed. It is recorded by the Office of the Registrar when the faculty member assigned a failing grade to a student and when the student has elected to take a course on a pass-fail basis in accordance with the Pass-Fail policy. This grade is not used in the computation of a quality point average.

V- Audit. This grade is assigned by the instructor when the student has properly registered to audit a course, and the student has attended at least three-fourths to the regular class meetings. (See policy #3456).

W- Withdrawal. This grade is recorded by the Registrar when the student has withdrawn from a course according to the requirements found in policy #3462 Withdrawal from a Course.

R- Research in progress. This grade is assigned by the instructor only when a student has been unable to complete a research component of a course because the length of time for the research exceeds the end of the semester sand when a formal plan for completion of the research is filed with the instructor and department chairperson. Provisions for removal of the grade are the same as those for the grade of I.

The instructor will submit the grade of R to the Registrar along with the formal plan for completion of the research and the grade to be assigned to the student if the research is not completed satis-factorily in the time period stipulated. The plan for the student to complete the research shall be drawn up by the

instructor with the acquiescence of the student. Unless specifically stated in the written plan to the contrary it is assumed that the work will be completed prior to the end of the next regular semester. When the plan has been completed by the student, the instructor shall recalculate the grade to be assigned for the course and submit this new grade to the registrar according to established procedures.

X- No grade reported. This temporary grade is reported by the Office of the Registrar when the instructor does not report any grade for the student. The Quality Point Average (abbreviated QPA) is computed from the record of courses taken at Bloomsburg University using the assigned grades of "A" through "E" as listed above. The computation is as follows:

1. Multiply the number of semester hours for each course by the number of quality points for the grade in the course, and add the products.
2. Divide the sum obtained in the first step by the total number of semester hours represented by the courses.

A "Semester QPA" is computed by including only the courses of a single semester. The "Cumulative QPA" is that computed by including all courses taken to date at Bloomsburg University. If a course has been successfully repeated, the credits are counted only once in the computation. If a course is success-fully repeated at another accredited institution of higher education, the credits for the course initially taken at Bloomsburg are deleted from the computation.

PRP 3536 - Grade Change

After a grade has been reported to the Registrar's Office, it may be changed only through the grievance process or to correct a computational or clerical error. A recommendation for change of grade due to a computational, clerical error, or to change a temporary grade to a final grade must be made in writing by the instructor and approved by the department chairperson and the dean of the appropriate college. The change of "R" and "I" grades do not require the dean's signature.

PRP 3540 - Department of Nursing Academic Good Standing

I. Students in the Baccalaureate Nursing Program abide by the University's retention policies as outlined in the undergraduate catalog.

II. A student in the Baccalaureate Nursing Program must maintain the following standards for Academic Good Standing to progress in the Department of Nursing.

A student must:

A. Attain a grade of "C" or above in:

1. prerequisite natural science courses
   50.173 Anatomy and Physiology I
   50.174 Anatomy and Physiology II
   52.101 Introductory Chemistry
   52.108 Physiological Chemistry
   50.240 Introductory Microbiology
2. prerequisite social science courses
   48.101 General Psychology
   48.210 Life Span Psychology
   45.211 Principles of Sociology
   or
   45.213 contemporary Social Problems (add)
   or
   46.200 Principles of Cultural Anthropology (add)
3. all required 82. Departmental courses.

B. Obtain a cumulative GPA of 2.50 (after 32 earned credits) to enroll in the sophomore year nursing courses.

III. A student who does not meet the identified requirements for Departmental Academic Good Standing will be required to eliminate the identified deficiencies through a repetition of the course before progressing in the Baccalaureate Nursing Program.

A student may fail only one 82. Departmental clinical course. A second failure in any clinical course will result in dismissal from the program. In addition, a student may repeat non-clinical nursing courses only once. University policy as to repetition of non-nursing courses applies to the department of nursing.

IV. The Department reserves the right and the responsibility to develop procedural guidelines for the implementation of this Academic Good Standing policy.

Recommendations concerning academic progression and retention are made to the Department of Nursing Chairperson by the departmental Student Admission, Progression, and Retention Committee. Based upon the recommendations, students who do not meet the requirements for academic good standing are placed on departmental probation or are required to take departmental leave of absence.

V. Departmental Academic Probation

A student who does not meet the identified requirements for Departmental Good Standing will be evaluated by the Committee on Student Admission, Progression, and Retention and will be immediately placed on Departmental Academic Probation.

B. The student will be notified of this decision by the Chairperson of the Department of Nursing.

C. The student will be required to eliminate the identified deficiencies through a repetition of the course before progression in the Baccalaureate Nursing Program.

D. A student may fail only one 82. Departmental clinical course. A second failure in any clinical

course will result in dismissal from the program. In addition, a student may repeat non-clinical nursing courses only once. University policy as to repetition of non-nursing courses applies to the department of nursing.

VI. Departmental Academic Leave of Absence

A. A student who does not attain departmental academic good standing after one academic period on probation will be required to take departmental academic leave of absence.

B. The student will be notified of such actions by the Chairperson of the Department of Nursing.

C. A student on a departmental academic leave of absence is ineligible to attend any course offered by the Department of Nursing. When on departmental academic leave, a position will be guaranteed for the student for no more than one calendar year. If at the end of the calendar year the student is not ready to return from departmental leave of absence, that student will be considered to be withdrawn from the program.

D. A student seeking reinstatement from a departmental academic leave of absence must do so in accord with the Departmental Transfer Policy.

January 20, 1984 Incorporated into BU Policies, Rules and Procedures Manual as #3540 effective November 28, 1994. Revised by Faculty May 1996

VII. Statue of Time Limitation

Policy Statement

Once a student has begun the first required 82. departmental course, all required 82. departmental courses must be completed within five calendar years.

VIII. Appeal

A student placed on Departmental Academic Leave of Absence may petition the Academic Review Board for reinstatement. (Refer to Policy 3557-Appeals.)

PRP 3557 - Academic Dismissal and Appeals Procedure

Policy:

1. A student who fails to meet the minimum grade point standards for retention (see Policy #3446 Undergraduate Satisfactory Progress) is dismissed from the University, and his/her record is marked by the phrase "Academic Dismissal".

2. A student who has been dismissed may not enroll in any university courses for a period of one calendar year. If the student wishes to resume academic work at the University, he or she must go through a readmission process.

3. A student who has been dismissed may appeal the dismissal in accordance with the procedures below. If the student is reinstated, he/she must meet all the conditions attached to the reinstatement. These conditions include a limitation on the number of credits that may be taken and the minimum grades that must by earned. Failure to meet the conditions will again lead to academic dismissal for which there is no appeal.

Procedures:

1. Each student who is academically dismissed will receive a letter, outlining the appeals process, from the Chairperson of the Academic Review Board.

