**Directory**

**ADDRESS**—University, 600 Forbes Avenue, Pittsburgh, Pa 15282  
Telephone Call specific number (see following), for other offices call 434-6000

**ADMISSION**—Director of Admissions, Administration Building, First Floor  
Telephone (412) 434-6220(6221/6222)

**ADVISORS**  
College of Liberal Arts and Sciences, College Hall, Room 215  
Telephone (412) 434-6394/6395/6396  
School of Business and Administration Rockwell Hall, Room 403  
Telephone (412) 434-6277/6278  
School of Education, Canevin Hall Room 214  
Telephone (412) 434-6118/6119  
School of Music, Room 315  
Telephone (412) 434-6083  
School of Nursing, College Hall Room 637D  
Telephone (412) 434-6346/6347  
School of Pharmacy, Mellon Hall of Science, Room 421  
Telephone (412) 434-6385/6365  
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**BOOKSTORE**—Duquesne Union Second Floor  
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**INFORMATION CENTER**—For University Events, Duquesne Union, Third Floor  
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**RESIDENCE LIFE**—For Housing Duquesne Towers  
Telephone (412) 434-6655/6656 (Second Floor Billing Contract)  
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Telephone (412) 434-6058/6059

**TESTING BUREAU**—Administration Building, Third Floor  
Telephone (412) 434-6203/6208

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**Duquesne University**  
Pittsburgh, Pennsylvania

**UNDERGRADUATE CATALOG**  
1986-1987

Published annually, in July, by Duquesne University, 600 Forbes Avenue, Pittsburgh, Pennsylvania 15282

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Under the Family Educational Rights and Privacy Act, access to student records by non-University personnel is restricted unless granted by the student, or dependency of the student is demonstrated by a parent or guardian.

Duquesne University admits students of any sex, race color, national and ethnic origin to all rights, privileges, programs, and activities generally accorded or made available to students at the school. It does not discriminate on the basis of sex, race, color, national or ethnic origin, veteran's status or non-performace related handicap in the administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other University-administered programs.

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*Some Jewish students may be absent, holiday begins at sunset of preceding evening

**SPRING SEMESTER—1987**

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*Some Jewish students may be absent, holiday begins at sunset of preceding evening
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**Part I: General Information**

**HISTORY**

Duquesne University first opened its doors as the Pittsburgh Catholic College of the Holy Ghost in October 1878 with an enrollment of 40 students and a faculty of seven. The school grew rapidly in its first years until it moved from its original location on Wylie Avenue in the city's Uptown section to its present site on a scenic 39-acre hilltop called "The Bluff," which overlooks downtown Pittsburgh. By 1911, the school had achieved university status at which time the name Duquesne University of the Holy Ghost was adopted in honor of the 18th-century governor general of French Canada, the Marquis de Duquesne, who first brought Catholic services to Pittsburgh while it was under French dominion.

Duquesne's great period of student growth after World War II along with the necessity of refurbishing a make-shift physical plant, led the University to begin an ambitious program of planned physical expansion and modernization in 1950. Now in the enviable position of having completed most of its physical development needs for the foreseeable future, the University is a modern, attractive, highly functional educational facility which has more than tripled from its early 125 acres to its present self-enclosed 39-acre campus site.

Today, Duquesne University is not only one of the leading private institutions in Pennsylvania, but also one of several major private, Catholic, urban universities in the United States. The University has over 6,000 students enrolled in its eight schools—College of Arts and Sciences (1878), Graduate School of Business Administration (1925), College of Liberal Arts and Sciences (1911) and the Schools of Law (1911) Business and Administration (1913) Pharmacy (1925), Music (1926) Education (1929), and Nursing (1937). Duquesne's eight schools offer degree programs in the baccalaureate, professional, master's, and doctoral levels.

**PHILOSOPHY AND OBJECTIVES**

While Duquesne University can look with pride at the remarkable transformation of the campus effected by its physical development and expansion program it has never lost sight of its primary role as an educational institution and its responsibilities to the students who form the Duquesne Family.

A Catholic institution operated by the Congregation of the Holy Ghost, Duquesne is open to students of all religions and creeds. A community committed to the ideal of producing young men and women whose minds seek intellectual freedom and truth, the University seeks to impart to its students the ability to judge and make decisions independently, to interrelate disciplines and experience, and to balance memory, reason and imagination.

In essence, the Duquesne student is ideally an individual with a fully integrated personality and a sensitivity and responsiveness to his humanity and that of his fellow man.

The educational objectives of the University include the development of a sound philosophy of life through an integration of spiritual, physical, intellectual, moral, social and aesthetic goals and values, the fostering of a spirit of inquiry and scholarship necessary for continuing intellectual and professional growth, the formation of a well-balanced, self-assured personality, and the imparting of an attitude of continuing self-evaluation and self-improvement both as an individual and a contributing member of the community of man.

Duquesne offers a wide variety of programs and curricula from which students may select freely in accordance with their interests, capabilities and goals in life.

Complemented by a broad spectrum of nonacademic activities and programs, the curriculum at Duquesne University is designed to prepare young men and women who, upon entering their chosen careers, will possess a broad, well-balanced and fully integrated education and perspective of themselves and the world.

**POLICY STATEMENTS ON INTERNATIONAL EDUCATION**

The mission of Duquesne University’s founders, the Holy Ghost Congregation, has always included service to peoples outside of the United States. Duquesne University also is committed to providing an educational environment which recognizes cultural and national pluralism.

Duquesne welcomes qualified students from throughout the world and encourages its students and faculty to take advantage of opportunities to study and teach abroad.

The University believes that the sharing of the multiple traditions and mores of societies is an invaluable element in the educational process.

In a world that is growing ever smaller, it is imperative that Duquesne reach out to peoples of different cultures to afford them the opportunity to acquire educational experiences not otherwise available to them. Interaction among international and American faculty and students will enrich all and enhance their ability to be better citizens of our shared world.

Duquesne University asserts its commitment to develop and maintain programs, services and practices which promote and express respect for persons of diverse cultures and backgrounds...
which provide educational bridges linking the peoples of the world.

THE UNIVERSITY SETTING
Located adjacent to downtown Pittsburgh, Duquesne University's modern hilltop campus is readily accessible to the business, entertainment and shopping districts of the city while still offering students the privacy and peace of its own enclosed 39-acre site.

Long noted as one of the world's greatest steel-producing centers, Pittsburgh combines the features of urban living with many of the charms and personal characteristics of a much smaller town. The third largest corporate headquarters center in the U.S. behind New York and Chicago, Pittsburgh was also shown in a recent survey of urban life to be the fourth most desirable metropolitan area in the United States.

Although most visitors and new residents who come to the city are conditioned by the old Smoky City image they soon learn that the Pittsburgh which emerged from its nationally acclaimed Renaissance as a redevelopment program is not only a city of clean air and streets safe neighborhoods and a bustling economy but that Pittsburgh more than any other American city, has developed a strong civic identity and sense of pride in its rebirth as a modern urban community. It is not only the other college and universities in the city can choose from a wide range of cultural events and institutions.

The world-famous Pittsburgh Symphony Orchestra, Pittsburgh Opera, and Pittsburgh Ballet Theatre all perform regularly in the elegant Henry Hall for the Performing Arts. The theatregoer can choose from productions of the Pittsburgh Public Theatre, local college drama departments and programs and a wide variety of summer and after-summer entertainment. In the summer the American Wind Symphony offers open-air concerts on Pittsburgh's riverbanks. Other seasonal events include the Three Rivers Festival and the International Carneval of the Arts and History. Pittsburgh which emerged from its nationally acclaimed Renaissance as a redevelopment program is not only a city of clean air and streets safe neighborhoods and a bustling economy but that Pittsburgh more than any other American city, has developed a strong civic identity and sense of pride in its rebirth as a modern urban community. It is not only the other college and universities in the city can choose from a wide range of cultural events and institutions.

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St Ann's Hall dedicated in 1964 is a two-wing three-story women's dormitory with its own laundry area, several lounges and television rooms, a recreation area, snack area, and attractive grounds. Double and single rooms are available.

St Martin's Hall, a 14-story residence, provides housing for graduate and law students as well as non-Duquesne students from other Pittsburgh academic and vocational institutions.

Trinity Hall dedicated in 1952 serves as the residence of the Holy Ghost Fathers who serve the University as administrators and teachers. The grounds of the hall include an attractive mall and grotto.

**ACCREDITATION AND AFFILIATION**

**University**
- American Association of Collegiate Registrars and Admissions Officers
- American Council on Education
- Association of Catholic Colleges and Universities
- Association of College Admissions Counselors
- Catholic Educational Association of Pennsylvania
- College Entrance Examination Board
- Council for Advancement and Support of Education
- National Association for Independent Colleges and Universities
- National Association of College and University Business Officers
- National Association of Foreign Student Administrators
- National Association of Student Personnel Administrators
- National Association of Student Financial Aid Administrators
- National Catholic Educational Association
- National Commission on Accrediting
- Pennsylvania Association of Colleges and Universities
- Pittsburgh Council of Higher Education
- Southwestern Pennsylvania Council on Higher Education

**College of Liberal Arts and Sciences**
- American Chemical Society
- American Conference of Academic Deans
- American Society of Journalism School Administrators
- Association of American Colleges
- Eastern Association of College Deans and Administrators

**School of Business and Administration**
- American Assembly of Collegiate Schools of Business
- Accreditation Council
- Membership
- Association for University Business and Economic Research
- Middle Atlantic Association of Colleges of Business Administration

**School of Education**
- Accreditation
- Membership
- American Association of Colleges for Teacher Education
- Association of Independent Liberal Arts Colleges for Teacher Educators
- The Pennsylvania Association of Colleges and Teacher Educators

**School of Music**
- Accreditation
- Membership
- American Association of Schools of Music
- National Association for Music Therapy
- American Symphony Orchestra League
- National Catholic Music Educators Association

**School of Nursing**
- Accreditation
- Membership
- National League for Nursing
- Pennsylvania State Board of Nurse Examiners

**School of Pharmacy**
- Accreditation
- Membership
- American Association of Colleges of Pharmacy

**EVENING STUDY**

The School of Business and Administration and the College of Liberal Arts and Sciences offer evening classes for full-time and part-time students each semester and during the Summer Session. These are for persons whose employment does not permit them to attend as regular day students.

Through careful planning and consultation with academic advisors, the bachelor's degree program may be completed by evening study in some major areas offered by these two schools. Other undergraduate schools also schedule occasional evening courses but it is not possible to complete their degree requirements through evening attendance alone.

Prospective evening undergraduate students should consult with the office of the Dean of the School in which they are interested for information about the opportunity for evening study on a continuing basis.

**SUMMER SESSIONS**

Many undergraduate and graduate courses are offered each summer in most areas. They are open to qualified Duquesne students and to those from other colleges and universities.

The sessions of varying length begin in May and run through mid-August. Short-term offerings on one and two-week duration usually at the graduate level are scheduled before and after the regular session.

**SYSTEMS CENTER/COMPUTER RESOURCES**

The Systems Center is a service department of the University which reports to the Vice President for Business and Management. The Systems Center has a UNIVAC 1100/62 computer with 8 megabytes of main memory and 1.8 billion bytes of disk storage. In addition, the University recently invested over $1.7 million in new computer equipment featuring 62 Sperrylink office system units and 36 UTS 400 terminals. Each Sperrylink consists of a terminal with a screen and keyboard and a diskette for storing information on magnetic disks. All the Sperrylink units and the UTS terminals will be linked in a computer-communications network to the Sperry 1100/62 main frame. Students in every field of study will integrate their study programs using the Sperrylinks and UTS 400 terminals.

The Systems Center also provides all the data processing services for the administrative offices of the University. Some of these services are registration, grade reporting, admissions and the financial record-keeping requirements for the University.
Part II: Programs and Courses

College of Liberal Arts and Sciences

HISTORY
In 1878 the Fathers of the Congregation of the Holy Ghost and the Immaculate Heart of Mary established a College of Arts and Letters which was incorporated in 1882 as Pittsburgh Catholic College of the Holy Ghost with authority to grant degrees in the arts and sciences. In 1911 the College and University Council of the Commonwealth of Pennsylvania extended the charter to the liberal arts and sciences in the College of the Holy Ghost with authority to grant degrees in the arts and sciences.

PHILOSOPHY AND OBJECTIVES
Duquesne University believes that education is concerned with the human person as a whole—mind, body, and soul. It believes that each individual has the obligation to self-society, and God to develop potential to the fullest. In this commitment, the College of Liberal Arts and Sciences sets its objectives and forms its curricula.

The objectives of the College are:

1. To provide a solid foundation for lifelong learning.
2. To develop an awareness of the methodologies and epistemologies of the major areas of knowledge so that evaluation and judgments may be valid.
3. To assist in both the growth of self-knowledge and the development of a philosophy of life.
4. To assist the individual to understand his relation to God, to society, and to nature.
5. To perfect that skill in the use of standard English necessary to clear, coherent expression of one’s thoughts, hopes, and ideals.
6. To cultivate a background for the learned professions and for scholarly pursuits.

CURRICULAR REQUIREMENTS

**English Composition**
- Proficiency at the 102 level
- Proficiency at the 202 or 212 level

**Modern or Classical Language**
- Proficiency at the 202 or 212 level

**Natural Sciences (Biology, Chemistry, Earth Sciences, Computer Science, Physics, Mathematics)**
- Nine credits

**Social Sciences (Political Science, Psychology, Sociology)**
- At least two disciplines must be represented

**History Literature**
- Nine credits

**Philosophy, Theology, Ethics**
- Nine credits

**Communications (Journalism, Linguistics, Speech, Media Arts)**
- Three credits

**Completion of Major Program**
- As determined by department (Minimum of 24 credits)

**Completion of Minor Program**
- As determined by department offering the minor (Minimum of 12 credits above the introductory courses)

**Students who major or minor in a basic area automatically satisfy the area requirements for that discipline. Courses taken in an interdisciplinary minor do not satisfy area requirements.**

**A maximum of 12 credits in the non-arts-and-sciences courses may be applied to the B.A. or B.S. degree.**

**A student’s major and minor programs may not be chosen from the same department.**

**Modern Language majors may minor in another language.**

**ACADEMIC REQUIREMENTS**
- Completion of 120 credits
- A minimum cumulative quality point average of 2.0
- Removal of I and F grades in major and required courses
- Completion of sequential courses in proper sequence
- Completion of the residence requirement: The last 30 credits must be taken at the University

**THE INTEGRATED HONORS PROGRAM**
- Constance Ramirez, Ph.D., Director

For the highly-qualified, motivated, and committed student who is searching for challenge, enrollment and enrichment in a college education, Duquesne University offers a new Integrated Honors Program (IHP).

**THE IHP provides a unique opportunity, through great books from both Western and Eastern civilizations, to examine our essential human heritage and debate the major ideas and issues forming the background, direction, and focus of modern life.**

**Special Programs**

**CONCENTRATED STUDIES PROGRAM**

Concentrated studies is a special developmental education program designed to help students improve their basic skills and realize their full potential for college work. Students in the program take a prescribed block of college-level courses during their freshman year and thereafter complete their education at Duquesne in the traditional manner.

Courses offered in the program:

**001 002 BASIC LANGUAGE SKILLS**
- 4 cr each semester

**003 BASIC CONCEPTS OF PSYCHOLOGY**
- 3 cr

**005 006 FOUNDATIONS OF LANGUAGE**
- 3 cr each semester

**007 STUDY SKILLS**
- 1 cr

**008 009 INTRODUCTION TO COMPUTERS**
- 3 cr

**010 ETHICS**
- 3 cr

**012 GREAT BOOKS SEMINAR**
- 2 cr

**121 GENERAL ETYMOLOGY**
- 2 cr

**FRESHMAN I (First Semester)**

101 Logic and Rhetoric
- 3 cr

102 Clear and disciplined thinking, reading, speaking, and writing
- 4 cr

105 Approaches to Culture The West
- 3 cr

113 Mathematics
- 3 cr

**FRESHMAN II (Second Semester)**

104 Information Resources
- 3 cr

106 Approaches to Culture The East
- 3 cr

115 The Rational Self
- 3 cr

**SOPHOMORE I (First Semester)**

203 Societal Structures
- 3 cr

207 Science I Chemistry and Physics
- 4 cr

**DEGREES**

The College confers two undergraduate degrees Bachelor of Science and Bachelor of Arts: Students who complete the major in biology, chemistry, computer science and physics receive the B.S. degree. Students who complete the major in history, classics, economics, English, history, journalism, modern languages, philosophy, political science, psychology, sociology, and theology receive the B.A. degree.

The Associate of Arts degree is awarded in International Communications for Industry, Communications for Industry, Criminal Justice and Applied Technology.

**DEGREES AND OBJECTIVES**

The Integrated Honors Program curriculum is concentrated in the freshman and sophomore years. Studies are continued in the junior and senior years through Capstone Seminars (Some rearrangement of the following schedule may be necessary for students in certain professional schools and science programs).
INTER-SCHOOL MINORS
Interschool minors are available in Business and Administration, Education and Music. For complete details students should consult the Director of Academic Advising.

BACHELOR-MASTERS
A student who has completed all requirements and a total of 90 credits with a 3.5 average may apply for the bachelor/master's program. After successful completion of the master's program the student will receive the bachelor's degree.

BACHELOR'S/PROFESSIONAL SCHOOL
A student who has completed 90 credits with a 3.50 overall average and satisfied all undergraduate curricular requirements may apply for the bachelor's degree after the successful completion of the first year of professional work in an accredited medical or law school.

LIBERAL ARTS ENGINEERING
Students who intend to prepare for a career in engineering may enter a 3-2 binary program that Duquesne University maintains with Case Western Reserve University in Cleveland, Ohio. Students may enter to meet the curricular requirements of the College of Liberal Arts and Sciences except for the completion of a major program. Under the guidance of a liaison officer they will normally complete the program at Duquesne University in three years prior to entering an engineering program at Case.

Upon completion of the program at CWRU, the student will be awarded the B.A. degree from Duquesne and B.S. Degree from the School of Engineering at Case.

For complete details consult the Liaison Officer for the Binary Program in Engineering in the Physics Department.

SECOND BACHELOR'S DEGREE
A student who has received a bachelor's degree from another school may become eligible for a second bachelor's degree by earning an additional 30 semester hours in residence in the College of Liberal Arts and Sciences and by meeting all departmental and College requirements if not already satisfied. The additional 30 credits must be completed at the University and may not be taken through cross-registration.

THREE-YEAR BACHELOR'S
For information contact the Office of Admissions or the Dean of the College.

ASSOCIATE DEGREE PROGRAMS
The College of Arts and Sciences offers the following Associate Degree Programs:

- International Communications for Industry
- Communications for Industry
- Criminal Justice
- Applied Technology

A minimum of 60 credits is required. For details consult the College Advisement Office at 434-6394 or the Assistant Dean at 434-6393.

CLEP AND ADVANCED PLACEMENT
See page 142

ACADEMIC REGULATIONS
Electives
A maximum of 12 non A & S credits may be applied to the BA/BS degree with the exception of certain approved inter-school minors which may extend this number to 15 credits.

ACADEMIC LOAD
Students may normally carry five courses in one semester. A schedule of more than five courses or 17 credits must be approved by the Dean. In the summer sessions students normally carry one credit a week for six credits in the six-week session. A 12-credit schedule in a regular semester is considered full-time study. Students on academic probation may not take more than 15 credits.

EFFECTIVE CATALOG
Degree requirements are those stipulated in the catalog of the year in which a student matriculates. The student is responsible for knowing the requirements for the degree. Requirements may be changed without notice or obligation. This catalog has been prepared on the best information available as of Spring 1984.

Major requirements are those stipulated in the catalog of the year in which a student declares the major.

UNIVERSITY-LEVEL COURSES TAKEN WHILE IN HIGH SCHOOL
University-level courses taken by entering freshmen while in their senior year of high school will be evaluated for credit if the following criteria have been met:

- the courses are recorded on an official transcript from an accredited institution of higher learning
- The grades must be C or better
- the student has completed one semester at Duquesne with a C+ average or better
MAJORS
The College of Arts and Sciences offers the following majors:

Art History
Biochemistry
Biology
Chemistry
Classics
Classical Civilization
Computer Science
Criminal Justice
Economics
English

and surveys courses at the member colleges of the Pittsburgh Council on Higher Education. In addition to personal enrichment and heightened awareness of man's will to create visual forms, the study of art history can lead to examination of the motivational forces which shaped its creation and to an overall view of the influence of art on art and literature. (Offered by the Classics Department)

American Government
American Literature
Art History
Biochemistry
Business and Administration
Chemistry
Classical Civilization
Comparative Government

MINORS
American Government
American Literature
Art History
Biochemistry
Business and Administration
Chemistry
Classical Civilization
Comparative Government

Course Descriptions

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<td>Director</td>
<td>Mrs Patricia S Ingram</td>
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<td>Survey and period courses in the history of Western art are offered by the Art Division of the Classics Department, which introduces the concepts of art history to those who wish to extend their visual perimeters and to understand the role of the visual arts in Western culture. Qualified students are advised to take collateral courses in history, philosophy, and psychology, as well as additional upper division art history courses offered at member colleges of the Pittsburgh Council on Higher Education. In addition to personal enrichment and heightened awareness of man's will to create visual forms, the study of art history can lead to careers in teaching, publishing, museology, art history preservation, and urban redevelopment.</td>
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REQUIREMENTS FOR THE MAJOR
The major consists of 111 112 History of Art plus 18 credits in upper division courses. Students are advised to take collateral courses in history, philosophy, and psychology, as well as additional upper division art history courses offered at member colleges of the Pittsburgh Council on Higher Education. In addition to personal enrichment and heightened awareness of man's will to create visual forms, the study of art history can lead to careers in teaching, publishing, museology, art history preservation, and urban redevelopment.

REQUIREMENTS FOR THE MINOR
The minor consists of 12 credits of upper division courses. The prerequisites are six credits of introductory and survey courses at the 100 level or their equivalent.

101 Understanding Art 3 cr
A study of the techniques and styles of architecture, sculpture, painting, and the graphic arts in Western society, with an emphasis upon increasing the student's comprehension of our visually oriented culture. Suggested preliminary for all upper division art history courses.

102 Introduction to Modern Art 3 cr
An attempt to render accessible to the spectator the realities formulated by the artists of the last two decades. Formal analysis of the art object and examination of the motivational forces which shaped its creation lead to an overall view of the structural framework of twentieth century painting and sculpture.

111 History of Art Ancient to Medieval World 3 cr
A chronologically oriented, detailed presentation of the history of Western art. This survey deals with Near Eastern, Greek, Roman, Early Christian and Medieval art. Can be elected to fulfill the history/literature requirement.

112 History of Art Renaissance to Modern World 3 cr
A continuation of 111. Surveys Renaissance Baroque and Modern art in Western Europe. Can be elected to fulfill the history/literature requirement.

123 Classical Mythology 3 cr
A presentation of the major myths of Greece and Rome with special attention to contemporary interpretations of myth and the influence of myth on art and literature. (Offered by the Classics Department)

106 Greek Art 3 cr
A study of the architecture sculpture, vase painting, and minor arts of the Greek world from Minoan to Hellenistic times. The student is introduced to the extensive vocabulary of Greek art which has been a continuing force in Western art. (Offered in alternate years)

206 Greek Art 3 cr
A study of the architecture sculpture, vase painting, and minor arts of the Greek world from Minoan to Hellenistic times. The student is introduced to the extensive vocabulary of Greek art which has been a continuing force in Western art. (Offered in alternate years)

206A Greek Art 3 cr
A study of the architecture sculpture, vase painting, and minor arts of the Greek world from Minoan to Hellenistic times. The student is introduced to the extensive vocabulary of Greek art which has been a continuing force in Western art. (Offered in alternate years)

207 Roman Art 3 cr
An introduction to Roman civilizations in architecture, sculpture, and painting. The background of Roman art in Etruscan, Greek and Egyptian civilizations is investigated, as is the impact of Roman art in art history. (Offered in alternate years)

208 French Art 3 cr
A survey which discusses ideas, schools and styles in the history of French art from the Roman occupation to the present. Highlights are Medieval, Renaissance, Rococo, and Modern art. (Offered in alternate years)

210 American Art 3 cr
An overview of American architecture, sculpture, and decorative arts intended to acquaint the student with the major trends and contributions of American art from colonial to modern times.

220 History of Photography 3 cr
A survey of photographic developments from the early 19th century to the present. Emphasis is upon the United States and upon the interaction of and confrontation between painters and photographers.

260 The Classical Tradition in America 3 cr
A study of the influences of Graeco-Roman civilization on American cultural life. (Offered by the Classics Department)

312 Late Medieval Art 3 cr
Western European art from the 11th to the 14th century. Focus is upon the development of stone vaulting systems, monumental architectural sculpture, stained glass, fresco and panel painting, and illuminated manuscripts. (Offered in alternate years)

331 15th Century Renaissance Art 3 cr
An investigation of the Renaissance spirit of the 15th century. Concentration is upon comparisons of Northern and Southern attitudes of man, nature and social structure, and to materials, techniques, pictorial representation, and iconography. (Offered in alternate years)

332 Art of the 19th Century 3 cr
A survey of the visual arts in the 19th century. The visual arts not only reflect the dramatic changes in the artists' use of form, color, line, texture and light, but also emphasize the changing political, religious and social values in society. (Offered in alternate years)

332 Art of the 20th Century 3 cr
A chronological study of 20th century painting and sculpture which 'looks beyond visual perception' and tries to find the essence and meaning of reality. From cubism to conceptual art, from Picasso to Pollock and Pop, this course offers a thorough exploration of the visual arts of the 20th century. (Offered in alternate years)

370, 371, 372, 373, 374, 375, 376 Special Studies in Art History 3 cr
An occasional course in this series is offered when special interests of students and faculty can be served. Courses offered include The Image of Women in Art, Picasso Impressionism, Egyptian Art, and others.

431 Selected Readings Variable Topics 1-3 cr
In-depth research using the resources of Pittsburgh area libraries and of source material relevant to the history of Western art. Prerequisite: Permission of instructor.

441 American Painting and Sculpture 3 cr
An examination of the forms created by American painters and sculptors from the early 17th through the late 20th century. A special class, the works of which are of the late 20th century. A special class, the works of which are of the late 20th century. A special class, the works of which are of the late 20th century. A special class, the works of which are of the late 20th century.

442 American Architecture 3 cr
Construction style building types and concepts of city planning in American architecture from the 17th century to the present. Emphasis is upon the interaction of and confrontation between painters and photographers.

443 American Decorative Arts 3 cr
Decorative arts from the Renaissance to the Bauhaus are examined in context historical, formal, technical, and cultural. Field trips to important museums in the Pittsburgh area are scheduled. (Offered in alternate years)

447 Introduction to Museum Studies 3 cr
An overview of the various functions of art and architectural museums in American society. Prerequisite: Permission of Department. (Offered in alternate years)
**DEPARTMENT OF BIOLOGICAL SCIENCES**

_Chairman Howard G. Ehrlich, Ph.D._

Biology is the scientific exploration of life in its many forms and details. It is a fundamental element in a balanced liberal education and offers both intellectual insight and knowledge vital to societies facing serious problems having biological implications. The biology program is a part of that search by mankind to understand its world in an effort to more effectively deal with the realities of that world and pursue its greater promises.

The undergraduate program is basic and flexible, providing a core of experience around which continuous future personal development may be centered. The program offers opportunities to develop professional attitudes and technical competence which aid in opening avenues for advanced study and career fulfillment as well as personal enrichment. The course of study pursued can aid in preparation for professional careers in teaching research, medicine, dentistry, veterinary medicine, and allied health fields as well as for advanced study in various graduate school specialties. While many students choose to pursue the benefits of advanced study in graduate and professional schools, others prefer to pursue opportunities in biological technologies in pure and applied research and service in hospitals, universities, private industry, and governmental service. Diverse opportunities are available in specialty sales, pharmaceutical laboratories, medical laboratories, atomic energy research laboratories and chemical laboratories, food technology and processing fisheries oceanography conservation, health services, space biology, agricultural technology, food and drug administration, environmental services, as well as in other industries and agencies.

**REQUIREMENTS FOR THE MAJOR**

A minimum of 31 semester hours is needed. Majors are required to take General Biology 111, 112 and to select other courses so that a balance is achieved with experience in biology of inheritance, structure, and function at the molecular, cellular, and organismal levels. Within that context, students may follow their preferred interest in subject matter selection and concentration. The specific program selected is individually formulated with the student through consultation with an advisor. Courses 107, 108, 201, 202, 206, 207, 208, 220 and 230 will not be counted toward a major in biology. Qualified majors may take two 500 level graduate courses during their senior year and apply them toward their undergraduate degrees.

_End requirements_ Calculation 115, General Chemistry 121, 122, Organic Chemistry 205, 206 or 221, 222 General (or Analytical) Physics 201, 202, or 211, 212 Students also should consider extradepartamental electives in chemistry, mathematics, and computer science. A minimum of 15 credits in biology must be taken at Duquesne University for the major.

**REQUIREMENTS FOR THE MINOR**

The department offers two minor programs:

1. **Professional Minor** which consists of 111, 112 and a minimum of 12 credits selected from the department's major courses numbered 200 or above. Individual course prerequisites must be met.

2. **Academic Minor** which consists of 107, 108, 111, 112 and a minimum of 12 credits selected from the department's courses numbered 200-395. Courses which are open to either non-majors may be selected.

Individual course prerequisites must be met.

If a student takes 107, 108—Principles of Biology and 111, 112—General Biology, the credits for the 107, 108 will not apply to the total number required for the degree. These courses are not interchangeable.

**NON-MAJOR COURSES**

- **107, 108 Principles of Biology** 3 cr each
  - Study of the living world of which man is an integral part. It includes considerations of organization, growth, reproduction, inheritance, environmental influences, and other interrelationships. This course is designed to provide the non-scientist with the biological information and principles necessary to assume an enlightened role in our increasingly complex society. Not for Biology Major credit. 107 is prerequisite to 108. Lecture

- **109 Principles of Biology** 1 cr each
  - Laboratory work illustrating selected biological principles and factual details. Not for Biology Major credit. Prerequisite: Biology 107 (or concurrent registration). Lecture

- **201 Biology of Microbes** 3 cr each
  - Examination of microbes as to what they are, how they grow, how they may be controlled, what their relationships to other living things are, why and how they cause disease. Not for Biology Major credit. Lecture

- **202 Biology of Microbes** 1 cr each
  - Illustrates methods of observation, growth, and identification of microbes as well as methods of controlling these organisms using sterilization techniques, disinfectants and antibiotics. Not for Biology Major credit. Prerequisite: Biology 201 (or concurrent registration). Lecture

- **203 Microbiology** 3 cr each
  - Introduction to the scientific study of life at the molecular, cellular, and organismal level. It involves consideration of relevant structure function development reproduction, inheritance, evolution and ecology. This course provides the basic information and concept necessary for understanding living systems their activity and interrelationships. 111 is prerequisite to 122. Lecture

**MAJOR COURSES**

- **206 Environmental Biology** 3 cr each
  - This course deals with the biological background for understanding environmental problems and considers population density, land use and pollution as well as legal aspects of the amelioration of environmental abuses. Not for Biology Major credit. Lecture

- **207 Anatomy and Physiology** 3 cr each
  - Studies designed to provide students with a background in the areas of human body structure and the mechanisms underlying normal body functions. Prerequisite: some previous exposure to introductory biology and chemistry is desirable. Not for Biology Major credit. Lecture

- **208 Anatomy and Physiology** 1 cr each
  - Laboratory includes examination of the micro and gross anatomy of the body. Cooperative experiments and special emphasis on physiological and psychological basis of human sexuality. The course also aims to examine sexual functioning, sexual behavior and sex therapy. Not for Biology Major credit. Lecture

- **220 Sex and Sexual Behavior** 3 cr each
  - Consideration of sex and reproduction as universal biological functions and special emphasis on physiological and psychological basis of human sexuality. The course also aims to examine sexual functioning, sexual behavior and sex therapy. Not for Biology Major credit. Lecture

- **226 Genetics** 4 cr each
  - See description under Major Courses

- **230 Stress and Adaptation** 3 cr each
  - A study of the biological effects of acute and chronic stress stimuli of various origins and the neuro and hormonal regulation associated with adaptation to stress. Not for Biology Major credit. Lecture

- **250 Animal Development** 4 cr each
  - Introduction to the scientific study of life at the molecular, cellular, and organismal level. It involves consideration of relevant structure function development reproduction, inheritance, evolution and ecology. This course provides the basic information and concept necessary for understanding living systems their activity and interrelationships. 111 is prerequisite to 122. Lecture

**318 Physiology of Reproduction** 4 cr each
- The course includes the anatomy, histology, physiology, biochemistry and endocrinology of vertebrate reproduction. The main emphasis is on the physiology of puberty, estrous and menstrual cycle, conception, pregnancy and parturition. The physiological basis of fertility and infertility are also included. Prerequisites 111, 112, and 232 or 244. Lecture and laboratory.
324 Regulatory Physiology 4 cr
A treatment of physiological and environmental regulations with emphasis on neuroendocrine integration and adaptation. Prerequisites 111 112 Lecture and laboratory.

332 Immunology and Virology 4 cr
Introduction to viruses and virology with emphasis on host-parasite interactions and patterns of infectious diseases in populations. Prerequisites Biologies 111 112 and organic chemistry (or concurrent registration) Lecture and laboratory.

342 Diagnostic Microbiology 3 cr
A course to acquaint the student with the methods employed on clinical samples by clinical laboratories in the isolation and identification of microorganisms which cause human disease. Cultural as well as serological techniques are included.

354 Human Parasitology 3 cr
Principles of parasitic epidemiology and life cycles of human parasitic protozoans and helminths. Special emphasis in allied health fields. Prerequisites introductory biology and a course in animal physiology or ecology or permission of the instructor. Lecture and laboratory.

395 Special Topics 1-3 cr
Treatment of topics of current special interest in biology. Lecture, laboratory, or combinations.

398, 399 Undergraduate Research 2-6 cr each
Opportunity for registered students to work in the laboratory on research problems under the direction of a faculty member. 398 is not prerequisite to 399. Maximum of four credits. Registration by permission of instructor. Laboratory.

411 Ecology 4 cr
The goal is to provide an overall grasp of the principles and procedures underlying ecological thought. Past present and future aspects of environmental studies are considered from the ecosystem viewpoint. Interrelationships of living things with each other as well as the non-living components emphasize the need for inter-disciplinary studies and quantitative data. Both terrestrial and aquatic habitats are used to illustrate concepts such as growth, niche succession and competition. Applicability to current human problems is discussed such as waste disposal, pollution food, fuel agriculture and urbanization. Prerequisites 111 112 Lecture and laboratory.

430 Animal Behavior 3 cr
Introductory survey of behavior of animals from an evolutionary perspective. Selected topics include natural selection and behavioral genetics, instinct and learning behavioral ontogeny orientation and navigation behavior adaptations for survival and reproduction, animal communication, social organization and the evolution of social behavior. Lecture.

431 Animal Behavior Laboratory 1 cr
Emphasis is on experimental design methodology statistical techniques, and the writing of scientific papers. Prerequisites a course in animal behavior, behavioral ecology or concurrent registration in the same.

444 Cell Physiology 4 cr
A study of cells with regard to means of obtaining energy including respiration, fermentation, and photosynthesis, work done by the cell including biosynthesis, active transport and cell movement, cell growth and differentiation, relationships of cell structure to these processes. Prerequisites 111, 112 and organic chemistry. Lecture and laboratory.

DEPARTMENT OF CHEMISTRY
Chairman Andrew J Glatt Ill Ph D
The Chemistry program is designed to provide the student with a fundamental background in chemistry and an understanding of the relationship of chemistry to the other sciences and disciplines. Elective courses and the opportunity to do undergraduate research allow the chemistry major to develop interests in a specialized area of chemistry such as analytical inorganic, physical, organic, and biochemistry. A large percentage of students elect to continue their study in graduate programs in chemistry and related fields. Chemists and biochemists provide a core of personnel in pure and applied research, technical sales, technical libraries management positions in the chemical and related industries, the space industry, education, the environmental sciences, and the health professions such as medicine, dentistry and veterinary medicine. The major in chemistry centers around the core of basic chemistry courses while also providing advanced courses in biochemistry and electives in biology.

REQUIREMENTS FOR THE CHEMISTRY AND BIOCHEMISTRY MAJORS
Thirty-two semester hours are required. All students must take 121, 122, 221, 222, 321, 323, and 421. Mathematics 115, 116, Physics 201, 202 or 211, 212, Biology 111, 112, proficiency in German, Russian or French at the 202 or 212 level is required.

If a student takes 111 112 and 121, 122 chemistry courses, the credits for the 111, 112 will not apply to the total required for the degree. Courses 101, 102, 205, 206 will not be counted toward a major.

Chemistry Major All students must take 322, 324, 422 and Mathematics 215.

Biochemistry Major All students must take 401, 524. In addition Chemistry 525 and 526 may be taken as electives. Students planning to enter a graduate chemistry department should take 322, 324.

Students who intend to work in industry after graduation are advised to take 548 Industrial Organic Chemistry. and 549 Principles of Polymer Science.

To meet the American Chemical Society’s requirements for Professional Certification the Chemistry Major elects two additional courses from the following: 401, 523, 524, 537, 538, 545, 546, 547, 548, 572, Mathematics 216 or 308 Biology 503. Pharmacy Sciences 539 and Physics 306. One of these must be a laboratory course. This laboratory requirement can also be fulfilled with 490. The Biochemistry Major must take 322, 324 and 422 for certification. Course electives of the 500 level courses can be found in the Gradate School catalogue.

REQUIREMENTS FOR THE MINORS
A minor in Chemistry consists of 12 credit hours beyond 121 122. A minor in Biochemistry consists of 12 credits beyond 121 122. Normally 205 206 or 221, 222 along with 401, will constitute the Biochemistry minor.

101, 102 Chemistry and Society 3 cr each
The impact of chemistry on society reaches every phase of life. The course attempts to provide a link between chemistry and the changes in our technological society. In the first semester, basic concepts of chemistry are developed for the non-science student and applied to current topics such as air and water pollution, pesticides, etc. The second semester deals with the biochemistry of living systems. Chemical principles are used to evaluate the normal life processes of photosynthesis, respiration etc. as well as abnormal conditions such as drug action potisons, etc. on metabolic processes. Students with a high school background may complete the minor with an additional 6 credits.

101 Lecture three hours, Recitation, one hour Laboratory three hours 4 cr
121 Lecture, three hours, Recitation, one hour Laboratory, six hours 5 cr
205, 206, 221, 222 Organic Chemistry 4 cr each
The theoretical background is developed from the standpoint of the electronic structure of molecules, and the accompanying energy considerations. The preparation and the chemical and physical (including spectral) properties of representative organic compounds are discussed in detail. Prerequisites 121, 122. For 205, 206, Lecture three hours, Recitation one hour, Laboratory, four hours, and for 221, 222, Lecture three hours, Recitation, one hour, Laboratory six hours.

321, 322 Physical Chemistry 3 cr each
A study of the structure and properties of the various states of matter, thermodynamics, thermodynamics, chemistry, and an introduction to chemical physics. Prerequisites: Physics 202 or 212. Chemistry 122. Mathematics 116 Lecture four hours.
323, 324 Physical Chemistry  
Laboratory portion of Chemistry 321 322 four hours

326 The Computer in Chemistry 3 cr
The computer will be introduced as a tool in the solution of problems from the fields of analytical, biological inorganic, organic, and physical chemistry. The student will progress from the use of the computer as a black box problem solver to the design and coding of programs to solve problems in his field of interest. Experimental design and analysis will be introduced by laboratory programs which permit the computer to simulate laboratory equipment in the production of experimental data. Prerequisite Chemistry 321, Lecture, three hours, Laboratory, four hours

401 Introductory Biochemistry 4 cr
An introduction to biochemistry at the cellular level. The structure and chemistry of cellular components (proteins, nucleic acids, etc.), of cellular reactions (enzymes, coenzymes, respiratory pigments, etc.) and metabolic reactions of carbohydrates, lipids, and amino acids are discussed. Prerequisite 206 or 222 Lecture, three hours, Laboratory, four hours

421 Analytical Chemistry 4 cr
Theoretical and practical training in modern methods in chemical analysis with emphasis on instrumental methods. Prerequisite 322 Lecture, three hours, Laboratory, eight hours

422 Inorganic Chemistry 4 cr
A survey of the basic principles required for understanding inorganic chemistry including atomic and molecular structure, crystal structure, non-aqueous solvents and coordination compounds. Prerequisite 322 Lecture, three hours, Laboratory, four hours

490 Undergraduate Research  Maximum 2 cr
Selected students work on a research problem under the direction of a staff member

524 Molecular Basis of Biochemistry 3 cr
A discussion of the chemistry of amino acids and proteins from the viewpoint of structure, physical chemistry, and analysis. An introduction to enzyme chemistry is also included in the course. Prerequisite 401

DEPARTMENT OF CLASSICS
Chairman Lawrence E. Kachos Ph D 1984-1986

The study of Classics is a unique discipline. It is not the study of a language or literature alone. It is rather the investigation of one of the world's inspired civilizations, the Greco-Roman world. As such, it offers the student insight into the broadest aspects of human existence set in a perspective distant enough from his own to expand significantly his understanding and appreciation of humanity's aspirations, failures, and occasional triumphs.

REQUIREMENTS FOR THE MAJORS

The Department offers four major programs: Classical Latin, Classical Greek, Classical Languages (knowledge of both Latin and Greek required), and Classical Civilization (no knowledge of Greek or Latin required). Credits applied to any major must be at the 200 level or above.

1) The Classical Latin major requires at least eighteen credits in Latin as well as six credits of ancient history or ancient literature courses in English.

2) The Classical Greek major requires at least eighteen credits in Greek as well as six credits in ancient history or ancient literature courses in English.

3) The Classical Languages major requires at least twenty-four credits in Latin and Greek (with a minimum of twelve credits in each) in addition to six credits of ancient history or ancient literature courses in English. The Survey of Sanskrit Literature 211-212 may be substituted for the twelve credits of either Latin or Greek.