2. The Academic Review Board consists of all College Deans, the Dean of Admissions, the Registrar, the Coordinator of Academic Advisement, a designee of the Vice President for Student Life, and the Director of the Counseling Center.

3. A student who appeals must write and submit an appeal petition to the chairperson of the Academic Review Board within the time frame stated in the dismissal notice. The petition must set forth:

a. The reasons why the student believes he/she should be reinstated;

b. The student's plan for meeting retention requirements.

4. In its evaluation of a petition for reinstatement, the Academic Review Board is charged to assess carefully the likelihood that the petitioning student can meet successfully the academic requirements that he/she will face during subsequent semesters. The Board may request additional information from the student, his/her advisor or other university officials. Non-academic, as well as academic, factors may be considered if they are pertinent to the student's argument for reinstatement.

5. If the Academic Review Board votes to reinstate the student, the Board will set forth the conditions that must be met by the student.

6. If the Academic Review Board denies reinstatement, the dismissal is final.

PRP 3565 - Graduate Academic Progress, Probation, and Dismissal

Procedures:

1. Satisfactory Progress

Satisfactory academic progress at the graduate level is evaluated on the basis of several criteria:

a. a graduate student's ability to earn the minimum of credit hours necessary to the degree program with a minimum quality point average of 3.0. A grade of less than C (Q.P. less than 2.0) must be repeated.

b. a second grade less than C (Q.P. less than 2.0) will result in automatic academic dismissal.

c. a graduate student's ability to successfully meet the requirements at the appropriate time of all comprehensive examinations of the degree program with acceptable grades.

d. a graduate student's ability to complete the thesis requirement of the degree program with a passing grade.

Non-degree students (Category 510), except for those in Supervisory Certificate Programs, are excluded from consideration for satisfactory progress.

2. Academic Probation

a. A graduate student who is not maintaining an overall quality point average of 3.0 in one of the following student categories may request to attend on academic probation for one additional grading period (semester or summer):

1) regular graduate students (Category 540)

2) degree candidates (Category 550)

3) non-degree students (Category 510) in Supervisory Certificate Programs

Enrollment is limited to a maximum of nine 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 overall QPA as required, may be recommended by his/her academic advisor, the graduate program coordinator, and the department chairperson to the Assistant Vice President for Graduate Studies and Research for continuation on probation for one additional grading period.

b. A graduate student who receives a failing or unacceptable grade, as defined in advance by the department administering the graduate program, in any Comprehensive Examination will be placed on academic probation. Students will be allowed a maximum of two reexaminations unless the program requirements are more restrictive, in which case the maximum permitted by the program will prevail. Prior to re-examination, the student must meet with his/her examination committee or its representatives to discuss deficiencies and steps to be taken to correct them. Reexamination normally would be only once during a term or semester unless the student requests expedited reexamination in order to meet a graduation deadline. A student who passes a reexamination is automatically removed from probationary status.

c. Graduate students who submit a master's thesis which receives a failing grade may not attend on academic probation.

3. Duration Of Degree Work

Full-time graduate students are expected to complete their programs of study within two calendar years of continuous enrollment. However, all requirements for a master's degree, including any courses accepted by transfer, must be completed within six calendar years. A student who is unable to complete degree requirements within six calendar years may be dismissed upon recommendation to the Assistant Vice President for Graduate Studies and Research by the academic advisor, program coordinator, and department chairperson. Students who fail to register for any courses over a two-year period will automatically be placed in an inactive category and must reapply to the graduate program. The period for completion of a master's degree may be extended for sufficient reason. Written application for extension must be made to the Assistant Vice President for Graduate Studies and Research prior to the end of the six-year period.

4. Academic Dismissal

A graduate student not maintaining satisfactory progress, who is not permitted to enroll in probationary status, is excluded from registration and his/her 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 n probationary status. 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 his/her studies in a non-degree status. A dismissed graduate student is not permitted to register for any courses offered by the program from which he/she was dismissed. Under exceptional circumstances and with the approval of the Assistant Vice President 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.

5. Procedures

Graduate students who fail to meet the minimal standards for satisfactory progress will be notified by the Registrar's Office and/or the Assistant Vice President for Graduate Studies and Research. Failure to request academic probation will result in academic dismissal (see above). Such students may submit a request in writing to their academic advisors to attend on academic probation. Upon recommendation of the academic advisor, graduate program coordinator, department chairperson, and approval by the Assistant Vice President for 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 for Graduate Studies and Research.

6. Appeals

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.

PRP 3581 - Withdrawal from the University

A student may withdraw from the university by completing a withdrawal form available at the Office of the Registrar. Students withdrawing in absentia must submit a written request to the Office of the Registrar.

When students withdraw during the semester, the grade of W is recorded for each course on the student's schedule if the withdrawal occurs prior to the beginning of the final examination period. Students may not withdraw during the final examination period.

The effective date of the withdrawal is the date on which the student signs the official withdrawal form in the Office of the Registrar or the date on which the written request is received by the Office of the Registrar for a student withdrawing in absentia.

PRP 3592 - Academic Grievance Procedure

Procedures:

I. The purpose of the following procedures is to provide students with a system by which to grieve complaints of alleged academic injustice(s) relating to grades and/or professional responsibilities as related to academic policies found in the Policies, Rules and Procedures and the Pilot. This process is not a disciplinary proceeding for any of the involved parties, although the findings may lead to disciplinary investigation or action under a different university policy.

The names of the Academic Grievance Coordinators (AGC) will be advertised extensively through normal communication avenues such as The Communique and The Voice.

II. Informal Consultation:

A. In an attempt to resolve a complaint on an informal basis, the student should first meet with the following individuals to discuss the matter in the order listed:

1. Faculty member teaching the course
2. Department Chairperson in which course is offered
3. Dean of the College in which course is offered

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. It is assumed that the department chairpersons and the deans will make every effort to resolve the conflict by meeting with all parties and by listening to the views of all parties as they relate to the grievance.

B. If the matter is resolved at one of the above levels, it need not go further in the appeals process. Every effort should be made to settle the alleged injustice through informal consultation.

III. Formal Channels:

A. Students who feel the informal consultations have not satisfactorily resolved the matter may initiate a formal grievance by filing an Academic Grievance Form with an AGC of her/his choice. (See IV.A.)

B. The AGC shall determine that the Academic Grievance Form is in proper order and shall contact the person against whom the complaint has been filed. That person will be supplied with a copy of the Form and informed that the AGC will be called to hear the case if the matter cannot be resolved within five (5) class days.

C. If the two parties do not settle the complaint within five (5) class days, the AGB will hear the case within ten (10) class days (after the initial five (5) class day period.

D. The grievant and respondent (individual being grieved) will be informed of the individuals who may serve on the AGB. Either (or both) party(ies) may request, with just cause, the disqualification of Board members whom she/he feels may be biased or should not be involved in the case. An appeal for disqualification may be made to the Provost and Vice President for Academic Affairs for a final decision.

E. The scope of the AGB's review and recommendations shall be to the merit of the complaint. The AGB, in Executive Session, shall prepare a recommendation as to the merit of the complaint and forward the recommendation to the Provost and Vice President for Academic Affairs. This shall be submitted within three (3) class days after the hearing. If recommendations go beyond the scope of this policy, the Provost will reject the recommendation and direct the AGB to prepare recommendations within the scope of its responsibilities.

F. Within ten (10) class days of receiving the recommendation, the Provost and Vice President for Academic Affairs will take action and shall notify all parties in the grievance of the decision and action taken. This action is final.

G. The President has delegated the resolution of academic grievances covered under this policy to the Provost and Vice President of Academic Affairs. Resolutions that involve altering the curriculum of any program shall be made with the involvement of the affected department faculty (i.e. waiving major course requirements).

The time line outlined in this section pertains to grievances filed during the academic year. Grievances filed during the summer sessions may take longer to adjudicate due to faculty assignments and availability of grievance board members. However, every effort

will be made to process grievances filed during the summer as quickly as possible.

IV. Structure Of Formal Channels:

A. Three (3) Academic Grievance Coordinators (AGCs), one (1) from each College, shall be appointed by the Provost and Vice President for Academic Affairs with the advice and consent of the Executive Board of APSCUF. Both sexes should be represented among the three AGCs. The individuals must have a reputation for fairness and objectivity. An AGC will be responsible for ensuring that all procedural guidelines are met and shall serve as moderator for any formal hearing. It is noteworthy that the role of an AGC is as a neutral party. She/he does not have voting privileges, nor should her/his opinions be part of the hearing. The appointments should be made in such a way as to insure that at least one (1) individual with prior experience is retained.

B. An Academic Grievance Board (AGB) shall consist of four (4) students and four (4) tenured faculty members selected by the AGC (chosen by the grievant) from a pool of twenty-five (25) individuals: three (3) students and three (3) faculty members from the College of Business, three (3) students and three (3) faculty members from the College of Professional Studies, six (6) students and six (6) faculty members from the College of Arts and Sciences and one (1) faculty member from the Department of Developmental Instruction.

1. Faculty members for the AGB pool will be appointed by the College Dean or appropriate administrator of the academic area with the advice and consent of the Executive Board of APSCUF.
2. Student members will be appointed by the Vice President for Student Life with the advice and consent of the Community Government Association. Appointees must be in academic good standing and have earned at least 48 credits at Bloomsburg University. At least two (2) must be enrolled as graduate students.
3. Members of the pool will be appointed to a one-year term and may be considered for reappointment.
4. Whenever possible, a diversity in membership should be maintained in the pool.

C. The College Dean or appropriate administrator will provide the President of APSCUF with a list of possible candidates for the AGC and the AGB in a timely fashion. The President of APSCUF will consult with the Dean or appropriate administrator concerning the possible candidates if necessary. APSCUF Executive Board will provide its advice and consent of the candidates in a timely fashion.

D. The Vice President for Student Life will provide the President of CGA with a list of possible student candidates for the AGB in a timely fashion. The President of CGA will consult with the Vice President for Student Life concerning the possible candidates if necessary. CGA members will provide its advice and consent of the candidates in a timely fashion.

E. The AGB will select one (1) person to serve as a voting moderator of the Executive Session. This individual will be responsible for transmitting the recommendation to the Provost and Vice President for Academic Affairs following the formal hearing.

F. Should the AGB members become deadlocked in preparing a recommenda-tion, the voting moderator will inform the Provost and Vice President for Academic Affairs of such within three (3) class days of the hearing. Evidence and any reasons or arguments relating to the AGB's inability to make a recommendation will be submitted to the Provost and Vice President for Academic Affairs also. This information is intended to provide background for any decision by the Provost and Vice President for Academic Affairs.

G. An AGC or a member of the AGB pool has the right and obligation to disqualify herself/himself from a case in which a personal interest, association, affiliation, or attitude might cause bias or jeopardize the AGB's objectivity.

V. Academic Grievance Hearing:

A. In keeping with the campus standards of due process, both the grievant and respondent have the following rights: (1) to receive written notice of the time and place of the hearing at least 48 hours prior to the hearing; (2) to receive a written notice of the complaint; (3) to be accompanied by an advisor of his or her choice, other than an non faculty attorney; (4) to present witnesses and other evidence; and (5) to question witnesses. Attorneys, although they may be consulted, may not be present at the academic grievance hearing.

B. The hearing will be open only to the parties involved in the case.

C. A tape recording may be made at each hearing with the consent of the grievant and the individual being grieved. Said tape will be kept as a confidential file in the Office of the Provost and Vice President for Academic Affairs for a period of one (1) year.

D. The AGC will serve as the neutral presiding officer, and shall conduct the hearing in a fair and orderly fashion.

E. At least six (6) AGB members (three {3} faculty, three {3} students) must be present for the entire hearing and to prepare the AGB's recommendation. If the complaint is on the graduate level, at least one (1) graduate student must be present.

F. If the respondent (individual being grieved) fails to appear, testimony shall, nevertheless, be heard and a recommendation rendered. If the grievant fails to appear, the grievance will be dismissed.

G. If a claim lacks substantial evidence, the AGB will dismiss the case and no further action concerning the respondent (individual being grieved) will be taken by the AGB or the Provost and vice President for Academic Affairs.

H. No person shall suffer recrimination or discrimination because of participation in this procedure.

I. A majority of the twenty-five (25) AGB pool members, along with the AGCs will determine any other rules or procedures consistent with this document, not in conflict with the CBA or state and federal laws.

PRP 3602 - Majors, Minors, Career Concentrations and Teacher Certification

Major - Each student must complete a major field of study for graduation. A major field of study is one of the approved degree programs prescribed by the major department or the college in which the student is enrolled. The specific course requirements for the options within each of the degree programs leading to the degrees as described in the Catalogue.

Minor - A minor field of study consists of a minimum of 18 hours. While courses counting toward a minor may also fulfill General Education or Career Concentration requirements, minor courses may not be in a student's major discipline and/or certification area. A minor offered in a academic discipline may have multiple advisement options. A student may choose to pursue minors in more than one academic discipline.

Career Concentrations - Career concentrations are multidisciplinary advisement programs to help students select course to develop appropriate skills and knowledge to prepare for entry and mobility in specific professions or careers. For example, career advisory committees exist in areas such as community services, public administration, gerontology, and environmental management and planning.