4) The Classical Civilization major is an individually designed program of twenty-four credits of ancient literature, ancient history, ancient art, and archeology. Students majoring in Classical Civilization create programs with the close advice and the approval of the Classics Department to fit their backgrounds, interests, and career objectives. Majors should formulate programs with balanced history and literature components. They are strongly encouraged to fulfill the College language requirement in either Latin or Greek. All courses in Greek or Latin at the 200 level or above apply to the Classical Civilization Major.

REQUIREMENTS FOR THE MINOR

The Department offers a minor in Latin (a minimum of twelve credits above the 100 level), a minor in Greek (a minimum of twelve credits above the 100 level), and a minor in Classical Civilization with concentrations in Greek Civilization, Roman Civilization, Ancient History, and Ancient Art and Literature (12 credits above the 100 level) with approval of the Department and advisors.

101 102 Elementary Classical Latin 4 cr each
Study of the fundamentals of Latin grammar and syntax combined with occasional exercises in translation from Roman authors.

103, 104 Elementary Classical Greek 4 cr each
Study of the fundamentals of Greek grammar and syntax combined with frequent exercises in translation from Greek authors.

105 106 Basic Sanskrit 3 cr each
A survey of the fundamentals of Sanskrit grammar and syntax combined with exercises in translation. Some previous foreign language experience is desirable.

107, 108 Elementary Ecclesiastical Latin 3 cr each
Study of the fundamentals of Latin grammar and syntax as represented in scripture and Church Fathers.

201, 202 Intermediate Classical Latin 3 cr each
Surveys of major Latin authors.

203, 204 Intermediate Classical Greek 3 cr each
Surveys of major Greek authors.

205, 206 Intermediate Ecclesiastical Latin 3 cr each
Selections from Biblical and Christian Latin literature.

207, 208 Biblical and Patristic Greek 3 cr each
Selections from Biblical and Christian Greek literature.

211, 212 Survey of Sanskrit Literature 3 cr each
Selected readings from major Sanskrit texts including the Mahabharata, Hitopadesa, Katha Sarit Sagara, Manasadhamamsa, Rigveda, and Vishalakoti.

The following will be taught as Latin or Greek courses or for those students who are qualified as combination Latin and Greek courses.

Each course will cover an individual author or group of authors or a genre. Each course may be repeated as long as a different author or work is read.

301 Pre-Fifth Century 3 cr
The Iliad, the Odyssey, the Homeric Hymns, Hesiod, Pindar, and Greek lyric poetry.

302 Fifth Century 3 cr
Herodutus, Thucydides, Aeschylus, Sophocles, Euripides, and Aristophanes.

303 Fourth Century 3 cr
Greek orators, Plato, Aristotle, Xenophon, and Menander.

304 Alexandrian Period 3 cr
Apollonius Rhodius, Theocritus, Callimachus, and the lesser Alexandrian authors.

305 Roman Republic 3 cr
Plautus, Terence, Cicero, Lucretius, Catullus, Caesar, and Sallust.

306 Augustan Literature 3 cr
Livy, Vergil, Horace, Ovid, Propertius, Tibullus.

307 Imperial Literature 3 cr

308 Post Classical Literature 3 cr
Post classical medieval renaissance and neo-Latin authors.

309 Studies in Genre 3 cr
Selected genre of Greek and/or Latin literature.

400 Independent Readings and Research  Var cr

CLASSICS COURSES IN ENGLISH
(NO GREEK OR LATIN REQUIRED)

111 General Etymology 3 cr
A study of Greek and Latin words to facilitate the comprehension of modern English as it is written by our acknowledged modern masters.

112 Etymology of Scientific Terms 3 cr
Introduction to Greek and Latin elements of scientific terminology.

113 Classical Mythology 3 cr
A presentation of the major myths of Greece and Rome with special attention to contemporary interpretations of myth and the influence of myth on art and literature.

124 World Mythology 3 cr

219 Computer Use in the Humanities 3 cr
A survey of non-scientific applications of computers in the humanities.

230 Ancient Theatre 3 cr
An examination of the origins and development of ancient tragedy and comedy. Readings from the works of Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terence, and Seneca.

231 Ancient Epic 3 cr
A study of ancient epic literature with particular attention to the techniques of oral and literary composition. Readings from the works of Homer, Apollonius of Rhodes, Vergil, and Lucan.

232 Ancient Novel and Romance 3 cr
Survey of Greek and Roman prose fiction with special emphasis on the nature and development of the story form.
of narrative techniques. Readings from Homer, Herodotus, Xenophon, Apollonius of Rhodes, the Greek Romances Lucian, Lucilius, Horace, Persius, Martial, and Juvenal.

233 Ancient Satire 3 cr
Investigation of the satirical element in classical literature with special reference to the writings of Lucian, Lucilius, Horace, Persius, Martial, and Juvenal.

240 Greek Religion 3 cr
An examination of the continuity of Greek religious experience from ancient times to the present and of the interconnectedness of ancient Greek religious ritual, moral experience, and religious thought.

241 Roman Religion 3 cr
A study of Roman religious beliefs and practices with attention to the development of hero cults, oriental mystery religions, and philosophical sects as alternatives to traditional religion.

242 Ancient Law 3 cr
An historical survey including the contributions of the Babylonians and the Greeks of Roman Law between c. 500 B.C. and A.D. 500.

244 History of Ancient Medicine 3 cr
Examination of the most significant medical theories and practices in the period from the Egyptian temple physicians to the doctors of the Roman Empire. Special attention will be given to Hippocrates and Galen.

245 Greek History 3 cr
An examination of the development of Greek history and culture from earliest times up to the death of Alexander of Macedon.

246 Hellenistic History 3 cr
A survey of Mediterranean history from the death of Alexander until the accession of Octavian and the establishment of the Roman principate.

247 History of the Roman Principate 3 cr
Study of the consolidation of the Roman imperial structure from Augustus to the death of Commodus.

248 History of the Late Roman Empire 3 cr
Examination of Roman history from the ascension of Severus to the death of Justian.

249 Egyptian Civilization 3 cr
A survey of Egyptian history and culture from the pre-dynastic period to the establishment of Roman rule in Egypt. Special attention will be given to the artistic, literary, and religious achievements of Egypt.

250 Classical Archaeology 3 cr
A study of the archaeological discovery of classical civilization from the Greek Bronze Age through the Roman Empire. An introduction to the techniques of archaeological investigation.

260 The Classical Tradition in America 3 cr
A survey of the influence of Graeco-Roman civilization on American cultural life.

261 Contemporary Literature and Classics 3 cr
An investigation of the influence of ancient myth on 20th-century French, German, Italian, English, and American Literature.

300 Seminar 3 cr
Topics variable.

301 Greek Art 3 cr
A study of the architecture, sculpture, vase painting, and minor arts of the Greek world from Minoan to Hellenistic times. The student is introduced to the extensive vocabulary of Greek art which has been a continuing formative force in Western art. (Offered in alternate years).

302 Roman Art 3 cr
An introduction to Roman innovations in architecture, sculpture, and painting. The background of Roman art in Etruscan, Greek, and Egyptian civilizations is investigated, and the impact of Roman art on the development of Christian art, Renaissance Art, and Neo-Classicism is analyzed. (Offered in alternate years).

305 History of Medicine 3 cr
A survey exploring the development of medicine in the western world in terms of medicine as an art and as a science. The latter part of the course will focus on the social and institutional aspects in the development of American medicine.

DIVISION OF COMPUTER SCIENCE
The curriculum in Computer Science is designed to allow maximum flexibility in direction. In conjunction with an appropriate minor, the degree in Computer Science provides excellent preparation for graduate work in Computer Science as well as the preparation sought by the scientific and business world.

REQUIREMENTS FOR THE MAJOR
A minimum of 18 semester hours is required for the major. These must include the core courses 112, 201 and 202 with the remaining courses selected from those numbered 300 and above. Extracurricular requirements- English 385 Professional and Technical Writing, Math 155 156. Contact the Computer Science Division for extracurricular requirements in particular areas of concentration.

REQUIREMENTS FOR THE MINOR
A minimum of 18 semester hours is required for the minor. These must include the core courses 112, 201, and 202 with the remaining courses selected from those numbered 300 and above. Extracurricular requirements- English 385 Professional and Technical Writing, Math 155, 156. Contact the Computer Science Division for extracurricular requirements in particular areas of concentration.

Note: Many of the courses in the Computer Science Division may be taken as electives by those not enrolled in the major or minor programs. Any such selections must be cleared by the advisor through a recognized course of study.

306 Introduction to Operating Systems 3 cr
I/O Hardware, properties of magnetic tapes, discs, drums, associative memories, virtual address translation techniques, batch processing, time sharing, scheduling resource allocation are among the topics covered. Prerequisite: 201 Machine Language Programming, 202 Data Structures.

307 Numerical Methods of Linear Systems 3 cr
This course deals with basic algorithms of numerical computation of linear algebra. The use of mathematical subroutine packages is included. This course is identical to Math 307. It may be used to satisfy either a Math or Computer Science requirement. But not both. Prerequisite knowledge of BASIC, FORTRAN or Pascal is required. Math 116 and Math 306.

308 Numerical Methods of Linear Systems 3 cr
This course develops the student's skills in the use of procedure oriented languages and emphasizes structured programming.

201 Machine Language Programming 3 cr
A survey of various machine configurations. Topics include number systems, machine language programming assemblers and macro-assemblers. Prerequisite: 112 Pascal.

202 Data Structures 3 cr
Introduction to the theory of graphs and trees and their utilization as computer programs. A thorough study of data structures and algorithms for their manipulation. Prerequisite: 111 Fortran.

301 Computer Logic 3 cr
Basic concepts used in the design and analysis of digital systems. Required course for 302. Prerequisite: 112 Pascal.

302 Computer Organization 3 cr
An introduction to current system structures of control communications memories processors and I/O devices. Prerequisite: 201 Machine Language Programming. 301 Computer Logic.

305 Introduction to File Processing 3 cr
This course is designed to introduce concepts and techniques of structuring data on bulk storage devices to provide experience in the use of bulk storage devices and to provide the foundation for applications of data structures and file processing techniques. Prerequisite: 112 Pascal, 202 Data Structures.

311 Data Base Management Systems Design 3 cr
An introduction to data base concepts and approaches to data base management. Topics include choice and design of data structures, design of user-oriented languages for updating and retrieving information, constraints and problems associated with the use of generalized data management systems. Prerequisite: 102 Cobol, 202 Data Structure, and 305 Intro to File Processing.
312 Artificial Intelligence 3 cr
Introduction to the theory of abstract mathematical machines. Structured and behavioral classification of automata. Finite state automata. Theory of regular sets. Turning machines are among topics considered. Prerequisite: 202 Data Structure

414 Software Design and Development 3 cr
An overview of system software. Examination of design and development of macro assemblers, compilers and control program functions. Prerequisite: 202 Data Structure

415 Theory of Programming Languages 3 cr
Comparative study of properties and applications of several higher level programming languages. Prerequisite: 112 Pascal and 202 Data Structure

419 Introduction to Micro and Mini Computers 3 cr
An introduction to the designs of micro and mini computers. Exploration of assembler and specialized languages for small computers. Prerequisites: 201 Machine Language Programming and 301 Computer Logic

420 Computer Simulation 3 cr
The fundamentals of simulation via digital and analog computers will be presented. Modern development and solution by numerical and analytical methods will be discussed in depth with emphasis on practical applications. Prerequisite: 112 Pascal and a course in statistics

421 Applications in Data Processing 3 cr
Data handling in terms of encoding, preparation, acquisition, summarization, and tabulation and analysis using packaged programs. Prerequisite: 112 Pascal

423 Information Systems 3 cr
Application of information systems to various areas as education, business, medicine, law, and public administration. Any one of the areas will be studied in detail. Prerequisite: 202 Data Structures

491-499 Selected Topics in Computer Science 1-3 cr
Topics selected in consultation with the advisor and the division

DEPARTMENT OF ECONOMICS
Chairman Geza Grosschmid, J Ud

REQUIREMENTS FOR THE MAJOR
Twenty-four semester hours are required for a major. These credits must include 221, 222, 321, and 322.

Extraacademic requirements: Mathematics 225 in the Mathematics Department of the College. Students planning to do graduate work in Economics are advised to take calculus. It is strongly recommended that students having economics as a major consult with the Economics Department for advisement.

REQUIREMENTS FOR THE MINOR
Eighteen semester hours are required for a minor in Economics. These credits must include 221 and 222. It is strongly recommended that students having economics as a minor consult with the Economics Department for advisement.

Course Descriptions are provided in the School of Business and Administration Section of this Catalog on Pages 60-67

DEPARTMENT OF ENGLISH
Chairman Joseph J. Keenan, Ph D

The chief purpose of the English program is to develop the student's powers to think critically about his life. To this end the Department's curriculum unites intensive and critical reading in a broad range of our literary heritage with close attention to the presentation of ideas in writing. Attention is also given to oral expression of ideas by means of dialogue between professor and student. Not only is the degree in English an excellent preparation for law school and graduate work in English, education, and library science, but it also provides the liberal preparation which is sought by the business world for such areas as personnel, advertising, and management.

Prerequisites—English Composition 101 (or its equivalent) is a prerequisite for admission to English Composition 202, English Composition 102 (or its equivalent) is a prerequisite for admission to all other courses offered by the department.

The English Department further advises that two 200 level courses should be taken before the student attempts any 300 or 400 level course (except for 308 and 407).

REQUIREMENTS FOR THE MAJOR
The major is an individually-designed program of 24 hours of English Department courses above the 100 level. Each English major, with the close advice and approval of a member of the English faculty, designs a program to fit his background, interests, and career objectives.

REQUIREMENTS FOR THE MINOR
A minimum of 12 credit hours beyond the freshman level of which no more than six hours may be taken at the 200 level.

There are five separate emphases from which the student must choose one:

1. English Literature 201 202 and six hours in upper division English Literature, courses 409 through 469
2. American Literature 205 206 and six hours in upper division American Literature, courses 471 through 479
3. Literature and Film “Introduction to Film” (3 hours) and nine hours in courses in literature and film.

Examples are Shakespeare on Film and “American Short Story into Film.”

4. Writing 203 and nine hours in 300 level Writing Workshops

5. English Honors Students who by invitation of the Department Honors Committee, complete English 212, 213 and two 300 Honors Seminars may count that program as an English Minor.

HONORS PROGRAM
Students who give evidence of outstanding ability in English through their performance in English Composition 101 or by virtue of superior national test scores will be invited to participate in the English Honors program at the discretion of the Department Honors Committee.

These students may apply Honors course credits to their English major or minor, or may use these credits as electives. Further details concerning the Honors program are available through the department office and will be distributed to all nominees at the time of their recommendation for admission to the program.

101, 102 English Composition 3 cr each
Practice in effective writing. Review of principles of grammar and rhetoric. Introduction to literary types and forms. 101 is prerequisite to 102.

103 English Composition Honors 3 cr
An honors counterpart to 102. Composition and introduction to literary types and forms. Participation by invitation only.

201, 202 English Literature Survey 3 cr each
Representative masterpieces of English literature in their literary and historical contexts.

203 Advanced Writing 3 cr
Designed to build upon writing skills learned in freshman composition centered chiefly on development of style and accuracy.

205 American Literature Survey I—Beginning to Civil War 3 cr
Representative selections from major American authors treated in both their literary and their historical contexts.

206 American Literature Survey II—After Civil War 3 cr
Representative selections from major American authors treated in both their literary and their historical contexts.

207 The Novel 3 cr
Introduction both to various types of novels and to the critical analysis of fiction.

208 Poetry 3 cr
Appreciation of British and American poetry. Critical analysis of traditional and experimental poetic form, consideration of philosophical and social concerns of poetry.

209 Drama 3 cr
An historical survey of major dramatic forms through a selection of representative works by major playwrights from the classical tradition of Greece and Rome to the Theatre of the Absurd.

210, 211 Readings in World Literature I, II 3 cr each
A survey of major literary works of the Western world from Homer to Cervantes (210) and from Dante to Baudelaire (211) with emphasis on continental traditions. The course explores both the thematic preoccupations of Western writers and the development and evolution of literary forms.

212, 213 English Literature Honors 3 cr each
Honors counterparts to 201, 202. Major British writers from Chaucer to Eliot. Participation by invitation only.

300 Honors Seminar 3 cr each
Special areas treated in these seminars will vary and will be designated in the schedule of courses each semester. Enrollment in the Honors Seminar is by invitation of the Honors Committee of the Department of English.

308 Applied Linguistics 3 cr
Practical uses of structural linguistics in the teaching of composition and literature.

370, 371, 372, 373, 374, 375, 376, 377, 378, 379 Special Studies in English or World Literature 3 cr each
Two or three courses in this sequence are offered every semester by the English Department to meet the current interests of both the students and the faculty. Examples of courses regularly offered are Science Fiction, The English Bible and Literature, Comparative Literature, Modern Comparative Drama, Modern Short Story, Far Eastern Literature, Forms of Fantasy, Introduction to Film, The Literature of Mystery and Detection.
387, 388, 389 Writing Workshops 3 cr each Courses in this sequence are offered each semester in a workshop format designed to develop students' creative and/or technical writing skills Examples of courses regularly offered are Planni ng Poetr y Workshop Fiction Workshop Writing for Business and Industry Professional and Te ch nical Writing Admission by instructor's permission only

407 The English Language 3 cr
An introduction to linguistic analysis with primary emphasis on the history of the structure of English from old to modern English

The remainder of the English courses are divided into areas of emphasis. During a four-semester period each course from each area will be offered at least once.

Medieval Studies

409 Chaucer 3 cr
A study of the Canterbury Tales and minor poems

410 Medieval Special Topics 3 cr
Studies in the ideas and attitudes of the medieval period through one of its dominant genres such as the romance the drama the lyric etc or some of its major writers other than Chaucer or through an intensive reading of Old and Middle English Old Icelandic Medieval French and German (all read in English translation)

Renaissance Studies

413 Sixteenth Century English Literature 3 cr
Survey including non-Shakespearean drama Sidney Spenser Shakespeare Marlowe and minor figures

414 Seventeenth Century English Literature 3 cr
Survey of drama prose and poetry to 1660

415 Milton 3 cr
A survey of Milton and his times A close scrutiny of the minor poems and Paradise Lost and Sam son Agonistes

419 Renaissance Special Topics 3 cr
Studies in Renaissance thought and aesthetic in the works of one or more of its great writers Spenser Sidney Donne Jonson etc or through the ideas and attitudes conveyed in one of the dominant genres of the Renaissance the lyric the epic the drama etc

Shakespeare Studies

433 Shakespeare I 3 cr
Comedies and romances

434 Shakespeare II 3 cr
Tragedies and histories

439 Shakespeare Special Topics 3 cr
Studies in Shakespeare relating his works to those of his contemporaries or concentrating on the problems of Shakespeare biographical, aesthetic, and critical Specific works and approaches to be selected by the instructor

Eighteenth Century Studies

441 English Classicism 3 cr
Developments of neo-classical literature from the Restoration to the death of Pope Primary attention given to Dryden Swift and Pope

442 Late Eighteenth Century English Literature 3 cr
Johnson and his circle the development of the novel the aesthetic movement

449 Eighteenth Century Special Topics 3 cr
Studies in Eighteenth Century thought and aesthetic in the works of one or more of its great writers Dryden Swift Pope Johnson Blake etc or through the ideas and attitudes conveyed in one of the dominant genres of the Eighteenth Century the drama the novel the essay etc

Nineteenth Century Studies

451 English Romantic Literature 3 cr
A study of the aesthetic moral political and literary aspects of English romanticism approached through the writings of Wordsworth Coleridge Byron Shelley Keats

452 Victorian Literature 3 cr
A study of the poetry of Tennyson Browning Arnold and the prose of Arnold Carlyle and Rus kin Attention also given to the poetry of Morris Rossetti and Fitzgerald

459 Nineteenth Century Special Topics 3 cr
Studies in Nineteenth Century thought and aesthetic in the works of one or more of its great writers such as Wordsworth Tennyson Browning Dickens Hardy through the ideas and attitudes conveyed in one of the dominant genres of the Nineteenth Century

Twentieth Century Studies

461 Early Twentieth Century Literature 3 cr
Selective study of authors representing the major literary types and trends from about 1890 to 1930 Hardy Joyce Butler Yeats Hopkins and Joyce

463 Contemporary Literature 3 cr
Major modern types and trends Eliot Woolf Waugh Greene Auden Spender Thomas Golding and others

469 Twentieth Century Special Topics 3 cr
Studies in Twentieth Century thought and aesthetic in the works of one or more of its major writers such as Yeats Joyce Eliot or the ideas and attitudes conveyed in one of the dominant genres of the Twentieth Century

American Studies

471 Early American Literature 3 cr
A study of the literature of America's Colonial and Federal periods emphasizing the political and idealistic writings of an emerging nation

472 American Romanticism 3 cr
A study of the Romantic movement in America with emphasis on Emerson Thoreau and Poe

499 Directed Studies 3 cr

DEPARTMENT OF HISTORY

Chairman Jerome E. Janssen M.A

The Department of History offers a program devoted to the study of mankind in diverse cultural settings through time A large number of courses are taught by a faculty reflecting a variety of philosophical and methodological outlooks. Apart from the fact that the program fully meets the needs of students intending to pursue graduate work in historical studies the history major will be well prepared for careers in law business or government services Most importantly the discipline of history provides an excellent synthesis of the liberal-arts education since it effectively joins together the humanities and the social sciences

REQUIREMENTS FOR THE MAJOR

A minimum of 10 credits must be taken including 101 104 Development of the U.S. (six credits) and either 213 214 Western Civilization (six credits) or 311 312 World History and the Historian (six credits) Twelve of the remaining credits must be taken from 200 and 300 level courses and six credits from 400 level courses

A maximum of 12 transfer credits in history can be applied to the major requirements

REQUIREMENTS FOR THE MINOR

Students who wish to minor in history must consult with the department's undergraduate advisor. The student is required to take 15 hours including 103, 104

Introductory Surveys

103 Development of the United States to 1877 3 cr
The historical development of American institutions ideals and society from earliest times to 1877

104 Development of the United States since 1877 3 cr
The historical development of American institutions ideals and society since 1877

Area Courses

212 Europe in the Feudal Age 3 cr
The world of the Middle Ages—a survey of medieval man's political social and cultural activities

213, 214 Western Civilization 3 cr
An introductory survey of the origins and characteristics of European Civilization emphasizing the personalities and events and institutions that have made the West the dominant global power today

244 History of Ancient Medicine 3 cr
Examination of the most significant medical theories and practices in the period from the Egyptian temple physicians to the doctors of the Roman Empire. Special attention will be given to Hippocrates and Galen

245 Greek History 3 cr
An examination of the development of Greek history and culture from earliest times up to the death of Alexander of Macedon

246 Hellenistic History 3 cr
A survey of Mediterranean history from the death of Alexander until the accession of Octavian and the establishment of the Roman principate

247 History of the Roman Principate 3 cr
A study of the consolidation of the Roman imperial structure from Augustus to the death of Commodus

248 History of the Later Roman Empire 3 cr
Examination of Roman History from the ascension of Severus to the death of Justinian
249 Egyptian Civilization
A survey of Egyptian history and culture from the pre-dynastic period to the establishment of Roman rule in Egypt. Special attention will be given to the artistic, literary, and religious achievements of Egypt.

254 The History of the Modern Middle East
A study of the modern Near East with concentration on the conflict between imperialism and nationalism, traditionalism, and western influences in the area.

255, 256 History of Asia I and II
A survey of Asian civilization from ancient times to the present day. Western colonialism, the rise of the nationalist movement and the establishment of modern states.

257, 258 Russian History
Development of society and state in Russia from its origins to the twentieth century.

259, 260 East-Central Europe
The medieval and modern history of the small nations situated between Russia and Germany on the east and west and the Baltic and Mediterranean Seas on the north and the south.

266 Modern Britain
A study of the first industrial nation, with special attention to the achievements of constitutional monarchy, the social and economic problems of industrialization, the nature of British imperialism, and the problems faced in the 20th century.

267 Canada
An introduction to Canadian history with particular attention to the years from 1763 to the present, and to Canadian-American relations and contemporary Canada.

269, 270 China
A survey of social, economic political and cultural changes before and after the establishment of the People's Republic of China.

271 Japan
An analysis of Japan's current cultural and economic development in light of its historical past, the Meiji era, and twentieth century expansion.

Topical Surveys

305 History of Medicine
A survey exploring the development of medicine in the western world in terms of medicine as an art and as a science. The latter part of the course will focus on the social and institutional aspects in the development of American medicine.

307, 308 History of Science
A survey exploring the significance of scientific developments within the historical and social context of Western culture.

309 American Science and Technology
The development of science and technology in America from colonial times to the twentieth century.

310 World History and the Historian
The course traces the main events of world history in relation to the most important theories of world history and in the context of an inquiry into the nature of historical understanding. The first semester treats prehistory, the emergence of civilization, and the world views of the major classical civilizations. The second semester is an inquiry into the nature of modernity.

320 Special Studies in European History
Topic will be announced by the instructor. The course may be taken more than once.

321 Special Studies in American History
Topic will be announced by the instructor. The course may be taken more than once.

322 Special Studies in Third World History
Topic will be announced by the instructor. The course may be taken more than once.

340 History of Western Law
Primary emphasis will be placed on the rise of customary law, especially its development in England into Common Law.

341 History of American Law I
This course deals with the development of law, legal philosophy, and legal institutions in America from the colonial period to the Civil War.

342 History of American Law II
This course deals with the development of law, legal philosophy, and legal institutions from the Civil War to the present.

343 Church History I
A religious and historical exploration of the growth of Christianity from the first century up to the Reformation, discussion of those issues within the Church and the external forces which brought about major conflict and development.

344 Church History II
Selected topics in Catholic and Protestant development from 1500 to the present day. Special emphasis on the crises, revolutions, and reforms that were central to this development.

345 American Church History
Emphasizes the historical development of major religious traditions in America, both Catholic and Protestant. Special attention will be given to the "life of the mind" of Christianity in America, the frontier expansion of religion, the changing nature of the Church and American culture, the place of religion in the creation of the American character, and the unique separation of church and state.

347 War in Modern Society
A study and analysis of the phenomenon of war in the Western World from the Age of Napoleon to the present with special emphasis upon the inter-relationship between international conflict and social and political and technological change.

352 Diplomatic History of United States
Emphasis is upon involvement of the United States in both World Wars and its role as an imperial power.

357 History of the American Presidency
Primarily on investigation and evaluation—personal, political, contemporary, and historical—of each president with some attention to the growth of the office.

360 Constitutional History of the United States
An analysis of the Supreme Court and constitutional development stressing the major controversies in the history of the United States.

362 History of the United States' Political Parties Since 1868
A detailed examination and analysis of the origins, leadership, and organization of the major political parties since 1868.

364 The American Mind
The origins and development of contemporary modes of American thought, including major "climates of opinion" diverse movements, and selected scientific political religious social, and artistic topics.

366 The Modern Mind
The major ideological tendencies of modern European thought and their connection to society and politics and to the major philosophic and scientific currents of the nineteenth and twentieth centuries.

370 Current History
What are the major forces affecting our lives today? Where do they come from? Where will they lead? Resources will be current media such as newspapers, TV etc.

372 Asian Influences on America
From the quest for Asia by Columbus to the economic impact of twentieth century Japan the Orient has affected America's social, cultural, economic and technological development.

373, 374 Diplomatic Histories of the Far East
Western imperialism in Asia, rise of Asian nationalism, analysis of international problems in current tension areas.

375 History of Inner Asia
The history of Inner Asia from Genghis Khan's Mongol Empire to Leonid Brezhnev's Soviet Empire.

378 Europe and International Politics, 1870-1970
A study of global international relations since 1870 with emphasis upon the evolution from a European centered world to global politics.

382 Psychology
Examines the inter-relationships between psychology—especially psychoanalysis—and history. Psychology leadership of group behavior, or war etc.

385 Women in History
A survey of the historical experience of women, from ancient times, with emphasis on the forces that have led to the modern changes in women's status.

386 Historical Geography
A survey of the physical world which is the basis for a human civilization, past, present, and future. What are the possibilities and limitations of different places for human development? How successful or unsuccessful were human settlements? Emphasis also on geography as an intellectual discipline and cultural phenomenon.

389 European Industrialism and the Masses
A historical analysis of Europe in the last two centuries with particular attention to the relationship between technological and social change and its impact on politics and culture.

394 History of U.S. Labor Management Relations
Concentrates chiefly on the relations between worker and employer from the early craftsmen to the industrial union member.

395 Pittsburgh and the American City
The rise of Urban America, using Pittsburgh as a case study of city growth and change, industrialization, immigration, and renewal in the twentieth century.

396 Immigration and Ethnic Identity
An examination of the dynamics of immigration to the United States with emphasis on the new immigration at the turn of the century.

398 Economic History of the United States
Investigates the economic development of the United States emphasizing its impact on social and political issues as background for current economic problems.

Specialized Areas and Topics

458 Civil War and Reconstruction
An intensive study of the American experience before and after the War for the Union.

467 Science and Society in the Twentieth Century
The economic, social and cultural consequences of the rise of modern science.
**DEPARTMENT OF JOURNALISM**

**Acting Chairman** Paul Krakowski M.A.

The Department of Journalism encourages the liberal education of a student by emphasizing how a professional education for a career in the mass media relies on the liberal arts tradition. The journalism curriculum concentrates upon the development of communicative skills for creative and responsible positions in such areas as mass communication as advertising, newspapers, public relations, magazines, and specialized publications. A transfer student must take at least 12 credits from the department to graduate as a major.

**REQUIREMENTS FOR THE MAJOR**

Twenty-seven semester hours are required for a major. Required courses are 167, 267, 268, 367, 369, 372 or 376 and 466 or 468 or 470 or 476.

**REQUIREMENTS FOR THE MINOR**

Eighteen semester hours credit are required for a minor. Credits must include 167, 267, 268, and nine other journalism credits approved by the head of the Department of Journalism. Minors do not qualify for the Department's Professional Internship Program.

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>167</td>
<td>Introduction to Mass Communications</td>
<td>3 cr</td>
<td>An introduction to the role, principles, and responsibilities of newspapers, broadcasting, magazines, advertising, and public relations. A series of guest speakers from these fields is included. Course open to non-majors (Offered both semesters).</td>
</tr>
<tr>
<td>199</td>
<td>Language for Journalists</td>
<td>3 cr</td>
<td>Aims at improving and polishing language skills of prospective or beginning journalists. Emphasis on word usage, grammar spelling, and style. Credit given only to Freshmen and Sophomores.</td>
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<tr>
<td>267</td>
<td>Basic Reporting and Writing I</td>
<td>3 cr</td>
<td>Fundamentals of news reporting and writing. Applied practice in laboratory sections special events and beats covered outside of class. VDT used. Typing abilities required.</td>
</tr>
<tr>
<td>268</td>
<td>Basic Reporting and Writing II</td>
<td>3 cr</td>
<td>Advanced writing of the more complex types of news stories such as business, government, courts, and applied practice in laboratory sections. VDT used.</td>
</tr>
<tr>
<td>290</td>
<td>Field Study in Mass Communications</td>
<td>3 cr</td>
<td>A field study is a practical experience in advertising, broadcasting, public relations, print journalism, or photography. Individual projects may be brochures, slides, feature articles, stringers, or other professional experiences. (Offered both semesters)</td>
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<td>331</td>
<td>Public Relations Practices</td>
<td>3 cr</td>
<td>Case studies of public relations programs in industry, education, social welfare, and trade associations. The application of techniques through the design and implementation of programs for clients. Open to Junior and Senior majors. Prerequisites 267, 268, and 330, or approval of Department.</td>
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<td>360</td>
<td>Radio-Television Principles and Writing</td>
<td>3 cr</td>
<td>A lecture-laboratory course in the study and application of principles and techniques of writing for radio and television laboratory experience in radio and closed-circuit TV studios. Open to non-majors. Prerequisites 267, 268, or approval of Department.</td>
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<td>369</td>
<td>Advertising Principles and Writing</td>
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<td>A laboratory course in the study and application of writing principles and practices for advertising. Study of various types of advertising: Open to non-majors. Prerequisites 267, 268, or approval of Department.</td>
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<td>470</td>
<td>The Broadcast Program</td>
<td>3 cr</td>
<td>A study of the programming strategies in commercial and public broadcasting. Factors impacting programming decisions. The organizing and design of program services in a variety of work settings. Prerequisites 381.</td>
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<td>The Search for Identity</td>
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<td>United States since 1945. A discussion of selected contemporary issues, foreign and domestic, which illustrate the identity crisis in the U.S. Prerequisites 470.</td>
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367, 369, 375, 372 or 376 405 (Offered both semesters)

476 Professional Internship
Public Relations
3 cr
A supervised observation-experience program of study and assignment to a public relations agency, association, industrial, non-profit or educational group in the Pittsburgh area. Prerequisites 167, 267, 268, 367, 369, 372 or 376 409 (Offered both semesters)

485 Industrial Advertising
3 cr
Deals with the principles and practices of industrial marketing communications. Emphasis will be placed on trade-paper ads, direct-mail advertising, descriptive product folders, sales letters and presentations. Examination will be made of related crafts such as commercial art typography, printing, plate-making and media selection. Prerequisites 167, 267, 268, 367, 369

490 Individual Projects in Mass Communications
3 cr
Individual research projects in the mass media. Related to a media topic not covered in other courses. Written paper or other appropriate formats. Open to junior and senior majors only. Prerequisite Permission of instructor and department chairman.

DEPARTMENT OF MATHEMATICS

Chairman Charles A. Koch, M.A.
The Department of Mathematics offers a sequence of modern courses which will 1) aid in students in developing their ability to think scientifically and form independent judgments, 2) provide students with a breadth and depth of knowledge concerning not only manipulative skills but also fundamental and essential theory, 3) enable students to use their knowledge in the formulation and solution of problems, and 4) give students the necessary basis of foundation for the pursuit of graduate study or productive effort at the bachelor level.

REQUIREMENTS FOR THE MAJOR

Bachelor of Arts Degree
A minimum of 32 semester hours is required. These must include 115, 116, 215, 216, 303, 415, 416. The remainder must be selected from courses numbered above 300. Exceptionally able seniors are encouraged to seek departmental approval to include 500 level mathematics courses listed in the graduate catalog. Extra-Departmental Requirements: Computer Science 101 Basic or 111 Fortran or 112 Pascal.

Bachelor of Science Degree
A minimum of 32 semester hours is required. These must include 115, 116, 215, 216, 303, 415, 416. The remainder must be selected from courses numbered above 300. Extra-Departmental Requirements: 20 hours in science; 211, 212 General Analytical Physics and Computer Science 101 Basic 111 Fortran or 112 Pascal must be taken. The remaining courses may be selected from Biology 111 and 226 and above Chemistry 121 and above Physics 212, and additional Computer Science courses.

REQUIREMENTS FOR THE MINOR

A minor must include 115 and 14 additional credits selected from courses numbered above 115. 116 must be included.

For economics majors 215 216 315 321 are recommended.
For economics and social science majors, 308, 225 or 301, 306 are recommended.

101 Elementary Mathematics
3 cr
A remedial course in the fundamentals of algebra, including the solution of equations and inequalities. Not to be counted toward a major minor or the mathematics/science area requirements.

103, 104 Finite Mathematics, I, II
3 cr each
A course meeting the needs of non-science students in the College for an introduction to matrices and their applications, linear programming, probability and statistics computer and other relevant topics. Not counted toward a major or minor.

105 College Algebra and Trigonometry
4 cr
A modern course in college algebra and analytic trigonometry for those students who do not possess the prerequisites for 115. Not counted toward a major or minor.

107, 108 Introduction to Modern Mathematics I, II
3 cr each
This course is designed for elementary education students in the School of Education. Not to be counted toward a major minor or the mathematics/science area requirement.

109 College Algebra
A traditional course in college algebra for students who are not prepared for 111. Not counted toward a major or minor. Credit will not be allowed for both this course and 105.

111 Calculus for Non-Science Students
3 cr
Differentiation and integration of algebraic logarithmic and exponential functions, maxima and minima, area, exponential growth. Not counted toward a major. Credit will not be allowed for both this course and 115.

115, 116, 215 Calculus, I, II, III
4 cr each
A unified course in analytic geometry and calculus. Consideration of theory of limits, functions, differentiation integration, series geometry of space functions of several variables and multiple integration. Prerequisites for 115. Two years of algebra, one year of plane geometry, and one-half year of trigonometry.

216 Ordinary Differential Equations
3 cr
The course includes solutions existence of solutions and applications of differential equations. Prerequisite 215.

221 History of Mathematics
3 cr
This is a survey of the historical development of mathematics. Prerequisite One year of college mathematics preferably including one semester of calculus. Not counted toward a major.

225 Fundamentals of Statistics
3 cr
A basic course in probability theory and descriptive and inferential statistics for non-majors. Prerequisite Intermediate Algebra school. Not counted toward a major.

301, 302 Introduction to Probability and Statistics I, II
3 cr each
A mathematical treatment of probability theory and mathematical statistics including probability distributions, random variables and their transforms, expectation, point and interval estimation, and distribution sampling distributions. Prerequisite 116 or equivalent.

303 Principles of Modern Algebra
3 cr
A study of basic properties of groups rings, boolean algebra and fields. Prerequisites 115 116.

306, 307 Linear Algebra I, II
3 cr each
A study of linear transformations and matrices, and models. 307 is identical to Computer Science 307 in which knowledge of a computer language (BASIC, FORTRAN, Pascal) is required. 307 may be used to satisfy a mathematics or a Computer Science requirement but not both. Prerequisite 116 or consent of the department.

308 Numerical Methods of Classical Analysis
3 cr
A computer oriented course in numerical analysis introducing elementary techniques for numerical solution of problems. A knowledge of Fortran or equivalent language is assumed. This course is identical to Computer Science 308. It may be used to satisfy a Math requirement or a Computer Science requirement but not both. Prerequisite 215 Fortran 111.

311 Introduction to Number Theory
3 cr
A discussion of divisibility, congruences, quadratic residues, Diophantine equations and arithmetic functions. Prerequisite: Proficiency at 105 level.

315 Advanced Differential Equations
3 cr
Principally theoretical, this course considers the methods of solutions as well as existence and uniqueness of solutions, applications, and partial differential equations. Prerequisite 216.

321 Mathematical Concepts for Physics
3 cr
A survey of the mathematical concepts used in undergraduate physics, especially quantum mechanics. Topics covered include vector analysis, matrix theory, complex function theory, Fourier series and calculus of variations. Prerequisites 216.

325 Applications in Statistics
3 cr
This course is intended for students interested in statistics and who wish to examine methods in applying statistics. Topics include: aspects of linear regression analysis, experimental design, and analysis of categorical data. Emphasis is placed on applications. Prerequisite One semester of calculus and one semester of statistics.

401 Fundamentals of Geometry
3 cr
The course considers topics in Euclidean and Non-Euclidean geometry also synthetic, projective, and affine geometries, and some topology. Prerequisite 215. Not offered in regular sequence, but available on request.

403 Introduction to Point Set Topology
3 cr
A survey of elementary topics including topological spaces, compactness, connectedness, convergence and separation axioms. Prerequisite 215. Not offered in regular sequence, but available on request.

405 Introduction to Complex Variables
3 cr
Topics include the plane of complex numbers, functions of a complex variable and integration in the complex plane. Prerequisite 216 not offered in regular sequence but available on request.
**MEDIA ARTS**

It is the goal of the Media Arts program to develop professional attitudes and competencies in media technology. Required studies in the humanities and science combined with major courses provide the background necessary for success in a field which daily influences the opinions, attitudes, and decisions that affect every aspect of contemporary human experience.

**REQUIREMENTS FOR THE MAJOR**

A major consists of thirty-six credits in Media Arts courses. 101 Introduction to Media Arts 103 Video Production I (ENG) and 112 Photography I are required for all majors. Medical Media Majors must take 107 Photographs-Medical Photographs.

Media Arts majors may concentrate on either program development or production. In close consultation with their academic advisors, they may design programs which emphasize production, videography, writing on a combination of these areas. A sub specialty in Medical Media Communications is also available (Prognosticative Medical Media Majors will be interviewed by the program director before being admitted to the major).

Two extra-departmental courses may be applied toward the Media Arts Major: Fine Arts 220 (History of Photography) and Journalism 381 (Visual Production I).

**REQUIREMENTS FOR THE MINOR**

Eighteen credits are required for a minor in Media Arts. These must include 101 Introduction to Media Arts.

Media Arts Minors may, in consultation with their advisors, design general programs to gain broad experience or concentrate in one of the following areas: Video Production (103, 108, 208, 308, 403), Photography (112, 212, 312, 401) and Fine Arts 220.

**Basic Courses**

101 Introduction to Media Arts

106 Creative Media

206 Graphics for Media Production

215 Production Design and Scripting

217 Aesthetics of Media Production

**Video Production**

103 Video Production I (ENG) 3 cr

108 Video Production II (EFP) 3 cr

208 Video Production III (STUDIO) 3 cr

308 Video Production IV (ADVANCED) 3 cr

112 Photography I (INTRODUCTION) 3 cr

118 Video Production II (INTERMEDIATE) 3 cr

312 Photography III (ZONE) 3 cr

202 Audio Production I (BASIC) 3 cr

302 Audio Production II (ADVANCED) 3 cr

**Photography**

401 Photography IV (ADVANCED) 3 cr

407 Photography V (MEDICAL PHOTOGRAPHY) 3 cr

405 Directed Readings 4 cr

**Advanced Courses**

311 Multi Media Production 3 cr

316 Producer-Director 3 cr

340 Management of a Media Facility 3 cr

409 Interactive Video 3 cr

405 Internship 3 cr

**DEPARTMENT OF MODERN LANGUAGES AND LITERATURES**

Chairman Francesca Colecchia, Ph D

The Department of Modern Languages offers courses in French, German, Italian, Russian, Spanish and Swedish. On the elementary and intermediate level in French, German, and Spanish, the student may choose from two tracks of language courses both of which satisfy College degree requirements. One of these emphasizes reading and the other writing, speaking, and aural comprehension. In conversation and composition courses, the student's fluency in the active use of the language is strengthened. Subsequent courses stress primarily literary studies in which the student is systematically introduced to a survey of the literature and is given a working acquaintance with the culture of the country whose language he is studying. Choice of courses dealing with specific works author's and auxiliary subjects is also presented.