Teacher Certifications - Certification is the result of completing a teacher education program approved by the Pennsylvania Department of Education as defined by Chapter 49 of the Regulations of the State Board of Education - Certification of Professional Personnel. Certificates are issues by the Pennsylvania Department of Education upon the recommendation of the University, based on its approved teacher education programs. Certification does not apply to certificates issued by the University for completion of a University program. Minors cannot lead to certification to teach or supervise in the public schools of Pennsylvania.

PRP *3604* - Graduation Requirements

A candidate for graduation for the baccalaureate degree must have earned a 2.00 or higher cumulative quality point average, satisfied the residence requirements, and completed all academic and other applicable requirements.

Graduation from Bloomsburg University requires the successful completion of at least 128 semester hours, to include:

1) completion of the curriculum of an approved major program;
2) completion of general education requirements;
3) an average of 2.0 in all courses required by the major program.

The last 64 semester hours of credit toward graduation must be in courses taken in an accredited four-year degree-granting institution. At least 32 of the last 64 semester hours credited toward a baccalaureate degree must be taken at Bloomsburg University. Exceptions to this policy will be made only by the college dean with the recommendation of the appropriate department chairperson.

A semester hour is ordinarily defined as the credit for one weekly period of fifty minutes on lecture, discussion, or recitation for one semester. In some cases, as in laboratory, studio, and internship, there may not be a one to one correspondence between contact time and credit. The approved course syllabus will specify that relationship.

All financial obligations to the university must have been cleared.

PRP *3608* - Change in Graduation or Curriculum Requirements

In case of changes by the university in graduation or curriculum requirements, full-time students who attend without interruption may choose to satisfy either the requirements as they existed at the time of their entrance or the new requirements; if they select to satisfy the new requirements they are responsible for them in toto. All students who are readmitted to the university and part-time students must apply to the Provost and Vice President for Academic Affairs for permission to be graduated under the requirements existing at the time of their original admission to the university.

PRP 3612 - General Education Requirements

The goals of the present general education program at Bloomsburg University are to develop:

1. an ability to communicate effectively;
2. an ability to think analytically and quantitatively;
3. a facility to make independent and responsible value judgements and decisions according to high ethical values and life-long goals;

4. an appreciation of the need for fitness and life-long recreation skills;
5. a capacity for assessing the validity of ideas and an understanding of the approaches used to gain knowledge through development of critical thinking abilities;
6. a greater appreciation of literature, art, music, and theater through stimulation of one's creative interests;
7. an understanding of our society and the relative position of an individual in this society;
8. an understanding of the relationship between an individual to her/his physical and biological environments;
9. a familiarity with the major contributions of human knowledge in the humanities, social sciences, and mathematics;
10. an awareness and global understanding of the relative position of the individual in the world community.

Specific Requirements:

1. Communication (Goal One) Six or Nine Credits

a. English 104 (three credits) or two courses (six credits) consisting of English 101 and one of the following courses: English 200, 201, 203, or any other approved course in English Literature with a writing component, or any other approved course centered on the teaching of writing in a specific academic discipline.

b. one additional course (three credits) from the approved list of communication courses.

2. Quantitative/Analytical Reasoning (Goal Two) Three Credits

Three credits from the approved list of quantitative/ analytical reasoning courses.

3. Values, Ethics, and Responsible Decision-Making (Goal Three) Three Credits

Three credits from the approved list of values, ethics, and responsible decision-making courses.

4. Fitness and Recreation Skills (Goal Four) Three Credits

Three credits from the approved list of fitness and lifelong recreation skill courses.

Diversity Requirement (Goals seven and ten) Six Credits

5. Six credits (two courses from different departments) which are from an approved list of diversity focused courses. Diversity courses are to focus wholly on topics related to gender, race, ethnicity, religion, language, and/or global perspectives that provide an in-depth knowledge and understanding of cultural diversity. Diversity courses may be taken in general education, in the major, or as free electives.

Distribution Requirements:

Thirty six (36) credits are required with 12 credits required from each of the three general academic areas of humanities, social sciences, and natural sciences and mathematics. No more than three credits from a given academic major may count toward this distribution requirement. Courses which an individual uses to satisfy the specific communication, quantitative/ analytical reasoning, values/ethics, and fitness and recreation requirements may not be used to satisfy distribution require-ments. The Bloomsburg University Curriculum Committee (BUCC) or an individual academic department with the approval of the BUCC may exclude any of its courses from being counted as a distribution requirement.

1. Humanities, 12 Credits - Twelve credits from courses developing an understanding of approaches to gain knowledge in the humanities (Goal Five), creative interests in and appreciation of art, literature, music, and theater (Goal Six), knowledge of major contributions in the humanities (Goal Nine), and global awareness (Goal Ten). At least three different humanities departments must be represented in these 12 credits with two or more credits taken from each department selected. The humanities departments include Art, Communication Studies and Theatre Arts, English, History, Languages and Cultures, Mass Communications, Music, and Philosophy.

2. Social Sciences, 12 Credits -Twelve credits from courses developing and understanding of approaches to gain knowledge in the social sciences (Goal Five), an understanding of our own society and the place of an individual in that society (Goal Seven), knowledge of the major contributions in the social sciences (Goal Nine), and global awareness (Goal Ten). At least three different departments must be represented in these 12 credits with two or more credits taken from each department selected. Social sciences departments include Anthropology, Economics, Geography and Earth Science (courses with "41" numbers), Political Science, Psychology, and Sociology and Social Welfare and Criminal Justice.

3. Natural Sciences and Mathematics, 12 Credits- Twelve credits from courses developing an understanding of approaches to gain knowledge in the natural sciences (Goal Five), an understanding of the relationship of the individual to her/his environment (Goal Eight), and knowledge of the major contributions in the natural sciences and mathematics (Goal Nine). At least three different natural sciences and mathematics departments must be represented in these 12 credits with two or more credits taken from each departments selected. Natural Science and Mathematic Department include: Biological and Allied Health Sciences, Chemistry, Geography and Earth Science (courses with "51" numbers), Mathematics and Computer Science (course with "53" numbers), and Physics.

PRP 3627 - Second Baccalaureate Degree

An individual who applies for a second baccalaureate degree must have completed the first degree at Bloomsburg University or another accredited college or university. The student also must add at least 30 semester hours of undergraduate courses in residence during regular academic years and/or summer sessions at Bloomsburg University. All requirements for the curriculum in which the second degree is earned must have been satisfied and free elective credit must have been taken if necessary to complete the additional 30 semester hours. If a particular course is required in both degree programs, it cannot be credited as part of the 30 semester hour requirement for completion of the second degree.

PRP 3629 - Multiple Degrees

A student can be awarded only one degree at a time. The degree to be awarded must be selected prior to the last semester. A student completing an additional major in another degree program will have the fact noted on the transcript.

PRP 3640 - Academic Distinction

1. The Latin Designations - Summa Cum Laude, Magna Cum Laude, and Cum Laude should be used for identifying honor graduates.

2. The graduating seniors having cumulative quality point averages between 3.95 and 4.00 should be designated, "summa cum laude".

3. All those graduating seniors having cumulative quality point averages between 3.75 and 3.94 will be designated as "magna cum laude".

4. All those graduating seniors having cumulative quality point averages between 3.50 and 3.74 will be designated as "cum laude".

5. Honors for graduation will be as of the last previous semester; while honors for transcript and diploma will be as of the end of the final semester.

6. Forty-eight credits must be taken at Bloomsburg University prior to the last semester in order to be considered for academic honors at commencement.

7. A full-time degree student whose semester Q.P.A. is 3.5 or higher in 12 or more semester hours of course work for which a grade or grades are received will be named to the deans' list for that semester.

8. At the spring commencement ceremony the graduate in each college who has earned the highest academic average of current spring graduates within the college, shall receive a diploma on behalf of all graduates from that college. This honored graduate must have earned (prior to the final semester) at least 64 semester hours of credit at Bloomsburg University. In the case of ties, all tied graduates will participate.

PRP 3670 - Mid-Semester Grade Reports

Policy:

Bloomsburg University is committed to maintaining its students in good academic standing. To assist with the accomplishment of this goal, mid-semester grade reports are issued to new students who are experiencing academic difficulty. Identified students are provided with academic support services and faculty advisors for the purpose of insuring they have the maximum opportunity to be successful.

Procedures:

The Registrar prepares and distributes to instructors a Mid-Semester Grade List Form for each course offered by the University. The form includes the name of each enrolled student who has completed 32 credits or less. Instructors indicate mid-semester grades of C-,D+,D or E and return the form to the Registrar within 96 hours of the close of business of the middle day of the semester. The Registrar issues a grade report to each identified student and provides copies to the student's faculty advisor and the Coordinator of Academic Advisement.

PRP 3700 - Computer and Network Use Policy

Preamble

The University seeks to maintain the security and integrity of its computers, networks and related resources; to support its other codes and regulations regarding harassment and abusive behavior; to protect itself from the legal consequences of copyright violations and the posting defamatory material and to ensure that the computer facilities are used in accordance with rules and regulation of proper behavior and its educational mission.

The Policy

Access to the University's computing facilities and resources is a privilege granted solely to Bloomsburg faculty, staff and registered students and those with special accounts. All users of the computing facilities must act responsibly and maintain the integrity of these resources. The University reserves the right to limit, restrict or extend computing privileges and access to its resources and to remove or limit access to material posted on the University computers or being sent over its network.

Violations

Violation of this policy could result in a user's access to Bloomsburg University's computers and network systems being restricted or denied and being subject to procedures and penalties under other University policies, rules, codes of conduct as well as local, state and federal laws.

Note

Bloomsburg University understands that the rapidly changing computer environment requires that its computer use policy be flexible and adaptable. Therefore, in order to help educate the Bloomsburg University computer users and to provide guidance as to rights and responsibilities appended to this policy is a list of examples of behavior that are restricted, and questions and answers that are intended to help clarify rights and responsibilities. These are expected to change over time to meet demands of the changing issues we must confront.

Appendix I - Frequently asked Questions and Answers (FAQ)

As with the examples, the FAQs are intended to help educate and guide the computer user. They will respond to changing issues and needs for clarification and interpretation. It is very important to understand that the examples and FAQs do not and cannot cover all situations and that if there are any questions regarding what is acceptable behavior they should be directed to the University administrators (vice presidents and computer administrators).

Is my campus email or files I have stored on University computers secure?

Everyone needs to operate on the assumption that E-mail is not secure. A rule to follow is if it would bother you to have it on the front page of the local newspaper, you shouldn't send it through email. The same caution should be applied to stored files.

Is my email private?

The University has the right to look at e-mail or the content of files, but it will do this only if there is reasonable cause and proper authorization is given. The University reserves the right to look at email and files if evidence indicates a violation of University rules and codes or local, state or federal laws. Appropriate authorization comes from the president, vice president and their designees.

Are my files stored on University computers private?

Like email on the University computers and network, files on the University equipment belongs to the university and can be accessed if there is reasonable cause to do so and proper authorization is given. In addition, supervisors in order to get material that is needed for the normal work functions may access files. For example, supervisors can get files stored on subordinate's computers if needed as part of the normal job functions and if the person is not present. During normal administrative work of maintaining systems, backing up files and other necessary work, files may be seen.

Does the University monitor the content of what is sent over its network or posted on its computers?

No, it does not monitor content. It does, however, reserve the right to remove or restrict material when applicable university policies or codes, or state, local or federal laws are violated. For example, the university, as necessary, may remove material that violates copyright laws or is potentially libelous.

Are there limitations to what I can say or post on the university computers and network?

The university wishes to support the free exchange of ideas and freedom of expression. However, it does reserve the right to limit or restrict the distribution and posting of material directed at classes of people (hate speech) and other threatening or offensive material if it believes this is creating a hostile environment or is damaging to the university.

How do I report a violation of the computer policy?

If you believe that a violation has occurred you should report it to the computer administrators (x4821 / x4099). You should gather as much information as you can to help in the investigations of the incident. The computer administrators will direct the complaint to other offices if needed.

In addition there may be situations where you should also report the incident to other offices. For example:

If you believe there is a violation that threatens your safety or others, you should report it to the Campus Police (x4168)

If it involves work-related activities, your supervisor should be notified.

What are copyright violations?

An increasingly common problem that comes with the widespread use of personal homepages is using material that is copyrighted without the permission of the owner. It is important to remember that material does not need to have the © notice on it to be copyrighted, and copyright protection extends beyond text to such things as photos, art and video. If the University is informed of copyright violations, it will act to remove the material in compliance with law.

What are the consequences of violating the computer policies?

The consequences of violating computer policies can range from a warning to formal actions by the University's authorities to further action, which might lead to the legal system.

How will violations be handled?

For violations which are less serious and do not have an immediate impact on the integrity of the systems or threaten others, the alleged offender will be requested to come to computing administrator's office so information can be gathered and the allegation discussed. If the situation is resolved, no further action is taken. For cases that are not resolved at this meeting or are more serious, violations will be handled like other violations of University codes, regulations, policies, rules and procedures. For students, this can involve the judicial procedures explained in the Student Handbook. For staff and faculty it may involve their supervisor or Human Resources and Labor Relations.

Appendix II - Specific Examples Of Rights And

Responsibilities

These examples should be used as guidelines for behavior. They are not to be considered all inclusive as they do not cover all situations that would be violation of the general policy. As guidelines, these can change as issues and needs change.