The student possessing a knowledge of foreign languages will find career opportunities in a number of fields such as education, government employment, foreign service, social work, industry, and tourism.

**REQUIREMENTS FOR THE MAJOR**

The Department offers major programs in French, German, and Spanish. In addition, it offers minor programs in these languages. Italian and Russian as well as non-major courses in Swedish.

The major program in Modern Languages and Literatures consists of a minimum of 24 semester hours at the 100 level and above. Required courses are as follows:

**French**

301 302 462 463 Majors will discuss their courses with their advisors.

**German**

301 302 460 461 Majors will discuss their courses with their advisors.

**Spanish**

301 302 401 402 453 454 Majors will discuss their courses with their advisors.

Elementary and intermediate courses must be taken in sequence. It is recommended that students not take advanced courses out of sequence. Credit toward the major or minor will not be given for 201 202
REQUIREMENTS FOR THE MINOR

The minor program consists of a minimum of 12 semester hours at the 300 level and above

101, 102 Elementary German 3 cr each Fundamentals of oral and written German Three hours lecture and one hour laboratory each week

111, 112 Elementary French for Reading 3 cr each The course will stress basic grammar and structure for reading comprehension

115, 116 French for Musicians 3 cr each Specially designed for majors in music to provide them with those skills in French to meet their professional requirments Registration limited to students in the School of Music This course does not allow for continuation at the 200 level or higher

120 Intensive French 6 cr Fundamentals of oral and written French Utilizes a different approach allowing the student to complete one year's work in one semester Six lecture hours and one-hour laboratory each week

201, 202 Intermediate German 3 cr each An intensified review and continuation of 101, 102 Prerequisite 102 or equivalent

211, 212 Intermediate French for Reading 3 cr each Prerequisite 102 or 112

220 Intensive French 6 cr Review and continuation of 120 Utilizes techniques allowing the student to complete one-year's work in one semester Prerequisite 120, 102 or equivalent

239, 240 Readings in Modern French Authors 3 cr each Selections from modern works of literature Do not carry credit toward a major or minor Prerequisite 202 or equivalent

301, 302 French Conversation and Composition 3 cr each 302 or its equivalent is the recommended prerequisite to all courses above 302 Prerequisite 202 or equivalent

320-345 Pro-Seminar in French Literature and Culture 3 cr each All courses numbered 320 through 345 are seminars in literature and culture The following courses represent current pro-seminar offerings They will be offered on a rotated basis and/or as circumstances warrant from one semester to another All pro-seminars carry three credits a semester Recommended prerequisite French 302 or its equivalent

320 Stylistics 3 cr Comparative study of English/French style in spoken and written French

321 Phonetics 3 cr Mechanics of phonation with comparative English-French application to phonemic analysis of French

322 Theatre de L'Avant-Garde 3 cr The "avant-garde" theatre since 1950 Ionesco Beckett Genet Schelde Vian Pinget

323 Maupassant 3 cr Consideration of one of the most popular writers in France in the 1880's Selected short stories and novels

324 Balzac 3 cr Study of Honore de Balzac (1799-1850), author of the vast Comedie humaine Selected novels

325 Realism and Naturalism 3 cr Theories of the two movements in the latter part of the 19th Century Their manifestations in prose works from Balzac to Zola

326 The Literature of the Existentialist Movement 3 cr Analysis and discussion of selected works of A Camus, J-P Sartre, and G Marcel

327 The Symbolist Movement in French Poetry 3 cr A basic introduction to the Symbolist movement with emphasis on hermetic poetry of Mallarme and Rimbaud

328 French Poetry Middle Ages to 19th Century 3 cr Study of major movements of various periods in French poetry

329 17th Century French Literature 3 cr Emphasis on 17th Century French prose and poetry Will also include a play of Corneille Racine and Moliere

330 French Prose of the 19th Century 3 cr Consideration of the French prose of the first half of the century Stendhal Balzac Flaubert

331 18th Century French Literature 3 cr An overview of the 18th century novel and French prose

332 Voltaire and His Age 3 cr In-depth study on Voltaire plus one other writer of the period such as Voltaire Beaumarchais Voltaire Diderot and Rousseau

333 The Symbolist Movement in French Poetry 3 cr Emphasis on the major movements in French poetry

334 17th Century French Poetry 3 cr Emphasis on the major movements in French poetry

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465 18th Century French Theatre 3 cr An overview of the major dramatists of the century including Moliere Voltaire and Beaumarchais

466 19th Century French Poetry 3 cr The major poetic movements of the 19th Century Symbolism, with a special emphasis on Baudelaire

467 19th Century French Novel 3 cr Selected novels from the 19th Century, from Romanticism to Naturalism

468 19th Century French Theatre 3 cr Beginning with the influence of the Revolution on French literature, through the literary movements of the century Emphasizes works written for the stage and current in criticism and directing.

469 20th Century French Poetry 3 cr Ambivalence of modern French poetry after Baudelaire Will consider Apollinaire Valery Breton Aragon Eluard, Cocteau, Supervielle Saint-Jean Perse

470 20th Century French Novel 3 cr From A France to Robbe-Grillet and the "New Novel"

471 20th Century French Theatre 3 cr From Jules Romains to Ionesco and the Theatre of the Absurd

472 Sartre and Camus 3 cr Contrasive study of Sartre and Camus and their works

480 Directed Readings Var cr Readings of literary texts under close faculty supervision for majors only and with permission of the Department Variable credit

German

101, 102 Elementary German 3 cr each Fundamentals of oral and written German Three hours lecture and one hour laboratory each week

111, 112 Elementary German for Reading 3 cr each The course will stress basic grammar and structure for reading comprehension

115, 116 German for Musicians 3 cr each Specially designed for majors in music to provide them with those skills in German to meet their professional requirements Registration limited to students in the School of Music This course does not allow for continuation at the 200 level or higher

201, 202 Intermediate German 3 cr each An intensified review and continuation of 101, 102 Prerequisite 102 or equivalent

211, 212 Intermediate German for Reading 3 cr each Prerequisite 102 or 112
239, 240 Readings in Modern German Literature
German Authors 3 cr each
Selections from modern works of literature. Do not carry credit toward a major or minor. Prerequisite: 202 or equivalent

252 Readings in Scientific German 3 cr each
Prerequisite: 102 or equivalent

301, 302 German Composition and Conversation 3 cr each
Prerequisite: 102 or equivalent

320-345 Pro-Seminar in German Literature and Culture 3 cr each
All courses numbered 320 through 345 are pro-seminars in literature and culture. The following courses represent current pro-seminar offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All seminars carry three credits.
Recommended Prerequisite: German 302 or equivalent

320 History of German Culture from the Franks to Hitler 3 cr
The artistic socio-historical and literary expressions of German culture from the earliest periods to World War II

321 History of German Culture from Hitler to the Present 3 cr
The artistic socio-political and literary manifestations of German culture from Hitler to the Present

324 Popular Traditions in German Literature 3 cr each
Emphasis on poetic verse, fairy tales, folklore, and legends. Heroic tales and fables.

325 Popular Traditions in German Literature 3 cr each
Studies in popular literature such as sagas and animal fables. Chapbooks as well as selected more complex fairy tales and legends.

326 Women Figures in German Literature from Goethe to Boll 3 cr each
Key women figures in German Literature from Gretchen in I n s t n t to strong characters in Boll's novels and short stories.

329 Introduction to German Poetry 3 cr each
German verse from early modern times to contemporary. Narrative, dramatic, and epic verse. Emphasis on brief lyric verse.

330 Modern German Prose 3 cr each
Individual search for identity in the prose works of Thomas Mann, F. Kafka, H. Hesse, and H. Boll.

331 Modern German Theatre 3 cr each
From the introduction of naturalism into German drama in the late 19th Century to the most recent movements since World War II. Will discuss Hauptmann, Brecht, Zuckmayer, Dürrenmatt and Frisch.

460, 475 Seminar in German Literature 3 cr each
All courses numbered 460 through 475 are seminars in literature designed to offer the advanced undergraduate student the opportunity to study various aspects of literature in greater depth.

The following courses represent current seminar offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All seminars carry three credits. Recommended Prerequisite: German 302.

460 German Literature to Lessing 3 cr each
German literature from the Middle Ages up to and including the early 18th Century.

461 Lessing: His Life and Works 3 cr each
Lessing's major literary and critical works considered in relation to his life.

462 Advanced German Stylistics 3 cr each
Comparative study of German/English styles in spoken and written German.

464 German Romantic Literature 3 cr each
The German Romantic movement following the Napoleonic era. The role of the individual in the works of Novalis, Tieck, etc.

465 Modern German Narrative 3 cr each
The process of alienation in modern German narrative. Includes novels by H. Hesse and T. Mann.

467 Age of Goethe 3 cr each
Study of important works of Goethe and his contemporaries. Emphasis on Lessing, Goethe, Schiller. Also "Sturm und Drang" authors.

468 Goethe's Faust 3 cr each
Emphasis on the spirit of the 18th Century as personified in Goethe's Faust.

470 Literature of Enlightenment 3 cr each
Consideration of late "baroque" and "classics" including Gellert, Gotsch. Hamann, Lichtenberg, Klopstock, and Gunder Wieland.

471 Sturm and Drang 3 cr each
Storm and Stress as Germany's literary revolution against the despotic tyrants of the 18th Century. Includes Goethe's The Sorrows of Young Werther and Schiller's The Robbers.

480 Directed Readings 3 cr each
Reading of literary texts under close faculty supervision for majors only and only with permission of the Department. Variable credit.

Italian

101, 102 Elementary Italian 3 cr each
Fundamentals of oral and written Italian. Three lecture hours and one hour laboratory each week.

101, 102 Intermediate Italian 3 cr each
An intensified review and continuation of 101-102. Prerequisite: 102 or equivalent.

315 Individual Studies 3 cr each
Var Cr Prerequisite: 202 or equivalent.

320-345 Pro-Seminar in Italian Literature and Culture 3 cr each
All courses numbered 320 through 345 are pro-seminars in literature and culture. The following courses represent current pro-seminar offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All seminars carry three credits.

321 Modern Italian Novel (Levi, Buzzati, Cassola, Moravia) 3 cr each
A study of the works of significant representatives of realism and naturalism within the framework of the social and political atmosphere of post-WWII Italy.

322 Commercial Italian 3 cr each
A view of the basic grammatical structures of Italian composition and the practice in written and oral communication.

323 Il Parnasso Italiano 3 cr each
An analysis and stylistic comparison of these three writers representing the literary evolution after verismo to the psychological novel and drama and to neorealism.

324 Introduction to Italian Poets 3 cr each
A study of the works of the most important modern Italian poets from Caradosci to D'Annunzio.

325 Introduction to Italian Poetry 3 cr each
A continuation of 324. Study of contemporary poets with special emphasis on the works of two Nobel laureates: Quasimodo and Montale.

326 History of Italian Civilization 3 cr each
The evolution of Italian Civilization, with emphasis on the Renaissance and the Renaissance.

Russian

101, 102 Elementary Russian 3 cr each
Fundamentals of oral and written Russian. Three lecture hours and one hour laboratory each week.

101, 102 Intermediate Russian 3 cr each
An intensified review and continuation of 101-102. Prerequisite: 102 or equivalent.

301-305 Russian Conversation and Composition 3 cr each
Prerequisite: 202 or equivalent.

314, 315 Individual Study 3 cr each
Var Cr Prerequisite: 202 or equivalent.

320-345 Pro-Seminar in Russian Literature and Culture 3 cr each
All courses numbered 320 through 345 are pro-seminars in literature and culture. The following courses represent current pro-seminar offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All seminars carry three credits.

320 A P Chekhov 3 cr each
Chekhov's stories studied against the social, political and philosophical background of his time. Course conducted essentially in Russian.

321 19th Century Russian Short Stories 3 cr each
The development of the short story from Pushkin to Chekhov. The theme of this course is to develop critical analysis of selected works, focusing on their philosophical content and political environment. Course conducted essentially in Russian.

322 Commercial Russian 3 cr each
Spoken and written language of business Russian. Conventions of letter writing, import, export, and commercial transactions.

323 Russian Folklore 3 cr each
Russian folklore as oral tradition. Particular attention to traditions, festivals, rituals, epics, ballads, and fairy tales. Course conducted in Russian.

324 Contemporary Russian Literature 3 cr each
Study of short stories of Soviet writers. Representing ideological changes and evolutionary trends from the revolution to Solzhenitsyn. Course conducted essentially in Russian.

Spanish

101, 102 Elementary Spanish 3 cr each
Fundamentals of oral and written Spanish. Three lecture hours and one laboratory each week.

111, 112 Elementary Spanish for Reading 3 cr each
The course will stress basic grammar and structure for reading comprehension.

120 Intensive Spanish 6 cr each
Fundamentals of oral and written Spanish. Utilizes a different approach allowing the student to complete one year's work in one semester. Six lecture hours and one laboratory each week.

131, 132 Elementary Spanish for Industry 3 cr each
Fundamentals of oral and written Spanish, with emphasis on business vocabulary and forms. Three lecture hours per week. (Restricted to evening students).
201 202 Intermediate Spanish 3 cr each
An intensified continuation of 101 and 102. Prerequisite 101 or equivalent.

211, 212 Intermediate Spanish for Reading 3 cr each
Prerequisite 102 or 112.

220 Intensive Spanish 6 cr
Review and condensation of 120. Utilizes techniques allowing the student to complete one-year's work in one semester. Prerequisite 120 or equivalent.

231, 232 Intermediate Spanish for Industry 3 cr each
An intensified continuation of 131 and 132.

239 Readings in Modern Spanish Authors 3 cr each
Selection from modern works of literature. Does not carry credit toward major or minor. Prerequisite 202 or equivalent.

240 Readings in Modern Spanish-American Authors 3 cr each
Selection from modern works of literature. Does not carry credit toward major or minor. Prerequisite 202 or equivalent.

301, 302 Spanish Conversation and Composition 3 cr each
Prerequisite 302 or equivalent. Recommended prerequisite to all courses above 302. Prerequisite 202 or equivalent.

320-345 Pro-Seminar in Spanish Literature and Culture 3 cr each
All courses numbered 320 through 345 are pro-seminars in literature and culture. The following courses represent current pro-seminar offerings. They will be offered on a rotating basis and/or as circumstances warrant from semester to semester. All pro-seminars carry three credits a semester. The recommended prerequisite Spanish 302 or equivalent.

322 The Nineteenth Century Novel (New Title) 3 cr
Examines the realist, naturalist, and regionalist novel in the works of Galdós, Clarín, Pardo Bazán, Pereda, and Valera.

323 Don Juan as a World Literature Figure 3 cr
Principal plays and narrative poems dealing with the theme from its origin in Seventeenth Century Spain through modern times. Authors include Tirso de Molina, Molère, Mozart, Byron, Zorrilla, and G B Shaw (In translation).

324 The Generation of 98 3 cr
Major works of Spain's turn of the century authors in their aesthetic and historical contexts. Includes Unamuno, Azorín, A. Machado, Pio Baroja, J R Jiménez and Valle Inclán.

325 Contemporary Spanish Novel 3 cr
The Spanish Novel since the Civil War. From Cela to the present.

326 Contemporary Spanish-American Novel 3 cr
Major developments in the novel in historical perspective. From Asurias through Garca Marquez and Sarduy.

327 History of Spanish Culture 3 cr
The literary, historical, social, political, and artistic manifestations of Spanish culture from its origins to the post-Franco era.

328 Modern Spanish Theatre 3 cr
From Buero Vallejo to the present including the "Underground Theatre".

329 Revolt and Change The Spanish American Novel 3 cr
Nature and types of protest expressed in modern Spanish-American Literature. Major works of "protest literature".

330 Theatre of the Golden Age 3 cr
Reading and discussion of works of the major dramatists of the period selected plays by Lope de Vega, Calderón and Tirso de Molina.

360 Spanish for Business 3 cr
Spoken and written language of business. Spanish Conventions of letter writing import and commercial transactions.

401 Spanish Literature from the Cod through the Siglo de Oro 3 cr
Survey of major works from the Medieval period through the 17th Century.

402 Spanish Literature from the 18th Century to the Present 3 cr
Survey of works representative of the major literary movements of the 18th, 19th, and 20th Century.

453 Trends in Latin American Literature 3 cr
Major movements and representative works from Pre-Columbian period through Romanticism.

454 Trends in Latin American Literature 3 cr
Major movements and representative works from Modernismo to the present.

460-475 Seminar in Spanish Literature 3 cr each
All courses numbered 460 through 475 are seminars in literature designed to offer the advanced undergraduate student the opportunity to study various aspects of literature in greater depth. The following courses represent current seminar offerings. They will be offered on a rotating basis and/or as circumstances warrant from semester to semester. All seminars carry three credits a semester. Recommended prerequisite Spanish 401-402 or equivalent.

460 The Quirxote 3 cr
An in-depth study of Cervantes' masterpiece, one of the symbolic meaning of the two main characters.

461 Spanish literature since the Civil War 3 cr
The Civil War as mirrored in this literature. Its relationship to contemporaneous literary expression in other countries. From Hernandez through Goytisolo and Sauser.

462 Avant-Garde Spanish-American Theatre 3 cr

463 The Literature of the Siglo de Oro 3 cr
Spain's most glorious era through the poetry, prose, and drama of its major authors.

465 Literature of Spanish Romanticism 3 cr
Studies of the major poems, plays and historical novels of the period. Authors include Duque de Rivas Espronceda, Larra, Bequer Rosalía de Castro and Zorrilla.

466 The Age of Enlightenment 3 cr
From Fontane to Cadaíno to Larra. We see how the fundamental principles of the modern world have their seeds in this century.

467 Readings in Medieval Literature 3 cr each
The development of Spanish literature from its oral tradition as well as the evolution of the Spanish language beginning with the "archas" through La Celestina.

480 Directed Readings 3 cr each
Readings of literary texts under close faculty supervision for majors only and only with permission of the Department. Variable credit.

Swahili
101, 102 Elementary Swahili 3 cr each
Fundamentals of oral and written Swahili. Three lecture hours and one hour laboratory each week.

201, 202 Intermediate Swahili 3 cr each
An intensified continuation of 101 and 102. Prerequisite 102 or equivalent.

DEPARTMENT OF PHILOSOPHY
Chairman: Charles D. Keyes, Ph.D.
The program offered by the Department of Philosophy is designed to be a basic part of the student's liberal education. It is intended to introduce students to philosophical thinking, past and present, and to provide a discipline for asking the basic questions of life and to help students begin relating their other academic subjects to one another and to human experience. The Department, made up of professors who have different philosophical interests, attempts to develop the capacity for independent thinking on all issues.

REQUIREMENTS FOR THE MAJOR
The Department requires majors to take nine philosophy courses above the 100 level of these nine courses, three must be selected from the Historical Sequence and two from the sequence of Advanced Courses.

REQUIREMENTS FOR THE MINOR
First courses are required for a minor from the Introductory Courses (104 to 107), two from the Basic Courses (200 to 217) and two from the Historical Sequence and Advanced Courses (300 and 400 levels).

Introductory Courses
104 Introduction to Philosophy 3 cr
A first-hand study of selected philosophical texts from both traditional and existential perspectives with the aim of introducing students to the nature of philosophical thinking and to the variety of philosophical issues area methods and theories.

105 Ethics 3 cr
An introduction to ethical theories of past and present time. Contemporary moral issues will be considered in the light of these theories.

106 Introductory Logic 3 cr
Analysis of the requirements for valid reasoning, logical fallacies, types of definitions and important informal aspects of arguments in ordinary discourse and in addition to the formal logic of inferences involving simple and compound statements.

107 Medical Ethics 3 cr
Ethical questions that arise in medical care and research will be examined. Topics might include experimentation on animals and man allocation of scarce medical resources, euthanasia, the privileged relationship of doctor and patient, etc.

108 Business Ethics 3 cr
This course designed primarily for business majors begins with a discussion of some general ethical issues and, in particular, the problem of a just distribution of wealth. These discussions are applied to concrete current business problems.

Basic Courses
200 Introduction to Phenomenology 3 cr
The basic approach to philosophical issues developed by Husserl, the founder of Phenomenology, will be explored; the types of signs, meaning, the
possibilities of philosophy as rigorous science, etc are considered

203 Philosophy of Religion 3 cr
Introduction to the nature of religious experience. Topics such as religious symbolism, belief and unbelief, the existence of evil and free will will be considered. Assigned readings include both traditional and contemporary writers.

204 Literature and Philosophy 3 cr
Explores philosophical themes as they emerge within great works of literature. Works will be selected from such authors as Sophocles, Dante, Shakespeare, Goethe, and Dostoevsky.

205 Existential Phenomenology 3 cr
Examination of the methods and style of thought which characterizes existential phenomenology. Lectures and discussion on texts by major thinkers such as Being and Time by Heidegger. Phenomenology of Perception by Merleau-Ponty and Being and Nothingness by Sartre.

211 Marxism 3 cr
A study of the political philosophy of Karl Marx as one of the major directions in social thought. Engels, Lenin, and contemporary Marxism.

212 Political Philosophy 3 cr
Fundamental political questions will be explored. Examples include the origins of political society, war and empire, and revolution. May be considered possible authors read Plato, Aristotle, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, and Hegel.

214 Philosophy of Sex 3 cr
The course provides an introduction to some of the basic themes and texts both traditional and contemporary related to the philosophical study of sex. It uses historical, analytical, and phenomenological methods and gives attention to the sexual origin of our consciousness of values.

215 Psychoanalysis and Philosophy 3 cr
Psychoanalysis has had an impact upon and been affected by modern philosophy. This course will study the presuppositions and implications of Freud's thought and that of some other thinkers such as Sauffre, Marcuse, and Reich.

216 Communication and Philosophy 3 cr
Speech is man's most important means of communication. The course will examine the structure, purpose, and function of speech in everyday usage and in the spheres of politics, science, and art.

217 Elementary Symbolic Logic 3 cr
Introduction to the methods of symbolic logic as applied to the logic of arguments involving compound statements, propositional functions, and quantifiers and relations.

218 Special Topics 1-3 cr

220 Philosophy of Death and Living 3 cr
The course provides an introduction to some of the basic themes and texts both traditional and contemporary related to the philosophical study of death. Its main purpose is to ask how human beings can be happy in view of death's certainty, therefore it emphasizes the act of living.

224 Philosophy of Sport 3 cr
A philosophical examination of the nature of sport. Particular focus will be upon the ontological and aesthetic status of the phenomenon of sport.

225 Elements of Thomistic Thought 3 cr
An introduction to the basic concepts and principal ideas of Christian philosophy with an emphasis on the thought of St. Thomas Aquinas. The course will cover an introduction to metaphysics, metaphysical thinking, definition of knowledge, analogy of being, the principles of cause and effect, and the concept of the transcendent and the problem of evil.

255 Philosophy of Technology 3 cr
A philosophical examination of how our lives are shaped by technology and the relationship of science, religion, ethics, and metaphysics.

280 Computed Formal Logic 3 cr
An introduction to formal logic with computer assisted tutorials. The course will deal with translating arguments from ordinary language into formal symbols and will apply these principles to "real world" situations.

260 Philosophy of Law 3 cr
A study of the major legal traditions. The following topics will be examined: legal reasoning, justice and law, ethics and law, legal relations, and social institutions. Philosophical issues involved in evidence and procedure, legal and political theories, and theories of law.

290 Historical Sequence 3 cr
A study of the beginning of philosophy in Greece, from the Presocratics to Plotinus with readings from Plato and Aristotle.

291 Medieval Philosophy 3 cr
A philosophical study of medieval texts in English translation selected as representatives of the broad range of issues, approaches, and theories which characterize the major Christian Jewish and Islamic philosophical thinking of the period.

292 Early Modern Philosophy 3 cr
Explores the beginning of modern thinking in the 17th century and proceeds to the time of the French Revolution. Course work consists in analyzing several important texts chosen from such philosophers as Montaigne, Descartes, Pascal, Hobbes, Spinoza, and Locke. Hume, Kant.

293 Later Modern Philosophy 3 cr
This course examines the period of modern philosophy initiated by Kant. It deals primarily with the central themes of the 19th century including Hegel, Feuerbach, Kierkegaard, Marx Mill and Nietzsche.

305 Contemporary Philosophy 3 cr
A course of contemporary philosophy from 1900 to the present, covering the methods and history of selected 20th century movements.

312 American Philosophy 3 cr
A course of American philosophy with emphasis on key figures in 20th-century philosophy. Perce, Dewey, James, Rocke, Santavana, Whitehead, etc.

325 Concentrated Philosophical Readings 3 cr
This course is in-depth study of one or several philosophers such as Plato, Aristotle, Aquinas, Descartes, Kant, Wittgenstein, Sartre, Heidegger, etc. varying in subject matter from time to time.

Advanced Courses

313 Philosophy of the Human Sciences 3 cr
The relations of the human sciences with other sciences with philosophy and with practical life. The use of the mathematical and interpretative and other issues will be discussed in relation to past and contemporary philosophical and scientific thought.

401, 402 Thomism 3 cr each
Courses dealing with the texts of St. Thomas Aquinas. The first semester (401) covers his metaphysics and the second semester (402) deals with his philosophy of man. Neo-scholastic interpretations of the texts of Aquinas (Maritain, Gilson, and the school of Mereel and Rahner).

403 Philosophy of God 3 cr
This course introduces students to selected texts and basic themes in the study of God's nature and attributes. It is required of all philosophy majors.

404 Aesthetics 3 cr
An examination of theories of art which explore such questions as the beautiful, the ugly, and the sublimely.

425, 426 Modern Philosophy 3 cr each
In depth examination of the work of a single or a group of historically modern authors. Such as Augustine, Avicenna, Maimonides. Bonaventure will be studied.

430, 431 Contemporary Philosophy 3 cr each
Concentration upon a single contemporary philosopher such as Augustine, Avicenna. Maimonides. Bonaventure will be studied.

435 Senior Seminar 3 cr

DEPARTMENT OF PHYSICS
Chairman Walter S. Skinner M. S.

The program in the Department of Physics is primarily aimed at providing today's students with a fundamental background in traditional physics as well as the interrelationships with other sciences and disciplines. The Department is also aware that in today's changing world, there must be a suitably flexible program which will best fit the graduate for the challenges faced in the many professions which are based on the science of physics. There is always the hope that the student will continue professional growth in physics but it is also realized that there are many expanding paths to professional growth. The Department program therefore is structured to provide the essential background for success in graduate studies in the many current fields which seek Ph. D. candidates as well as to equip the student to successfully compete for the available positions in research institutions, government agencies, or private corporations. Department policy calls for individual attention to student needs.

REQUIREMENTS FOR THE MAJOR

A minimum of 20 semester hours is required for a major. These credits must include: 211, 212, 301, 329, 330, 361, 372, 402, 430, 473, 474, 483, 484, or 485 may be substituted for 474 with departmental approval. Extra-departmental requirements: Chemistry 121, 122 or Biology 111, 112, Mathematics 115, 116, 215, 216. 308 Computer science 111 and two years of modern language.

If a student takes 207, 208, Physics and the Modern World and either 201, 202, General Physics or 211, 212, General Analytical Physics, the credits for 207, 208 will not apply to the total number required for the degree. Credit will not be given for both 201, 202 and 211, 212.
REQUIREMENTS FOR THE PHYSICS MINOR
The minor consists of eight hours in the General Analytical Physics (211 212) and 12 credits of upper division physics on the 300 and above level. The department will structure the minor program from the course offerings to fit as nearly as possible the needs and desires of the individual student.

REQUIREMENTS FOR THE EARTH SCIENCE MINOR
The minor consists of a prerequisite sequence of 101 and 102, which must be taken as the first courses and 12 credits chosen from 203 204 205 206, 303, 304, 305, as available to the curriculum. Not all courses are taught each semester and some are on alternate years. Earth Science 101 is prerequisite to all courses unless waived by the instructor.

201, 202 General Physics 4 cr each
Designed to give the student a basic knowledge and understanding of mechanics, properties of matter, heat, wave motion, sound, magnetism, electricity and modern physics through the use of modern day examples and applications. At the completion of this course the student should have attained a working knowledge of physics, its techniques and reasoning such that the knowledge of physics gained may be applied to future work in the sciences or other fields of endeavor. Prerequisite: Mathematics 103 104 or the equivalent. Students who have completed Mathematics 116 and pre-engineering students should take 211 212. Lecture four hours, laboratory two hours.

207, 208 Physics and the Modern World 3 cr each
A course especially for the nonscientist. Designed to give the student some basis for understanding the physics of the twentieth century and the physicist's approach to the study of nature. The physics of everyday life is used as a basis, and classroom demonstrations are generously employed to help the student grasp concepts by showing concrete examples. No mathematics beyond basic high school algebra required.

211, 212 General Analytical Physics 4 cr each
This is an introduction to the fundamental theories and applications of physics designed for students of sciences and engineering. Methods of using calculus is introduced. A good algebra background is necessary. The quantitative approach of the physicist is used in solving problems and understanding physical phenomena. Mechanics and electromagnetism are treated in minute details in 211 and 212. Applications in modern physics are emphasized. Other topics such as heat optics are developed briefly. Co-requisite for 211 Mathematics 116 Lecture three hours, Laboratory two hours.

301 Thermodynamics 3 cr
This is an intermediate level course covering the fundamental principles of thermodynamics, kinetic theory and statistical mechanics. The following is a partial list of items generally included: Temperature and thermodynamic systems, work, heat, the first and second laws of thermodynamics, ideal gases, entropy, Maxwell's equation the kinetic theory of ideal gas, and the basic concept of statistical mechanics. Prerequisites: 212, Mathematics 215.

306 Applied Electronics Laboratory 2-3 cr
This course seeks to combine treatment of the principles of modern electronic instrumentation with practical laboratory experience. Topics which will be included are passive and active electronic components, electronic measuring instruments, power supplies, amplification, feedback and control, linear and digital devices. Emphasis will be on understanding instrumentation rather than on advanced principles of design. Prerequisite: Permission of instructor.

329 Advanced Laboratory I 1 cr
This course is designed to acquaint the students with the basics of modern electronics to the extent that the student will have a sufficient background to design and use simple electronic circuits in modern research. A set of experiments is performed and analyzed by the students. Subjects covered are the use of research grade electronic instruments, transducers, diode and transistor circuits, transistor design parameters, printed circuit design, layout and construction. Prerequisite 211 or 202 and consent of instructor.

330 Advanced Laboratory II 1 cr
A continuation of Advanced Laboratory I which includes the following basic and advanced operational amplifier circuits, digital integrated circuits, Gates Boolean Algebra, I C timer circuits, digital flip-flops and counter circuits, A/D and D/A conversion circuitry, digital meter design and construction. Prerequisite 329 or consent of instructor.

361 Mechanics 4 cr
An intermediate level theoretical classical mechanics involving concepts and problems that can not be understood except by using the mathematical language of vectors, calculus, matrices, etc. Many of the topics will be re-introduced in the course. A good calculus background is indispensable. The topics covered normally are motion of a particle in 3-dimensions, non-central force systems, dynamics of many particles and rigid bodies and Lagrangian mechanics. Prerequisites: 212, Mathematics 215.

372 Electromagnetism 4 cr
An intermediate course for the science and engineering students. The following topics will usually be discussed: electrostatics, energy relations in electrostatic fields, dielectrics, currents and the interaction magnetic properties of matter, AC circuits, Maxwell's equations and electronic radiation. Prerequisites: 212, Mathematics 215.

402 Optics 3 cr
This course introduces the student to the principles of geometrical and physical optics. Topics may include reflection, refraction, diffraction, polarization matrix techniques in lens system design, basic quantum optics and the laser. Prerequisite: 211 or 202 and the consent of the instructor.

405 Acoustics 3 cr
A course which presents the physical principals underlining the production and propagation of sound. Examples and explanations are focused principally on musical sound. No mathematical preparation beyond high school algebra is necessary.

419 Introduction to Micro and Mini Computers 3 cr
An introduction to the design of micro and mini computers. Exploration of assembler and special-purpose languages for small computers. Prerequisites: 201 Machine Language Programming and 301 Computer Logic.

425 Microcomputer Laboratory 3 cr
A hands-on laboratory course in the use of single board microcomputers for interfacing and control. This course introduces the student to those concepts of discrete and digital electronics that relate to the use of these concepts for interfacing the microcomputer with the "real" analog world. Some of the topics covered are assembly language programming for an 8085 microprocessor, use of parallel and serial I/O ports, analog to digital and digital to analog conversion techniques, motor speed control and control of microcomputers. Prerequisites: Physics 419 or consent of instructor.

426 Problems in Microcomputers 1-4 cr
Special topics and problems in microcomputers. Applications to interfacing circuitry and related subjects for independent work. Prerequisites: Physics 419 or consent of instructor.

430 Advanced Research 2 cr
This is a one year course in which the student selects a research project develops it and prepares a report on the results. The student is also required to present results of his work at a department seminar or an appropriate scientific meeting if deemed advisable. A research topic is selected from those suggested by members of the Physics Department or other science faculty members. Work is carried out in close coordination with the selected advisor although all work must be the student's own. No grade is given at the end of the first semester but a final grade is assigned at the completion of the project in the Spring Semester.

473 Atomic Physics 3 cr
This course provides an introduction to special relativity and quantum theory with applications drawn mainly from modern theories of the atom. Topics usually included are quantum theory of heat radiation, the uncertainty principle, quantum theory of the hydrogen atom, many-electron atoms, atomic spectroscopy. Prerequisites: 212 and consent of instructor.

474 Quantum Mechanics 3 cr
A basic introduction to the dynamics of quantum phenomena. Some of the topics covered are: Schroedinger Equation, oscillators, hydrogen atom, linear operators, Hermitian Matrices, observables, conservation theorem, spin, angular momentum and perturbation theory. The course will emphasize application to simple systems. Prerequisites: 212, Mathematics 215.

483, 484, 485, 486 Special Topics 1-3 cr each
Designed to allow the physics major flexibility in scheduling. This course may include the following topics:

483 Nuclear Physics 3 cr
Experimental and theoretical aspects of the atomic nucleus are discussed. The topics present may include two-nucleon systems, nuclear models, nuclear structure, the free electron model, bank theory, superconductivity, magnetic properties and magnetic resonance. Prerequisites: 212 and consent of instructor.

484 Introductory Solid State Physics 3 cr
Bulk properties of materials are discussed with both the phenomenological and microscopic approaches. Typical topics are the geometric structure of solids, waves and diffractions, thermal properties the free electron model, bank theory, superconductivity, magnetic properties and magnetic resonance. Prerequisites: 212 and consent of instructor.

485 Relativistic Mechanics 3 cr
This course is an introduction to the Special and General Theories of Relativity. A list of topics which may be discussed are absolute space, Einsteinian Kinematics, Einsteinian Optics, space-time and four-vectors. Relativistic particle mechanics. Prerequisites: 212, Mathematics 215.

486 Shop Techniques 1 cr
A basic introduction to machine shop practices necessary to experimentalists in all fields. Some of the areas covered are shop equipment and its use, materials, metal working and welding techniques. Mechanical drawing and schematics, electronics construction techniques and practical application.

487 Problems in Physics 1-4 cr
Special topics and problems in physics and related subjects suitable for independent work.

488 Advanced Problems in Physics 1-4 cr
Problems of a more sophisticated nature.
489 Problems in Health Physics 1-4 cr
Special topics and problems in health physics and related subjects suitable for independent work

Earth Science
101 Physical Geology 3 cr
(Prerequisite to all Earth Science courses) This introduction to the geological processes and materials will concentrate on the makeup of our planet and the materials involved. Study will also include physical features and the processes of the earth as presently understood which have created those features. Geologic relation to environment is also examined.

102 Historical Geology 3 cr
A study of the earth's history which relates tectonic movements of the crust. Mountain building processes and life history with their interrelations will be discussed. Evolution of local features will be discussed also with the relationship to plate tectonics.

103 Physical Geology Laboratories 1 cr
An introduction to the identification of rocks and minerals by composition and appearance and the interpretation of topographic maps. The use of maps to identify the cause of drainage and some effects of water and erosion will be experienced. Mapping tools will be introduced as will some field equipment.

104 Historical Geology Laboratories 1 cr
An accompaniment for ES 102 providing an introduction to sedimentation and the use of fossil identification. Columnar sections. Aerial Geologic maps and Aerial Photos will be used.

203 Astronomy 3 cr
An introduction to the study of astronomy and the basis of observation. Study will include telescopic views of the heavens, the known solar system, and the stars and their distances will also be examined.

204 Meteorology 3 cr
Elementary study of meteorology and weather systems in the local area as well as the world patterns. Observation and prediction will be practiced when practical. Local and U.S. Weather Bureau services will be used and analyzed when possible.

205 Planetary Geology 3 cr
A systematic study of the geology of other planets and satellites in the solar system. Methods of study used to obtain information on these bodies will be examined along with the latest available information from scientific probes.

206 Geophysics 3 cr
An introduction to geophysics and its methods and uses. Study will include the use of geophysics to determine the nature of the earth’s interior and various geological processes such as structure mount building and the plate tectonics. Prerequisite: Physical Geology or major in Physics.

303 Oceanography 3 cr
An introduction to the marine environment including the geology and ecology. Attention is paid to the importance of dangers to the ecosystem. Characteristics of oceanic waters and circulation patterns will be discussed.

304 Environmental Earth Science 3 cr
A course based on an examination of some of the most fundamental concepts of environmental science. Laboratory exercises will be conducted and field trips will be arranged to gain a better understanding of the geological sense and Land Use Planning. Resources and their recovery use and abuse in past and present and possible cures will be discussed. Local and national problems will be examined and evaluated from the standpoint of origin and control.

305 Physiography of the United States 3 cr
Introduces the student to the various topographic and physiographic differences in the contiguous states as well as Alaska and Hawaii. This course is designed to allow the student to become familiar with the terrain resources, economics, and individual problems of the various regions of our country. An approach to demonstrate the fact that no generalization may be made to fit all areas at once; but different problems are associated with each resource and each region.

DEPARTMENT OF POLITICAL SCIENCE
Chairman William E. Markus

Political science studies the political ideas, institutions, behavior, values, and goals of human collective life. The department stresses an understanding of political life as a necessary complement to the study of human existence. Through an awareness of and appreciation for the similarities and differences among political structures, policies, and political problems and the ways by which political activity relates to the dimensions of life as a whole, the student becomes familiar with the political as an expression of deeper and more fundamental considerations. Students in the Department of Political Science are introduced to both the normative and empirical methods of analyzing political life.

Political science majors are prepared for careers in government and administration, teaching, private enterprise, and for further study in graduate and law school programs.

REQUIREMENTS FOR THE MAJOR IN POLITICAL SCIENCE
Twenty-four semester hours are required for a major in political science in addition to 101 these credits must include 208, 233, 309, and 403 or 406.

A student transferring to Duquesne from another college or university may receive a maximum of 12 transfer credits applied to their major requirement.

REQUIREMENTS FOR THE MAJOR IN INTERNATIONAL RELATIONS
Twenty-four semester hours in International Relations are required for a major in International Relations in addition to 101 these credits must include 309, 312, 318 and 320 or 402. The remaining courses may be selected from either 320 or 402 (the one not taken for the required core) 208, 331, 409, 413, 450, 406, 321, 415, 404 and 412. Majors in International Relations are advised to take certain courses for their college requirements and electives especially in language and history. Majors are advised to carefully plan their courses with their advisors.

REQUIREMENTS FOR THE MINOR
General Minor This minor is designed to provide the students with a comprehensive view of the entire discipline and is recommended for those students who may later contemplate graduate study or think that they might eventually like to change from a minor to a major in Political Science. It consists of a minimum of 12 credits beyond the freshman course. 101. The 12 credits encompass the following required courses: 208, 331, 409, and 405 or 406.

Concentrated Minor The following minors concentrated in a particular area are also available:

2. Comparative Government 208 and a minimum of nine credits from among 315, 318, 321, 408, 412, 415, and 450.
3. International Relations 309 and a minimum of nine credits from among 321, 318, 320, 402, 404, 409, and 450.

Selective Minor The Department of Political Science will also devise a minor from its course offerings to fulfill the particular needs and desires of a student in any major area of concentration. Such a minor must be structured in consultation with an assigned Political Science Department faculty advisor and the Department Chairman. A minimum of 6 transfer credits can be applied to the minor requirement.

1. Introduction to Political Science is prerequisite to all courses.

101 Introduction to Political Science 3 cr
An introduction to political science and the most fundamental concepts involved in the study of political society.

208 Comparative Political Systems 3 cr
A systematic multifocused analysis of selected political systems.

233 American National Government 3 cr
The institutional structure and policy-making processes of national government are examined as reflections of the assumptions of liberal democracy and the American social and economic systems.

240 American Political Parties 3 cr
An intensive study of the roles of political groups and political parties and the decision-making processes of the American system of government with attention devoted to the internal dynamics of these institutions.

241 The American Presidency 3 cr
A study of the role of the President at the center of the decision-making process in the American political system.

242 The American Congress 3 cr
An investigation of the operation of the Congress of the United States within the American system of government.

243 Politics and Society 3 cr
A study of political culture, political socialization, political participation, political cleavages and social structure.

276 Voting and Election Behavior 3 cr
An examination of the determinants of opinions and political beliefs, political participation, and voting behavior, the significance of democratic government of findings in these areas.

301 State and Local Government 3 cr
A study of the position of the state and local governments in the Federal Union.

309 International Relations 3 cr
A study of the major factors involved in international relations including such concepts as sovereignty, nationalism, balance of power, international law, and organization.

312 International Law and Organization 3 cr
A survey of the historical development and present role played by international law in the world community and the formation and operation of...
such organizations as the United Nations and its specialized agencies.