Computer users should use only the computer ID that has been assigned. Obtaining or attempting to obtain the computer ID and/or password that has not been assigned to a user is a violation of this policy. It is also a violation of this policy to disguise or attempt to disguise the identity of the account or machine being used.

The University's network resources must not be used to gain or attempt to gain unauthorized access to remote computers.

Any action taken by computer users which deliberately disrupts or disables the operation of computers, terminals, peripherals, or networks is violation of this policy. This includes, but is not limited to, tampering with components of a local area network (LAN) or the high-speed backbone network otherwise blocking communication lines, or interfering with the operational readiness of a computer.

Running or installing on any of the University's computer systems a program which could result in the eventual damage to a file or computer system and/or the reproduction of itself is prohibited. This includes, but is not limited to, those classes of programs known as computer viruses, Trojan Horses, and worms.

Circumventing or attempting to circumvent data protection schemes or computer security measures is prohibited.

Computer users are required to abide by the terms of all software licensing agreements and copyright laws. In particular, it is prohibited to make copies of copyrighted software, unless the University has a site license specifically allowing the copying of said software. It is further prohibited to copy site-licensed software for distribution to persons other than Bloomsburg faculty, staff, and students, nor may you copy site-licensed software for use at locations not covered under the terms of the license agreement.

Computer users must not deliberately perform acts which are wasteful of computing resources or which unfairly monopolize resources to the exclusion of others. Examples of abuse would include commercial spam, derogatory remarks, chain letters, or creating unnecessary multiple jobs or processes. Persons having questions about a possible use should contact the computing administrators.

Using University computers to send threatening, harassing, libelous or offensive messages may be contrary to University codes and or local, state or federal laws.

Computer users are prohibited from monitoring or attempting to monitor another user's data communications or copy, change, or delete another user's files or software, without permission of the owner.

Using University computer and networked resources for personal or financial gain is prohibited. (This does not apply to any activities directly related to the scholarly/professional pursuits of faculty, staff and/or students. NOTE: Please refer to PRP #2910 Patents and Copyrights.)

Any network traffic exiting the University is subject to the policies stipulated herein and to the "acceptable use policies" of the network through which it flows such as the SSHEnet.

The primary use of computing facilities is for academic-related activities. Other non-restricted use such as games are secondary and must yield to academic use. Games playing and other secondary uses may be restricted when they are found to interfere with academic use.

PRP *3810* - Admission, Monitoring and Exit Procedures for Teacher Education Certification Program

Procedures:

The following are requirements for Admission, Monitoring and Exit procedures and requirements for all students who will major in Teacher Education Certification Programs at Bloomsburg University. In setting these requirements, attention was given to all standards and criteria for teacher candidates as mandated by the State Board of Education of Pennsylvania, the Pennsylvania Department of Education, and the National Council for Accreditation of Teacher Education.

Admission To Candidacy

Students should submit application to candidacy no later than completion of 65 credits. Transfer students should submit application to candidacy after completion of the first semester at Bloomsburg University, but not before the second semester of their sophomore year. Enrollment in upper division teacher education coursework (300 and 400 level courses) is contingent upon admission to the teacher education program.

1. Possession of an overall cumulative grade point average of 2.5 or higher.
2. Successful completion of a five-to-ten day noncredit field experience in the freshman year or at the earliest possible time in the case of transfer or non-traditional students.
3. Submission of two (2) recommendations from teacher education faculty.
4. Successful completion (grade of C or better) of
   a. Two English composition courses or Honors Composition.

b. Public Speaking or interpersonal communication course.

5. Completion of the following:

a. Speech Screening

b. Hearing Screening

c. Tuberculosis Testing

(Speech and Hearing screening tests can be completed at no cost to the student in the Speech, Hearing, Language Clinic located in Navy Hall. Tuberculosis testing is available each semester at a minimal cost to students.)

6. Possession of a professional liability insurance policy is highly recommended.

7. Submission of a resume that includes:

a. personal interests

b. special skills

c. experience with children, youth, or adults that would be relevant for a pre-service teacher.

8. Completion of ACT 34 clearance.

9. The completed admission packet should be submitted to the faculty advisor. The faculty advisor will review the packet, interview the student, and submit a recommendation to the department chairperson indicating that the student be admitted or not be admitted to the program.

Admission to teacher education programs permits students to schedule upper division teacher education courses (300 and 400 level).

Monitoring

1. Completion of all professional education courses with a grade of C or better.

2. Maintenance of an overall cumulative grade point average of 2.5 or better and an average of 2.5 or better in the area of academic specialization or be placed on probation one semester. If grade point average falls below 2.5 overall, or below a 2.5 in the area of academic specialization in a secondary education program beyond one semester then dismissal from the program, but not the department occurs. Students will remain in the department for one additional semester after dismissal from the program so that appropriate advisement is available to the student.

3. Continuation of field and clinical experiences as outlined in the curriculum.

4. Continuation of professional liability insurance is recommended.

5. Students are required to maintain contact with their advisor(s) throughout the program of study.

There will be close supervision of the above criteria by advisors and chairpersons to ensure student teaching eligibility and to suggest counseling and/or remediation.

Eligibility For Student Teaching

Eligibility for student teaching will be determined at the scheduling period prior to the semester of student teaching. Student teaching eligibility is contingent upon:

1. Completion of the admission to candidacy process.

2. Possession of an overall cumulative grade point average of 2.5 or better and an average of 2.5 or better in the area of academic specialization.

3. A grade of C or better in all professional education and specialty courses.

4. Completion of appropriate methods courses which will be determined by each teacher education program.

5. Continuation of a professional liability insurance policy or presentation of evidence of membership in a professional education organization providing professional liability insurance.

6. Completion of ACT 34 clearance.

Competency In Student Teaching

1. Recommendations from and competency evaluation by cooperating teacher(s).

2. Recommendations from and competence evaluations by university supervisor(s).

3. A grade of C or better.

Exit Criteria

1. Completion of the prescribed teacher education curricula with an overall cumulative grade point average of 2.5 or better and a 2.5 average in the area of specialization.

2. Demonstration of competency in student teaching.

In order to receive Pennsylvania Department of Education Instructional Level I certification, candidates must successfully complete (cut off scores to be established by the Secretary of Education) the National Teacher Examination (NTE):

a. NTE Core Battery Tests (General Knowledge, Communication Skills, Professional Knowledge)

b. NTE Specialty Area Tests

Note:Students are provided with a system by which to grieve complaints of alleged academic injustices. The Academic Grievance Procedure is outlined in Policy 3592.