315 Politics of Third World Countries 3 cr
A topical study of the politics of the emerging nations including nationalism, political integration, political parties and the role of the military and elite.

318 Nationalism 3 cr
A study of the dynamics of nationalism with an emphasis on the role of nationalism in current world political problems. Includes the development of nationalism in Europe.

320 United States Foreign Policy 3 cr
A study of American foreign policy since the Vietnam era, with emphasis on the central present issues and the domestic sources of foreign policy.

321 Government and Politics of Eastern Europe 3 cr
An analysis of political developments in the communist regimes of Eastern Europe with special emphasis on relations between the USSR and Eastern Europe in the post-Stalinist era.

323 Constitutional Law Federalism 3 cr
A detailed examination of Supreme Court cases concerning the nature of American federalism—Constitutional and Presidential power, commerce clause/state power, judicial review, due process, clauses, and apportionment. Students are introduced to court and appeals procedures, the reading and briefing of court decisions, and the nature of the court review process.

324 Constitutional Law Civil Liberties 3 cr
A detailed analysis of Supreme Court decisions bearing upon Bill of Rights guarantees, with specific reference to the freedoms of speech, press, assembly, and religion. Students are introduced to the dimensions of search and seizure, right of legal counsel, equal protection, and due process rights vowing rights, and the adjudication of the fourteenth amendment application of rights to state action.

325 Constitutional Law Criminal Law 3 cr
This course will consider appellate cases in criminal rights and major aspects of criminal procedure. As with the Constitutional Law courses, it is a casework class. Students will read court decisions and will develop familiarity with briefing cases.

327 Research Methods in Political Science 3 cr
A study of the techniques of scientific inquiry into political phenomena, including research methods, data collection, analysis, and interpretation.

331 Peace and the Arms Race 3 cr
An analysis of the grave threat to world peace posed by nuclear weapons and the arms race. Special attention will be given to the political, ideological, and moral dimensions of the arms race.

402 Soviet Foreign Policy 3 cr
An analytical study of the development of Soviet foreign relations with special emphasis on the post-Stalinist era.

404 Simulation in International Politics 3 cr
Students spend the semester simulating an international conflict situation. They act as foreign policy decision-makers, applying the principles, concepts, and instruments of international politics. For majors only.

405, 406 Western Political Thought 3 cr each
A study of political ideas as distinct from and yet related to political institutions which constitute our present political heritage. 405 considers theorists from the classical period to the early 18th Century. 406 considers theorists from the later 16th Century to the late 19th Century.

407 American Political Thought 3 cr
An analysis of the issues which have played a fundamental role in American Politics from colonial church-state problems to modern liberalism and conservatism.

408 Theory of Comparative Government 3 cr
An examination of the basic theories and concepts in contemporary approaches to comparative political systems.

409 Theory of International Relations 3 cr
A study of various theoretical approaches to an understanding of international relations including political realism, systems analysis, decision-making, and equilibrium analysis.

410 Government and Politics of Germany 3 cr
A comparative analysis of the contemporary political systems of Western and Eastern Germany.

413 Government and Politics of the USSR 3 cr
An intensive analysis of the origin and evolution of the Soviet political system.

414 Public Policy 3 cr
A study of the elements, operations, and investigation of the way governmental units decide upon programs and policy objectives.

420 Contemporary Political Theory 3 cr
A study of central topics in political thought from Marx to the present time.

430 International Practical Politics 3 cr
A work and observation experience in government and political offices at the city, county, state, and national levels in the Pittsburgh area. Permission of department required.

436 Honors Colloquium in Political Science 3 cr
A detailed analysis of a selected topic.

450 Workshop-International Studies 3 cr
An intensive one-week interdisciplinary summer school course. This course presents politics, foreign policy, culture, religion and social problems of Third World countries. Several outside speakers augment Duquesne faculty.

DEPARTMENT OF PSYCHOLOGY

Chairman Rev. David L. Smith, C.S.Sp., Ph.D.

The undergraduate program of the Department of Psychology is designed to (1) introduce and familiarize students with the fundamental content issues and interests of various areas of psychology and critically evaluate and reformulate these in the context of psychology as a human science; (2) to foster intellectual and personal freedom and critical thinking as essential to the humanizing process; (3) to prepare the professionally oriented student for advanced study; (4) to provide a foundation for careers involving human services.

While the department believes that human scientific psychology is the most viable and encompassing approach to the study of man, it also realizes its responsibility to expose its students to other psychological approaches. Hence, every major with plans to enter graduate school in psychology is strongly encouraged to take advantage of the offerings in sister universities through the procedure of cross-registration.

REQUIREMENTS FOR THE MAJOR

The major program consists of 103-Introduction to Psychology plus a minimum of 24 semester hours. These credits must include 220 and 223. Majors desiring to pursue graduate study in psychology are strongly advised to take six additional credits through cross-registration at other universities (Learning Theory, Experimental, Perception Memory etc.), and Statistics (225 Fundamentals of Statistics offered by the Mathematics department may be considered part of the mathematics/science requirement). Finally, it is recommended that majors enroll in a hospital or community practicum for credit, and/or do volunteer work in a neighborhood clinic. Three credits earned in practicum count toward the 24 required credits, an additional three credits in practicum may be earned above and beyond the required minimum of 24. Information about such opportunities can be obtained from the department academic advisor.

The psychology department has set up a dual advisement system, departmental academic advisor and the faculty academic advisor. Prospective majors should consult the departmental academic advisor concerning the special procedure followed for the declaration of the major. A minimum of 15 credits in psychology exclusive of practicum must be taken at Duquesne University for the major.

REQUIREMENTS FOR THE MINOR

Requirements for a minor are 103 and 223 and any three of the following: 225 or 226, 280, 328, 340, 352, 361, 390. 400 level courses may be taken for the minor with permission of the department head. A minimum of nine credits in psychology must be taken at Duquesne University for the minor.

COUNSELING SERVICES

Personal counseling services are available to all students at the Center for Training and Research in Phenomenological Psychology located at the Chapel end of Centennial Walk.

103 Introduction to Psychology 3 cr
(Preliminary to all courses)

223 Introduction to Existential Phenomenological Psychology 3 cr
Introduction to a human-science alternative to psychology as a natural science. Prerequisite for 356 and 410, required for majors and minors.

225 Developmental Psychology I (Infancy and Childhood) 3 cr
Growth and development of the child, with emphasis on personality development.

53
226 Developmental Psychology II 3 cr
(Adolescence and Maturity)
Development from adolescence through adult stages to coping with death

230 Psychology of Community Experience 3 cr
Experience of community phenomena e.g. individuals versus group priorities intimacy vs privacy

280 History of Psychology I 3 cr
Overview of figures and issues in the history of psychology from precursors to present

328 Psychology of Personality 3 cr
Critical examination of major theories of personality

340 Social Psychology 3 cr
Foundations of social processes attitudes values and roles public opinion propaganda and communication personal participation in society

352 Abnormal Psychology 3 cr
Examination of theories and data on disordered human existence

356 Research Psychology Theory and Practice 3 cr
Review of theory and practice of traditional and human science research Includes student projects Prerequisite 220 223 permission of department head for non-majors

361 Psychology of Identity and Fulfillment 3 cr
The ways in which identity is lived individually and collectively Designed to be personally relevant to the life of the student Open to juniors and seniors only

370 Psychology of Aesthetic Experience 3 cr
Theoretical and empirical explorations of aesthetic experience

390 History of Psychology II 3 cr
Intensive study of selected historical figures in dialogue with contemporary themes Reading of primary sources Prerequisite 280

391 Applied Psychology Practicum 3 cr
An applied psychology setting provides opportunities for working directly with professionals Settings include psychiatric hospitals and community centers Majors only permission of Department head Repeatable once

392 The Individual and His World 3 cr
Examination of individual's relation to society from a developmental and cross-cultural perspective

393 Principles of Psychoanalytic Thought 3 cr
Examination of the times and contributions of Freud and selected other major psychoanalytic therapists Permission of department head for non-majors

394 Psychology of Language and Expression 3 cr
Communication as a live embodied relation of person to world and others Emphasis is on phenomenological theorists Permission of department head for non-majors

410 Advanced Existential-Phenomenological Psychology 3 cr
Detailed investigation of selected works in existential-phenomenological philosophy and psychology Prerequisite 223 Permission of department head for non-majors

432 Gestalt Psychology 3 cr
Contributions of Gestalt psychology (especially the works of Koffka Kohler and Goldstein) to traditional and human-science psychology Permission of department head for non-majors

450 Contemporary Issues in Clinical Psychology 3 cr
A human-science examination of the approach methods data and current issues of clinical psychology Permission of department head for non-majors

457 Independent Studies 3 cr
A tutorial course for an exceptional student who wishes to pursue a particular study with a faculty member For majors only usually those intending graduate study advanced coursework completed Permission of faculty member and department head required

490 Special Topic 1-4 cr
An visiting professor presents his/her specialty or a regular faculty member presents highly specialized studies or an experimental course Repeatable Prerequisites vary with the instructor Permission of department head for non-majors

ARIES OF CONCENTRATION

Sociology
The orientation of sociology is independent in the sense that it is concerned with what men in groups try to achieve and how successful they are Sociology is oriented around the problem of what men in groups actually do how they interact to meet needs where they are

Recommended courses 101 104 201 202 205 214 215 304 307 308 309 313 315 323 325 341 492

Criminal Justice Founded in a broad-based liberal arts curriculum this program is designed to provide the student with the opportunity to develop his potential as a professional in many areas of the criminal justice field including probation parole investigation corrections and research

Recommended courses 101 103 245 256 250 264 265 266 290 302 310 313 335 467

Gerontology As the size and characteristics of the elderly segment of the population have changed there has been increased interest in the study of the aging process its effects on the individual and society and its meaning for the future The Gerontology program is designed to develop the knowledge and skills required for a student's preparation as a professional in this specialty area

Recommended courses 101 210 317 324 327 411

Social Services The principle that is the basis for this program is that classroom learning provides the foundation out of which effective social/human services may be built Preparation for professional training and skill development is the emphasis

Recommended courses 101 103 212 213 314 450 451

REQUIREMENTS FOR THE MAJOR

A minimum of 24 semester hours not including 101 is required for a major in Sociology these must include 201 and 304 In consultation with the undergraduate academic advisor the major may select a concentration in general Sociology Criminal Justice Gerontology or Social Services/ Human Services The suggested course numbers for these concentrations are listed above with the corresponding titles and descriptions in the following section

REQUIREMENTS FOR THE MINOR

A minimum of 12 semester hours not including 101 is required for a minor 450 451 488 and 492 are required for majors only Minors may select a concentration in one of four areas above in consultation with the department advisor

Sociology 101 is a prerequisite to all courses except 103 Criminal Justice and 103 Social Work All 300 and 400 courses are for juniors and seniors only

Sociology

101 Survey of Sociology 3 cr
A broad survey of the social and cultural aspects of environment

104 Social Anthropology 3 cr
Study of the cultural aspects of human existence in early man and modern society

201 Sociological Theories 3 cr
A study of selected European and American theorists For sociology majors and minors only

202 Sociology of Social Problems 3 cr
Study of person-structure-change framework applicable to contemporary social issues

205 Person and Society 3 cr
Exploration of socialization the person's interaction with structure and culture small groups and collective behavior

214 Sociology of the Child and Adolescent 3 cr
Discussion of the child and adolescent socialization process in American society

215 Computer Uses in the Social Sciences 3 cr
An introduction into computer related skills with a focus on data management use of canned programs and the UNIX computer system

304 Methods in Sociology 3 cr
Discussion and application of techniques and research procedures used in sociological research

307 Leisure and Popular Culture 3 cr
Study of relationship between work leisure and popular culture leisure as a social problem will be considered

308 Ethnic Groups 3 cr
Comprehensive survey of roles performed and problems faced by ethnic groups

309 Women in Society 3 cr
The role of women in culture and the study of women's movements for liberation

313 Sociology of Sexual Behavior 3 cr
Discussion of sociological studies of sexual behavior

315 Social Development—Infancy to Death 3 cr
Study of the socialization process from the infant state to the dying state
**DEPARTMENT OF SPEECH COMMUNICATION AND THEATRE**

**Chairman** Eva C. Robotti, M.A.

The program provides training essential to the several areas of speech communication. The department offers both its majors and interested students from other fields the opportunity to choose courses from a particular area of concentration or the whole range of the discipline

**AREAS OF CONCENTRATION**

**Social Communication**

This focuses on the theories and techniques of human communication on both the personal and societal levels. The student of social communication examines the concepts and procedures which govern men's interactions as individuals and as parts of the mass. He also learns the practical arts of critical analysis and persuasive communication.

This training is excellent preparation for careers in law, government, administration, personnel, public relations, industrial communications, advertising, sales, social work, and all fields which involve human symbolic interaction. Internships are available to students who qualify.

Recommended courses: 101 102 204 206 208 302 304 306 311 402 411 412

**Theatre/Media**

The Theatre/Media concentration combines Aesthetic Communication skills, theatre history and theatre performance skills with media theory and skills. This concentration prepares the student for the fields of applied communication: theatre, radio, television, and public relations. Along with classroom theory and practice, students will have an opportunity to obtain practical experience in the studio and stage in Red Masquers productions and by participating in on-and-off-the-air work at WDUQ (905). Duquesne's twenty-five thousand watt National Public Radio affiliate.

Courses in radio and TV announcing and TV production afford the student the opportunity to work in a fully equipped TV studio. Internships are available to students who qualify.

Recommended courses: 140 141 190 204 251 280 290 351 352 370 400 412 451 470 490

**Speech Pathology/Audiology**

The profession of Speech Pathology/Audiology is concerned with impairments in the processes of communication—speech, language, and hearing. Upon completion of graduate education, a speech pathologist or audiologist may provide clinical services or work in basic and applied research. He or she may be employed in schools, hospitals, laboratories, community service centers, or colleges and universities. Speech pathology and audiology is a rapidly growing field and the demand for trained personnel far exceeds the supply.

This area of concentration at Duquesne is a pre-professional program designed to prepare the student for graduate study in speech pathology and audiology. The student concentrating in Speech Pathology/Audiology may be eligible to register for Speech 322, 422 with a 3.0 GPA in his/her major completion of all required courses and the permission of the department chairman.

Recommended courses: 120 140 204 220 221, 320 420 426

Co-requisites: Psychology 225 352

Advised Mathematics 223

Prospective Speech Pathology majors should declare the major before they begin their junior year

**REQUIREMENTS FOR THE MAJOR**

A minimum of 30 semester hours is required for a major in Speech Communication and Theatre. Majors will be required to enroll in three of the following courses: 101, 102 140 141, 190 204 Speech Pathology/Audiology. Concentrations will be required to enroll in Speech 120, 140 204, 220.

A maximum of 12 transfer credits in speech can be applied to the major requirements. A maximum of 6 credits may be taken in Independent Study and/or Speech/Media Internship.

**REQUIREMENTS FOR THE MINOR**

The minor consists of 18 credits: six credits in required introductory courses and 12 additional credits. There are four emphases that the student may follow:

1. **Social Communication**
   - 101, 102, plus 12 credits in any of the following: 204, 206, 208, 302, 304, 306, 311 402 404 411

2. **Theatre/Media**
   - 140, 190 plus 12 credits in any of the following: 141, 251, 280, 290, 351 352 370 451, 470 490

3. **Speech Pathology/Audiology**
   - 120, 220 plus 12 additional credits Courses 320, 426 are required; the remaining six credits may be taken in any of the following: 221 420 425

4. **General Speech Communication and Theatre**
   - Either 101 or 102, with 12 additional credits

Suggested activities for majors and minors in Speech Communication and Theatre include the Red Masquer Dramatic Organization WDUQ Radio and Television The Debate Team, and the Circle (student...
400 Independent Study (All areas of concentration) 1-3 cr
The student will work on a selected project under the supervision and guidance of a faculty member.
Prerequisite Permission of the instructor and Department Chairperson Must be taken twice

Social Communication

101 Communication and Society I 3 cr
Examines how man a being who must believe communicates his beliefs and how he utilizes cer-
tain kinds of beliefs which have proven funda-
mental through the ages to assist or exploit his
man

102 Techniques of Oral Communication 3 cr
Develops those communicative skills necessary to
truthful analyze discourse and to perform
effectively in public speaking situations which
confront the educated person

204 Interpersonal Communication 3 cr
Designed to investigate the various aspects of
interpersonal communication. Primary consider-
ation will be given face-to-face human interaction
in a variety of situations

206 Discussion and Group Process 3 cr
Develops those communicative skills essential for
functioning effectively in the small-group setting
Prerequisite 204

280 Nonverbal Communication 3 cr
Nonverbal messages are those messages transmi-
ted without the aid of language or in conjunc-
tion with language. They carry much information
about the emotional state of the sender. Some
components of nonverbal communication to be
covered are body movement, physical attributes
physical alterations, dress, space, time, touch
objects, the eyes, and the human voice

302 Organizational Communication 3 cr
Stresses the acquisition and application of skills
that will bring success in an organizational setting
Prerequisite 204 and 206

304 Persuasion
A study and application of principles and practices
that influence people's beliefs and actions. Prereq-
quisite Either 101 or 102 or permission of the
instructor

306 Advanced Public Speaking 3 cr
Students will be directed in the design and produc-
tion of the problem-solving presentation on a
major world problem. Presentations will be given
before live audiences from local high schools or
other organizations. If possible, presentations
will be videotaped. Prerequisite 102 and either 101 or
104

311 Communication and Society II 3 cr
Examines more completely and philosophically the
rhetorical perspective established in "Communication
& Society I" by applying that particular
perspective to contemporary systems of belief
Prerequisite 103 or permission of the instructor

402 Argumentation and Debate 3 cr
A course in applying the principles and methods of
critical deliberation to a significant contemporary
social issue. Emphasis will be on the advocacy
defending and relating a proposition of policy.
Prerequisite 102 or permission of the instructor

404 Intercultural Communication 3 cr
An investigation into the similar and different per-
cceptions of reality held by individuals and cultural
groups and how such perceptions affect the com-
munications process. Prerequisite 101 208

411 Communication and Imagination 3 cr
Examines how the strength of beliefs dominated by
imagination over beliefs dominated by science
has changed our understanding of com-

412 Speech/Media Internship 1-3 cr
An internship in communication industry or other
organizational setting. Prerequisite Permission of
department chairman required. May be taken twice

Speech Pathology/Audiology

120 Development of Language 3 cr
Focus will be on the acquisition of sound, mean-
ing and grammar systems from infancy through
childhood with emphasis on the comparative anal-
ysis of theories of communication development.
Physical, neuro-physiological and social bases of
language will be discussed. Socio-linguistic
differences will be referenced to the
Black language and regional variations

121 Sign Language (Manual Communication) 2 cr
Sign language systems used by and with the deaf
and hearing impaired will be presented in an over-
all introductory methods course. Participants will
be able to demonstrate ability to finger-
spelled and use basic signs in simple phrases and sentences.
Aspects of current trends in deaf awareness will
be included

140 Phonetics 3 cr
An approach to the English language based upon
the fundamentals of vocal and articulatory speech
sounds as systemized by the International Pho-
netic Association

204 Interpersonal Communication 3 cr
Designed to investigate the various aspects of
interpersonal communication. Primary considera-
tion will be given face-to-face human interactions
in a variety of situations

220 Introduction to Problems in Speech 3 cr
A survey of various speech disorders and their causes,
recognition and possible therapy

221 Anatomy and Physiology 3 cr
This course will study the basic neurological skel-
tetal and muscular structures involved in the
speech and hearing process. Prerequisite 220 or
permission of the instructor

320 Clinical Techniques in Speech Pathology 3 cr
This course will focus upon the clinical manage-
ment of speech and hearing problems. Past and
current treatment approaches and techniques
will be presented in relation to disorders of speech
and hearing. Different organizational procedures
and materials will be included. Prerequisite 120 220 or permission of the instructor

322 Speech Pathology/Audiology Internship 3 cr
Provides opportunities for observation of various
aspects of clinical work. Directed readings and
field trips are included. For Speech Pathology/
Audiology concentration majors only. Written
permission of department chairman required.
Open to juniors and/or seniors

420 Speech Problems of the Exceptional Child 3 cr
This course will investigate the speech and lan-
guage development speech problems and speech
remediation of the mentally retarded brain
injured aphasic learning disabled and cerebral
palsied child. The role of other professionals in
addition to that of the speech pathologist in speech
remediation will be explored. Prerequisites 120, 220 221 320 or permission of the instructor

421 Communication and Imagination 3 cr
Designed to examine the principles of interpersonal
communication. Primary consideration will be
given face-to-face human interaction in a
variety of situations

424 Radio Announcing I 3 cr
Application of the principles of good speech to the
announcing of news, sports, weather and commer-
cials, and to the art of interviewing

480 Acting I 3 cr
A study of the basic principles, theories and tech-
niques of acting, including various problems con-
fronted by the actor in the creation and interpreta-
tion of a role on television or film. Prerequisites 190 or permission of instructor

490 History of the Theatre 3 cr
The development of theatre as an art form in
Western civilization and in the Orient styles and
methods of production, artistic conventions,
growth of formal theatre, etc. As manifestations of
how man has seen his world through the ages

351 Television Announcing 3 cr
Continuation of Radio Announcing, but with the
added studies necessary for TV. Prerequisite 251

352 Radio Announcing II 3 cr
Continuation of Radio Announcing I with empha-
sis on interviewing and location reporting. Addi-
tional foreign pronunciation exercises. Prerequi-
site 251
470 Advanced Oral Communication of Literature 3 cr
A continuation of 370 with special emphasis on techniques for the oral presentation of specific literary genres. Prerequisite: 370

412 Speech/Media Internship 1-3 cr
An internship in communication industry or appropriate organizational setting. Prerequisite: Permission of department chairman required. May be taken twice.

451 TV Practicum 3 cr
The essentials of developing dramatic productions for television scripted commercials, serious and comic performances acted and taped. Prerequisite: Permission of the instructor.

DEPARTMENT OF THEOLOGY
Chairman John F. O'Grady, S.T.D., SSD
Duquesne's Department of Theology affirms that the academic study of religious experience is essential to a complete education. The department fulfills its role in theological studies by the pursuit of the following aims: 1) it emphasizes Catholic Theology, in dialogue with other Christian traditions, non-Christian traditions and Judaism as the key element in Duquesne's commitment to Catholic education on the university level; 2) it acknowledges the fact of the universal search for religious meaning and experience and seeks not only to offer the possibility of a study of the varied approaches to religious witnesses in history, but also to place Catholic Theology in communion with that quest; 3) it aspires to a fruitful encounter with other university disciplines since the department is convinced that theology's concerns are related to all vital human issues.

Accordingly, the department has organized its courses into three divisions: Biblical Studies, Christian Studies, and Selected Religious Studies.

REQUIREMENTS FOR THE MAJOR
The major program consists of a minimum of 27 credits. These must include 106, 213, 214, 220, 250, 498, and the remaining credits will be chosen in consultation with the student's advisor.

REQUIREMENTS FOR THE MINOR
A minor consists of four courses:
The department has also prepared suggested sequences which may be helpful to a student wishing to concentrate in a certain area of theology. Examples include Biblical Studies, Roman Catholic Theology, World Religions, Religion and Culture, and History, etc.

COURSE INFORMATION
The numbering of the course indicates the level of approach:
100 These courses are of the basic survey type, wherein emphasis is on breadth rather than on depth, and serve as background for other courses.
200-300 These courses treat of subject matter in a specific area of theology and in greater depth than in the 100 category.
400 Selected topics are dealt with at a more advanced level; independent research is required.

Biblical Studies
114 Interpreting the Bible 3 cr
An introduction to the principles involved in interpreting the Bible in relation to its different manners of expression: a study of key sections of the Bible to determine what these materials meant to those who wrote them and what their relevance is today.

213 Introduction to the Old Testament 3 cr
A presentation of the Old Testament writings in their dynamic context of culture, politics, and geography, as well as an introduction to their literary modes, theological themes, and practical approaches to interpreting key passages of the Old Testament.

214 Introduction to the New Testament 3 cr
A presentation of the books of the New Testament including their literary makeup, historical origins and testimony, and theological content; practical approaches to interpreting key passages of the New Testament.

Archaeology and the Bible 3 cr
An illumination through archaeology of the historical setting, the cultural background and the events described in the Bible, a general introduction to the techniques of archaeological investigation and a study of the principal archaeological sites in Palestine.

The Apostle Paul 3 cr
An exposition of Pauline literature emphasizing the person of Paul and his impact on the early Church.

Jesus in the Gospels 3 cr
A portrait of the person of Jesus Christ, based on a study of the 4 gospels with ample usage of recent scholarship.

The Old Testament Understandings of God 3 cr
Examination of the Theology of the various books of blocks of writing in the Old Testament, an attempt to draw together and present the major themes, motifs, and concepts of the Old Testament; a study of the relationship between the Old Testament and the New Testament. Prerequisite: 114 or 213.

Jesus Through Mans Eyes 3 cr
The fact of Jesus is everything he stands for; and every book of the New Testament has its interpretation of it. A study of different books as well as themes in the New Testament.

Field Experience in Biblical Archaeology 3 cr
Six weeks of supervised participation in an archaeological excavation in the Ancient Near East, experience in stratigraphic digging, pottery classification, the analysis of finds and recording methods offered every two or three years; approval of participants by core staff required.

Individual Topics in Biblical Studies 1-3 cr
The topics will change regularly and will be published within the department.

Christian Studies in General

140 Christian Understanding of the Human Person 3 cr
An investigation into the question of "What does it mean to be human?" according to Judeo-Christian teaching, a discussion of the relationship of the human person to self, others, the world, and the Divine as the basis for humanness: a study of the issues involved in these four relationships, e.g., freedom, grace, contemplation.

235 Christian Worship 3 cr
The meaning of ritual and worship in Christianity with special emphasis given to the history of worship and the developments in both Roman Catholic and Protestant worship since the Vatican Council.

Theology

274 Church History I 3 cr
A religious and historical exploration of the growth of Christianity from the first century up to the Reformations, discussion of those issues within the Church and the external forces which brought about major conflict and development.

275 Church History II 3 cr
Selected topics in Catholic and Protestant development from 1500 to the present day, special emphasis on the crises, revolutions and reforms that were central to this development.

345 Women and Christianity 3 cr
Survey of the Old and New Testament views of women and a history of the status of women in the Roman Catholic and major Protestant traditions with emphasis on the contemporary role and spirituality of women in Christianity.

351 Sexuality, Sex, and Morality 3 cr
An analysis of the nature of sex and sexuality, according to the sources and developments of Christian thought, the integration of these concepts into a contemporary moral and ethical system.

352 Human Life and Morality 3 cr
A discussion of the fundamental moral principles involved in making any of the "life decisions," the problem of the definition of life, and a survey of the varied moral approaches to the issues of war and peace, capital punishment, abortion, birth control, euthanasia, genetic engineering, and the new technology.

451 War and Peace in Christian Perspective 3 cr
An analysis of Christian teaching of the moral permissibility of using violence and participation in war from biblical times to the present, including an evaluation of the varieties of pacifism, non-violent resistance, and of just war theories.
470 Christian Mysticism 3 cr
A study of the manifold Christian experience of mysticism as experiential contact with God as seen in famous exemplars of mystical experience, e.g., Jesus Christ, Paul Ignatius of Antioch, Augustine, John Cassian, Catherine of Siena, Theresa of Avila, John of the Cross, and the Venerable Edmund Campion.

494 Individual Topics in Christian Studies 1-3 cr
The topics will change regularly and will be published within the department.

Roman Catholic Theology

106 Faith and Experience 3 cr
An examination of various forms of atheism and an exploration of Christian responses to their challenges, a study of the meaning of faith and revelation in its history and contemporary expression, an attempt to answer the question of faith's reasonableness.

108 Catholicism 3 cr
An explanation of the spirit, beliefs, and practices of Roman Catholicism, including its understanding of sacramentality, mediation and communion, a study of the Roman Catholic classics and issues confronting Roman Catholicism.

220 The Mystery of Christ 3 cr
A study of the person and meaning of Christ in historical and contemporary perspective, a discussion of the new bond between God and humanity, and the new era in the spirituality of humanity inaugurated by the Incarnation and the Passion-Death-Resurrection event.

230 The Church 3 cr
A study of the Christian community of believers in its origins, some of its major historical and dogmatic emphases and its contemporary understanding of itself, the Church as a mystery as Mystical Body as People of God as sacrament.

242 Contemporary Theological Issues 3 cr
An examination of theological developments in an era of renewal, reevaluation, and cooperation, e.g., belief and unbelief, Christian and secular humanism, the future with reference to hope, heaven, hell, afterlife, and resurrection in a secular age, suffering, and evil.

250 Conscience and Morality 3 cr
A Catholic perspective of the basic issues involved in the formulation of moral values with the developing person and of the sources upon which moral systems are based, a discussion of the absolute vs. the relative, traditional morality vs. new morality, and application of these principles to modern problems.

256 God and His Meaning 3 cr
A theological understanding of the problem of God, a consideration of the responses of various religions and philosophies to this problem, the origins and development of the theology of God in the Judaic-Christian tradition with special focus on Catholic development.

301 Marriage 3 cr
A personal-oriented and practical treatment of the marital union as seen in its Christian theological, psychological, and sexual aspects, a discussion of Christian marriage as a bond of love as a sacrament and as a way of human fulfillment.

331 The Church in the Modern World 3 cr
An analysis of the Church's role in human development today and in offering solutions to present problems of humanity in light of Vatican II's "Pastoral Constitution on the Church in the Modern World" and other related documents.

335 Theology of the Sacraments 3 cr
A practical treatment of the seven sacraments in relation to their significance for the Christian's daily spiritual growth and fulfillment, consideration of human needs for ritual and symbol, discussion of recent revisions and developments in sacramental theology.

475 Theology and Catechesis 3 cr
An examination of the principal theological and pedagogical themes of modern religious education and of the place of catechesis in the ministry of the Church, a presentation of the historical background of the contemporary catechetical renewal.

491 Experience in the Teaching of Religion 6 cr
One semester of supervised experience in teaching religion in a high school environment in conjunction with a cooperating high school teacher and University Department coordinator. This course is open only to majors in Theology upon approval of the Chairperson of the Department.

495 Individual Topics in Roman Catholic Studies 1-3 cr
The topics will change regularly and will be published within the department.

498 Seminar in Theology 3 cr
A critical analysis of selected topics in theology or of selected works by outstanding theologians, open only to juniors and seniors with a major or minor in theology.

Selected Religious Studies

180 Religious Experience 3 cr
An examination of the dimensions of mankind's religious experience, e.g., mystical, ritual, mythological, ethical, and scriptural, an analysis of the likeness and differences of how the Divine is sensed and responded to in varied geographical cultural and chronological contexts.

240 Studies in Black Theology 3 cr
An examination of the dimensions of the religious experience of Black Americans, e.g., its history, its relationship to African origins, to slavery, to racism to Christianity, and to Christian denominations, an analysis of special elements in that experience, e.g., Black Churches, preaching, music and the American Way of Life.

280 World Religions 3 cr
A survey of the history, beliefs, practices, and contemporary influence of the major religions of the world, including Hinduism, Buddhism, Confucianism, Taoism, Shintoism, African traditions, Judaism, Christianity, and Islam, a discussion of a basic methodology for understanding religions.

283 Studies in Judaism 3 cr
Each examines a series of modern Jewish histories to discover sources and traditions of the Jewish people in American, Israel, and the Soviet Union, view of the

284 Judaism People & Faith 3 cr
An examination of the dimensions of the religious experience of Jewish life today, the faith beliefs and practices of Jewish life today.
School of Business and Administration

HISTORY
The School of Business and Administration was established in 1913 as the School of Accounts and Finance. The rapid growth of the School necessitated a constant broadening of the curriculum until it covered all business subjects of fundamental importance.

In 1931 it was designated the School of Business Administration and with this change definitely became a professional school of business administration.

In 1971 the name was changed to the present designation to indicate broader preparation for activities in organizations of all types.

PHILOSOPHY AND OBJECTIVES
In accord with the educational philosophy and objectives of the University, the School of Business and Administration aims to assist students in their development of the natural and supernatural virtues. The general aim is to provide through the media of instruction and related collegiate activity the facilitation of purposeful character, intellectual accomplishment, emotional and social maturity, and professional efficiency.

The School of Business and Administration has the professional responsibility of developing in students such knowledge of business principles, procedures, and problems as will enable them to become self-sustaining members of the community; aware of their social and public responsibilities and dedicated to the enrichment of the resources for worthwhile living.

It seeks to produce graduates who, upon entering their chosen careers, will be effectively prepared to discharge their obligations to God, their community, and themselves as intellectual and moral beings.

The School attains this objective by guiding students through a cultural core program, a business core program, an elective area of advanced business subjects chosen on the basis of professional interests; co-curricular and extra-curricular activities; and established personnel services.

As a division of the University, the School of Business and Administration is obviously dedicated to promoting those University aims and objectives contained in the general statement.

The professional objective of the School of Business and Administration is to produce graduates who have acquired and developed:

1. An appreciation of the importance of initiative and who consequently are willing to assume responsibilities, work efficiently and harmoniously with others, and adjust to changing circumstances.
2. A respect for logical thinking and who strive energetically therefore to develop the capacities for analytical reasoning through the vigorous and orderly application of ethical and technical principles to problem solving.
3. An understanding of the personal and professional value of effective communications and a cultivation of their capacities for speaking and writing clearly and concisely.
4. An awareness of the important role of quantitative measurements in today's business and who have become skilled in the interpretation of mathematical accounting and statistical data with computer usage.
5. Sufficient knowledge in a professional area so that they can assume positions of responsibility with a background of learning-method and learning-impulse that will enable them to progress rapidly.

DEGREE
The School of Business and Administration grants the degree of Bachelor of Science in Business Administration. This degree may be awarded to those who satisfy the entrance requirements and complete successfully the School's degree program.

SECOND BACHELOR'S DEGREE
Persons who have received a Bachelor's degree from an approved college or university may be eligible to enter the program for a second Bachelor's degree in Business Administration. A second degree candidate must meet all requirements of the School's degree program. A minimum of 30 credits must be completed in residence.

THREE-YEAR BACHELOR'S/J D
A student who has completed 90 credits with a 3.5 or better overall average and who has satisfied all undergraduate curricular requirements may apply for the Bachelor's degree after successful completion of the first year of academic work at Duquesne University School of Law. Students interested in this program should consult the advisement office in the sophomore year.

BUREAU OF RESEARCH AND COMMUNITY SERVICES
Activity complementing direct instruction takes place in four ancillary units grouped under the Bureau of Research and Community Services. All function to provide students and faculty with an opportunity for professional development as well as to provide services to the University and the community at large.

Bureau of Research
The Research Bureau carries out an independent research program and cooperates with divisions of the School in facilitating the research of individual faculty members. Through the University Press, the Bureau issues monographs and other publications. From time to time contract research is undertaken for business, community, and governmental agencies.

The Bureau is a member of the Association for University Business and Economic Research and maintains an interchange of publications with similar organizations in other universities throughout the country.

Center for Administration of Legal Systems
The Center serves as the focal point for research activity in the administration of law. It engages in cooperative projects with other centers such as the center for Small Business Administration, where legal issues arise.

Center for Economic Education
The Center is charged with the responsibility of initiating and promoting economic education in the society at large. More specifically, it develops and coordinates economic education within the Western Pennsylvania and Tri-State area where the primary thrust of the Center focuses on upgrading economic literacy and teaching competence in the school system. The Center also conducts economic education programs for clergy, media professionals, and other opinion leaders.

Center for International Management
The objective of the Center is to develop a better understanding of the American involvement in international affairs and business and in management abroad through teaching and research. It is achieved through an interdisciplinary approach. The areas of current research focus are:

1. Trade expansion between the USA and Eastern Europe
2. Management in foreign nations
3. Problems in international business
4. International economic development with a stress on interaction among developed countries, and the relationship of developed and less developed countries
5. International political and legal issues

The Center has no teaching program of its own, most of its staff are faculty members from various schools and departments of the University or visiting foreign professors.

STUDENT ORGANIZATIONS
These organizations, limited to students in the School of Business and Administration, exist for the promotion of the scholarly and professional interests of members.

The Zeta Chapter of Beta Gamma Sigma, national honorary fraternity for accredited schools of the American Assembly of Collegiate Schools of Business, is established at Duquesne University. Membership in this honorary fraternity is limited to those in the highest 40 per cent of their class and to seniors in the highest 10 per cent of their class.

The Beta Alpha Phi Fraternity is the honorary scholarship society of the school.

Phi Chi Theta is a national professional commerce fraternity.

American Marketing Association, the student chapter, affords membership to students whose major interests include salesmanship, marketing, advertising, transportation, or foreign trade. A selected group of seniors is permitted, under faculty supervision, to participate in the meetings of the Sales Executives Club of Pittsburgh and the senior chapter of the A.M.A.

Delta Sigma Pi, a national professional business fraternity, is represented by the Theta Rho chapter.

The Association for Personnel Administration is the student group sponsored by and affiliated with the American Society for Personnel Administration.

DIVISIONS AND PROGRAMS
The School of Business and Administration is comprised of three Divisions: Quantitative Science Behavioral Science, and Economic Science.

Students entering the School of Business and Administration are expected to inform their advisors about their career objectives and their academic areas of concentration, and to consult with them when choosing junior and senior courses indicated in any of the three Divisions. Their proposed curriculum choices must, of course, include the University requirements and Business and Administration Core requirements as indicated in the illustrations set forth in this catalog. Consistent with their stated career objectives and with the concurrence of their advisors, students, except those whose area of concentration is Accounting, are to select any junior and senior courses from the School of Business and Administration curriculum to complete the required hours for graduation.

Regulations for certification in Accounting make the program very rigid, this is dealt with in the paragraphs following the Sample Program.

Students' concentrations should be based upon career objectives and constitute as broad and flexible an educational process at the undergraduate level as is possible. Career advice should be sought from many and varied sources in the University, including faculty and Career Planning & Placement Staff.

Students registering for 300-400 level courses are presumed to have passed freshman and sophomore required courses and have junior standing.
ELECTIVE COURSES ARE NOT NECESSARILY OFFERED EACH YEAR

FOUR YEAR SAMPLE PROGRAM

SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
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<tbody>
<tr>
<td>Courses</td>
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<tr>
<td>211 Intro Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>231 Prin of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>281 Probabilty &amp; Stat II</td>
<td>3</td>
</tr>
<tr>
<td>213 Legal Process</td>
<td>3</td>
</tr>
<tr>
<td>Theology or Non Business elective</td>
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TOTAL CREDITS = 15

JUNIOR YEAR

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<td>Credits Courses</td>
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<tr>
<td>361 Prin of Management</td>
<td>3</td>
</tr>
<tr>
<td>371 Prin of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>331 Business Finance</td>
<td>3</td>
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<tr>
<td>322 Inter Accounting</td>
<td>3</td>
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<tr>
<td>313 Managerial Acc I</td>
<td>3</td>
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<tr>
<td>381 Decision Making</td>
<td>3</td>
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TOTAL CREDITS = 15

SENIOR YEAR

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<td>Business elective</td>
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<tr>
<td>Non-Business elective</td>
<td>3</td>
</tr>
<tr>
<td>Non Business elective</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS = 15

**ELeGANT ACTION SIMULATION OR EXECUTIVE POLICY**

The accounting faculty recommends that students concentrating in accounting take Accounting 211, 212, 311, 312, 314, 315, 411, 412, 413, and 251-Legal Process, as well as at least one of the following: Law 335, 345, 355. It is recommended that the student achieve an overall B average in Accounting 211, 212 before attempting Accounting 311 and a minimum grade of C in both 311 and 312 before attempting the remaining 300 and 400 level courses.

Three credits in Theology are required for Catholic students. Others may take theology or may substitute three credits in the departments of History, Philosophy, Political Science, Psychology or Sociology.

ACADEMIC REGULATIONS

ACADEMIC LOAD

Students may normally carry five courses in one semester. A schedule of more than five courses or 15 credits must be approved by the Dean. In the summer sessions, students normally carry one course a week, i.e., six credits in the six-week session. A 12-credit schedule in a regular semester is considered full-time study. Students on academic probation may not take more than 12 credits.

EFFECTIVE CATALOG

Degree requirements are those stipulated in the catalog of the year in which a student matriculates. The student is responsible for knowing the requirements for the degree. Requirements may be changed without notice or obligation. This catalog has been prepared on the best information available as of May 1984.

CLASS ATTENDANCE

Regular class attendance in the School of Business and Administration is normally required for maximum educational advantage. The responsibility for all course material rests wholly with the student. It is the prerogative of each instructor to establish specific policies for attendance at tests, examinations, class lectures, deadlines for reports, and other specific school or course requirements.

A student who is unable to attend class because of serious illness, hospitalization, a serious accident or other extenuating circumstances is responsible for notifying the office of Academic Advisement. The student should supply a written verification as soon as possible. A student who is absent for cause is expected to complete all of the work in all courses. It is the student's responsibility to make up all assignments in all courses and to be familiar with any instructions which may have been given during the absence.

HANDICAPPED STUDENTS

Handicapped students requiring special assistance are urged to notify the class instructor or the Academic Advisement Office before the first class and have the necessary accommodations implemented. Handicapped students are encouraged to consult the Academic Affairs Office for assistance.

DIVISION OF QUANTITATIVE SCIENCE ACCOUNTING CURRICULUM

CPA REQUIREMENTS

Students who desire to become certified public accountants in Pennsylvania and who have been graduated from a four-year program in a college approved by the Board of Education may sit for the CPA examinations. The degree program of the University is so approved.

Graduates may sit for the CPA examination in other states, among which are New Jersey and New York.

211, 212 Introductory Accounting 3 cr each

An introduction to the language of accounting basic accounting concepts and principles. Examinations. An extensive study is made of accounting information for management decisions. Offered every semester.

311, 312 Intermediate Accounting 3 cr each

This course is primarily concerned with an investigation and analysis of the accounting problems and practices of the corporation, with detailed study of the component elements of the balance sheet and income statement. Basic treatments of cost and alternative methods in the accounting cycle. Financial statements, their form, content and use. Accounting problems of the corporation. Detailed analysis of the balance sheet accounts and the uses of working capital. Prerequisites 211, 212. Offered every semester.

313 Managerial Accounting 3 cr each

Studies of the techniques involved in the gathering, recording, interpretation of accounting and statistical data used in the solution of internal problems of management. Some of the topics covered are: construction analysis and interpretation of reports, establishment of production operating and financial standards, measurement of management performance, use of budgets in managerial control, use of cost data and interpretation of cost reports. Use of quantitative data in the formulation of polices. Consideration of various aspects of Federal State and local taxes. The effect on managerial decisions. Recommended for non-accounting students. Prerequisites 211, 212. Offered every semester.

314 Advanced Accounting 3 cr each

This course applies fundamental theory to a number of important activities in business. Activities studied are partnerships special sales procedures and fiduciary relationships. Prerequisite 311. Offered every semester.

315 Cost Accounting 3 cr each

Basic cost accounting procedures are discussed from the following viewpoints: cost principle, cost determination cost control, cost analysis. Topics include cost terminology, planning and control techniques, and development and application of overhead rates. Cost behavior patterns are treated in conjunction with development and application of overhead rates. Standard costing. Job order costing. Process costing. Joint products and by-product costing are treated in detail. Methods of judging managerial efficiency, inventory control and management control systems are also stressed. Prerequisites 211, 212. Offered every semester.

411 Auditing 3 cr each

Standards and procedures employed by auditors in the examination of financial statements for the purpose of rendering an opinion are studied and evaluated. Emphasis is placed on theory and philosophy of auditing, however, case problems are used to demonstrate the application of the principles studied. Prerequisites 312. Offered every semester.

412 Introductory Income Tax Accounting 3 cr each

This course is a study of basic tax and procedure affecting primarily individuals and to a lesser extent partnerships and corporations. Principal topics include the income tax, personal exemptions, income, deductions and sales and exchanges of assets, and credit. Emphasis is placed on problems to demonstrate the application of the principles studied and use is made of official forms for demonstration purposes. Prerequisites either 311 or 313. Offered every semester.

413 Business Information Systems 3 cr each

A course designed to introduce students to management information processing systems and the transformation of information systems to meet specific types of informational requirements. Topics include data base concepts, file storage considerations, development methodology, design, implementation and management considerations of business data systems. The course presumes a familiarity with basic computer programming and accounting 211, 212. Offered every semester.

414 Corporate and Partnership Taxation 3 cr each

This course will acquaint the student with the principles of tax laws as they apply to corporations and their shareholders and to partnerships and their partners. Rather than emphasizing tax return preparation, the course's concentration is upon preparing students to make reasoned and sound judgments regarding the tax consequences of business transactions. Prerequisite 412. Offered every spring.

419 Seminar in Accounting 3 cr each

This course is designed to develop a student's ability in technical expression, deepen his understanding of accounting theory, and acquaint him with
FINANCE CURRICULUM

Students who desire to function in finance, either in the world of private business, government bodies, or in any area of securities are encouraged to select from the several groups of courses that place emphasis on specific material leading to that end. The professional designation of Chartered Financial Analyst (CFA) is offered by those in the securities industry. Suggested courses for students interested in this area are 336, 337, 433.

The designation in the life insurance area for professional personnel is (CLU) or Chartered Life Underwriter and CPCU for property and liability insurance. For students interested in careers in insurance courses 334, 434 and 435 are recommended.

331 Business Finance 3 cr
The aim of this course is to combine the study of financial institutions in our society as they perform their function of either the creation of the medium of exchange or of taking existing funds from sources of excess to sources of supply. Further, to develop an understanding of the construction of the portfolio of the institutions in order to understand why each employs their available funds as they do, knowledge about interest rate movements and their effects on business and the development of financial instruments used within the business society. Through a research paper, the student has the opportunity to develop a major area in detail. Emphasis is primarily on the role money and banking take in relationship to business entities.

Offered every semester

332 Money and Banking 3 cr
To develop knowledge about the role of financial institutions in our society as they perform their function of either the creation of the medium of exchange or of taking existing funds from sources of excess to sources of supply. Further, to develop an understanding of the construction of the portfolio of the institutions in order to understand why each employs their available funds as they do, knowledge about interest rate movements and their effects on business and the development of financial instruments used within the business society. Through a research paper, the student has the opportunity to develop a major area in detail. Emphasis is primarily on the role money and banking take in relationship to business entities.

Offered every semester

333 Financial Management 3 cr
The course is designed to provide a theoretical or conceptual framework that a financial manager can use to reach decisions. Material is presented with the purpose of involving the student in the fundamental decisions and compromises of the financial manager as he faces choices between risk and return. Reading material, case material, computer analysis of financial problems and a research project are tools to be used.

Prerequisite 331

Offered every year

334 Risk Management 3 cr
A study of the broad spectrum of risk exposure in a business enterprise, with special attention to the need for identifying these in terms of nature and magnitude. Emphasis is on techniques available to aid the decision-making process as applied to the finance function of business. Secondary emphasis is given to the securities markets, financial projections, organizational form, mergers and consolidation and reorganization.

Prerequisites Accounting 211, 212 or the equivalent

Offered every semester

335 Business Financial Problems 3 cr
The aim of this course is to provide a vehicle in which the student can take material from previous courses both of a financial nature and that from other disciplines and through its utilization solve problems primarily of a financial nature. It also provides the student with an opportunity to learn to write and deliver professional opinions on how to solve business problems. While the course is primarily taught through the case technique, other methods are also used. The student is expected to be able to identify problems, reach conclusions, recommend solutions, and identify techniques on how they might be implemented.

Prerequisite 331

Offered every third semester

336 Security Analysis 3 cr
An intensive study of the analytic techniques applicable to the selection of the various securities of private as well as public entities. Consideration is given to the markets in which these securities are traded and the types of information that are available and necessary to the decision-making process of the investor as the attempt is made to measure the value of a particular security. Several models are examined in seeking their appropriateness in establishing the relative worth of a security. The merits of both the fundamental and technical approach to security analysis are considered for their contribution to the analysis of a security.

Prerequisite 331

Offered every year

337 Investment Analysis 3 cr
It is the aim of this course to present material that will be useful to the student in developing an understanding of the various types of investments which may be available for a portfolio investment. Discussion of the various risks that a portfolio may be subject to and further the importance of the various risks to the various types of portfolio is presented. The basic elements of portfolio theory are presented. Various quantitative and descriptive techniques that are used in portfolio development are investigated. Techniques for measuring the effectiveness of the portfolio are illustrated.

Prerequisites 331, 336, or special permission of the instructor.

Offered every year

422 Credit Management 3 cr
This course will be taught in such a manner so as to give the student a thorough understanding of the function of credit management. In order that the student be afforded a maximum opportunity to grasp such information as presented in the literature and in the classroom cases, problems, and field experience may be assigned. Through these experiences the student will have the opportunity to integrate the knowledge gained from text material and other financial sources with that of other disciplines to arrive at a logical sound credit decision.

Prerequisite 331

Offered every third semester

433 Financial Markets 3 cr
An extensive and intensive study of the markets in which the financing of needs take place. Study is made of the markets for borrowing and lending of capital, both short-term and long-term. Financial institutional structures are given emphasis as they relate and interact when serving as sources or intermediaries and users of funds. Research by the student is required to afford the student the opportunity to concentrate on an intensive effort upon an individual topic.

Prerequisite 331

Offered every third semester

434 Life Insurance 3 cr
A study is made of the risks of death and longevity as they occur in personal and business situations. Analyses are made of various forms of life-insurance and annuity contracts and their uses, with emphasis upon their functions as instruments of estate creation and administration. Uses of insurance in connection with partners and key men, and in connection with bank loans, are explored. Attention is also given to accident and health coverage, group insurance, and other insurance of life insurance companies.

Prerequisite 331

Offered every third semester

435 Property and Liability Insurance 3 cr
A study of business and personal applications of casualty fire, and liability coverages in the form of both insurance and bonding, including the fields of workmen's compensation, landlords', and tenants' liabilities, burglary, robbery, and theft, automobile, credit and title insurance, fire and related lines, fidelity and surety bonding, and relevant aspects of inland and ocean marine.

Prerequisite 331

Offered every third semester

437 Fundamentals of Real Estate 3 cr
A study of the problems involved in financing residential, commercial, and industrial properties, as well as the real estate industry from the points of view of both owner and lender. Methods of financing covered include use of individual and business equity, equity secured by mortgages, land contracts, sale-and-lease-back arrangements, and creative syndications. Attention is given to the regulations governing the activities of real estate agents and brokers. Special attention is given to the classification of real estate, the characteristics of real estate, and the methods of financing of real estate. Through a research paper the student may be assigned.

Prerequisite 331

Offered every third semester

439 Seminar in Finance 3 cr
Concentration upon selected contemporary topics presented by distinguished visiting professors of finance or resident faculty. Open only to senior students. Offered as needed.

QUANTITATIVE METHODS CURRICULUM

Students in the undergraduate School of Business and Administration complete a basic sequence in Quantitative Methods. This sequence is concerned with the application of mathematics, statistics, and electronic data processing to the analysis of business and economic problems. The objective of the program is to increase the student's knowledge and understanding of the uses of mathematics, statistics, and computers as aids in decision-making. The basic sequence is comprised of these courses: 181, 281, 282, and 381. Prior to entrance into the institution, Mathematics 109 and/or 111 in the College or the equivalent are required.

In addition to the basic sequence a number of electives are offered for students wishing to include quantitative management science techniques in their areas of concentration.
181 Introduction to Computers 3 cr
An introduction to the basic concepts of computer programming in algebraic and representational languages. The course introduces the algorithmic approach to problem-solving and continues through the development of flowcharts and programs using BASIC or FORTRAN. Brief treatment is also given to other business-related languages. Prerequisites: Mathematics 110. Offered every semester.

281, 282 Probability and Statistics 3 cr each
This sequence includes the basic ideas of descriptive statistics, inductive statistics, and probability. Among the topics covered are frequency distributions, measures of central tendency, measures of dispersion, sets and set operations, elementary probability theory, probability distributions, sampling distributions, statistical estimation, testing of hypotheses, time series analysis, simple linear regression and correlation, and multiple regression. Prerequisites 181 and Mathematics 111. Offered every semester.

381 Introduction to Decision Sciences 3 cr
The application of the scientific method to the solution of business problems. The course includes various models and the methods of applying them to business situations. The models covered include linear programming, simulation, queuing, and inventory optimization. The use of library computer programs will be emphasized. Prerequisites: 281, 282. Offered every semester.

MANAGEMENT INFORMATION SYSTEMS CURRICULUM
The Quantitative Science Division offers an area of concentration in Management Information Systems to prepare students for career opportunities in business application programming, systems analysis, and data processing management positions. The course work is designed to prepare students in solving complex problems within organizations with the assistance of computers and computer programs. For the area of concentration completion, 382, 383, 481, 482, and 483 are required. In addition, three elective courses must be taken from the following: 384, 385, 386, 484, and 485.

382 Data Processing with COBOL
Orientation towards data processing applications through COBOL. The scope of the course ranges from an introduction to data processing, data management, debugging, and testing the programs to the input, output, and file processing and report generation. Offered every year.

383 File Processing
Deals with file processing in terms of its cost and efficiency. The topics include data structures, file accessing mechanisms, sorting, merging, report writing, and updating and managing sequential and non-sequential files. The use of computer languages will be used for file processing. Offered every year.

384 Advanced Programming
Structured programming is introduced. Emphasis is on a sequence of increasingly complex business applications in one of the computer languages. Arrays and concepts of files processing is presented. Offered as needed.

385 Computer System
Designed to develop an understanding of the hardware components of a modern computing system and the components and functional characteristics of different types of computer systems. A basic understanding and appreciation of the internal operation of the computer system through assembler language will be developed. Offered as needed.

386 Computer Simulation
Oriented to design and implement simulation models to study the behavior of the system. The validation of such models and their results for the purpose of decision making in management situations. General purpose simulation models financial system models will be discussed with appropriate computer language. Offered as needed.

481 Systems Analysis and Design
An overview of all the phases of life cycle of the system development with the emphasis on strategies and techniques of structured analysis and design to provide a framework for the managers to achieve their goals and objectives. Prerequisite: 382. Offered as needed.

482 Data Base Management Systems
The focus of the course is data base structure, processing and implementation. The topics include data base organization, query language, data integrity, security, privacy, and recovery capabilities. The hybrid of the network and relational approaches to data base systems with an overview of several commercially available data base management systems will be discussed. Prerequisite: 481. Offered as needed.

483 Management Information Systems Project
Advanced coverage of strategies and techniques of a structured systems development project, designing of data base specifications. The project management methods, project scheduling and control, formal presentations and group dynamics in the solution of Information Systems problems will be discussed. Students will work as a team to solve the project. Prerequisite: 482. Offered as needed.

484 Distributed Data Processing
Designed to develop an understanding of the features of centralized, decentralized and distributed system with the emphasis on the impact of distributed system on the business enterprise. Modes, data transmission and various devices required to implement distributed data processing system will be discussed. Offered as needed.

485 EDP Audit and Control
This course will deal with the fundamentals of EDP audit and control process and the techniques used in EDP audits. The particulars real-time, time-sharing systems and computer service bureaus will be discussed. Offered as needed.

DIVISION OF BEHAVIORAL SCIENCE PROGRAM GUIDE
The present combination of required courses and free electives gives the student a solid foundation in business and at the same time, allows him to follow his inclination in a special field of endeavor. At the same time, the greater the freedom of choice, the greater the need for helping the student in selecting courses in a meaningful way.

Students should be aware that they can use this freedom either
1. To broaden their cultural background by expanding in many different fields of knowledge.
2. To establish with the help of their advisor, a background of specialized knowledge in the field in which they have their strongest interest.

Several Study Programs—combining a concentration in Business (24 credits) with a judicious choice of electives from the College (27 credits)—are given as illustrations of the flexibility and the depth possible under the present program. Presently, Study Programs are offered in

- Industrial Relations
- Law Administration
- Marketing Management
- Production
- Transportation and Traffic

The listing of these Study Programs is only indicative; not inclusive. Others may be structured, and the suggested areas can be modified according to the occupational objectives and preferences of the student.

INTERNATIONAL BUSINESS CURRICULUM

141 Physical and Economic Geography 3 cr
This course examines the present and potential products of the world's major geographic regions. The course concerns itself essentially with man's utilization of natural resources in earning a living. Attention is given to the geographical foundations and operations of major industries, including agriculture, manufacturing, extractive activities, and transportation. Domestic and world trade movements are analyzed. Offered every semester.

142 Economic Development of Europe and America 3 cr
A survey of the evolution of Western economic institutions and business practices. The origin of capitalism, the commercial and Industrial revolution, the rise of the bourgeoisie, and the spread of capitalism are examined. A study is also made of the institutional development and productive growth of the United States economy. Emphasis is placed on analyzing economic issues, particularly the evolution of business institutions, within a historical context. Offered every semester.

441 International Business 3 cr
A study of the techniques of international trade. Emphasis is given to the contract overseas equipment, customs procedures in this country and abroad, marine insurance, packing for overseas trade, financing exports and import shipments, foreign exchange, and carriage of goods by air. Prerequisites: 371, 221, 222. Offered every year.

442 International Economics 3 cr
This course is an introduction to international trade theory and the principles of international monetary economics as well as foreign trade policies. Topics to be discussed include the classical and neo-classical theories of comparative advantage, foreign exchange markets and balance of payments, adjustment mechanisms, analysis of the consequences of trade regulation and international liquidity problems. Prerequisites: 221, 222. Offered every second year.

454 The Law of International Commercial Transactions
This course provides the student with an overall perspective of the basic legal problems involved in doing business with and in other countries. Topics covered include an introduction to foreign legal systems, study of various forms of business organization and the legal and institutional development and productive growth of the United States. Emphasis is placed on analyzing economic issues, particularly the evolution of business institutions, within a historical context. Offered every semester.

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A study of the techniques of international trade. Emphasis is given to the contract overseas equipment, customs procedures in this country and abroad, marine insurance, packing for overseas trade, financing exports and import shipments, foreign exchange, and carriage of goods by air. Prerequisites: 371, 221, 222. Offered every year.

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LAW ADMINISTRATION CURRICULUM
This curriculum is designed to prepare professionals to aid in the solutions of one of society's most critical problems—that of the administration of legal systems. Future executives in court management, correctional institutions, and control systems (law enforcement) receive a broad interdisciplinary educational experience with the basic core coursework in the School of Business and Administration.
Other coursework may be appropriate to fit a student’s career objective. Counselors and school officers should be consulted.

PRE-LEGAL CURRICULUM

The curriculum of the School of Business and Administration meets the requirements for registration for general purposes of the State Board of Law Examiners in Pennsylvania, and of the State Education Department of New York.

Coursework in the various areas of the School of Business and Administration provides good preparation for the professional study of law.

251 Legal Process
An introductory course exploring the nature of law, its sources, its relation to society and government. The relationship between law and the executive, legislative and judicial functions of government. Law as a social institution. Pre-requisite: 251 Offered every semester

354 Commercial Transactions
Study of the law pertaining to the formation of contracts, the legal requisites of a enforceable agreement, the transfer of contractual rights and duties, the discharge of contracts, and the relationship between principal and agent. Pre-requisite: 251 Offered every semester

MANAGEMENT CURRICULUM

In accord with the objectives of the University and of the School, the Management Curriculum aims are:

1. To acquaint students with managerial concepts and practices in both profit and non-profit organizations.

2. To offer an opportunity for some degree of specialization to those students who are interested in a study program in management.

361 Principles of Management 3 cr
This course represents an initial introduction to the essential principles of management centered around the concept of management being a basic process which is distinct and applicable to all enterprises. The course is designed to enable students to develop and understand the fundamentals of management, making up the management process. These functions constitute the framework around which this course is built. Emphasis is given to planning which is rapidly growing in managerial importance. Decision making, managerial creativity, and the art of management are thoroughly developed. Offered every semester

362 Behavioral Science 3 cr
This course is an introduction to the scientific study of behavior. It incorporates concepts from the disciplines of anthropology, psychology, sociology, economics, law, and political science, as well as from the newer fields of organization theory and decision theory. This interdisciplinary approach to behavior provides an integrative framework for transfer to any organizational setting. Pre-requisite: 361 Offered every year

363 Production Management 3 cr
A follow up course to Principles of Management in which all important phases of management are developed, including purchasing, inventory, control, motion and time study, plant layout, pricing, etc. are covered. Other related organizational problems are considered. An intermediate course to be used as a basis for further special treatment of management areas in the advanced courses. Pre-requisites 361 and 281, 282 Offered every second year

364 Personnel Management 3 cr
A course presenting techniques of manpower management. Includes study of recruiting and screening techniques, training programs, merit rating, wage payment plans, safety, disciplinary programming, etc. Current practice is presented in the form of case material. Pre-requisite: 361 Offered every semester

365 Industrial Relations 3 cr
A course developed to present to the student historical knowledge of the labor movement current status and importance in industry, and the legal status of labor governing the actions of management in a myriad of ways. Presents the role of labor management and government in collective bargaining and current industrial relations policies and practices. Pre-requisites 361 Offered every second year.

466 Wage and Salary Administration 3 cr
An advanced course involving treatment of the major wage administration problems. Coverage will include such related and diverse facets of compensation as analysis of the contemporary concepts of wage and salary administration, such as cost of living and merit rating, appraisal of various payment approaches, such as incentive programs and profit sharing, structuring a wage program, analysis of the final effects of such technically oriented practices on the functional areas of management. Pre-requisite 361 Offered every year

491 Executive Action Simulation 3 cr
A course incorporating the Games Theory Approach. The teaching techniques of Case Method and Role Playing are combined in a simulated business environment in which the students make the decisions affecting the conduct of a business. Participants are divided into teams with key corporate duties being assigned and several teams compete against each other in an attempt to operate the “firm” on the optimum profitable basis. Pre-requisites: Senior standing and 361. Open only to students in the School of Business and Administration. Offered every semester

492 Executive Policy 3 cr
Integrates concepts and skills from all functional areas of business and administration in decision making under conditions of uncertainty. Makes use of case histories and other information to allow students analysis and problem solving with the organization as a whole. Pre-requisites: Senior standing and 361 Offered every semester

493 Independent Scholarly Study 3 cr
Student must initiate an original research project in a field of business of his choice. The project is then scrutinized by a Committee of three Faculty Members. If the project is approved, the Dean will choose a faculty member as director of the project. The project must be completed within an academic semester. Pre-requisite: Student must qualify as a University Scholar. Offered every semester

494 Field Study 3 cr
Organized group study under specific programs beyond the classroom. Participants will be required to utilize analytical and decision making abilities in projects in an action setting under faculty supervision. Pre-requisite: Approval of the instructor. Offered every semester

MARKETING CURRICULUM

In accord with the objectives of the University and of the School, the Marketing Curriculum aims are:

1. To develop an understanding and appreciation of distribution in our economy.

2. To explore the many basic activities involved in the marketing concept and in matching products to markets.

3. To provide an area of specialized study for those students who wish to pursue the marketing phase of business.
371 Principles of Marketing 3 cr
The emphasis throughout this course is on problem solving and decision-making in marketing. The basis for the course is a systematic analysis of customer behavior and the development of marketing policies and advertising campaigns. Marketing strategy is derived from fundamental ideas and designing a marketing mix is stressed to give the student an insight into these areas and the reduction of risks is emphasized through the use of quantitative and qualitative market research techniques. Offered every semester.

372 Marketing Problems 3 cr
This course employs the case method illustrative of typical marketing problems such as merchandise distribution, advertising selection of channels of distribution, and development of new products. These problems are analyzed as they affect different middlemen in the marketing structure including manufacturers, wholesalers, jobbers, brokers and similar functionaries. Theories of marketing are subjected to the test of practical examples so that the student may develop a more realistic grasp of the principles involved and the value of the practitioner's judgments. Current marketing developments are studied. Prerequisites 371. Offered every semester.

373 Sales Administration 3 cr
This course introduces the fundamentals of salesmanship and the problems confronted by the sales manager. Topics include such areas as production planning, pricing, packaging, qualitative and quantitative market analysis, and specific sales management functions of selection, training, equipping, compensating, supervising, and controlling salesmen. Prerequisite 371. Offered every spring.

441 International Business 3 cr
See International Business Curriculum.

471 Marketing Research 3 cr
This course examines the means and methods of business management used to get the necessary information for effective marketing. The course content will emphasize the behavior of customers and the logical basis of economic reasoning. Emphasis is placed on understanding the behavior of households and firms under competitive and imperfectly competitive market conditions. Offered every semester.

222 Principles of Economics I 3 cr
This course introduces the economic concepts and principles necessary to understand the nature of economic systems. Topics include the theory of the firm, the theory of the individual, the role of market systems, and the role of government in economic systems. Offered every year.

221 Principles of Economics II 3 cr
The context of the course is designed to acquaint the student with concepts and principles of national income and on general social welfare. The course also includes a comparative study of problems in labor economics in American and other democratic countries. Prerequisites 221, 222. Offered as needed.

421 History of Economic Thought 3 cr
This course introduces the student to the history of economic thought from the Age of Mercantilism to 1850. Major emphasis is placed on understanding the behavior of household and firms under competitive and imperfectionally competitive market conditions. Offered every semester.

422 Business Cycles and Forecasting 3 cr
This course is designed to study the process of economic change. Analyses of seasonal cycles and secular movements will be undertaken. Theoretical and empirical aspects will be covered. Forecasting techniques will also be studied. Offered every year.

423 Business Cycles and Forecasting 3 cr
This course is designed to study the process of economic change. Analyses of seasonal cycles and secular movements will be undertaken. Theoretical and empirical aspects will be covered. Forecasting techniques will also be studied. Offered every year.

424 Business and Public Policy 3 cr
A study of the regulatory techniques used by government to influence and modify business behavior. This course also includes an analysis of the structure, conduct, and performance of various industries and the effect of government regulation. Emphasis is given to anti-trust laws and special regulatory problems. Prerequisites 221, 222. Offered every year.

425 Current Economic Issues 3 cr
A seminar-like discussion of the state of the nation's economy and its current problems and their basis of critical examination of professional journal articles and economic reports by official and private sources (such as the President's Council of Economic Advisers). The purpose of the course is to give students the ability to coordinate and apply the analytical knowledge he has acquired during his undergraduate study of economics and related fields of social science and business administration. Prerequisites 221, 222. Offered every year.

426 Monetary Theory and Policy 3 cr
This course presents the general theoretical foundations of monetary theory and policy. The policy implications of these theories, past and present, will be emphasized. Concentration will center upon policy proposals and related policy issues of concern to the student since World War II. The theories and contributions of Hicks, Keynes, Friedman, Tobin, among others, are reviewed. The role of interest rate is reviewed along with price-wage controversies and international gold flows and the role of interest rate. Monetary policies Prerequisites 221, 222. Offered every year.

427 Theory of Economic Development 3 cr
The purpose of the seminar is to provide a vehicle for advanced students to investigate some subject areas in the field of Economic Theory. The seminar is designed to study the process of economic change. Analyses of seasonal cycles and secular movements will be undertaken. Theoretical and empirical aspects will be covered. Forecasting techniques will also be studied. Offered every year.

442 International Economics 3 cr
See International Business Curriculum.
## School of Education

### HISTORY
Prior to 1929, teacher preparation courses were offered through a department of the College of Liberal Arts and Sciences. In that year, the newly-organized School of Education granted its first degree in programs of secondary education. The following programs have since been approved for certification by the Department of Education of the Commonwealth of Pennsylvania, music education in 1930, graduate education in 1936, elementary education in 1937, guidance in 1952, school psychology in 1969, early childhood education in 1969, early childhood education in 1975, school supervision in 1976.

### SELECTION AND ADMISSION
Candidates who express a desire to become teachers are admitted to the School of Education through the University Office of Admissions (apply to Director of Admissions Duquesne University Pittsburgh PA 15282). The curriculum for the first two years is devoted to the broad learnings in general and basic professional education and beginning course work in a major discipline or area of concentration. The School of Education includes and maintains in its enrollment only those students who give definite indications of teacher potential. Students are therefore expected to demonstrate developing personal and professional characteristics, attitudes, and competencies which will recommend them as worthy candidates for the teaching profession. Evaluation and approval by the faculty is based on the student's development of:

1. A well-balanced personality as evidenced through personal appearance, health and vitality, emotional maturity, verbal fluency, self-confidence, cooperation, judgement and tact, adaptability and resourcefulness, cultural appreciation, and social relationships.

2. Professional attitudes and competencies as evidenced through interest in teaching, preparation in subject matter and in teaching methods and techniques participation in laboratory experiences, including observation and student teaching, and the demonstration of necessary abilities and skills.

### PROGRAMS
The School of Education has program approval from the Pennsylvania Department of Education for the preparation of Elementary, Secondary and Special (teaching the mentally and/or physically handicapped) Education teachers. Also in consortium with Carlow College students can become certified in Early Childhood Education.

### COURSE REQUIREMENTS

#### GENERAL EDUCATION
The following courses in the arts and sciences are an integral part of each program:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>English Area</td>
<td>12</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>English Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

#### COMPETENCY CORE CURRICULUM
The Competency Core Curriculum consists of 27 credits beginning with Introduction to Education in the freshman year, Developmental Foundations I, II in the sophomore year and concluding with Curriculum and Instruction I, II in the junior year. The Competency Core Curriculum focuses on the philosophical, psychological and pedagogical foundations needed by entry-level teachers, extensive involvement in field experiences beginning with the freshman year, and an on-going process of individual advisement and counseling regarding teaching and career decisions.

The Competency Core Curriculum is predicated on four demands: 1) Becoming a student, 2) Becoming a student of education, 3) Becoming an educational theorist, and 4) Becoming a practitioner. The Competency Core Curriculum as the title implies, is a competency based program that is developmentally designed to prepare education students to be entry-level teachers in elementary secondary and special education.

### ELECTIVE EDUCATION
The following 39 credits (semester hours) in Professional Preparation and 12 in electives combined with the 42 credits specified in General Education and 27 in the Competency Core Curriculum comprise this curriculum.

#### Professional Preparation (All Courses Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>101 Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>215 216 Developmental Foundations of Education I</td>
<td>4</td>
</tr>
<tr>
<td>217 218 Developmental Foundations of Education II</td>
<td>4</td>
</tr>
<tr>
<td>315 316 Curriculum and Instruction I</td>
<td>8</td>
</tr>
<tr>
<td>317 318 Curriculum and Instruction II</td>
<td>8</td>
</tr>
</tbody>
</table>

*In Early Childhood Education 315, 316 and 317, 318 are not required.*

### EARLY CHILDHOOD EDUCATION
This is a cooperative program approved by the Pennsylvania Department of Education, with Carlow College. Some of the professional courses are offered only on the Carlow campus. These 47 credits (semester hours) in addition to 42 specified under General Education, 11 credits in the Competency Core Curriculum, and 20 credits in electives, are required for the degree.

### MUSIC EDUCATION
General and professional course work and professional education courses required for this program are outlined in the School of Music section.
SECONDARY EDUCATION
In addition to the 42 credits (semester hours) in General Education and 27 in the Competency Core Curriculum a student must complete the following 51 credits in Professional Preparation, three in Electives, and four additional credits in an art, science, or sciences Area to satisfy requirements for the degree and certification.

Credits

Professional Preparation (All Courses Required)
497 Reading in the Secondary School
Specific Methods Course
3
215 Teaching Grammar and Composition OR
316 Teaching Secondary Mathematics and Science OR
318 Teaching Secondary Foreign Languages OR
319 Teaching Secondary Social Studies
491 Student Teaching
12

*No student may register for additional course work during the student teaching semester without permission

Electives

Arts or Sciences Area (Minimum for certification)

30

Certification Your Course Supporting Courses
Concentration
Biology
Mathematics
Chemistry
Communication
English Emphasis
Journalism
English Emphasis
Speech Emphasis
General Science
Minimum of eight credits in biology, chemistry, and physics and additional courses to total a minimum of 18 semester hours in one field of science
Latin
Mathematics
Computer science
Computers and information sciences
Modern Languages
French
German
Latin
Mathematics
Physics
Social Studies
Economics
Geography
Psychology
Sociology

SPECIAL EDUCATION (MENTALLY AND/ OR PHYSICALLY HANDICAPPED)
This program is designed to prepare students for teaching mentally and/or physically handicapped pupils, including brain injured, emotionally and socially disabled, learning disabled.

These 48 credits (semester hours) in Professional Preparation and three in Electives in addition to the 42 credits in General Education and the 27 in the Competency Core Curriculum are required for the degree.

Credits

Professional Preparation (All Courses Required)
209 Foundations of Special Education
3
273, 274 Art, Music, and Physical Education for the Classroom Teacher
6
276 Methods in Special Education I
3
325 Teaching Reading in the Primary School
3
330 Teaching Elementary Language Arts and Reading
3
332 Teaching Elementary Mathematics
3
333 Teaching Elementary Science
3
336 Teaching the Mildly Handicapped
3
337 Teaching the Severely Handicapped
3
388 Vocational Education for the Handicapped
3
477 Methods in Special Education II
3
491 Student Teaching-Special Education
12

Electives

*No student may register for additional course work during the student teaching semester without permission

HONOR AWARDS
These awards, presented at the annual Honors Days Convocation are open to undergraduates in the School of Education.

Faculty Award for General Excellence in Early Childhood Education
Faculty Award for General Excellence in Elementary Education
Faculty Award for General Excellence in Secondary Education
Faculty Award for General Excellence in Special Education
Kappa Delta Epsilon National Professional Education Sorority Award
Kappa Phi Kappa National Education Fraternity

DUAL CERTIFICATION
Through advisement, a student may complete requirements in two certification areas, such as elementary/early childhood, elementary/secon-
dary, elementary/special education. Such programs require some additional coursework beyond the 120 semester hours for a degree. After completing all other requirements, students may register with appropriate advisement, for a nine and a six-credit student-teaching course. Student teaching in both areas is offered during the student’s final semester.

CLASS ATTENDANCE
The School of Education faculty has determined that the following policy will be in effect for the School of Education and will be adhered to by all professors who teach undergraduate courses. It is presumed that each student in a professional course will normally attend every session. The maximum number of cuts permitted is equated in credits, not in periods the class meets, in other words a student may miss three hours of class time in a three-credit course.

STUDENT ORGANIZATIONS
The School of Education includes in its program opportunities for participation in student organizations related to professional education preparation. Students are encouraged to take an active part in these professional organizations, for such activity is interpreted as reflecting social and educational development. The organizations are Duquesne University Chapter of the Council for Exceptional Children, and national student organizations in Special Education.

Kappa Delta Epsilon National education sorority
Kappa Phi Kappa national education fraternity

EDUCATIONAL FOUNDATIONS AND PSYCHOLOGY

101 Introduction to Education
3 cr
An overview of professional education programs and careers, introduces students to the competence based format of undergraduate curriculums and gives them opportunities to meet faculty and staff in informal information-giving and counseling situations.

201 Child Development
3 cr
Behavior and personality characteristics of children from birth to adolescence as they relate to school and home situations.

202 Educational Psychology
3 cr
Examines affective and cognitive development, planning and teaching techniques, measurement and evaluation, and related theories in an experiential learning environment.

203, 204, 205, 206, 207
Field Experience
1 cr each

215, 216 Developmental Foundations of Education I
4 cr
See description for 217, 218

217, 218 Developmental Foundations of Education II
4 cr
Developmental Foundations I and II examine and provide for demonstration of various generic competencies in the areas of physical, cognitive, affective and social development of the individual from birth until late adolescence. The components examine the effects that values, classroom interactions, approaches to various teaching and learning styles, recognition of individual differences, and various curriculum designs including IEP’s and multi-cultural approaches, have on the physical, cognitive, affective and social development of all students and the teacher. These components provide for the demonstration of competency in the understanding, the analysis and the managing of these effects. Concurrent with these components is a field placement that requires case studies, directed observations, data collection and teacher aide experience.

301 Foundations of Education
3 cr
Introduction to the study of the philosophical, social, and historical foundations of education and the relationships between the school and other institutions of society.

315, 316 Curriculum and Instruction I
8 cr
See description for 317, 318

317, 318 Curriculum and Instruction II
8 cr
Curriculum and Instruction I and II focus on the presentation, analysis and demonstration of those
generic competencies that directly apply to the design and implementation of effective teaching-learning practices in the classroom. The components specifically address such topics and techniques as educational taxonomies, instructional objectives planning the lesson, classroom management, learning assessment, materials utilization, evaluation of learning and grading. These components also include a concurrent field placement that continues the directed observations and data collection initiated in the Developmental Foundation components and introduces the student to the evaluation of the teaching-learning situations observed and to the self-evaluation process of his/her own development in the four domains of the Competency Core Curriculum. The field placement for these final components includes teaching experience in an actual classroom.

340 Self-Development for the Classroom 3 cr
Focuses on a philosophical-psychological approach to self-development using classroom activities to promote personal awareness in the teacher and student.

351 Adolescent Development 3 cr
Examines the developmental processes psychological, physical, and social which affect students and student-teacher behavior and relationships in the classroom.

410 Interpersonal Management Techniques for Educational and Organizational Leaders 3 cr
Focuses on four major concerns for maximizing learning and minimizing conflict they are the teacher’s personal awareness of feelings and emotions interpersonal societal and educational values understanding of group dynamics and knowledge of managing classroom situations.

480 Independent Study 1-2 cr
With permission of an instructor and approval of the Dean seniors may pursue in-depth study of a subject area or engage in individual projects related to their professional goals.

481 Learning Resources 3 cr
Identification, location, utilization, and creation of learning materials adaptation of print and non-print materials to meet curricular needs developing materials for individualized classroom instruction.

485 Problems in Teaching Reading 3 cr
Reading difficulties in elementary and secondary school levels discussion of classroom and clinical procedures in solving reading problems, diagnostic and corrective techniques and materials for the classroom teacher reading improvement programs special unit on reading problems of the mentally retarded.

499 School Law and the Pupil 2 cr
School law as it affects the child—census admission practices, vacation, compulsory attendance—when the neglected, dependent, and delinquent child, work periods, graduation requirements, current school services and other regulations pertaining to the health and welfare of the child.

Early Childhood Education

201 Orientation to Early Childhood Education 3 cr
Examination of the history of child development and practices of early education, culminating in an overview of theoretical issues influencing practice in the early childhood, Development of the student’s observational skills, completion of on-site observations in early educational settings, defining the role of the Early Childhood Educator, and developing a personal philosophy (Fall semester only).

203 Child Development 3 cr
In-depth examination of the development of the child from birth-eight years in physical, intellectual social and emotional areas of growth. Methods of recording and assessing growth of young children will be examined and utilized in a term project based on readings and observations will be required (Spring semester only).

307 Curriculum and Methods for Early Childhood Education Practicum 4 cr
Study of curriculum methodology and implementation in nursery, kindergarten and primary settings. Students will design environments and enact activities for language development and reading, music, art, social studies, science and math for children 3-8 years. A weekly practicum in an early education classroom is an integral part of this course. Prerequisite EC 201 and 203 (Fall semester only).

308 Curriculum and Methods for Day Care With Practicum 3 cr
Examination of social needs, program designs and curriculum implementation of day care services for children birth-8 years. Topics covered include research on working families, program design, environment, child development and assessment, comprehensive curriculum planning, staffing strategies, parent communication, and research on impact of day care on young children and their families. A weekly practicum required in a child care classroom. Prerequisite EC 201 and 203 (Spring semester only).

310 Specialized Programming for Young Children 3 cr
Examination of history and current status of programs which provide compensatory, remedial, therapeutic or early intervention experience to young children. Curriculum design and implementation will be examined along with specific responsibilities of the early educator for mainstreaming training and working in liaison with other professionals. Weekly practicum required in specialized setting. Prerequisite EC 201 and 203 (Fall semester only).

320 Reading and Language Arts 3 cr
The nature of reading, the pertinent research in the field, the selection of materials, methodologies and teaching strategies are emphasized (Fall semester only).

331 Reading and Language Arts Practice 1 cr
Diagnosis of needs, planning and teaching of age and need appropriate lessons to small groups of children in a supervised situation. Prerequisite ED 320 (Spring semester only).

404 Nursery School Student Teaching and Seminar 6 cr
406 Primary Student Teaching and Seminar 6 cr
The student teaching experience involves the prospective teacher in a Nursery School setting and in a primary classroom for eight weeks each. She assumes teaching responsibilities, applies theory/practice and develops her own teaching style under the direct supervision of the cooperating teacher and college supervisor. Verification of student competency will be determined jointly by both the cooperating teacher and the college supervisor. Student teaching will be distributed among a morning and an afternoon for a total of one semester.

493 Student Teaching—Elementary School 3 cr
Student teaching in elementary education for students in the secondary or special education program. Content deals with language, societal, educational and primary grades. Emphasis on the pre-school, readiness, health, and music to children of elementary school age, including exceptional children.

493 Teaching Reading in the Primary School 3 cr
Major emphasis is on the pre-school, readiness, and primary grades. Content deals with language, experimental cognitive, and perceptual development in young children and their relationship to the beginning reading program. In addition, consideration will be given to the basic reading skills which comprise the first three years of a developmental reading program, techniques of individualizing instruction, evaluating and reporting pupil progress.

326 Teaching Reading in Intermediate and Middle Schools 3 cr
Focuses on the transitional period in a developmental reading program in which reading becomes a tool to be used in each content area. In addition to continuing reading skills in the developmental reading program, specialized reading and study skills will be taught for students who function in social studies, science, language arts, mathematics, and other content areas, will be presented. Techniques of determining readability of materials, individualizing instruction, evaluating and reporting pupil progress are also studied.

330 Teaching Elementary Language Arts and Reading 3 cr
Presents psychological principles and historical perspective in the language arts, the foundation on which a good language arts program should be built. Four skills—listening, speaking, reading, writing—as acquired by the child, combined with knowledge of the evaluative process, teaching methods, and materials, provide a realistic approach to teaching language arts and reading experiences.

331 Teaching Elementary Social Studies 3 cr
Provides a combination of theoretical and practical models which furnish multi-level approaches to problem-solving, materials, activities, and resources inherent in a good social studies program.

332 Teaching Elementary Mathematics 3 cr
Theories, techniques, and content pertaining to mathematics are presented. Emphasis is on exploratory and systematic instructional styles, games as an instructional strategy.

333 Teaching Elementary Science 3 cr
Study of theories, techniques, and content of the content area. Accent is on discovery and inquiry instructional styles, organizing for learning.

484 Children’s Literature 3 cr
A general survey of books and other printed materials for children, criteria for the evaluation and analysis of children’s books, types of books available, considered in terms of interest, needs, and abilities of children.

490, 491 Student Teaching—Elementary 9-12 cr
Student teaching in an approved elementary school under the direct supervision of a cooperating teacher. Prerequisites include Senior status, good academic standing, completion of required professional courses, and recommendation of faculty.

493 Student Teaching—Elementary 6 cr
Student teaching in elementary education for students in the secondary or special education programs who wish to complete requirements in two certification areas. Registration is concurrent with Ed 490-Secondary. 490-Special Education
SECONDARY EDUCATION

215 Teaching Grammar and Composition 3 cr
Examines various ways to teach grammar, language, and composition provides opportunity for students to review the basics of grammar and composition and to develop lessons for teaching those grammar areas at the elementary, secondary levels and in special education.

216 Teaching Literature—Prose, Poetry, and Drama 1 cr
Focuses on planning and teaching techniques to prepare and present literature utilizing a genre, a chronological or thematic approach, the four sessions involve an approach to literature experience, teaching prose teaching poetry and teaching drama.

216 Teaching Secondary Mathematics and Science 3 cr
Designed to acquaint the student with methods and materials for teaching specific models research and field-based activities are expected.

218 Teaching Secondary Foreign Languages 3 cr
Explores a variety of approaches for teaching foreign languages grammar, structure verbal exercises and literature germane to the specific language to be taught will be discussed.

219 Teaching Secondary Social Studies 3 cr
This is a competency-based experience for social studies/history majors that develops evaluation skills, knowledge of curriculums, media and technological experiences and methods expands planning and questioning skills.