PRP 3880 - Graduate Course Repeat

Graduate

A maximum of one course in which a grade less than C (Q.P. less than 2.0) has been recorded or a maximum of two courses in which a grade less than "B" and greater than C- has been recorded may be repeated upon application to the Assistant Vice President for 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 grade point average. A course may be repeated only once. A course taken at Bloomsburg University in which a grade of less than C (Q.P. less than 2.0) has been earned must be repeated at Bloomsburg University. Individual departments or graduate programs may implement more stringent requirements than those shown above.

PRP 3990 - Institutional Review Board (IRB) for Human Subjects Research

Bloomsburg University recognizes its ethical and legal responsibilities to provide a mechanism to protect individuals involved as subjects in research conducted under the auspices of the University. Research, as defined by the Bloomsburg University Graduate Council Research Committee, is the systematic inquiry/ investigation of a specified problem or set of problems with the goal of advancing the discipline. Therefore, all research involving human subjects will be reviewed, prior to the initiation of the research, through the procedures set forth by the University and directed by the Institutional Review Board (IRB). Failure to submit research for review and approval is a violation of Bloomsburg University policy.

Rationale

The University policy entrusts the investigator with the primary responsibility for protection of individual subjects. The University assumes the responsibility for ensuring the conditions for protecting human subjects as required by the National Research Act, Public Law 93-348 and implemented by the Department of Health and Human Services (Title 45 CFR 46, Protection of Human Subjects, as amended and by other Federal agencies with appropriate jurisdiction.) The complete document can be reviewed in the Grants Office.

The University assumes responsibility for encouraging research activities to benefit advancement of knowledge of human conditions and, at the same time, protecting the rights and welfare of human subjects, the investigators, and the University. This includes assuring the scientific validity of the research methodology as it relates to the protection of human subjects. University faculty, staff, and students conducting human subject research are responsible to comply with this policy and all federal regulations. The IRB reserves the authority to suspend or terminate approval of research that is not being conducted in accordance with the Bloomsburg University IRB policy #3990.

Structure

The IRB has the responsibility and authority to review and approve all research involving human subjects. The IRB may authorize the establishment of Human Subject Research Committees (HSRC) at the department, school, or college level as an extension of the IRB for the purpose of reviewing and acting upon proposals in the "Exemption from Review" category. The dean, in consultation with department chairs, will decide on which structure will be used within a college. The HSRCs must comply with the procedures and requirements established by the IRB.

The chairperson of the HSRC will maintain a record of all proposals that are exempted from further review, and forward to the IRB all proposals which need further review. The chairperson of the department school or college HSRC shall submit a list of all research approved for exempt status to the IRB chairperson by June 1 of each year.

IRB Membership

The IRB shall be appointed by the Provost and Vice President for Academic Affairs. Federal guidelines indicate that members should possess a sufficient background to be able to look at ethical issues and the committee should contain a balance of males and females. An individual from outside the institution must serve on the committee. Both scientific and nonscientific expertise must be included and, at a minimum, one individual must be an ethicist. Members will be appointed as follows: three from the College of Business, three from the College of Professional Studies and three from the College of Arts and Sciences. The term of office will be staggered three years terms. The Assistant Vice President of Graduate Studies and Research and the Director of Grants will serve as ex officio, non-voting, members. Departmental, school, or college HSRC chairpersons will serve as ex officio and voting members on the IRB.

Administration

The university official responsible for carrying out or delegating executive functions is the Provost and Vice President for Academic Affairs. The executive functions include development of policy and modification to conform with laws and regulations; providing continuing educations for personnel with respect to policy; and providing administrative support and legal assistance to the IRB.

Procedures

Researchers must describe their proposed research to the IRB in enough detail that the potential adverse effects and benefits to human subjects can be evaluated. The IRB forms and procedures provide a means for researchers, subjects, the university, and community to communicate clearly and responsibly about the risks and benefits of research for human subjects and informants.

Three principles guide the review process:

1. Subjects must give their informed consent to participate in research.
2. Researchers must provide and protect subject confidentiality.
3. Potential risks to subjects must be balanced by potential benefits of the research. The review process uses the concept of minimal

risk to decide the extent to which subject interests warrant formal and extensive review of research proposals. Minimum risk is defined as "the risks anticipated in the proposed activity, are not greater than those ordinarily encountered in daily life or during performance of routine physical or psychological tests." Risks to subjects are minimized (i) by using procedures which are consistent with sound research design and which do not unnecessarily expose the subjects to risk, and (ii) whenever appropriate, by using procedures already being performed on subjects for diagnostic purposes.

The IRB classifies research into three categories based on the need to ensure that research conforms to the above principles. These categories are Full Review, Expedited Review, and Request for Exemption from Review. These review categories are discussed in detail in the Guidelines for Human Subject Research. Approval is by majority vote in all cases.

Basic features of each category are:

Full Review - A Full Review occurs when the IRB reviews the proposed research and meets with the principal investigators to discuss and evaluate the impact on human subjects. After review IRB members vote to approve or disapprove the proposal. Full reviews are conducted for proposed research that involves more than minimal risk or where very careful evaluation of risks and benefits is appropriate, minors or vulnerable populations are subjects, or where adverse impact on subjects may occur due to research activities. For example, research exposing subjects to threats to dignity, physical or emotional injury or discomfort, legal liability or arrest, damage to financial or social standing, or procedures in which subjects experience stress or have their behavior, attitudes or beliefs manipulated by researchers must undergo full review.

Expedited Review - Expedited Review occurs when at least two members of the IRB review the proposal and independently indicate their approval or disapproval. Researchers are not required to meet with reviewers. Reviewers frequently give written comments advising the researcher on ways to enhance the protection of human subjects. Reviewers may ask for more information or require changes in procedures to enhance the provisions for informed consent, confidentiality and risk/benefit balance. Expedited research involves minimal risk to subjects but involves procedures with potential impact on subjects; such as the collection of body samples or physiological data, video or voice recordings, or studies involving vulnerable populations or sensitive issues.

Exemption from Review - A Request for Exemption from Review may be received by the IRB or an authorized HSRC. Researchers must complete and submit the same forms and documents required for the other review categories. These forms provide reviewers with the information needed to evaluate whether the research qualifies for exemption from review. An IRB member must approve requests for exemption. Exempted research involves research on effectiveness of or the comparison among instructional techniques, curricula, or management methods, the use of educational tests, or the study of existing data.

Student Research - Student research activities are governed by both the requirements of good research and the regulations of the Bloomsburg IRB. Student research is any systematic data collection and recording process done by students that is subject to interpretation and dissemination to solve a problem or advance understanding of a discipline. Dissemination occurs whenever information goes beyond registered students or assigned faculty or supervisors for the course. Examples of student research include the collection of data for a thesis, honors paper, or departmental paper or data collected for publication, distribution, presentation, or that is publicly available beyond the course environment. It is the responsibility of faculty members overseeing student research activities to ensure that his or her students meet the professional standards of the discipline and also conform to Policy 3990 and IRB procedures.

Procedure for Appeal

In the event a proposal is not approved at the exempt or expedited level, the researcher may request a full review of the protocol by the IRB.

Procedures for Noncompliance - Investigators are admonished to remember that the university policy entrusts the investigator with the primary responsibility for protection of individual subjects. It is the individual investigator's responsibility to be in compliance with this policy. The IRB is the only body authorized to take action when a researcher is in noncompliance with PRP #3990. Noncompliance includes

1. failure to submit applicable research involving human subjects for review and approval to the IRB or department, school or college HSRC;
2. failure to conduct research according to the approved protocol as it relates to the protection of human subjects.
3. failure to immediately notify the IRB when research activity results in an unexpected adverse impact on the subjects.

Allegations of non compliance (either written or oral) should be directed to the chair of the IRB. The IRB will investigate allegations of noncompliance, maintaining confidentiality in all matters. Only voting members will participate in the investigation. In the event that allegations are substantiated, the IRB will terminate approval of the research and recommend to the Assistant Vice President for Graduate Studies and

Research that the research be terminated. These decisions will be communicated to the researcher and the appropriate federal agency or funding agency, if appropriate, by the Assistant Vice President of Graduate Studies and Research. A decision to terminate research may be appealed to the IRB within 15 days of notification.

PRP 3991 Course Assignments Involving Human Subjects

Student research conducted within an academic course may be categorized as either a course assignment or disseminated research. If the student research is categorized as a course assignment, the data collection and interpretation is for pedagogical purposes only and is contained wholly within the course environment. Such data is gathered without the intention of disseminating it beyond the instructor and students of the course. Disseminated research occurs whenever information is formally presented (eg. poster, oral or written) to any audience beyond the course. Disseminated research must be reviewed under Policy 3990. All research course assignments must still be planned and carried out with a due consideration of the University's ethical and legal responsibility to protect individuals involved as the subjects of these activities, especially when exposed to more than a minimal risk. Student research which involves specialized populations as subjects (for example; pregnant women, fetuses, abortuses, prisoners, individuals with physical or mental disabilities, minors, economically or educationally disadvantaged, or institutionalized individuals) is always considered to be above minimal risk. (Minimal risk is defined as "the risks, anticipated in the proposed activity, are not greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or test.") Suitable precautions must be taken to ensure the confidentiality of the results of any procedure pertaining to a particular person who is a participant in the activity.

Role of faculty in supervising student research categorized as a course assignment:

A. It is the responsibility of faculty to determine, prior to giving an assignment, whether a project falls within the area of course assignment or disseminated research. Disseminated research must be reviewed under Policy 3990. Student research originally conducted as a course assignment may not later become disseminated research. No IRB (Institutional Review Board) approval will be given after the fact.

B. It is the responsibility of the faculty to discuss research ethics with the class in the context of the assignment prior to the initiation of data collection.

C. It is the responsibility of faculty to monitor student projects from beginning to end for impact on human subjects. Special attention should be paid to maintaining confidentiality, minimal levels of risk, the freedom to withdraw, and informed consent.

D. It is the responsibility of faculty to report unexpected adverse affects on human subjects to the department chair.

PRP 3995 - Animal Subjects Research

Bloomsburg University recognizes its ethical and legal responsibility to provide a mechanism to protect animal subjects used in research under the auspices of the institution. Since 1982 Bloomsburg University has maintained an Assurance of Compliance with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Assurance #:A3043). As specified under this assurance, an Institutional Animal Care and Use Committee (IACUC) was formed and maintains a program for activities involving animal research in accordance with the National Institutes of Health Guide for the Care and Use of Laboratory Animals.

Responsibility of the IACUC

The members of the IACUC (a) review annually the institution's program for humane care and use of animals; (b) inspect at least twice annually all of the institution's animal facilities; (c) review concerns involving the care and use of animals; (d) review protocols of research conducted at the university that involve animal subjects; (e) approve/require modification in or withhold approval of those sections of the protocol related to the care and use of animals as set forth in the PHS Policy; (f) notify in writing the investigators and the institution of its decision to approve or withhold approval of research protocols; (g) make written recommendations to the Dean of the College of Arts and Sciences regarding any aspect of the institution's animal program, facilities, or personnel training; (h) maintain minutes of the IACUC meetings, records of proposals, and proposed changes in the care and use of animals.

Administration

The IACUC reports directly to the Assistant Vice President for Graduate Studies and Research who in turn reports to the Provost and Vice President for Academic Affairs and the President of the University. The IACUC is authorized to suspend activities involving the care and use of animals as set forth in the PHS Policy.

IACUC Membership

Members of the IACUC shall be appointed by the Provost and Vice President for Academic Affairs and the President of the University for a three-year term.

Federal guidelines require that the IACUC must consist of at least five members. At least one member must not be involved in animal research. At least one member must not be associated formally with the university. At least one member must be a veterinarian. The veterinarian may also serve as the member not affiliated with the university. The remaining members of the IACUC will be faculty actively involved in animal research. A chairperson will be elected by the members of the committee and will serve for one year.

Applicability

Any individual conducting research employing vertebrate animals as subjects must submit an Animal Research Protocol Form to the IACUC. A research project is any activity designed to uncover new information and should not be confused with classroom demonstrations or projects where the sole purpose is to instruct students in methods of experimentation; however, all classroom demonstrations that involve surgical procedures, animal discomfort, anesthesia, or euthanasia must submit an Animal Research Protocol. The Protocol must be submitted whether or not the project is funded by a federal grant. In order to assure that research activities do not unnecessarily duplicate previous research without scientific rationale or justification, a new Protocol must be submitted for every research project or classroom demonstration, even if an identical Protocol has been previously approved. The Animal Research Protocol Form will ask each individual conducting animal research to include the scientific rationale for any duplication of an activity and a description of the appropriateness of the number of animals being used.

Protocol

An Animal Research Protocol Form may be obtained from the Grants Office in Waller Administration Building. Five copies of the Protocol should be submitted to the chairperson of the IACUC. The name of the chairperson of the IACUC may be obtained by calling the Director of Grants at extension 4129. An Animal Research Protocol will be reviewed by one or more committee members. If the Protocol is not approved, it will be given a full committee review for further consideration. If a full committee review is conducted, approval of the project may be granted only after approval vote of a majority of the quorum present. The Protocol must be acted upon within two weeks of submission. The purpose of the IACUC is to address concerns directly related to the health and welfare of animals such as the procedures used to avoid or minimize discomfort, the proper use of sedation or methods of euthanasia. The purpose of the review is not to evaluate the scientific merits of the proposal. Copies of reviewed Animal Research Protocols will be maintained by the Grants Office.

Academic Affairs
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