477 Methods in Special Education II 3 cr
Development and implementation of an individualized student teaching readiness plan that emphasizes the management of problem behaviors and development of instructional environments, includes supervised field experience independent study and individual learning conferences Prerequisites 209, 276, 386

490, 491 Student Teaching—Special Education 9-12 cr
A full semester of supervised classroom experience in a carefully selected school for mentally and/or physically handicapped pupils. Prerequisites: Senior status, good academic standing completion of required professional courses and recommendation of faculty.

493 Student Teaching—Secondary Education 6 cr
Student teaching in special education for students in the elementary or secondary education program who wish to complete requirements in two certification areas. Registration is concurrent with Ed 490-Elementary or Ed 490-Secondary Education.

209 Foundations of Special Education 3 cr
A survey of the educational, psychological and social and characteristics of exceptional persons, an overview of special education methods and programs, introduction of judicial and legal aspects.

211, 212, 213, 214 Field Experience 2 cr each
Classroom and other experiences in educational, social welfare and vocational settings as an observer and participant. Enrollment with consent of Director of Students Teaching and School of Education faculty advisor. Students may choose 211 (Elementary) or 212 (Secondary) which involve the mildly handicapped, 213 which is with the severely handicapped, or 214 which is with pre-vocational/vocational pupils.

272, 273 Art, Music, and Physical Education for the Classroom Teacher 3 cr each
An introduction to the basic principles and concepts of teaching visual arts, physical education, health, and music to children of elementary school age, including exceptional children.

276 Methods of Special Education 3 cr
An introduction to management techniques utilized in programs for exceptional persons information covering educational assessment procedures, design and implementation of individual educational programs and methods for individualizing instruction, examination of judicial and legal aspects Prerequisite 209 or equivalent.

386 Teaching the Mildly Handicapped 3 cr
Evaluation, integration, and implementation of theoretically based methodologies, curricula, instructional techniques, and evaluation procedures for students who have been labeled brain injured, learning disabled, mentally retarded, physically handicapped, socially and emotionally disturbed. Prerequisites 209, 276.

387 Teaching the Severely Handicapped 3 cr
Evaluation and integration of the various theories methodologies, curricula, instructional techniques, and evaluation procedures for severely handicapped persons labeled brain injured, learning disabled, mentally retarded, physically handicapped, socially and emotionally disturbed. Prerequisites 209, 276 or permission of instructor.

388 Vocational Education for the Handicapped 3 cr
Overview of pre-vocational, career, and occupational education programs to be used for exceptional persons. Students will be given information and experiences enabling them to design and implement instructional programs appropriate to the vocational needs of mentally and physically handicapped pupils. Prerequisites 209, 276, or permission of instructor.

SPECIAL EDUCATION

These courses are designed to prepare students for teaching mentally and/physically handicapped pupils including brain injured, emotionally and socially disturbed learning disabled.
School of Music

HISTORY
Duquesne University, recognizing that it was most fortunately situated to offer outstanding opportunities for professional preparation in music, in 1926 established a School of Music with a four-year course of study leading to the Bachelor of Music degree.
The music education program was approved by the Pennsylvania Department of Education in 1929. In 1959 the School became an associate member of the National Association of Schools of Music, and in 1966 was elected to full membership.

On April 29, 1967 a new air-conditioned music building was dedicated. Van Ciburn was awarded an honorary Doctor of Music degree on this occasion.

PHILOSOPHY AND OBJECTIVES
The administration and faculty of the School of Music believe that the development of the artistic personality is entirely compatible with the objectives of scholars in all fields. It is felt that the best place to educate music students to take their place in society is in a situation where they have an opportunity to share their academic courses with students from other schools of the University.
The great advantage of a solid musical preparation and the opportunity to participate in nationally recognized organizations and in performances of professional caliper are available to all students.
The faculty of musical scholars and artists with whom Duquesne students work believes that fine talents are best encouraged and developed in an atmosphere that is friendly while at the same time committed to the development of excellence.
The faculty, selected with care, includes the names of concert and opera soloists, members of the Casals Festival Orchestra, the Pittsburgh Symphony, nationally known composers, authors, arrangers, conductors, clinicians, and music educators. The Pittsburgh Symphony, Pittsburgh Opera, chamber music and concert series, WDUQ (the Duquesne University radio station) and the high level of interest on the part of other radio and television stations in the arts serve as unusual stimuli to the eager music student.
The Symphony Band, in its many performances on and off campus, presents a wide variety of standard and contemporary repertoire.
The Symphony Orchestra offers fine opportunities for students interested in orchestral literature. Association with teachers who are members of the Pittsburgh Symphony is an exceptional advantage.
The school also maintains various vocal and instrumental ensembles that are receiving national recognition for the excellence of their performances.

The objectives of the School of Music are to educate teachers and performers of music who should possess a sensitive and intelligent musicianship, and who will be equipped, by reason of their general and professional education, to accept positions in fields of performance, education, therapy and church music.

ADMISSION
Students who are interested in applying for admission to the School of Music should request an application from the Office of Admissions. The music education program was approved by the Pennsylvania Department of Education in 1929. In 1959 the School became an associate member of the National Association of Schools of Music, and in 1966 was elected to full membership.

On April 29, 1967 a new air-conditioned music building was dedicated. Van Ciburn was awarded an honorary Doctor of Music degree on this occasion.

The Music School has over 70 pianos including 56 Steinways. All practice rooms have Steinway pianos. The School of Music has 3 uprights. There are two Moeller and one Fischer practice organs, an electronic organ, a three manual Moeller organ and one Kurzma passenger pipe organ. There are two pipe organs in Kilgen and Tellers and one Rodgers electronic theatre organ on campus for recitals and practice. More than 300 orchestral and band instruments are available for instrumental classes. Listening and recording equipment are of professional quality.

STUDENT ORGANIZATIONS
Chapters of the national music organizations Phi Mu Alpha Sinfonia and Mu Phi Epsilon contribute substantially to the students’ professional and social development. The Music Educators National Conference has an active student chapter which sponsors professional programs and attends and participates in the state, regional, and national activities of the association. There are active student chapters of the American Guild of Organists and the National Association for Music Therapy. The School of Music is represented in the College of Education by the Student Council. The council serves as a representative and advisory body to the Student Senate, and participates in the state, regional, and national activities of the association.

REQUIREMENTS
All students are required to attend a minimum of 30 recitals and concerts sponsored by the School of Music per year.

OTHER ATTENDANCE REQUIREMENTS
All students are required to attend professional events other than concerts pertinent to their specific areas of study.

 Polish Arts League Scholarship
This scholarship is awarded to a senior with the highest standing in Sacred Music.

Many talent scholarship awards of varying amounts are available for instrumental and vocal study to students who qualify musically and academically.

Ande Marchal Award
This award is presented to the organ student with the highest standing in Sacred Music.

nounie Ander Scholdschips
Competitive scholarships provided to winners of an annual competition.

Robert F. Minardi Memorial Scholarship
Awarded to a deserving student who demonstrates financial need in addition to superior musical ability.

Tutti Award
Competitive award provided annually to outstanding piano or violin student.

RECENT ATTENDANCE
All students are encouraged to attend a minimum of 30 recitals and concerts sponsored by the School of Music per year.

Tutti Award
Competitive award provided annually to outstanding piano or violin student.

OTHER ATTENDANCE REQUIREMENTS
All students are required in addition to attend professional events other than concerts pertinent to their specific areas of study.
### THEOLOGY REQUIREMENT

One three-credit course in theology is required of every Roman Catholic student.

### CONSERVATORY MAJOR IN PIANO

#### Freshman Year

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<th>Courses</th>
<th>Credits</th>
<th>Fall</th>
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<td>Eng 101,102</td>
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#### Sophomore Year

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#### Junior Year

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#### Senior Year

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<td>Mus 400</td>
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### MAJOR IN ORGAN

#### Freshman Year

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### MAJOR IN VOICE

#### Freshman Year

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<td>Mus 101,102</td>
<td>Italian for Musicians I, II</td>
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<td>Mus 193,194</td>
<td>English Composition I, II</td>
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<td>Mus 251,252</td>
<td>History and Literature of Music</td>
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#### Junior Year

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**MAJOR IN ORCHESTRAL INSTRUMENT/CLASSICAL GUITAR**

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**Senior Year**

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**Junior Year**

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**Senior Year**

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**MAJOR IN JAZZ PERFORMANCE**

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**Sophomore Year**

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**Junior Year**

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**Senior Year**

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**SACRED MUSIC—MAJOR IN ORGAN**

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### Sophomore Year

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### Junior Year

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### SACRED MUSIC—MAJOR IN VOICE

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#### Sophomore Year

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<tr>
<td>Mus 389,390 Field Observation</td>
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<tr>
<td>Mus 143,143 Ensemble</td>
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<tr>
<td>Mus 301,302 Applied Music Major</td>
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<td>Mus 387 Marching Band Techniques</td>
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MUSIC EDUCATION—MAJOR IN MUSIC THERAPY

COURSES

Credit Freshman Year
Fall Spring

MUS 105, 105 Seminar 0 0
MUS 101, 102 Applied Music Major 2 2
MUS 113, 114 Piano Class 2 2
MUS 131, 132 Theory 2 2
MUS 133, 134 Musicianship 2 2
MUS 121, 122 Ear Training 4 4
MUS 143, 143 Ensemble 1 1
MUS 107 Music Therapy Orientation 3
MUS 124 Music Therapy Practicum 1
SOC 101 Survey of Sociology 3
ENG 101, 102 English Composition 3 3

Sophomore Year

Credit
Fall Spring

MUS 105, 105 Seminar 0 0
MUS 201, 202 Applied Music Major 2 2
MUS 213, 214 Piano Class 2 2
MUS 231, 232 Theory 2 2
MUS 233, 234 Musicianship 2 2
MUS 251, 252 History and Literature of Music 2 2
MUS 143, 143 Ensemble 1 1
PSYCH 103 Introduction to Psychology 3
MUS 108 Music in Therapy 3
MUS 124, 124 Music Therapy Practicum 1 1
Academic Elective 3 3

Junior Year

Credit
Fall Spring

MUS 105, 105 Seminar 0 0
MUS *301, 302 Applied Music 2 2
MUS 315 Piano Improvisation 2
MUS 185, 186 Voice Class Methods 2 2
MUS 351, 352 History and Literature of Music 2 2
MUS 143, 143 Ensemble 1 1
PSYCH 202 Educational Psychology 3
EDU 209 Foundations in Special Education 3
MUS 374 Music and Movement for the Exceptional Child 3
PHYS 308 Acoustics 3
MUS 308 Influence of Music on Behavior 2
ED 308 Drug Abuse 2
MUS 124, 124 Music Therapy Practicum 1 1

MUS 385 Choral Techniques 2
MUS 327 Jazz Pedagogy & Directing 2
MUS 379, 380 Conducting 2 2
MUS 340 Orchestration 2
MUS 440 Jazz Arranging 2
MUS 383 Elementary Methods 2
MUS 384 Secondary Methods 2
Academic Electives 9 9

Credit

Senior Year

Fall Spring

MUS 105, 105 Seminar 0 0
MUS *401, 402 Applied Music 2 2
MUS 143, 143 Ensemble 1 1
MUS 600 Psychological Foundations of Musical Behavior 3
MUS 379 Conducting 2
MUS 340 Orchestration 2
PSYCH 352 Abnormal Psychology 3
PSYCH 207 Anatomy and Physiology 3
MUS 309 Directed Study—Music Therapy 2
MUS 310 Recreational Instruments 1
Academic Elective 3
Academic Elective 3
Academic Elective 3

Elective

*In accordance with the recommendations made by the School’s faculty, the National Association for Music Therapy, and taking into consideration performance needs of music therapists, the applied music requirements for therapy majors are altered in this manner. Upon satisfactory completion of the first two years as an applied major on the instrument of the individual’s choice, determined by audition and jury with the appropriate faculty, the student may study one or several instruments for the remaining two years. This will enable the student to develop a degree of versatility which can be of considerable use in the practice of music therapy.

COURSE DESCRIPTIONS

APPLIED MUSIC

101, 102, 201, 202, 301, 302, 401, 402
Applied Music Major for the Bachelor of Science in Music Education 2 cr each
The study of voice, piano, organ, string, wind, or percussion instruments throughout all semesters. Credits are distributed according to departmental curricula.

103, 104, 203, 204, 303, 304, 403, 404
Applied Music Major for the Bachelor of Music 2 or 3 cr
Private study of voice, piano, organ, string, wind, or percussion instruments throughout all semesters. Credits are distributed according to departmental curricula.

118, 119, 218, 219
Applied Music Minor—Jazz Class 1 cr each
For non-piano majors Jazz piano techniques including comping, harmonic continuity through common chord progressions, using trads and 7th chords. Many include more advanced comping, harmonic continuity through standards and jazz songs and harmonic extensions of 9ths, 11ths, and 13ths

400 Recital
2 cr
Transfer of Credit Transfer credit in the undergraduate program can be evaluated by a faculty panel.

Changing Assigned Applied Music Teacher
Changes in assigned teachers can be effective only at the beginning of a new semester and cannot be accomplished while a semester is in progress. The student must discuss the feasibility of a proposed change with the appropriate chairman.

BACHELOR OF MUSIC

Bassoon
103, 104 3 cr each
Scales and arpeggios in all keys, Kovar scales, five note studies and interval studies, selected studies and Weissenborn and Milde, solos by Weissenborn, Foret and Mouquet.

203, 204 3 cr each
Continue scales and arpeggios, Kovar technical studies, Ouobadous Scales and Daily Drills, Milde Concert Studies, Handel Sonata in C Minor, solos by Bozza and Vidal.

303, 304 3 cr each
Ouobadous, Scales and Daily Drills, Milde, Concert Studies, Orefici, Bravura Studies, selected.
passages from the Bach Cantatas, Mozart Concerto in B flat, Beethoven Quintet, representative contemporary solos, orchestra studies

303, 304 3 cr each Gambaro, Etudes for Bassoon, Bozza, Fifteen Daily Studies, Sonatas by Hindemith and Saint-Saëns, orchestral and chamber music studies, Bozza, Concertino the contra bassoon

Clarinet

103, 104 3 cr each Scales and arpeggios in various articulations, Langenus Scale Studies, Rose, Forty Studies, Cavallini, Thirty Caprices, Weber, Fantasy, Le Fevre, Fantaisie Caprice J B Albert 24 Varied Études, H Klose, Part II

203, 204 3 cr each Scales and arpeggios continued, Rose, Twenty Studies after Rode, Jeanjean, Twenty-Five Études, Weber Concertos, Mozart, Quintet for Clarinet and Strings, Weber First Concerto, representative contemporary solos, orchestral studies

Op 37, Kuhlau Duets, Sonatas of the Baroque Period Solos by Doppler, Chaminade, Mozart, Mosz, Kuhlau

203, 204 3 cr each Taffanel-Gaubert Scales, scales in thirds and sixths, chromatic scales, arpeggios and trills Anderson Études Op 21, Boehm Caprices Op 26, Moyse La Sonorité Selected duets by Kuhlau, Kocenik, etc concertos by Haydn and Mozart, sonatas by LeClair, J S Bach and Vivaldi, L Moyse, French Music for Flute

103, 104 3 cr each Continue scale study, Taffanel-Gaubert, Progressive Studies, Barrère, The Flutists Formulaire, Anderson Études Op 30, Altes-Barrère, 26 Selected Studies, Moyse, Études et Exercises Techniques, Torchio-Wimmer, Orchestral Studies, Bach, sonatas and arias from the religious works Arne, Sonatine, Telemann, Suite in a minor, M Moyse, Golden Age, Solos by Hue, Enesco, Griffes, Gaubert, and Varese

403, 404 3 cr each Taffanel-Gaubert Scales, the half note equals MM 120, scales in thirds, sixths, octaves and tenths, Moyse, De la Sonorité, Mechanism and Chromatics, Anderson, Études Artistiques Op 15, including the memorization of certain selected studies, Anderson Op 63 Jeanjean, Études Modernes, Orchestral Studies, Bach, Sonatas in A minor for unaccompanied flute sonatas by Hindemith, Remke, Concerto by Ibert, works by representative contemporary composers

Guitar—Classical

103, 104 3 cr each Evaluation of student's abilities, basic technique and reading abilities including reading knowledge through VII positions' all major scales in all positions Berklee Method Book I and Melodic Studies Book by William G Leavitt, basic chord theory, basic position folk chords and alterations, all barre chords, and working knowledge of base jazz chord forms, beginning study of chord-melody solo playing and single-note techniques, standard guitar solos

303, 304 3 cr each Continue single-note technique, chord studies, all major and minor scales, continue chord-melody playing, Joe Pass Guitar Style, Improvised Chord Solos and Single Note Improvised Solos by Joe Pass, intensive rhythm jazz chord studies (may use Bucky Pizzarelli's A Touch of Glass or Ronny Lee's Jazz Guitar Method Book II), intensive chord-melody playing, including arrangements done by the student, beginning single-note improvisation, standard guitar repertoire, Berklee Method Book II

203, 204 3 cr each Continue rhythm playing studies, chord-melody playing, and single-note improvisation studies, Berklee Method Book III, chord-soloing and development of repertoire, including solos by George M Smith, Eddie Lang, Dick McDonough, Carl Kress, John Smith, Tony Mottola, George Van Eps, Single-string studies, Kreutzer violing studies, Paganini violin studies

403, 404 3 cr each Intensive single-note improvisation and improvisational lines, REH Publications for single-note study (DiTore, Carlson, Mock, Kato, Hutchinson, Joe Pass' Jazz Solos and Jazz Classics), Charlie Christian Studies, Howard Roberts' Method and Materials, Wes Montgomery's Octave-Style Playing, understanding "fusion" music, chord-melody arranging from traditional and contemporary literature, record transcription both already existing and ones done by the student (Coryell, Pass, Barnes, Burrell, Roberts, DeMaceola, Benson and others)

Harp

103, 104 3 cr each Lariviere Exercises and technical studies Standard orchestra parts Bochsa Etudes opus 318, Book II Vocalise, essential difficulty of Grandchamp, Impromptu, Classic Style, Tourner, Images (Suite I), Saint-Saëns, Fantaisie

203, 204 3 cr each Technical studies Bochsa Etudes, opus 62 Standard orchestra cadenzas Pieces of grade difficulty of Tourner, Feene, Rousseau, Variations Pastorales, Grandjany, Fantaisie on a Theme of Haydn
Introduction to figured bass and harmonization of simple melodies.

203, 204
2-3 cr each
Selected works by Brahms, Mendelssohn, Schumann, Hindemith, Willcoxon Jenkins, Six Pieces, Dupre Antiphons, Messiaen, Le Banquet Celeste or Ascension Suite, mvts 1 or 4, Langlais, Franck, Schroeder or Pogg, Vierne, Pieces de Fantaisie, Bach, Orgelbuchlein, Schubler Chorales, Concerti Preludes and Fugues, Trio Sonatas.

Organ Class II, Continuation of pedal scales, hands and feet. Hvmn playing Modulation, transposition, counterpoint and figured bass. Continued harmonization of melodies. Score and clef reading.

303, 304
2-3 cr each
Selected works by D’Aquain, deGregori, Handel, Mozart, Sweelink, Franck, Langlais, Messiaen, Bach, Preludes and Fugues, Trio Sonatas, Organbuchlein. Great 18 chorales. Works by contemporary American composers.

Organ Class III, Continuation of pedal scales, hymn playing, accompaniments, transposition, figured bass, clef reading in open score, conducting from the console.

403, 404
2-3 cr each
Franck, Chorales, Messiaen, Nativity, Irist, Dupre, Dufour, Langlais, Vierne and Widor, Symphonies, Alain, Tournemire and selected works by contemporary composers, Bach Passacaglia and Fugue, extended Preludes and Fugues, Claviverubang Part III selections Recital.

407, 408
Service Playing
1 cr each
The objective of this course is to develop the service playing skills necessary to play for church services of all denominations through a study of applied harmony, counterpoint, form, accompaniments and conducting from the console.

413, 412 Organ Improvisation
2 cr each
A practical application of the basic tools of improvisation including harmonization of melodies at the organ and the use of two and three voice counterpoint in varying styles, short ABA forms and chorale preludes with emphasis on their liturgical application.

413 Organ Pedagogy
2 cr each
Students learn through demonstration the philosophies, methods, and principles of teaching both beginning and advanced students. Junior standing is required.

Percussion
103, 104
3 cr each
Fundamental snare drum technique and its application to musical notation, exercises in rhythm phrasing, control. Elements of tympani technique, their application to classical literature, tuning. Rudimentary xylophone technique, scales, arpeggios, forms.

203, 204
3 cr each
Advanced snare drum studies repertoire. Three and four tympani exercises, orchestral literature intermediate xylophone studies, transcriptions for solo.

303, 304
Tympani study through romantic and contemporary literature. Advanced xylophone exercises, transcriptions. Latin American instrumental techniques, use of special accessories in 19th and 20th century literature. Repertoire in all instruments.

403, 404
Examination of representative solo material for all percussion instruments, preparation of solo for recital.

Piano
103, 104
Bach, Three-Part Inventions, Haydn and Mozart, selected sonatas Beethoven, Op 10 and Op 14, Chopin waltzes, mazurkas, nocturnes, selections from modern repertoire. Major and minor scales in different rhythms and temps, and diminished arpeggios.

203, 204
Scarlatti, selected sonatas, Bach, Well-Tempered Clavier, Beethoven, Op 22, Op 31, Chopin, preludes, impromptus, and nocturnes, Brahms, Intermezzi, Rhapsodies, selections from Impressionistic and Contemporary repertoire. All major and minor scales, dominant and diminished seventh arpeggios.

303, 304

313 Piano Pedagogy I
2 cr each
Students will become acquainted with the techniques and materials for teaching piano at the elementary level. For piano majors, junior standing is required.

314 Piano Pedagogy II
2 cr each
A continuation of 313 concentrating on the techniques and materials for teaching piano at the intermediate and advanced levels.

243, 244, 343, 344 Piano Accompanying
2 cr each
This course is designed for the undergraduate with the purpose of offering the student instruction in the art of piano accompanying.

403, 404
3 cr each
Bach English Suites Partitas Toccataas Well-Tempered Clavier Beethoven sonatas from middle and later periods more extensive compositions from the Romantic Period Ravel Jeu d’eau Debussy Preludes at least on work selected from the standard concerto literature. Contemporary literature. Continue scales and arpeggios.

Jazz
103, 104
3 cr each

203, 204
3 cr each

303, 304
3 cr each

313 Organ Pedagogy
2 cr each

313 Organ Pedagogy
2 cr each
Major and Minor diatonic scales. Continued Schlossberg and Sachs, Nagel Speed Studies, Brandt 34 Studies, Clark, 36 Studies, Bartold, Orchestral Excerpts, M Gismondi, Bach for the Trombone and Euphonium.

103, 104
3 cr each

203, 204
3 cr each

303, 304
3 cr each

313 Organ Pedagogy
2 cr each
Trumpet, J N Hummel, Concerto, P Hindemith, Sonata, G F Handel, Suite in D Major

103, 104
3 cr each
M Broiles, Studies and Duets, Vol I, R Sabanch, 10 Etudes, Continued Bartold, Orchestral Excerpts, Kennan, Sonata, J M Molter, Concerto No I, G Eenesco, Legend

Tuba

103, 104
3 cr each
Scales and arpeggios in all keys, review of tone production, Recruit, Melodious Studies Vol I, Blume Studies Vol I, selected solos

203, 204
3 cr each
Scales and arpeggios in all keys with various articulations, Rochut, Melodious Studies Vol II, Blume Studies Vol II, selected solos, orchestral and band studies

303, 304
3 cr each
Rochut, Melodious Studies Vol III, Blume Studies, Vol I, Blazhevich, Seventy Etudes, Eby, Bass Studies, selected solos, orchestral studies

403, 404
3 cr each
Gregorov, Tuba Studies, Bernard, Etudes and Exercises for Tuba, transcriptions of horn and violoncello literature, solos by Camara Barat, Schroen, orchestral literature

Violin

103, 104
3 cr each
Scales and arpeggios in three octaves, selected scales in thirds, sixths and octaves, Flesch, Scale Studies, Seveck, Studies (Lisfechey), Campagnoli, Forty one Caprices, Fuchs, Twelve Caprices, Eseso, Concert Piece

203, 204
3 cr each
All major and minor scales and arpeggios, scales in octaves, thirds, sixths and tenths. Selected studies from Rode, Caprices, Hermann, Six Concert Studies Op 18 Concertos by C P E Bach, and Hoffmeister, Vaughan-Williams, Suite, Sonata by Milhaud, parts from orchestral and chamber music literature

303, 304
3 cr each
Continue scales and arpeggios selections from Rode, Caprices and Gavines, Twenty-four Matines Sonatas by Brahms and C allow in viola parts from orchestral and chamber music literature

403, 404
3 cr each
Selected Studies from Paganini, Caprices, Reger, Three Suites, Bach, unaccompanied scale or violoncello works transcribed for viola, Bloch, Suite for Viola, concerts by Bartok, Walton, Porter Viola

103, 104
3 cr each
Scales and arpeggios in three octaves, scales in thirds, sixths, octaves, tenths, harmonics. Fiorillo or Kreutzer, concertos by Bach, Mozart, Vieuxtemps, Wienawski, Bruch, Lalo, short pieces from the romantic period

203, 204
3 cr each
Continue study of repertoire listed above, Kreutzer or Rode

303, 304
3 cr each
Scales and arpeggios continued, Rode or Gavines, Bach Solo Sonatas and Partitas, any of the major sonatas and concertos (Beethoven, Brahms, Mendelssohn, Bartok, Sibelius, Tschaikovsky)

403, 404
3 cr each
Scales and arpeggios continued, Diant Op 35 or Paganini Caprices, continue solo Bach and study of major concertos and sonatas

Violoncello

103, 104
3 cr each
Scales and arpeggios in three octaves with various bowings. Duport Studies, Franchomme, Twelve Caprices, Sonatas of Veracini, Locatelli, and Boccherini

203, 204
3 cr each
Scales and arpeggios in four octaves with various bowings, scales in thirds, sixths and octaves, chromatic scales, and seventh chords Franchomme, Twelve Caprices, Duport, Etudes Concertos by Romberg, Popper and Saint-Saens, sonatas by Boccherini and Haydn Orchestral Studies Contemporary works

303, 304
3 cr each
Continue scales etudes by Servais and Patti, Concertos by Davidoff, Dohmney, Lalo, Boellmann, Symphonic Variations, six solo sonatas of Bach Orchestral Studies Contemporary works

403, 404
3 cr each
Etudes by Servais, Patti and Popper Concertos by Haydn Boccherini Elgar, Barber, Schubert, Arcangelo Sonata Contemporary solos and sonatas, Orchestral studies and chamber music literature

401, 402
3 cr each
Selected studies from Milde, Concert Studies Vol I, Telemann, Sonata, orchestral studies

Clarinet

101, 102
3 cr each
Scales and arpeggios Klose, Celebrated Method for Clarinet, Part II, Baerman, Method Book II, selected solos

201, 202
3 cr each
Continue scales and arpeggios with various articulations, Weissenborn Op 8 Vol II, continue Milde Studies, Kovar Studies, Wenger, Solomonic, 101, 102
3 cr each
Milde Studies in all keys, Jancourt, Grand Method Book II, Kavor Studies, solos by Marcello and Cools, orchestral studies

201, 402
2 cr each
2 cr each
Selected studies from Milde, Concert Studies Vol I, Telemann, Sonata, orchestral studies

201, 402
2 cr each
2 cr each
Selected scales and arpeggios, Weissenborn Op 8 Vol I, Milde Studies Griller, 6 Sonatas for Bassoon

201, 402
2 cr each
Continue scales and arpeggios with various articulations, Weissenborn Op 8 Vol II, continue Milde Studies, Kovar Studies, Wenger, Solomonic, 101, 102
3 cr each
Milde Studies in all keys, Jancourt, Grand Method Book II, Kavor Studies, solos by Marcello and Cools, orchestral studies

Clarinet

101, 102
3 cr each
Scales and arpeggios Klose, Celebrated Method for Clarinet, Part II, Baerman, Method Book II, selected solos

201, 202
3 cr each
Continue scales and arpeggios in various articulations, continue Klose Method, Rose, 32 Studies for Clarinet, Voxman, Duets, selected solos

301, 302
3 cr each
Langenus, Scale Studies, continue Rose, 32 studies Klose, 20 Characteristic Studies, Weber, Fantasia and Rondo, orchestral and band studies

401, 402
2 cr each
2 cr each
Continue Langenus, Scale Studies, Rose, 42 Studies, Polatchak, 12 Etudes for Clarinet, Mozart Concerto in A, solos by Jeanjean, contemporary solos, orchestral studies

Double Bass

101, 102
2 cr each
All positions up to thumb position, scales and intervals in all keys, Simandl, New Method for the Double Bass

101, 102
3 cr each
Scales continued including thumb positions, Simandl Method continued, selected pieces

201, 202
2 cr each
Scales and intervals continued, Simandl Method continued, Simandl, Thirty Etudes, selected pieces, violoncello sonatas by Marcello and others, orchestral studies

201, 402
2 cr each
Scales continued, selected studies from Hrabl, Eighty-six Etudes, pieces by Koussevitsky and others, orchestral studies

Flute

101, 102
2 cr each
Kohler, Etudes Book I, Terschak Studies, Drouet, 25 Celebrated Etudes, M Moyse, selected etudes, scales and arpeggios in all keys, selected solos, Sonatas by Marcello, Handel, Blavet and Telemann

201, 202
2 cr each
Continue scales and arpeggios, Drouet, 25 Celebrated Etudes, Anderson, Etudes Op 37 selected solos from 19th century composers, Sonatas of Baroque composers

301, 302
2 cr each
Anderson Etudes, Op 33 and Op 21, Berbouer, Studies, Taffanel-Gaubert, Daily Studies, all scales and arpeggios in various articulations, pieces by Anderson, Widor, Quanz, Handel sonatas

401, 402
2 cr each
Anderson Etudes Op 30, Taffanel-Gaubert Scales, scales in thirds and in sixths, chromatic scales, arpeggios and trills, sonatas by Handel, Telemann and Blavet, representative contemporary pieces, and Paris conservatory solos

Guitar—Classical

101, 102
2 cr each
Evaluation of student’s abilities and basic corrections of necessary Scales, major and minor up to four sharps and flats, Carcassi Method, selected studies from Carcassi Twenty-Five Etudes Op 60, Renaissance dances, works by Carulli, Aguado, Sor

201, 202
2 cr each
All scales major and minor, two and three octaves, Herme Method, Sor Concert Etudes, One suite and selected pieces from the Renaissance and Baroque, works by Luis Milan Tarrega, Ponce, and Villa-Lobos

301, 302
2 cr each
Continuation of technical studies of the first two years, lute music transcribed for guitar, Dowland, Bach, Sor Concert Etudes and Sonatas, chamber ensemble works by Boccherini, Schubert, Scheidler, Ibert, Paganini
401, 402  2 cr each  Baroque suite or sonata by a 20th-century composer or by a 20th-century composer

**Guitar—Jazz**

101, 102  2 cr each  Evaluation of student's abilities basic technique and reading abilities including reading knowledge through VII positions all major scales in all positions. Berklee Method Book I and Melodic Rhythm Studies Book by William G. Leavitt.

103, 104  2 cr each  Technical studies Orchestra parts Bochsa Etudes, Opus 34, Pieces grade of difficulty of Hindemith, Sonata Handel Concerto in Bb major Ravel, Introduction and Allegro.

105, 106  2 cr each  Technical studies Pieces grade of difficulty of Fauré, Impromptu, C.P.E. Bach, Sonata Salzedo, Scimitar Debusys, Danses Sacre et Profane.

107, 108  2 cr each  Fundamentals of tone production major scales and arpeggios, chromatic scales, ability to read in at least two clefs, selected etudes from Schuett, Kopprasch, selected solos.

109, 110  2 cr each  Extension of range in all keys and articulations, preparatory trill and multiple tonguing studies Kopprasch, Mueller and Alphonse etudes, selected etudes from F. Strauss, Haydn, and Mozart.

301, 302  2 cr each  Continuing work on fundamentals ability to play in all clefs Mueller, Kling, and Alphonse, etudes selected solos from Mozart, R. Strauss, and Bach orchestral studies.

111, 112  2 cr each  Review of previous work by student and corrective exercises as necessary scales and arpeggios. Barret, Exercises in Articulation and Progressive Melodies, selected solos, reed making.

113, 114  2 cr each  Scales and arpeggios in all keys, continue Barret, selected studies from Bleuzet Technique of the Oboe Vol. I, solos by Handel and Schumann, reed making.

301, 302  2 cr each  Barret, progressive Exercises, Bleuzet, technique of the Oboe Vol. II, continue scales and arpeggios in various articulations, Handel sonatas, orchestral studies, contemporary solos, reed making.

115, 116  2 cr each  Barret, Etudes, selected etudes by Fering, continue scales and arpeggios, solos by Bach and Handel, contemporary solos.

117, 118  2 cr each  Use of tympans and percussion in late 19th and 20th century literature. Orchestral studies in all instruments. Examination of percussion ensemble materials, group instruction methods. Selection and care of instruments for professional and school use. Extension of mallet study.

119, 120  2 cr each  Deployment of instruments in hand and orchestral settings, conducting the percussion ensemble. Review of teaching methods in basic techniques, the role of the percussion clinician. Problems in writing and scoring for percussion, discussion of available materials and sources for solo performances.

**Piano**

101, 102  2 cr each  Bach, two part inventions, short preludes and fugues, easier sonatas of Haydn and Mozart, Beethoven, Rondo in C, easier nocturnes and mazurkas of Chopin. Major scales. M. M. quarter note equals 96, diminished seventh arpeggios M. M. quarter note equals 88. All scales and arpeggios in triplet and quadruplet rhythms.

201, 202  2 cr each  Bach, and two part inventions, sonatas of Haydn and Mozart, easier sonatas of Beethoven, nocturnes and waltzes of Chopin, Schumann, Op. 15, Scales Major and Minor M. M. quarter note equals 104 Dominant and diminished seventh arpeggios M. M. quarter note equals 96.


**Saxophone**

101, 102  2 cr each  All major and minor scales and arpeggios. Universal Method for Saxophone or equivalent material. Bass-Ifallsi Concert Etudes, selected solos.

201, 202  2 cr each  Continue scales and arpeggios with various articulations, Bass-Ifallsi, Concert Etudes, selected solos.

301, 302  2 cr each  Mule, Scales and Arpeggios, Gatti-Ifallsi, 35 Melodious Technical Exercises, pieces by Faure and Jeanjean.

401, 402  2 cr each  Mule, Scales and Arpeggios, Gatti-Ifallsi, 35 Melodious Technical Exercises, pieces by Faure and Jeanjean.

**Trombone and Euphonium**

101, 102  2 cr each  Fundamentals of tone production, embouchure development, breath support and attack, work in elementary Legato style Arban, Method for
Trombone, major and minor scales through two octaves, selected solos

201, 202 2 cr each
All scales and arpeggios, continue drills and Arban Method for Trombone, selected studies from Cimera, 170 Etudes, Study of single, double and triple tonguing Prior solos and other selected materials, band and orchestral studies

301, 302 2 cr each
Continue technical exercises, Staecey, Lip Flexibility, Rouchot, Melodious Etudes Book I-II, Blume, Studies Book I, La Fosse, Sight Reading Studies study of tenor clef, Croce-Spinelli, Solo de Concerts, Alary, Contest Pieces, Morel, Piece in F minor

401, 402 2 cr each
Continue technical exercises, Staecey, Lip Flexibility, Kopprasch, Book I-II, Rouchot Melodious Etudes Book III, Blazhevich, Clef Studies study of bass trombone, Guilmant, Morceau Symphonique, Cimera, Valse Petite Ropartz, Andante and Allegro

Trumpet

101, 102 2 cr each
Major and minor scales and arpeggios, Schlossberg, Daily Drills, Clark, Technical Studies, Arban, Complete Method, Vokman, Selected Studies, Balay, Petite Piece Concertante, Fitzgerald, English Suite

201, 202 2 cr each
Continue study of major and minor scales and arpeggios Continued Schlossberg and Clark, Boussquet 36 Celebrated Studies, E Gates, Odd Meter Studies Concone, Lyrical Studies Fioco/Owen, Arnozo, Ropartz, Andante and Allegro

301, 302 2 cr each
Continue scales in rhythmic and articulation patterns Continued Schlossberg, and Clark, Goldman Practical Studies, Clark, Characteristic Studies, Godicke, Concert Etude, Gibbons/Craft, Suite

401, 402 2 cr each
Major and minor scales diatonic patterns. Continued Schlossberg and Clark, P M Dubois, 12 Etudes various, Glaznt, The Complete Harry Glaznt, W Hartley, Sonatina, E Bozza, Badimage, Webber, Suite in F Major

Tuba

101, 102 2 cr each
All scales and arpeggios, Arban, Method for Trombone and Baritone, selected solo material

201, 202 2 cr each
All scales and arpeggios with various articulations, continue Arban, Bell Foundations of Tuba and Sousaphone Playing selected solos

301, 302 2 cr each
Continue scales and arpeggios chromatic scales, Bell, Foundations of Tuba and Sousaphone Playing, Vandercook Etudes, Rouchot, Melodious Etudes Book I Blume, Studies Book I, Tyrrell, Advanced Studies for the BB flat Tuba, selected solos, band and orchestra studies

401, 402 2 cr each
Rochut, Melodious Etudes Book II, Blume Studies Book II, Blazhevich, Etudes For The BB Flat Bass, band and orchestra studies

Violin

101, 102 2 cr each
Scales and arpeggios in three octaves scales in thirds, sixths, octaves (Flesch), Dont Schradieck, Mazas, or Kreutzer, Baroque period concertos and sonatas concertos Bach and Mozart

201, 202 2 cr each
Scales and arpeggios continued Fiorillo or Kreutzer concertos of Bach, DeBeriot Mozart, Rode, and Viotti

301, 302 2 cr each
Scales and arpeggios continued Kreutzer or Rode, short pieces of the Romantic period standard concertos and sonatas

401, 402 2 cr each
Scales and arpeggios continued Rode or Gavarnies, short pieces of the Romantic period, standard concertos and sonatas

Viola

101, 102 2 cr each
Scales and arpeggios in three octaves, Sevck Studies (Lifschev), Herrmann, Technical Studies, Telemann, Concerto in G, Klengel, Album of Classical Pieces

201, 202 2 cr each
Continue scales and Sevck Studies, selected studies from Kreutzer, 42 Etudes, Stamitz, Concerto in D, Bruch, Romance

301, 302 2 cr each
Continue scales and arpeggios, scales in thirds, sixths and octaves, Palachko, 20 Etudes, Fiorillo, selected studies from 36 Etudes, Bach, Three viola da gamba sonatas adapted for viola

401, 402 2 cr each
Scales and arpeggios continued selected studies from Campagnoli, 41 Caprices, Concerto in B minor by Handel-Casadesus, Hindemith, Measure of Music of the Baroque, selected contemporary solos, viola parts from orchestral and chamber music literature

Vuncanello

101, 102 2 cr each
Scales and arpeggios in three octaves, Franchomme, 12 Studies, sonatas by Handel, Corelli, Concertos and Goltzerman and Romberg

201, 202 2 cr each
Scales and arpeggios continued, Duport Etudes, Galaetz, Sonata No 2, Marais Suite, Romberg Concerto in D minor

301, 302 2 cr each
Continue Etudes, Gruzmaner Etudes sonatas by Grazola, Sammartini Goltzerman Concerto No 1

401, 402 2 cr each
Scales and arpeggios as before but including thirds, sixths and octaves Duport Studies, selected studies from Franchomme 12 Caprices, Concerto No 2 Romberg, Sonatas by Nardini and Sammartini, orchestral studies

Voice

101, 102 2 cr each
Technical exercises to fit the needs of the student Literature from all periods to fit the vocal needs of the student

201, 202 2 cr each
Continuation of technical exercises More challenging repertoire from all periods

301, 302 2 cr each
Continuation of technical exercises Opera and oratorio repertoire included when vocally suitable in addition to concert repertoire

401, 402 2 cr each
Continuation of technical exercises More advanced opera, oratorio, and concert repertoire and contemporary theater literature

CONDUCTING

379, 380 Conducting I, II 2 cr each
This course provides a study of the fundamentals of conducting as a performing skill, technique, and as an interpretive art Use of the baton, choral and instrumental rehearsal techniques, and score reading Two hours a week

327 Jazz Pedagogy & Directing 2 cr each
Methods and materials pertinent to rehearsing and conducting jazz ensembles, studio orchestras and theater orchestras with an emphasis on conducting as a performing skill as well as an interpretive art

ENSEMBLE

Required for all students as laboratory work during each semester of full-time enrollment Non music majors are invited to register for ensemble with permission of instructor

Major Ensembles

0-4 cr each
Voice, Piano, and Organ Majors will participate in a choral ensemble for each semester of enrollment Instrumental Majors will participate in Band or Orchestra for each semester of enrollment

Instrumentalists are encouraged to take advantage of opportunities to participate in choir, keyboard or voice majors are likewise encouraged to gain experience in one of the instrumental ensembles

Small Ensembles

0-1 cr each
The Small or Minor Ensembles include Brass Ensemble, Guitar Ensemble, Jazz Ensemble, Percussion Ensemble, String Orchestra, Tamburitza Ensemble, and Woodwind Ensemble See catalogues

115 Opera Coaching 1 cr each
Individual work with pianist as a supplement to opera workshop

116 Opera Workshop 0-1 cr each
A performing class in which students learn standard and other opera repertory in English and the original languages

141 Chamber Music 2 cr each
Study and performance of all types of chamber music for the various instrumental combinations

248-249 Percussion Ensemble 0-1 cr each
Meets on Fridays, 115-3 05 pm Required of all Percussion Majors The objective is to perform works of varying styles and levels of difficulty in a very professional manner Members will have an opportunity to perform in the various percussion groups The ensemble performs at least one recital each semester

MUSIC EDUCATION

189, 190, 289, 290, 389, 390 Music

Field Observation 0 cr
Music education majors are required to complete six field observations per year The observations are not credit bearing, but are preparation for student teaching Each student must register for field observation every semester (except senior year) in order to fulfill the pre-requisite for student teaching

181 Woodwind Class 2 cr
Performance technique on clarinet Teaching technique of oboe, bassoon and saxophone covered Two hours a week

185 Vocal Methods I 2 cr
Fundamentals of vocal production including posture, breath control, placement, diction interpretation Voice classifications, ranges and a sampling of art songs and operatic repertoire will be covered For potential teachers and music therapists Two hours a week

186 Vocal Methods II 2 cr
Instructional methods for the elementary classroom K-6, including development of the child voice, song materials, pedagogy, lesson planning and curriculum sequencing Two hours per week Pre requisite Vocal Methods I 185
220, 221 Voice Class 1 cr each
Fundamentals of voice production including placement, breathing, breath control, study of vowels and consonants, posture, elementary song materials interval and scale drill, sight singing. Proper stage presence for recitals and concerts and comportment in the classroom will be emphasized.

113, 114, 213, 214 Piano Class 2 cr each
The development of functional keyboard skills in sight reading, transposition, harmonization of melodies, and improvisation of accompaniments. Required of all Music Education students.

115, 116, 215, 216 Conservatory Piano Class 1 cr each
The development of functional keyboard skills in sight reading, transposition, harmonization of melodies, and improvisation of accompaniments.

117 Piano Class for Organists 1 cr
Organ majors study the development of functional keyboard skills in sight reading, transposition, accompaniments, and techniques 1 hr per week.

281 Brass Class 2 cr each
Performance technique on trumpet. Teaching technique of French horn, trombone, baritone, and tuba. Two hours a week.

381 String Class 2 cr each
Fundamental principles and techniques of playing and teaching the violin, viola, cello, and bass. Bowing, positions, vibrato, and an examination of class methods and materials are presented. Two hours a week.

383 Elementary Methods 2 cr each
Philosophy and pedagogy of music in the context of the elementary general music class. The principles of Kodaly, Dalcroze and Orff are incorporated with field observations, in-class demonstrations, research assignments, and active student participation to develop required competencies for teaching on the elementary level. Two hours per week. Prerequisites: Vocal Methods 185 and 186.

384 Secondary Methods 2 cr each
Principles, practices, and materials for the general music program in the secondary schools including voice classification, the organization of ensemble activities, concerts, assembly programs, and the relationship of the school to the community. Two hours a week.

385 Choral Methods 2 cr each
This course develops all aspects of choral singing and their application to school music programs. Emphasis is placed on the development of performance ensembles, rehearsal techniques, special choral problems, planning musical productions and practical work in choral conducting and arranging. Includes principles, practices, materials, and an overview of current teaching strategies and curriculum trends as applied to the total music program of the secondary school. Offered Spring Semester only.

387 Marching Band Methods 2 cr each
Principles, practices, and materials for the marching band, including its role in the total music program, organization and maintenance, planning and executing of the field show, basic maneuvers and rehearsal procedures.

481 Percussion Class Methods 2 cr each
Fundamental principles and techniques of playing and teaching the percussion instruments of the band and orchestra with special emphasis on the snare drum. Two hours a week.

490 Student Teaching 12 cr each
Practice teaching in approved elementary and secondary schools under the guidance of a critic teacher and the college supervisor. Note: Before a student will be permitted to begin student teaching, all field observations and methods classes including instrumental classes, piano, woodwinds, brass, strings, and voice must be satisfactorily completed. Percussion, elementary and secondary methods must be taken in the same semester as student teaching. Students will receive complete instructions, together with lists of materials, when they enroll in the Music Education program. Practical techniques to aid students in fulfilling the requirements will be explored in various methods classes.

MUSIC HISTORY, LITERATURE AND ART

251, 252, 351, 352 History and Literature of Music 2 cr each
An historical survey of the ideas and cultural achievements of Western man in the context of the political and sociological developments to which the art of music is bound. The survey embraces four semesters which are arranged chronologically. These courses seek to provide a broad historical frame of reference within which the relationship of music to the development of man's thought can be clearly seen, along with a survey and analysis of representative literature.

451, 452 Organ Literature 2 cr each
A survey of organ literature and organ building as it relates to organ registration. The first semester deals with the literature from 1750 to the present. Outside listening and readings will be required.

152 Evolution of Jazz Styles I 2 cr each
A study of the origin, development and styles of jazz music and its ramifications with an emphasis on recorded music as well as scores.

153 Evolution of Jazz Styles II 2 cr each
A study and analysis of recorded improvised solos by major jazz artists from 1940 to the present.

MUSIC THEORY, MUSICIANSHIP, COMPOSITION, EURHYTHMICS

The Theory Department recognizes the individual differences of students and provides an opportunity for them to advance according to their abilities.

121, 122 Dalcroze Eurhythmics 2 cr each
Experiencing, analyzing, and creatively manipulating the materials of music through rhythmic movement. Two hours per week.

010 Fundamentals of Musicianship 1 cr
The purpose of this course is to introduce students to sight-singing and musical dictation using the Moveable system of solfeggio. The course is designed for prospective music majors and non-majors and is a preparatory course for Musicianship I.

Students enrolled in Fundamentals of Musicianship and/or Fundamentals of Theory must successfully complete these courses before enrolling in Eurhythmics, Theory I, or Musicianship I.

011 Fundamentals of Music Theory 1 cr each
Students will learn to read clefs, name intervals, spell scales in major and minor keys, key signatures, identify triads, and begin four-part writing. This is a preparatory course for theory 131. One hour per week.

131, 132 Theory 1 cr each
This course is designed to acquaint the student with the materials of musical composition using diatonic harmony. Opportunities for the student to do creative work are provided. Two hours a week.

133, 134 Musicianship 2 cr each
The goals of the course are to develop good intonation and the ability to sight sing, the ability to identify and notate melodies, rhythms, chords, and complete compositions, and to develop inner hearing and memory. The course uses the Moveable Do system, based on the Kodaly method. Two hours a week.

231, 232 Theory 2 cr each
A continuation of 132 introducing chromatic harmony and the basic principles of contrapuntal writing. Creative opportunities continued. Three hours a week.

233, 234 Musicianship 2 cr each
A continuation of 134. Two hours a week.

335 Counterpoint I 2 cr each
The course is devoted to a study of the polyphonic technique of the sixteenth century.

336 Counterpoint II 2 cr each
A course study concerned with the harmonic contrapuntal technique of the period of J. S. Bach.

340 Orchestration 2 cr each
A study of the basic problems of scoring for individual instruments, particularly orchestral change, the entire orchestra, and unique instrumental combinations. Analysis of the techniques of orchestration of selected composers of the 18th, 19th, and 20th centuries.

JAZZ STUDIES

118, 119, 218, 219 Jazz Piano Class 2 cr each
This course is designed to give the college student a thorough understanding of Jazz Chords and Harmony. The student will study a wide range of Jazz Chords, Jazz Chord Progressions, and learn to incorporate them into tunes. Major and Minor Scales will be studied in these sessions as well as famous Jazz Piano Arrangements.

430 Jazz Arranging 2 cr each
A study of the basic techniques of scoring for individual instruments and ensembles of various sizes, from small groups to studio orchestras. Analysis of scores by contemporary big band arrangers.

440 Advanced Jazz Arranging 2 cr each
Advanced arranging techniques for the jazz and studio ensembles.

138, 139 Composition 2 cr each
The study of writing of musical composition in the smaller forms.

238, 239 Composition 2 cr each
These courses are offered in order to provide gifted young composers an opportunity to receive guidance in the development of advanced compositional techniques. Permission of the chairman of the Theory Department is required.

226 Jazz Improvisation I 2 cr each
Beginning study and practice of melodic improvisation, conventional forms and chord progressions, employing idiomatic jazz and articular techniques in major and modal scales.

227 Jazz Improvisation II 2 cr each
A continuation of 226 with an introduction to altered scales and chords.

242 Jazz Improvisation III 2 cr each
A continuation of 227 with an emphasis on chromatically altered scales, chords, and extended forms.

427 Jazz Improvisation IV 2 cr each
Extension and continuation of 426 with an emphasis on the practical application of advanced techniques to standard and jazz literature.

433 Jazz Composition I 2 cr each
A study of advanced compositional techniques as applied to contemporary jazz styles. Analysis of jazz compositions from 1940 to the present.
454 Jazz Composition II 2 cr
A continuation of 453 with emphasis on individual style development

333 Ear Training for Jazz Musicians 3 cr
The course is designed to train the student to recognize aurally the melodic, rhythmic and harmonic elements of contemporary jazz. The devices used are sight-singing, keyboard work and extensive dictation. Emphasis is placed on four and six-note chords chromatically altered chords and polyphonic.

141 Chamber Music Jazz 3 cr
The purpose of this course is to develop the skills and techniques necessary for small jazz ensemble performance. Emphasis is on rhythm section techniques interaction among the members of the group and development of repertoire.

MUSIC THERAPY

107 Music Therapy Orientation 3 cr
An introduction to Music Therapy as practiced in a variety of rehabilitation settings. Observations followed by informal group discussions. Basic theory about the validity of music as therapy and the relationship of theory to practice. Intensive class participation will be required to prove qualification for further in-depth study of the profession.

108 Music in Therapy 3 cr
An exposure to music therapy techniques used in working with handicapped children and adults. Applications to current Practicum work will be emphasized. Prerequisite: Music Therapy Orientation 107.

307 Psychology of Music 3 cr
An exploration of musical behaviors and a lesser degree all other art behaviors of a variety of cultures and sub-cultures beginning with the student's personal experience. Extensive class participation will be expected. Prerequisite: Introduction to Psychology.

308 Influence of Music on Behavior 2 cr
Reviews different treatment theories and their relationship to music therapy. Emphasizes the effects of music on behavior and total health. Develops a philosophy of music therapy with a background in holistic health.

309 Directed Study in Music Therapy 2 cr
Study topics from areas of music therapy, psychology of music, brain research and other expressive therapies are reviewed and discussed.

310 Recreational Instruments 1 cr
Stresses a typical and functional uses of guitar and covers other musical instruments and devices for recreational purposes. No specific text used. Each student required to have a guitar and harmonica.

315 Piano Improvisation for Music Therapy 2 cr
Development of functional keyboard skills in improvisation on rhythm and dissonant chords as an aid in non-verbal communication with the handicapped client.

124 Music Therapy Practicum and Internship 1 cr each
Each practicum is a field placement in a clinical setting for a minimum of one hour per week for 12-15 weeks per semester. Students are placed with music therapists who practice in a variety of clinical settings, or within staff who can provide a structured therapeutic program. Attendance at four monthly seminars per semester is required. A six-month internship is the culminating experience of this 7 cr unit.

SACRED MUSIC

209 Children's Choruses 1 cr
Materials and techniques used in dealing with children's choruses.

431, 432 Improvisation 2 cr each
A practical application of the basic tools of improvisation including harmonization of melodies at the organ, two and three part counterpoint, short ABA forms and chorale preludes with emphasis on their liturgical application.

478, 479 Choral Conducting and Methods 1 cr each
Development of conducting technique. The study, rehearsal and class performance of choral works in various styles.

407, 408 Church Music Practicum 2 cr
Seminar in practical aspects of church music, establishing the music program in a church, graded choir systems, children's choirs, instrumental arrangements in workshop contracts, cantor systems, worship commissions, etc.

421 Gregorian Chant 2 cr
The history, notation and modal system of Gregorian chant. Class participation in the singing of chant. Chant as prayer and current liturgical application.

420 Hymnody 2 cr
A study of the church's heritage of song, the psalms, the great hymns of the Medieval Church, the heritage of Luther, Calvin and their followers. English hymnody, American contributions, twentieth-century hymnody with special emphasis on the theological framework for each major development in the history of hymnody.

476 Organ Design and Maintenance 2 cr
A study of the basic concepts of organ construction with emphasis on the historical development of the organ and the mechanical operation of pipes and console. Tuning, voicing and esthetics of organ design will be discussed.

322 Sacred Choral and Solo Literature 2 cr
A survey of choral and vocal literature for the church with emphasis on practical materials for church choirs, solos and congregations.

NON-MUSIC MAJORS

161, 162 Introduction to Folk Dance 2 cr each
The course introduces folk dance as a genre of movement, examining the types and styles of folk dance found among different nations and cultures of the world. In addition, it will familiarize the student with the varying types of music and rhythms used as dance accompaniment in different nations and cultures, and it will touch upon the related areas of folk instruments, folk singing styles, language, customs and folk costume.

255 Introduction to Balkan Music 2 cr
An analytical study of the primitive and traditional folk music of the Balkans, its musical styles, forms and characteristics in terms of its geographical setting and historical background, and its general structure and aesthetics.

256 Introduction to Balkan Dance 2 cr
A survey of folk dances of the Balkan highlighting their development form, indigenous characteristics, differences and similarities from one ethnographic region to another.

147 Tamburitza Ensemble 1 cr
The Tamburitza Ensemble involves the study and performance of music specifically composed and arranged for both small and large Tamburitza string ensembles. It encompasses the fundamental principles and techniques for both playing and teaching the Tamburitza and includes appropriate literature.

149 Ballet Fundamentals of ballet technique and practice, including barre and center floor work.

151 Jazz Dance Fundamentals of jazz dance styles and technique and practice.

321 Music for the Classroom Teacher 2 cr
The aim of this course is to assist the student in gaining an appreciation of the importance of music in the lives of children, a knowledge of fundamental principles of instruction in music, and a familiarity with the variety of musically enriching experiences.

492 Development of the Creative Personality 3 cr
This course encourages creative growth through the development and execution of individual and group projects in music, music education and music therapy. Limited enrollment with the consent of the instructor. Prerequisites: Introduction to Psychology and Educational Psychology.

Descriptions of courses in English, modern languages, psychology, sociology, and education, required in several curricula will be found in the College of Liberal Arts and Sciences and School of Education sections of this Catalog.

D
School of Nursing

HISTORY
Since it is the policy of the University to establish its schools under control of an already established school, the School of Nursing was originally organized in 1935 as a unit in the College of Liberal Arts and Sciences. On March 15, 1937, the Department of Nursing Education was given the status of a separate school with a Dean in charge.

On December 3, 1937, the State Board of Education of the Commonwealth of Pennsylvania approved the school and authorized Duquesne University to confer the degree of Bachelor of Science in Nursing and the degree of Bachelor of Science in Nursing Education upon graduates according to the appropriate curriculum. Previously, the School of Nursing offered two programs both leading to the degree of bachelor of Science in Nursing, however, since 1964, both generic nursing students and registered nurse students enroll in the same program.

SCHOOL OF NURSING PHILOSOPHY AND DEFINITION OF NURSING
The philosophy of the School of Nursing evolves from that of Duquesne University. As such it guides the development of a personal philosophy of life based on a Judeo-Christian frame of reference and supports a commitment to the values which gave meaning to life. The faculty believes that the academic discipline of nursing is a human science profession primarily concerned with the health care of man with family, evolving from conception through death. Health and health care are studied in relation to the science of nursing as a human science. Man is a sentient living unity, a creative act of God. Man and environment in their openness evolve unidirectionally.

Existence with others in the world, co-existence, is recognized through patterns of expression. This existence is co-constituted, that is, man's relationship with the environment is participative. Within limitations of situation, man has the freedom to choose a way of being with the world and in that choice, give meaning to a situation.

Health is a process of being and becoming which is experienced by man. It is a personal process that affords each individual the potential for productive and meaningful life that is congruent with individual belief systems and values which arise from a multicultural society. Every person has the freedom to choose changing dimensions of health and health values which emerge from ethnic and cultural customs and characteristics. Health is assessed by citizens and professionals of health care through a participative process which involves joint planning and decision-making.

The faculty of the School of Nursing has defined nursing as an academic discipline that seeks to understand man as living health through the processes of life change, change, inquiry, and valuing. The practice of nursing applies knowledge and theoretics from this discipline and from the humanities and natural sciences in the promotion of health. Health promotion occurs through the utilization of The Nurse/Client/Family process as the nurse participates in care giving, health education and leadership.

The uniqueness of the Duquesne University School of Nursing undergraduate program leads to the degree of Bachelor of Science in Nursing.

PROGRAM OF STUDY
The School of Nursing offers a program with a major in nursing leading to a bachelor's degree to qualified high school graduates, registered nurses, non-nursing baccalaureate graduates, and qualified transfer students. The program includes four years of study, and is designed to provide the student with the knowledge and the skills needed to practice as a professional nurse generalist upon graduation. The general and professional education acquired in this program provides a basis for the graduate to progress to positions of increasing responsibility and to undertake graduate study.

The curriculum design has three components: complementary courses, supplementary courses, and core nursing courses. The course offerings in the natural, biological and human sciences support the philosophy that provides the basis for the conceptual framework of the professional nursing program. Professional nursing courses, which constitute the nursing major, include theory and practice in the nursing care of individuals and families. Learning opportunities are provided in hospitals, homes, and in the community.

The faculty of the School of Nursing conducts all professional nursing courses and also guides and directs the practicum learning experiences. A variety of hospitals and agencies cooperate with the School of Nursing to provide a wide selection of excellent practice settings.

Upon the successful completion of this program, graduates will be eligible to write the examination for licensure in the state in which they wish to practice.

The faculty reserves the right to make changes in the curriculum and program requirements which are believed to be in keeping with the changing health needs of society and/or the best interest of the students and the School to maintain quality professional nursing education.

ADMISSION REQUIREMENTS

ADMISSION OF HIGH SCHOOL GRADUATES
Students who are interested in applying for admission to the School of Nursing should request an application from the Office of Admissions, Duquesne University, Pittsburgh, Pa 15282. The specific entrance requirements for admission are:

1. The applicant's high school curriculum must include a minimum of 16 units distributed as follows:
   - English: 4 units required
   - Social Studies: 3-4 units recommended
   - Language: 2 units recommended
   - Math & Science: 6 units recommended (1 unit Chemistry and 1 unit Algebra required)
   - 2. A candidate must have been graduated from an approved secondary school in the upper two-fifths of the class, and must have demonstrated exemplary personal conduct in the institution.

3. The primary consideration for admission is the student's school academic record. This is considered to be the most important criterion of success at Duquesne University. It is the desire of the Admissions Committee to admit those candidates who possess qualities of character and intellect and who show promise of development into useful and contributing citizens.
4 A candidate must present satisfactory scores of the required College Entrance Examination Board Scholastic Aptitude Test in accordance with the standards to which the University adheres.

In specific instances and at the discretion of the Committee on Admissions, the equivalent of these requirements may be accepted in lieu of the foregoing precise requirements. See the section on Admissions for other University requirements.

REGISTERED NURSE STUDENTS

Duquesne University School of Nursing currently offers an evening program for registered nurses. This program is designed to meet the needs of the registered nurse student who is a graduate of a hospital diploma program or an associate degree in nursing program. The nursing major portion of the program is being scheduled during the evening hours for the convenience of the working nurse.

All students in the BSN Evening Program must complete the University’s liberal arts requirement prior to progressing to the nursing major. Any previously earned college credits will be evaluated for application toward the degree requirements. Please contact the School of Nursing for a brochure describing this program.

Admission Requirements—RN/BSN Program

Students who are interested in applying for admission to the RN—BSN Program should request an application from the Office of Admissions, Duquesne University, Pittsburgh, Pa 15282.

• High school diploma or equivalent
• Graduation from an accredited associate degree (2.5 QPA minimum) or diploma nursing program
• Verification of current licensure as a registered nurse in Pennsylvania
• Present or past experience in nursing
• Verification of active malpractice insurance
• Fulfillment of prescribed science and math requirements of the School of Nursing
• Personal interview

Further information can be obtained from the Director of the RN/BSN Program in the School of Nursing.

TRANSFER STUDENT ADMISSION

See Admissions Section for further requirements.

Admission criteria for transfer students

1. A cumulative QPA of 2.5 from the transferring student’s institution
2. 1 unit of chemistry and 1 unit of algebra, which can be from either a secondary school or postsecondary institution
3. Personal interview with the Academic Advisor in the School of Nursing

Provisions affecting placement

1. No transfer student can be accepted into nursing practicum courses during the first semester of attendance at Duquesne University.
2. Only courses taken within the past ten years will be evaluated for transfer credit. For courses for which in the natural sciences, the limit is five years. This time limit may be evaluated in specific instances.

SECOND DEGREE PROGRAM

Applicants holding a baccalaureate with a major other than nursing must follow transfer student admission procedures. They should also arrange for a personal interview with the Academic Advisor in the School of Nursing.

TEMPORARY TRANSFER

With the approval of the Academic Advisor, a nursing student may take courses during the summer at an accredited college or university other than Duquesne University. A student wishing to do this will become a temporary transfer student, providing he or she receives the necessary clearance from both institutions.

1. A student must bring to the Academic Advisor both the catalog description of courses he or she wishes to take and the schedule for the summer session at which they are given. The Academic Advisor will evaluate the proposed courses and confirm the other institution’s accreditation status.
2. Ordinarily, a student who has acquired 60 or more credits may not receive advanced standing for courses taken at accredited community or two-year colleges. Language courses at the elementary or intermediate level are exceptions and may be taken even though the student has already earned 60 or more credits. Other courses require special permission.
3. A candidate for the Bachelor’s degree must complete the last 30 credits (exclusive of challenge credits) toward the degree at Duquesne University.
4. A student is responsible for earning a C grade, or its equivalent, or better if he or she expects to receive advanced standing. The student must arrange to have an official copy of the transcript of grades earned at the institution in which he or she is a temporary transfer sent to the Academic Advisor in the School of Nursing in order to receive advanced standing. This transcript must be sent immediately upon completion of the course to be transferred.

ADDITIONAL EXPENSES AND REQUIREMENTS

Student Liability Insurance (Professional) for three years
Uniforms, nurse’s cap, duty shoes, identification pin (approx.)
Transportation to and from clinical agencies (weekly)
School of Nursing pin, if desired (cost varies)
Physical examinations, diagnostic procedures, and immunizations (cost varies)
Physical Assessment Kit
Mosby Test

All students entering Nursing III are expected to produce evidence of completion of first aid and CPR certification. Students will not be permitted to enter clinical without evidence of these competencies. Students are expected to maintain currency in these competencies as they progress through the program.

An annual physical examination and certain immunizations and health tests are required for all students in the School of Nursing. Pre-clinical students must complete specific health requirements by August 1 before proceeding to the Junior and Senior clinical practicum. The School of Nursing provides information on required school uniforms to students prior to entrance into the clinical area.

Each student is responsible for transportation to and from hospital and other clinical resources. Each student will be expected to have access to an automobile to permit experience with home care of clients and their families in Nursing VI.

STUDENT ORGANIZATIONS

Each nursing student is a member of the general student body and may select and participate in any of the campus organizations. There are numerous social sororities and organizations as well as professional organizations. These organizations exist for the promotion of the scholarly and professional interests of members.

Alpha Tau Delta (meaning “through force of character”) is a national professional fraternity for persons in nursing. Theta Chapter of Alpha Tau Delta National Professional Fraternity for Persons in Nursing was established 1945 to honor Mary Tobin on the occasion of her retirement from the University. The Dean Johnson Red Memorial Award commemorates Dean Johnson’s contributions to the growth of the School of Nursing.

Four new awards were presented for the first time in 1983. The first award on behalf of Miles Laboratories, Inc., is awarded annually to the outstanding graduating senior in the area of acute care nursing. The award is called the Miles Laboratories Award for Excellence in Nursing Practice in the Acute Care Setting. The second award is called the Lanza Award for Excellence in Home Health Nursing, and is sponsored by Lanza, Hospital Equipment for the Home. This award is presented annually to the student demonstrating outstanding ability in the area of community health. The third award is sponsored by the United States Air Force. This award, the Air Force Leadership in Nursing Award, is presented to the graduate best demonstrating outstanding leadership qualities (in general), contributions to the nursing program and/or class, and evidence of community service and commitment to the profession. The last new award is for general excellence in the area of nursing research and is awarded to a graduating senior. This award is sponsored by Sigma Theta Tau—Epsilon Phi Chapter.

MOBY ASSESSMENT TEST

The Mosby Assessment Test Battery is required of all second semester seniors. The purpose of this battery of tests is to provide a mechanism for feedback to students to help them evaluate their strengths and weaknesses in preparation for the licensing examination.

GRADUATION REQUIREMENTS

General University requirements for graduation are in the Academic Policies section of this catalog. In addition, specific School of Nursing requirements are:

1. Completion of 120 credits
2. A minimum cumulative over-all quality point average of 2.0
3. Successful completion of all clinical practicums
4. Completion of the required curriculum plan...
5 A candidate for the Bachelor's degree must complete the last 30 credits toward the degree at Duquesne University Challenge credits are not included in this 30 credit requirement.

6 Submission of an application for the degree. No student is considered a degree candidate until he/she files an application for the degree on a form provided by the Registrar's office. Degree requirements must be completed within 10 years after initial enrollment. At the end of the 10-year period, the student's record is re-evaluated in terms of the curriculum in effect at that time, and the student is advised of any additional requirements for graduation. The responsibility for fulfilling degree requirements rests with the student.

RECOMMENDED COURSE SEQUENCE

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*These courses must be taken during the semester indicated.*

**Pre-requisite to Nursing III

Students in the School of Nursing are preparing themselves for entry into a respected health profession where the highest degree of character and sense of responsibility are basic requirements. As such, they expect to be conducted themselves, at all times, in a manner befitting this position and according honor to it. For these reasons, the School of Nursing insists on strict adherence to the following regulations:

1. Class Attendance: Attendance is mandatory for the entire class session. Specific class attendance requirements (in relation to grading) will be stated in each course syllabus. Acceptable reasons for absence will be in accordance with the current Undergraduate Catalog statement of scholastic policies. Consideration of any other request for an excused absence will be at the instructor's discretion.

A student who is unable to attend class because of serious illness, hospitalization, a serious accident or other extenuating circumstance is responsible for notifying the office of the Dean of the School of Nursing. The student who is absent for coursework is expected to complete all of the work in all courses. It is the student's responsibility to make up all assignments in all courses and to be familiar with any instructions which may have been given during the absence. Absence is mandatory for any scheduled hours in the clinical area. This includes community clinical hours as well as those scheduled in the acute care area. Acceptable reasons for absence will be in accordance with the current Undergraduate Catalog statement of scholastic policies. The student is expected to notify the clinical instructor of the absence prior to the scheduled clinical time. The specific procedure for this notification will be at the discretion of the clinical instructor. Consideration of any other request for an excused absence will be at the instructor's discretion. Tardiness or unexcused absence(s) are serious offenses of professional responsibility and may result in adverse effect to meet course goals and indicators.

Handicapped students requiring special assistance are urged to notify the class instructor before or at the first class.

2. Health Requirements: All School of Nursing students entering studies are required to conform to the health requirements of the School of Nursing.

Curriculum Standards:

To progress to the nursing practice courses a minimum cumulative QPA of 2.0 is required with a minimum of a C grade in the natural sciences (Biology and Chemistry) and Psychology (including laboratory). Nutrition, Pathology, Nursing I and II, Basic Pharmacology, and Developmental Psychology I and II.

The School of Nursing faculty reserves the right to withdraw any student from the nursing major who in its opinion has not progressed satisfactorily in nursing practice even though the quality point average meets required standards.

Students must maintain a minimum of a C grade in each clinical practical An F in either theory or clinical practice will result in an F grade for the course.

Students may repeat non-nursing courses one time only. This includes support courses offered in and out of the School of Nursing. This is Anatomy and Physiology I and Lab Pathology. Basic Pharmacology and Nutrition. Students may repeat only one course at the 300 level and one at the 400 level in the nursing major.

The student is cautioned to seek regular advice from the faculty and to keep a record of credits earned and the calculated averages. The School assumes no responsibility for such errors appearing in student records which may prevent the student from being graduated.

The faculty of the School of Nursing reserves the right to make any changes in the curriculum that seem necessary or desirable.

**COURSE DESCRIPTIONS**

Descriptions of courses in liberal arts and sciences may be found in the College of Liberal Arts and Sciences section pages 14 to 63.

**199 Nursing I** 3 cr

This course introduces the students to the discipline of nursing as a human science. The students in this course explore nursing as a human science in light of the major concepts of man and health. Students are introduced to key themes of the conceptual framework which have been identified as the processes of life, change, valuing, caring, and family/nurse/client. Students explore the valuing process and look at self esteem as a means of valuing self. Students explore the process of becoming a professional nurse and investigate the historical emergence of nursing as a profession and a discipline.

**200 Nursing II** 3 cr

This course builds on Nursing I. The students examine nursing as a human science in light of the interrelating health and man-in-his-family. Students examine man as he lives in his health situation and as he partakes in the health care system. Students will explore the process of valuing nursing research through systematic inquiry toward development of nursing theory. Students are encouraged to identify the meaning of responsibility for self as learner moving toward becoming a professional nurse. Students will begin to explore the nursing process and the components of a basic nursing assessment. Prerequisite: Nursing I.

**212 Pathology** 4 cr

The students in this course examine the major diseases affecting man and health in today's society. Students will explore the major processes associated with disease, such as infection, inflammation and the immune response. The major diseases affecting man and health in today's society are explored. Lecture, four hours. Prerequisite: Anatomy and Physiology Lecture and Laboratory. Offered during Spring Semester only.

**255 Nutrition** 3 cr

This course studies nutrition principles and their importance to the student. Topics covered include factors influencing food habits, exploration of ways in which nurses may help families and individuals apply nutrition facts for promotion of health and well-being, and recent research in relation to such national problems as heart disease, obesity, and increased life span. Lecture, three hours. Sophomore year.
340 Nursing III 9 cr
This is the first clinical nursing course, building on Nursing II in which the student begins to examine the processes of life valuing change inquiry care- and the nurse/client/family process. In Nurs- ing, these processes will be further explored in relation to man’s unidirectional movement as lived through health patterns. The nurse/client/family process is practiced as the method used by the discipline to promote health. Use of theory as a basis for practice is emphasized. The student will be exposed from the sciences and humanities as he/she practices the Nurse/client/family process in a clinical setting with clients experiencing changing patterns of health. The course is offered during the Fall semester Prerequisites Natural Sciences Anatomy and Physiology lecture and lab Pathology Nutrition Pharmacology Nursing I and II Developmental Psychology I and II. Please contact the School of Nursing for information regarding health requirements uniform, CPR and First Aid certification etc.

341 Nursing IV 9 cr
Nursing IV is the second clinical nursing course and builds on the learnings of Nursing III. The course focuses on the participative endeavor within the nurse/client/family process. Nursing IV also provides the student the opportunity to explore adult man as he experiences changing patterns of energy in select nurse/client situations.

The course is divided into three units emphasizing nurse/client decision-making. These decisions are made in the following health care situations of high risk crisis short-term and long-term. The families and communities are discussed as client-sup- port. Nursing IV offers a clinical component in which the student cares for select clients in the acute medical-surgical and psychiatric settings. The course is offered during the Spring semester. Prerequisite Nursing III

460 Nursing V 9 cr
Nursing V the third clinical nursing course, builds upon the learning in Nursing IV. The student examines nursing as a participant with evolving families. For the purpose of this course, the term evolving family will be viewed as a family primar- ily concerned with childbearing and childre- ning. The student will focus on the interrelatedness and vulnerability of the family members as they strive toward family unity. The student will initiate interrelationships with evolving families as they experience separateness/togetherness to describe their health, evaluate alternatives and mobilize resources in planning change. Nursing practice will be based upon caring valuing and change processes to assist the family in the mobilization of resources for health care.

The course is presented in two units. Unit I utilizes the nurse/client/family process with evolving families as they experience life processes. The concept of separateness/togetherness, is utilized to explore the needs of the individual within the fam- ily the interrelatedness of family members, and family dynamics as the family progresses towards unity. The major unit of Unit II is the concept of family vulnerability. The concept, separateness/togetherness continues to be used to explore man and his family’s experience of health. This course is offered during the Fall semester. Prerequisites Nursing IV. Family Systems

461 Nursing VI 9 cr
Nursing VI is the final clinical nursing course and builds on prior learnings. The focus of the course is on the promotion of health with groups in both community settings and the nurse/client/family process is the vehicle through which the student participates in health promotion. Emphasis throughout this course is on the collaborative function of the nurse leader. The collabora- tive process with multi-disciplinary health team members provides the opportunity for the genera- tion of nursing research possibilities.

The course is presented in two units. The first unit deals with the nature of groups, groups of clients as a family as a group and the community as a group. The student will have the opportunity to develop the role of a member of a leader of the nursing team and as a member of the multi-disciplinary health care team. The course is offered during the Spring semester. Prerequisite Nursing V

470 The Research Process 3 cr
This introductory course offers students an opportunity to examine the historical perspectives of nursing research as well as trends and issues which have emerged. These are discussed and critically analyzed. Ethical implications of nursing research are considered integratively. The students are encouraged to examine the research process from a natural scientific viewpoint as well as from a human science approach. Further applications of the research process to nursing studies is explored through critical evaluation of current research. Prerequisite Fundamentals of Statistics and Nursing IV

NURSING ELECTIVES

215 Computer Applications in Health Care 3 cr
This is an introductory computer course. Computer Applications in Health Care is an elective course designed to introduce the student to the basic fundamentals of data processing with a focus on applications in the health care field. Students will become familiar with the basics of computer terminology and technology and be able to utilize a simple program. Learners will explore the various applications of information processing as they relate to health care including applications in edu- cation, practice administration, and research. Trends and issues related to the various applica- tions will be introduced and discussed. This course will assist the student in following the inquiry theme throughout the curriculum

260 Ways of Healing 3 cr
This course will explore many of the ways in which clients and their families are involved in the process of healing which are not thought to be medical. This course will begin looking at man’s beliefs systems and how they affect his life and specifically the healing process. The student will explore the mystery around unconventional or unexpected healing and look at this in relationship to man’s belief system, which is a reflection of how man participates in his own health. The student will then look at in-depth two ways of healing. One way is biofeedback. The other is visual imagery with relaxation techniques as researched by Dr. Carl O. Simon. The underlying theory will be explored. Case histories will be discussed, and the student will get an opportunity to practice these techniques on him/herself. In addition the applications of these techni- ques will be explored. There will also be group presentations around seven other healing techniques. These include prayer and healing. The course will be presented in two units. The major unit of the course will be to give direction for the case studies. Students will be introduced to and experience a variety of healing techniques, and the student will have an opportunity to practice those techniques on himself/herself.

299 Nursing and Spirituality 3 cr
This course will initially identify the universal and timeless truth of the spiritual dimension of man’s nature. It will then investigate case histories in nursing which focus on spiritual needs encountered in the nurse-client relationship. The student will begin to develop an awareness of his/her own spiritual growth through nursing experiences. In addition the student will discover the gift of the health care situation when spiritual needs are recognized and shared (entered into) with the client

300 Ways of Relating 3 cr
This course builds on basic communication theory and skills. It offers the student the opportunity to explore ways of relating through increasing self- awareness and critical analysis of one’s own patterns. This knowledge promotes the motivation toward changing the individual’s style of relating. The student learns to apply the skills of critical analysis of one’s own patterns.

353 Health Care Ethics 3 cr
This course studies the practical and theoretical issues in the ethics of health care. Students will explore a number of ethical theories and will become aware of ethical models of and approaches to health care ethics. Students are introduced to a model which offers direction for ethical decision-making in the health care context. The role of the nurse in ethical decision-making is discussed and some case studies involving duties that are faced by nurses are used to demonstrate the use of this model. However, the model is broad enough to be used in all areas of health care ethics and the student can explore the individual case study and the case studies used in this course. This course is offered jointly by the School of Nursing and the Theology Department.

397 Health Care of Women 3 cr
Health Care of Women is a nursing elective that will provide students with an opportunity to explore many of the prevalent health experiences of women in contemporary society. This course investigates aspects of women’s health that involve choices related to the quality of their lives. It will provide students with an opportunity to analyze health promotion for women from a nursing perspective. It will provide them with the knowledge of health resources available to meet the specific needs of women.

398 Communicating with Children Through Play 3 cr
Communicating with Children Through Play is a non-clinical elective for any student who is interested in working with children of all ages and the present and future children. The focus of the course is on play as an evolutionary life experience. Emphasis is placed on play as a means of understanding of children’s behavior, as a valuable resource for anticip- ating and communicating with children, and as a means for the child to work through some of his/her immediate life stresses. The participants will expand their perspectives of children’s play as a form of communication by observation and evaluation of children’s play by utilizing selected techniques. The selected play techniques that will be presented are Drawings (draw-a-man, draw-a-family, draw-a- house-tree-person), Pigem’s Question, Three Wishes, Story Completion, Make-up a Story, Puppets, and Therapeutic Play. Interviews. Prereq- uisite Psych 225 Developmental Psychology I and Psych 206 Developmental Psychology II or current enrollment in Developmental Psychology I Open to any University student

399 Health Education 3 cr
This course focuses upon the nurse’s role as health educator and allows the student to explore the dimensions of health education in today’s soci- ety. The major issues confronting the nurse as a teacher are emphasized together with the processes of valuing and change in health education. The learning needs of the client-family are carefully scrutinized. The student has the opportunity to write and implement a teaching plan, design an evaluation tool, and create teaching aids. Prereq- uisite Nursing III
400 Practical Approaches to Implementing the Nursing Process 3 cr
This course is a clinical nursing elective designed to provide students with the opportunity to utilize the process of inquiry specifically through a problem solving methodology. Students will re-examine the elements of the Nurse/Client/Family process drawing upon past learning utilizing data and information derived from the current practice setting. Students will then synthesize these elements and formulate relevant nursing care plans which reflect a refinement of problem solving skills. Outcomes realized through the utilization of the nurse/client process will then be analyzed and evaluated through the selected learning experiences occurring within the actual practice setting. Students will also have the opportunity to examine the values that exist in the practice setting itself and the impact that they have on the Nurse/Client/Family process. Prerequisite: Nursing IV

458 Famils Nursing in the Appalachian Community 3 cr
This course offers the student an opportunity to implement the Nurse/Client/Family process with families in a rural community whose cultural reference is different from that usually encountered. Students examine history and cultural patterns of the geographical area for their influence on health and health care delivery systems. Group process is explored as it relates to communal living and intense working relationships with a temporary multidisciplinary team of volunteer health providers. This course is offered during the summer and is only by special permission only. Prerequisite: Nursing IV Family Systems

463 Patterns of Aging 3 cr
This course is an elective course designed to examine the aging process with a focus on the older adult. Emphasis is placed on the meaning of increasing complexity in the life process. Learners will examine changing belief systems as they relate to health services for the older adult. Learners are expected to critically investigate the Nurse/Client/Family process through selected situations

466 Choosing the Living in Dying 3 cr
Choosing the Living in Dying is a three-credit, non-clinical elective for nursing majors. The focus of the course is on dying as an evolutionary life experience. Emphasis is placed on the quality of living throughout the dying process. The learners will develop their perspectives of the dying process and current issues in America related to that process. Meaning will be enhanced through the sharing of thoughts, feelings and perceptions within the group process

480 Senior Nursing Seminar 3 cr
This senior nursing seminar focuses upon clients' experiencing a wide range of health-related problems throughout the life span. The students will prepare their research report utilizing case studies and faculty/student discussions. Inquiry and decision making are emphasized within the framework of Nurse/Client/Family process. This course is offered only in the spring. Prerequisite: Nursing V

499 Directed Study 3 cr
This course in Directed Studies provides students with the opportunity to pursue an area of individual interest in nursing which is consistent with the curriculum. Students will have the opportunity to generate goals related to the area of interest they wish to pursue and to formulate and implement a plan for achieving these goals. By special permission only.

School of Pharmacy

HISTORY
Plans for establishing a School of Pharmacy were instituted in 1911 when the charter of the University was amended and authority obtained to grant degrees in Pharmacy. On April 20, 1923, the final work of organizing the School of Pharmacy was completed. The first class was received September 21, 1925.

Duquesne University School of Pharmacy is housed in Richard King Mellon Hall of Science, whose design by master architect Mies van der Rohe won the "Laboratory of the Year" award for 1969 in the National Medical Research, Inc., survey of new science buildings across the country. The School's specialized facilities include the Hugh C. Milwood Model Pharmacy, animal operating room, biochemistry laboratory, eight additional teaching laboratories, and a manufacturing pharmacy laboratory containing basic pharmaceutical manufacturing equipment and separate tabulating and aerosol technology area.

PHILOSOPHY AND OBJECTIVES
The School of Pharmacy, as an integral part of the University, embodies as its own the mission and goals set forth by the University. The School of Pharmacy has many important missions, but the primary mission of the School is to prepare practitioners for life-long careers in pharmacy and allied health sciences. Academic training must build sufficient knowledge and skills to allow graduates to practice in the present environment and to grow and adapt as the practice environment changes. The curriculum in pharmacy represents a composite of educational experiences that results in a well-educated and well-trained professional and offers the undergraduate student a well-rounded and broad education which will inspire a permanent interest in learning.

In order to be a competent pharmacist, the student must become a therapeutic specialist who has knowledge of drugs and their actions. Secondly, the pharmacist must possess skills and knowledge to manage a professional practice. The comprehensive and specialized nature of the curriculum offers the Pharmacy graduate a choice of occupations within the profession and its closely allied fields as well as an adequate foundation for the continuation of studies on a graduate level in many areas.

Within the profession of Pharmacy, a graduate may become a community pharmacist, hospital pharmacist or a pharmacist in government service. Many pharmacists find employment as medical service representatives for drug manufacturers. Some enter the wholesale drug business and the pharmaceutical manufacturing industry. Graduates in pharmacy are exceptionally well-qualified to become agents for the enforcement of narcotic and pure food and drug laws. In recent years, pharmacists have entered the fields of nuclear pharmacy and drug information-poison control. Many pharmacists find employment as chemists or biochemists in industrial and research organizations in allied fields, others enter the profession of teaching. Additional study is required for some of these positions. A few pharmacists continue their study in other health professions leading to a second professional degree or an advanced degree in the basic pharmaceutical and medical sciences.

The School of Pharmacy directs the professional program leading to the Doctor of Pharmacy degree. Those graduates are qualified for placement in clinical pharmacy positions in hospitals across the nation.

Medical technologists work under the direction of a pathologist or clinical scientist. In the field of Medical Technology, positions are available in hospital and industrial laboratories preparing tissue samples and slides for microscopic study, taking blood samples, storing plasma, and keeping records of tests.

In the field of Radiological Health, positions as health physicist are available in hospitals and any laboratories and industrial facilities which use radionuclides.

The Graduate School of Liberal Arts and Sciences of Duquesne University offers programs through the Department of Pharmaceutical Sciences, leading to the Doctor of Philosophy degree in pharmaceutical chemistry and medicinal chemistry, and the Master of Science degree in the fields of pharmacoeconomics, pharmaceutical chemistry, pharmacology-toxicology and medicinal chemistry.

DEGREES
The School of Pharmacy offers programs leading to three undergraduate degrees Bachelor of Science in Pharmacy, Bachelor of Science in Medical Technology, and Bachelor of Science in Radiological Health; these are described on the following pages.

Descriptions of advanced degrees offered by the faculty of the School of Pharmacy are found in other catalogs available from the School of Pharmacy office.

PROGRAMS

PHARMACY
The School of Pharmacy offers a Bachelor of Science degree in Pharmacy upon completion of the undergraduate professional program. The first two years encompass many courses offered by the College of Liberal Arts and Sciences in addition to several professional courses. The latter three years
of study are taught mainly by the pharmacy faculty with electives being available from both that faculty and all other schools of the University. Students are enrolled in the School of Pharmacy for all years. Transfer students are enrolled according to qualifications in the first, second or third year of the five-year sequence. Legal requirements of all states are met with regard to graduation from an accredited college of pharmacy. Licenses in the several states may be acquired by meeting specific additional requirements of each particular state.

Residency Requirements
The pharmacy curriculum has been designed to provide a sequence of courses leading to professional competence. The minimum time period in which this may be accomplished has been determined by the faculty to be three years of full-time residency. This residency requirement for the final years of the professional curriculum is in accordance with a policy statement ratified by the American Association of Colleges of Pharmacy and followed by all colleges of pharmacy in establishing minimum residency requirements, as well as guidelines for professional education. The residency requirement is applicable to all students regardless of advanced standing status.

Curriculum
A minimum of 30 credits in the combined general education areas of humanities and social sciences is required for graduation from the School of Pharmacy (fifteen in the Humanities including English Composition and English and six in the Social Sciences and nine credits chosen from any area in consultation with the advisor). Courses fulfilling the residency requirement are listed under the Department of Sociology in the College of Liberal Arts and Sciences section of this catalog.

The faculty recommends and reserves the right to require completion of course clusters in the humanities and social sciences as a means to provide a strong general education for all health professionals. A list of suggested course clusters appears at the end of this section.

The student is cautioned to seek regular advice from the faculty and to keep a record of credits earned and the calculated averages. The School assumes no responsibility for such errors appearing in student records which may prevent the student from being graduated.

PHARMACY CURRICULUM
For classes entering in Fall, 1982 and thereafter.

|        | First Year |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | Fourth Year | Spring Semester |
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MEDICAL TECHNOLOGY

The program leading to the degree B.S. in Medical Technology is a joint effort between Duquesne University and Mercy Hospital, Pittsburgh, Pa. The program involves completion of 124 credits, with 30 of the credits being taken in the Mercy Hospital School of Medical Technology in the fourth year of the program. Graduates of the program are eligible for national certifying examinations.

The School of Medical Technology at Mercy Hospital is approved by the National Accrediting Agency for Clinical Laboratory Sciences which acts as an adviser to the Council on Medical Education of the American Medical Association. It is responsible for establishing and maintaining high standards of education in AMA-approved schools of medical technology.

Students in the program enroll in the School of Pharmacy as medical technology majors. These students are advised through the Office of the Dean of the School of Pharmacy.

Admission to the fourth year of the program will be on a competitive basis with these as the determining factors:

1. A minimum cumulative quality point average of 3.00 in the sciences is recommended.
2. No student with a grade lower than C in any chemistry course will be considered for admission.
3. Written recommendations.
4. Personal interview with the Student Selection Committee of the Mercy Hospital School of Medical Technology.

Applications for entrance to the fourth year are to be made before October 15 of the third year. Information and applications are available from the Office of the Dean of the School of Pharmacy.

During the fourth year of the program, students will register and pay tuition to Duquesne University. They will be permitted to reside in the University dormitories and enjoy all of the privileges of Duquesne University students.

Failure in any of the major courses included in the fourth year will lead to immediate dismissal from the Mercy Hospital School of Medical Technology.

Curriculum

A minimum of 15 credits in the combined areas of humanities and social sciences is required for graduation (nine in the Humanities, including Theology, and six in the Social Sciences) Courses for fulfilling the Theology requirement are listed under the Department of Theology in the College of Liberal Arts and Sciences section of this catalog.

The faculty recommends and reserves the right to require completion of course clusters in humanities and social sciences. A list of the suggested course clusters appears at the end of this section.

Students in the radiological health program enroll in the School of Pharmacy as radiological health majors. These students are advised through the Office of the Dean of the School of Pharmacy.

Curriculum

A minimum of 15 credits in the combined areas of humanities and social sciences is required for graduation (nine in the Humanities, including Theology, and six in the Social Sciences) Courses for fulfilling the Theology requirement are listed under the Department of Theology in the College of Liberal Arts and Sciences section of this catalog.

The faculty recommends and reserves the right to require completion of course clusters in the humanities and social sciences. A list of the suggested course clusters appears at the end of this section.

The student is cautioned to seek regular advice from the faculty and to keep a record of credits earned and the calculated averages. The School of Pharmacy assumes no responsibility for such errors appearing in student records which may prevent the student from being graduated.

RADIOLOGICAL HEALTH

Since 1972 the School of Pharmacy has offered a four-year 123-credit program leading to a Bachelor of Science degree in Radiological Health. Graduates from the program qualify for positions of health physicist in any facility using radioactive isotopes.

Students in the radiological health program enroll in the School of Pharmacy as radiological health majors. These students are advised through the Office of the Dean of the School of Pharmacy.

Curriculum

A minimum of 15 credits in the combined areas of humanities and social sciences is required for graduation (nine in the Humanities, including Theology, and six in the Social Sciences) Courses for fulfilling the Theology requirement are listed under the Department of Theology in the College of Liberal Arts and Sciences section of this catalog.

The faculty recommends and reserves the right to require completion of course clusters in the humanities and social sciences. A list of the suggested course clusters appears at the end of this section.

The student is cautioned to seek regular advice from the faculty and to keep a record of credits earned and the calculated averages. The School of Pharmacy assumes no responsibility for such errors appearing in student records which may prevent the student from being graduated.
ADMISSION

Students who plan to enter any of the programs offered by the School of Pharmacy are encouraged to meet with the Dean Assistant Dean or the Director for a personal interview. Entrance requirements are listed under Admission Policies in the General Information section of this catalog. Students should be submitted as early in the year of matriculation as possible.

The national Pharmacy College Admissions Test (PCAT) may be taken by applicants. Results should be reported to the Admissions Office and to the School of Pharmacy. The test is not required for admission to the School but the results are used by advisers personnel to assess the level of knowledge in pertinent areas related to the program. Superior performance in certain topics will alert the student to enroll for advanced placement examinations.

The School of Pharmacy admits students into each of the first three years of the medical technology and radiological health programs and into the first or second year of the pharmacy program. Procedures for entrance are outlined under Application Procedures in the General Information section of this catalog.

All transfer students must be interviewed by the Dean Assistant Dean or Dean’s designee in the School of Pharmacy. Students intending to transfer into the pharmacy program must have successfully completed the appropriate math science and liberal arts prerequisites for entrance into the second or third year of the curriculum. Advisors at the School of Pharmacy are available to meet with students to discuss the requirements necessary for possible future placement in the School of Pharmacy.

Transfer pharmacy students must complete a minimum of three academic years of residence in the School of Pharmacy.

In extending circumstances and with the permission of the School of Pharmacy Student Standing Committee, a waiver of the three years of residence required by the American Association of Colleges of Pharmacy will be sought by the faculty on behalf of the student. Failure to request and obtain such a waiver will require the student to complete a minimum of six semesters in residence as full-time students.

Advanced credit for courses completed by students at other institutions may be allowed for those courses which appear in the Duquesne curriculum. No credit is allowed in any subject in which a grade lower than C was earned or for a course not equivalent to one among the University curricula. Once enrolled at Duquesne, students may not pursue courses at other institutions for transfer credit without specific permission from the Office of the Dean.

Advanced standing is conditional until the student completes a minimum of one semester's work (16 semester hours) if his work proves unsatisfactory, the student will be requested to withdraw.

Applicants who have completed advanced courses in high school are encouraged to take advanced placement tests (see Admission section of this catalog). Partial advanced placement credit for some courses may be awarded for these examinations. Students are advised to investigate carefully the credit equivalency.

SCHOLARS PROGRAM

Any student designated as an Admissions Scholar upon entrance to the University and to the School of Pharmacy or who has obtained a cumulative average of 3.50 is named to the School of Pharmacy Scholars Program. Students enrolled in any major offered by the School are eligible. Selection is made annually on the basis of academic standing. No application is required. Scholars are recognized annually at the fall social gathering and encouraged to investigate Advanced Placement CLEP and Challenge Examination opportunities, faculty research projects in which they may participate, and independent study courses.

SPECIAL FEES

Laboratory

Required laboratory courses scheduled by all schools of the University are subject to fees as published. Pharmacy laboratories require a fee of $40 each a semester. This is a prorated charge derived from the total costs of all laboratory operations throughout the professional years. Other courses offered in the program of medical technology and radiological health are subject to special fees. No laboratory fees are assessed for courses scheduled in the fourth year of the medical technology program.

Activities

Instituted by student request this fee of $30 a semester for a minimum of six semesters covers such miscellaneous items as local and national Student American Pharmaceutical Association dues and journal subscription, laboratory jacket, course books, pharmacology seminar, and free admission to the pharmacy student newsletter, Pharmac, and partial travel expenses for one required field trip to a pharmaceutical manufacturing firm. Payment is made at registration each semester. This privilege is extended only to those students in the last three years of the pharmacy program.

School of Pharmacy Fee

All students enrolled in any program of the School of Pharmacy are required to pay a fee determined by the University. This fee is assessed for each semester that a student is enrolled in the School of Pharmacy, assists with the special operating expenses of the School of Pharmacy.

REGULATIONS

Students in the School of Pharmacy are preparing themselves for entry into a respected health profession where the highest degree of character and sense of responsibility is expected. As such they are expected to conduct themselves at all times in a manner befitting this position and according honor to it. For these reasons the School of Pharmacy insists on strict adherence to the following regulations.

1. Class Attendance

Regular class attendance in the School of Pharmacy is normally required for maximum educational advantage. The responsibility for all course material rests wholly with the student. Under no circumstances will class attendance be used as the sole basis for altering a grade in a course. This principle shall not modify the prerogatives of each instructor to establish specific policies for attendance at tests, examinations, class lectures, deadlines for reports, and other specific school or course requirements.

2. Academic Standards

All students who are admitted to the School of Pharmacy must maintain a 2.0 QPA (quality point average) in the required courses in the professional pharmacy curriculum, throughout the program. Students who do not achieve a 2.0 QPA by the end of the first professional year may be admitted to the second year on a probationary basis. No student will be admitted to the third, fourth, or fifth years of the program with less than a 2.0 QPA in all courses and in professional courses. A minimum cumulative 2.0 QPA is required in the pre-pharmacy science and math courses is required for entrance into the third year of the pharmacy program. A student will not be admitted to the fifth year of the pharmacy program without successful completion of all required courses in Pharmacy I, II, III, IV.

3. Required Programs

Pharmacy students in the fourth year of the curriculum are required to participate in one industrial visit arranged by the School.

The faculty of the School of Pharmacy may require Pharmacy student attendance at other seminars and special programs.

4. Health Requirements

Any School of Pharmacy student entering studies in a hospital or other institutional setting may be required to conform to the health requirements of that institution.

STUDENT ORGANIZATIONS

The Student American Pharmaceutical Association whose membership includes all pharmacy students registered in the last three years of the School of Pharmacy, is organized to promote their interests, academic, social, and professional. Officers and members are elected annually by a vote of the membership to serve for one year. The Student American Pharmaceutical Association and a year's subscription to its Journal Interested pharmacy students enrolled in their first and second years at the University are also eligible for membership and are encouraged to become actively involved in SAPHA.
The Alpha Chi Chapter of Rho Chi, national pharmacy honor society at Duquesne University, was organized to promote the advancement of the pharmacological sciences. Pharmacy students who have completed three and one-half years of work at the University level and who have achieved a B average are eligible for membership. A maximum of 20 percent of the class enrollment may be admitted to membership. Faculty, graduate students, and former students of the school may also be invited to join. The Beta Gamma Chapter of Phi Delta Chi, an international pharmacy fraternity, was chartered at Duquesne University in 1960. The fraternity endeavors to integrate academic, spiritual, and social activities and to foster the highest professional and personal ideals among its members. Membership is open to students in pharmacy.

The Delta Epsilon Chapter of Kappa Psi Pharmaceutical fraternity was chartered at Duquesne University in 1932. The organization numbers among its members some of the most outstanding women in pharmacy. Its purposes are to promote the profession of pharmacy and to create a center of culture and enjoyment for its members.

The Eta Chapter of Lambda Sigma, an international pharmacy fraternity, was chartered at Duquesne University in 1939. The chapter aims to stimulate interest in professional activities and to foster the highest professional and personal ideals among its members. Membership is open to students in pharmacy.

Honor Awards

American Institute of the History of Pharmacy Award A recognition certificate and gift publication are awarded annually by the American Institute of the History of Pharmacy for superior achievement in pharmacological study or activity.

American Pharmaceutical Association Award A plaque provided by the McKesson Company is presented annually to the graduate who has made the most significant contribution to the Student American Pharmaceutical Association at Duquesne University.

Bernard and Blanche Schiller Award in the Humanities and Social Sciences An annual award is made to the student who has demonstrated understanding of the value of the humanities and social sciences in his development as a pharmacist. The award is to be used for the purchase of books on any aspect of the humanities in which the student is interested.

Mary McPaviland Beck Award An award of $25 is presented annually to the graduate who has shown outstanding ability and interest in the clinical practice of pharmacy.

Bristol Award An award is presented annually by the Bristol Laboratories, Inc., Syracuse, New York, to a Doctor of Pharmacy candidate for excellence in scholastic achievement.

Bristol Award A copy of a standard reference book is awarded annually by the Bristol Laboratories, Inc., Syracuse, New York, to the graduate who has shown outstanding ability and interest in the field of medical microbiology and pharmacology.

Faculty Award The faculty of the School of Pharmacy may present an appropriate award to an outstanding member of the graduating class who has displayed exceptional qualities of academic excellence and a QPA of over 3.75.

Maurice H. Finkelpearl Award An award of $50 is presented annually to a student who intends to practice Community Pharmacy.

Galen Society Award The Galen Society of Pittsburgh annually offers two $25 awards to two members of the graduating class who have achieved the highest standing in the departments of pharmacology and pharmaceutical chemistry.

Samuel W. Curtis Award An annual award of $25 is presented to the graduate who has shown outstanding ability and interest in the field of pharmacometrics.

McNeil Dean's Award A replica of an Early American Mortar and Pestle is awarded annually to an outstanding student of Pharmacy Administration.

Lilly Achievement Award A gold medal is presented annually to a member of the graduating class who has demonstrated superior scholarship and professional achievement as well as qualities of leadership.

Merck Sharp and Dohme Award Each year Merck and Company, Rahway, New Jersey, offers a set of valuable reference books to a member of the graduating class who attains the highest average in medicinal chemistry.

Rho Chi Award Alpha Chapter of Rho Chi awards annually a suitably inscribed key to the student who carries the highest general average in all subjects during the first two years of the pharmacy program. It is presented at a meeting of the Student Chapter of the American Pharmaceutical Association.

Roche Pharmacy Communications Award A personalized plaque is awarded annually to the graduating student who has shown exceptional ability in patient communication through coursework and application.

Smith Kline & French Laboratories Award A personalized plaque is presented annually by the Smith Kline & French Laboratories, Philadelphia, Pennsylvania for superior achievement in Clinical Pharmacy.

Student American Pharmaceutical Association Award An award of recognition is presented to the graduating student who has demonstrated through service, reporting and activity, an avid interest in organization work.

Syracuse Preceptor of the Year Award An appropriately designed plaque is awarded annually by the Syntex Laboratories, Inc., of Palo Alto, California, to the preceptor who, in the opinion of the faculty, has been the most effective in advancing the profession of pharmacy.

Upjohn Award A suitably inscribed plaque is awarded annually by the Upjohn Company, Kalamazoo, Michigan, for outstanding public service.

Western Pennsylvania Society of Hospital Pharmacists Award An award of $30 is presented annually to the graduating senior who has shown outstanding ability and interest in the area of Hospital Pharmacy.

Lenmon Company Award A certificate and award of $150 is presented to the graduating student who has completed the degree program through unusual and extraordinary perseverance and determination in the opinion of the graduating class.

Pennsylvania Pharmaceutical Association Award A certificate of recognition and one-year membership in the PPA is awarded annually to the graduate who has been most actively involved in pharmacy organizations.

Cortinelli Tucci Memorial Award An award of $100 is presented to the graduating student who has demonstrated excellence in pharmacoeconomics.

Sandez Doctor of Pharmacy Award A commemorative plaque and $100 which is provided by Sandez, Inc., East Hanover, New Jersey, is awarded annually to an outstanding Doctor of Pharmacy graduate.

Fisher Scientific Award for Outstanding Medical Technology Student A personalized plaque is presented annually to the graduating Medical Technology student who achieved the highest standing during the four-year program of study.

GRADUATION REQUIREMENTS

A committee of the faculty will review the record of each candidate for graduation to ascertain full compliance with specific School of Pharmacy curricula requirements and the general University Graduation Requirements, as stated in the Academic Policies section of this catalog. This committee will then recommend candidates for faculty certification for graduation or for remedial work to be fulfilled during the last semester of residence Communications pertaining to this certification may be entered in the Office of the Dean.

STATE LICENSING

PENNSYLVANIA

A candidate for licensure as a Registered Pharmacist in the Commonwealth of Pennsylvania must meet the following requirements before he may be admitted to the licensing examinations which are conducted by the Pennsylvania State Board of Pharmacy.

1. Character—be of good moral character

2. Professional Training—have a degree in Pharmacy granted by a School of College of Pharmacy, which is accredited by the American Council on Pharmaceutical Education.

3. Practical Experience and Internship—any person enrolled as a student of pharmacy in an accredited college may at the end of the second year of college file with the Pennsylvania State Board of Pharmacy for application for registration as a pharmacy intern.

To insure proficiency in the practical aspects of pharmacy, the State Board shall by regulation prescribe internship requirements which must be satisfactorily completed prior to issuance of a Pharmacist's License.

Specific information concerning practical experience, as well as all other requirements concerning licensure may be obtained from the State Board of Pharmacy, Department of State, Box 2649, Transportation and Safety Bldg., 6th Floor, Harrisburg, Pennsylvania 17120.

STATES OTHER THAN PENNSYLVANIA

According to law, the licensing of an applicant seeking to become registered as a pharmacist is under the sole jurisdiction of the state in which he seeks to practice. Although the requirements for licensure in the Commonwealth of Pennsylvania are similar to those of other states, differences may exist. Space limitations preclude a complete listing of the requirements of other states and the District of Columbia. The candidate for licensure in another state is advised to consult the Board of Pharmacy in that particular state for complete and current information.
CAREER GUIDANCE CENTER
A Guidance Center has been established within the School of Pharmacy to keep students informed about the latest career opportunities available to those pursuing a pharmacy education and to answer high school and college students to the profession.

The Center consists of faculty members School of Pharmacy alumni and pharmacy practitioners. It provides upon request speakers for career day programs and information to high school counselors on all matters relating to a pharmacy education and career.

RESEARCH FOUNDATION
The Hugh C. Muldoon and Pharmacy Alumni Foundation of Duquesne University established in 1950 to celebrate the twenty-fifth anniversary of the founding of the School of Pharmacy, is an increasingly valuable aid in helping to achieve the aims of the University and of the School of Pharmacy. The foundation provides funds for improving the instructional and research facilities of the School it assists in the advancement of pharmacy by supporting the training of undergraduate and graduate students in industrial and research procedures, it helps to extend the knowledge from research being conducted under the auspices of the School. Contributions are solicited from graduates and others interested in the work of the Foundation. They may be addressed in care of the School of Pharmacy.

COURSE DESCRIPTIONS
The courses of instruction are numbered in accordance with a plan uniform throughout the University.

University courses numbered 100 are Freshman courses; 200 Sophomore; 300 Junior; 400 Senior courses. Courses described in this section are required courses in the professional curriculum and those courses offered by the School of Pharmacy faculty as a University service. Courses numbered 500 are graduate level courses in which qualified undergraduate students may be enrolled with the permission of the instructor of the course. Credit for these courses cannot be used to satisfy requirements for a second degree. Most courses in the 800 series are generally restricted to Doctor of Pharmacy candidates.

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY AND PHARMACEUTICS
Chairman Mitchell J. Borke Ph D

101 Pharmacy Orientation 1 cr
Introduction to the profession of pharmacy. Discussion of various aspects of pharmacy education and professional practice. Pharmaceutical organizations are discussed and evaluated. The pharmaceutical literature is reviewed and a brief history of pharmacy is presented. Lecture one hour.

301 Basic Pharmacology—Pharmacy Math I 4 cr
A study of the basic physicochemical principles applicable to an understanding of drugs and the pharmaceutical systems in which they are contained. Subject areas include solubility and solutions, pH, diffusion osmometry, drug stability packaging and storage and administration, physicochemical evaluation of pharmaceutical products, the clinical applications of pharmacetics. Mathematical methodologies (algebraic and graphical) relevant to modern pharmaceutical practice will be included. Lectures and laboratory portions of the course. Laboratory emphasis is on practical and clinical applications. Prerequisites: Calculus I, General Physics (one semester), Organic Chemistry I, II; Lecture three hours, Recitation, conference, and laboratory, four hours.

302 Basic Pharmacology II 4 cr
A continuation of Pharmacology I; Prerequisite: Pharmacology I. Lecture, three hours, Recitation, conference, and laboratory, four hours.

305 Pharmacology—Biopharmaceutics III 3 cr
A study of the physico-chemical, biological, and pharmaceutical factors which affect absorption, distribution, metabolism, and excretion of drugs in man. Emphasis is placed on the utilization of biopharmaceutical and pharmacokinetic knowledge in problems of bioavailability and bioequivalence of drug products and in the determination of appropriate drug dosage regimens. Prerequisite: Basic Pharmacology I, II, Lecture, three hours.

306 Pharmacology—Pharmaceuticals IV 4 cr
A continuation of Pharmacology I, II, III. Emphasis on pharmacokinetics and on drug delivery systems. Prerequisite: Pharmacology III, Lecture, three hours, Laboratory, four hours.

309 Biochemistry—Nutrition 4 cr
A course designed to integrate basic biochemistry with the application to selected clinical cases. Emphasis is placed on metabolism of carbohydrate, fat, and protein. Problems of the source of energy derived from foods, certain aspects of nutrition are discussed. The function of enzymes, vitamins and hormones is presented in relation to their role in metabolism. Clinical applications including laboratory procedures in both the diagnostic and parenteral nutrition, and pertinent clinical cases which illustrate the interrelationship of biochemistry with physiology are discussed. Prerequisite: Organic Chemistry I, II; Lecture, four hours, Laboratory, two hours.

310 Analysis of Drug Substances 4 cr
A survey course covering the basic principles of analytical chemistry, statistics, and data interpretation. Examples used come from pharmaceutical manufacturing, clinical and biochemical analysis, pharmacokinetics and pharmacology, drug therapy. Prerequisites: General Chemistry I, II, and Biochemistry. Lecture four hours.

313 Medicinal Chemistry—Natural Products I 4 cr
Relationship between chemical structure and the biological action of natural and synthetic drug molecules. Emphasis is on understanding principles as well as on specific therapeutic agents. Organization is by pharmacological classification with chemical properties relating to mechanism of action. Drug disposition (absorption, distribution, metabolism and excretion) and chemical incompatibilities considered for each class. Prerequisites: Organic Chemistry I, II, and Biochemistry. Lecture four hours.

314 Medicinal Chemistry—Natural Products II 4 cr
A continuation of Medicinal Chemistry I. Lecture four hours.

365 Analytical Chemistry 4 cr
Rigorous training in stoichiometric relationships and in the application of equilibrium principles, with laboratory experience in the principal methods of gravimetric, volumetric and instrumental analysis. Prerequisites: General Chemistry, Organic Chemistry. Lecture three hours, Laboratory seven hours.

499 Independent Study and Research 1-2 cr/sem
To stimulate interest in furthering a student's education the School of Pharmacy uses this course as a vehicle to provide the means whereby those who wish to be involved in a programmed self-study educational experience may do so. To accomplish this aim the student in cooperation with a specific instructor chosen by the student will develop a course of study that will realistically be able to fill the learning objectives stated by the student. The student and instructor will meet at stipulated regular time intervals for guidance and evaluation of progress being made by the student. Contact School of Pharmacy office for restrictions on total credits allowed and on eligibility for registration.

DEPARTMENT OF PHARMACOLOGY—TOXICOLOGY
Chairman Gene A. Riley, Ph D

2 Drug Abuse 1 cr
A course designed to present the pharmacological and toxicological properties of substances of abuse. The major classes of drugs are described with direct reference to toxic and adverse effects. The myths and misconceptions commonly attributed to some substances of abuse are clarified. The philosophy of the course is to present an objective picture of the "drug abuse era" in this country. The course is intended for all students entering their collegiate studies. Admission to this course for students who have completed Pharmacology-Drug Mechanisms I and its equivalent is by approval of the instructor. Lecture one hour.

3 Basic Pharmacology 3 cr
A course dealing with the major classes of therapeutic agents designed for students with a limited background in biological sciences. Drugs are considered from a "disease state" point of view and include basic mechanisms of action. Important drug interactions as they relate to patient care are included. Not open to Pharmacy Students. Prerequisites: Six credits of biological science, including physiology. Lecture, three hours.

4 Social Diseases 1 cr
Causes, course of diseases, prevention, treatment and social effects of venereal diseases. Awareness and common sense should be awakened in students by the course. Open to students who have completed Pharmacology-Drug Mechanisms I only with the permission of the instructor. Lecture, one hour.

130 History of Pharmacy 2 cr
A survey of the origins of science, medicine, and pharmacy from the earliest recorded events to the present with emphasis on nineteenth and twentieth century pharmacy in the United States. Lecture, two hours.

220 Human Anatomy and Physiology I 4 cr
A lecture course dealing with the structure and function of the various cells, tissues and organ systems of the body. Emphasis is on the complexities of regulation and integration of function of these organ systems. Prerequisites: General Biology I, II. Lecture, four hours.

317 Human Anatomy and Physiology II 4 cr
A continuation of the Human Anatomy and Physiology I lecture series, with laboratory. The laboratory portion of the course deals with gross anatomy, a histological study of tissues and the clinical appraisal of physiological functions. Lecture three hours, Laboratory, three hours.

318 Pathology 3 cr
A lecture presentation of the cellular, organ and systemic changes associated with the human disease process. Also discussed are the physiological responses of the body's organ systems to the disease process and the contribution these responses make to the production of signs and symptoms that are normally associated with each disease state. Prerequisites: Human Anatomy and Physiology I. Lecture, three hours.
DEPARTMENT OF MEDICAL TECHNOLOGY

Director Jeanne A. Cooper, M.D., Education Coordinator M. Elaine Linkhauser, M.T. (ASCP)

61 Clinical Chemistry
A comprehensive study of the chemistry and metabolism of proteins, carbohydrates, lipids, and electrolyte, enzyme, and hormone systems as revealed by the various examinations performed on blood and other body fluids

62 Urinalysis
The study of renal function and its abnormalities as portrayed by alterations in the composition of the urine

63 Hematology
Detailed study of the anatomy and physiology of the blood and various laboratory methods used in establishing inherited or acquired abnormalities of blood and blood forming organs

64 Blood Banking
Essentials and importance of proper selection of blood for transfusion, preserving methods, recovery, and administration of blood. Also included are studies of tests pertaining to sensitization

65 Bacteriology
The study of clinical bacteriology, including culture methods, biochemical and immunological aspects of identification, and the application of these to the disease state

66 Parasitology
Methods of identification of the various parasites infecting man, with detailed study of their morphology and habit

67 Immunology
Study of the procedures used in analysis of immune mechanisms of the body, and their application in disease processes

69 Mycology
The study of the pathogenic fungi, the diseases they cause, and the technical methods of identification.

DEPARTMENT OF PHARMACY

Chairman Thomas J. Mattek, Pharm.D.

333 Drug Literature Resources
A course designed to familiarize the student with the literature of drug and the ultimate user are considered. Lecture, one hour, Laboratory, two hours

431 Therapeutics
A course designed to provide the student with the information necessary to demonstrate competency related to the therapeutic principles of selected disease states. Prerequisites: Pharmacology-Drug Mechanisms I, II and Medicinal Chemistry-Naturals Products I, II Lecture, six hours

491 Hospital Pharmacy Management
A course designed to introduce the student to hospital pharmacy resource management and to services frequently associated with hospital pharmacy. Lecture, three hours

814 Parenteral Therapy
A lecture/labatory course designed to present the principles of sterilization, aseptic processing and membrane filtration in the preparation of parenteral products and intravenous admixtures in pharmacy practice. Emphasis on the principles of fluid and electrolyte therapy, acid-base balance and total parenteral nutrition is included in lecture, three hours, Pre-laboratory and laboratory/demonstration
70 Virology
The study of the viruses causing disease and the technical methods of identification

71 Nuclear Pathology
The study of the use of radionuclides in the diagnosis and treatment of disease

DEPARTMENT OF RADIOLOGICAL HEALTH
Chairman: Mitchel L. Borke, Ph.D.

451 Practice in Radiological Health
4 cr
Designed to provide the student with practical experience in at least four broad areas of radiological health industrial hospital reactor and university. This experience will be acquired through observation and participation in daily practical problems of radiation protection within local organizations representative of the four broad areas of radiological health. Emphasis will be placed on personnel monitoring and dosimetry, radiochemical assaying of biological and environmental materials, field surveying of plant operations involving large quantities of fission products and other radiotactive materials, environmental monitoring practices, decontamination procedures, and radiation protection record keeping. Prerequisites: Bionucleonics 539 Radiological Health 541 Co-requisite: Radiological Health 542 Laboratory 16 hours

539 Bionucleonics
3 cr
A study of the fundamental techniques of manipulation and measurement of radionuclides. Experiments performed individually by each student include measurement of radioactivity with G-M counters, flow counters, ionization chambers, proportional counters, crystal and liquid scintillators, study of the characteristics of radiation, gamma spectrometry, some applications of radionuclides in pharmacy, chemistry, biology, etc. Prerequisites: General Chemistry, General Physics. Lecture three hours Laboratory three hours.

540 Advanced Bionucleonics and Radiopharmaceuticals
3 cr
A course devoted to the practical applications of radioactive isotopes in chemistry, biology, pharmacy, and medicine. The scope of the course includes neutron activation analysis, gamma spectrometry tracer methods and radiopharmaceuticals. Prerequisite. Bionucleonics 539 Lecture, three hours Laboratory three hours.

541, 542 Radiological Health I and II 4 cr each
A course designed to review the fundamental physical and biological principles of radiation protection and the application of these principles to the measurement techniques, radiation hazard evaluation, radiation protection surveillance and administration. Scientific principles most applicable to solving the problems of protecting humans from unacceptable levels of radiation exposure both in occupational and public environment are emphasized. Lecture three hours, Laboratory, four hours.

RECOMMENDED PROFESSIONAL ELECTIVES
The following courses offered by the Graduate Department of Pharmaceutical Sciences are available to qualified upperclassmen in the School of Pharmacy:

501 Manufacturing Pharmacy
502 Pharmaceutical Formulation and Development
504 Industrial Pharmacy and Governmental Affairs
510 Advanced Pharmacokinetics I
522 Spectral Methods
523, 524 Advanced Medicinal Chemistry I and II
539 Bionucleonics
540 Advanced Bionucleonics and Radiopharmaceuticals
541, 542 Radiological Health I and II
560 Biosynthesis of Natural Products
561 General Toxicology
563 Pathology
566 Clinical Toxicology
569 Toxins

Descriptions of these courses may be found in the Graduate School of Liberal Arts and Sciences Catalog.

RECOMMENDED ELECTIVES FOR MEDICAL TECHNOLOGY
107 Medical Ethics
101 Survey of Sociology
322 Medical Sociology
103 Introduction to Psychology
305 History of Medicine
307, 308 History of Science
204 Interpersonal Communications
121 Elements of Economics

RECOMMENDED ELECTIVES FOR RADIOLOGICAL HEALTH
106 Logic
104 Introduction to Philosophy
105 Ethics
107 Medical Ethics
101 Introduction to Political Science
312 International Law and Organization
103 Introduction to Psychology
101 Survey of Sociology
323 Medical Sociology
201, 202 English Literature Survey
103, 104 Development of the United States
305 History of Medicine
307, 308 History of Science

ELECTIVES—COURSE CLUSTERS
The following courses in liberal arts and sciences were especially selected by the several departments to support and complement pharmacy programs. Students are encouraged to view these electives with the aim of providing an appropriate depth of knowledge in the areas. Each cluster is intended to offer an interesting sequence of electives that will count toward minimum elective requirements of all programs in the School.

Department of English—
1) 201, 202 English Literature Survey
2) 205, 206 American Literature Survey
3) 210, 211 World Literature Survey
4) Special Studies in English or World Literature
5) 207, 208, 209 Study of Literary Form
6) English Honors Program 12 credits
7) All 12 credits minors listed by the Department in the current catalog.

Department of History—
1) 305 History of Medicine 307, 308 History of Science
2) 103, 104 Development of the U.S. 309 American Science and Technology
3) World History, Western Civilization
4) Non-American History Sequence

Department of Classics—
1) 121 or 122, 234, 245, 246, 248 Ancient History
2) 121 or 122, 236, 247, 248, 249 Greek Civilization
3) 245, 246, 247, 248 Ancient History
4) 103, 104, 203, 204, 301, 302, 303 Greek Language and Literature
5) 101, 102, 201, 202, 305, 306 Latin Language and Literature

Department of Sociology—
1) 101, any one of areas of concentration suggested under minor

Department of Psychology—
1) 103, courses suggested under minor

Department of Speech Communication—
1) Courses suggested under minor

Department of Philosophy—
1) 104, 105 or 107, 106
2) Courses suggested under minor

Department of Political Science—
1) 101, courses suggested under minor

Department of Theology—
1) Courses suggested under minor

Fine Arts—
1) Courses suggested under minor

Any course taught in the University may be chosen as an elective course by students who have met the prerequisites. Descriptions for courses outside the School of Pharmacy may be found in the appropriate section of the University catalog.
70 Virology
The study of the viruses causing disease and the technical methods of identification

71 Nuclear Pathology
The study of the use of radioisotopes in the diagnosis and treatment of disease

DEPARTMENT OF RADIOLOGICAL HEALTH
Chairman Mitchel L. Borke, Ph D

451 Practice in Radiological Health 4 cr
Designed to provide the student with practical experience in at least four broad areas of radiological health, industrial, hospital, reactor, and university. This experience will be acquired through observation and participation in daily practical problems of radiation protection within local organizations representative of the four broad areas of radiological health. Emphasis will be placed on personnel monitoring and dosimetry, radioclinical assaying of biological and environmental materials, field surveying of plant operations involving large quantities of fission products and other radioactive materials, environmental monitoring practices, decontamination procedures, and radiation protection record keeping. Prerequisites Bionucleonics 539 Radiological Health 541 Co-requisite Radiological Health 542 Laboratory, 16 hours

539 Bionucleons 3 cr
A study of the fundamental techniques of manipulation and measurement of radioisotopes. Experiments performed individually by each student include: measurement of radioactivity with G-M counters, flow counters, ionization chambers, proportional counters, crystal and liquid scintillators, study of the characteristics of radiation, gamma spectrometry, some applications of radioisotopes in pharmacy chemistry, biology, etc. Prerequisites General Chemistry, General Physics Laboratory, three hours, Laboratory, three hours

540 Advanced Bionucleons and Radiopharmaceuticals 3 cr
A course devoted to the practical applications of radioactive isotopes in chemistry, biology, pharmacy, and medicine. The scope of the course includes neutron activation analysis, gamma spectrometry tracer methods, and radiopharmaceuticals. Prerequisites Bionucleons 539 Lecture, three hours, Laboratory, three hours
Reserve Officers' Training Corps

DEPARTMENT OF MILITARY SCIENCE (ARMY OFFICERS' COMMISSIONING PROGRAM)

PROGRAMS

The Army Reserve Officers' Training Corps (ROTC) Program has been a member of the Duquesne Family since 1936. It is a completely voluntary program which is open to all male and female students. The program provides students with the opportunity to earn a commission as an officer in the US Army, US Army Reserves, or Army National Guard. After commissioning, students serve as an officer in the Reserve or National Guard while pursuing their chosen civilian careers or compete for active duty. The program is structured to give the student a variety of practical experiences in leading and managing people and resources while learning about the military profession and the role it plays in our system of government. Four-year and two-year programs are offered both of which are taken in conjunction with a student's required or normal course of studies leading to a degree.

FOUR YEAR

The four-year program is divided into two parts: the Basic Course and the Advanced Course. The Basic Course is usually taken in the freshman year and the sophomore year during which time the student would take ROTC courses as they would any other college courses. There is no military service obligation or special requirements of any kind. The freshmen and sophomore courses focus on leadership and leadership situations. Freshmen learn survival techniques, how to handle a rifle, and how to navigate cross-country using a map and compass. Sophomores learn about leadership, management, and the role of the military in the United States. The Basic Course may be compressed into less than a two-year period if the student meets certain prerequisite conditions.

DIRECT ENTRY INTO THE ADVANCED COURSE

Students may receive placement credit for MS 1 and MS 2 and be granted direct entry into the Advanced Course. This placement credit may be granted for:

1. Completion of Army Basic Training or its equivalent in the NAVY, AIR Force, COAST Guard, or MARINE Corps

EARLY COMMISSIONING

Many students are able to complete the requirements for commissioning prior to graduation through the direct entry concept. These students may be commissioned upon completion of the Advanced Course permitting them to serve in salaried positions with the National Guard or Reserves while completing their degree work.

SIMULTANEOUS MEMBERSHIP PROGRAM (SMP)

This program permits students to participate in the Army ROTC Advanced Course and serve in a Reserve or National Guard unit as an officer at the same time. The advantage to SMP is that the student will receive regular drill pay from the Reserve or National Guard as well as the $100 per month living allowance for participating in the Army ROTC.

TWO-YEAR PROGRAM

This two-year program is designed primarily for transfer students and students who did not participate in ROTC as freshmen or sophomores. Any student with at least two academic years remaining (undergraduate and/or graduate) is eligible. Students may qualify for this program and enrollment in the Advanced Course by successfully completing a paid summer camp at Fort Knox, KY.

ARMY ROTC SCHOLARSHIPS

Army ROTC offers four, three, and two-year scholarships which are awarded on a competitive basis. ROTC students as well as those students not currently participating in ROTC are eligible to apply. Each scholarship pays for tuition, textbooks, and other purely academic expenses. Scholarship students also receive a tax-free living allowance of $100 each month during the school year while on scholarship status. For details see the ROTC Scholarship listing in the Financial Aid Section of this catalog on page 222.

MILITARY SCIENCE CURRICULUM (ARMY OFFICERS' COMMISSIONING PROGRAM)

The BASIC COURSE

(Military Science Levels I and II)

Military Science (MS) 100 Survival Techniques

This is an introductory course designed to prepare students to recognize survival situations, determine direction, navigate at night, use maps and compass, find and prepare food, find water, apply first aid, and construct shelters.
Module I (MS 401), Administrative/Staff Operations and Procedures, is taught in the fall semester; Module II (MS 402), Military Law and Justice, is taught in the spring semester.

THE COMMON HOUR
Military Science (MS) 100 Cadet Corps Laboratories. The Common Hour and Cadet Corps Laboratories are synonymous. This class is scheduled both semesters, meeting once a week for one hour. The Cadet Commander uses the lab to disseminate information and to organize the activities of the Corps of Cadets. All students are required to attend unless a conflict exists between this class and their academic course work.

VOLUNTARY ADVENTURE AND SOCIAL ACTIVITIES
In an urban environment it is not possible to provide students with the kind of surroundings suitable for the conduct of such activities as rappelling and small unit tactics. Therefore off-campus sites on weekends are utilized in order to effectively apply techniques taught in the classroom. Weekend activities are student-run and instructor supervised. For this reason, these activities are ideally suited for cadets to practice leadership and organizational and military technical skills. Some weekday or weekend evenings are set aside for social activities which incorporate exposure to military customs and traditions. These events include a Dining-In, the Military Ball, an Awards Ceremony, and the Annual ROTC Commissioning Program.

THE MISSION
The mission of the Division of Student Life is to establish and maintain a total living, learning and developmental environment that will enhance students' growth for individual self-actualization and positive involvement in the world community.

PHILOSOPHY
Consistent with the educational philosophy of the University and the above-stated mission, the Student Life Division provides the student with opportunities to participate in a variety of experiences with fellow students, faculty members and administrators. The Student Life Staff encourages students to initiate new programs, implement change and participate in the essential processes of University governance on many levels.

ORGANIZATION
The Vice President for Student Life and his Assistant coordinate the Departments of Athletics, Career Planning and Placement, Dean of Students Office, Duquesne Union, Health Services, Residence Life, Retention and Testing. These Departments are briefly described below. Additional information may be obtained directly from each Department and through the Student Handbook and Code of Student Rights, Responsibilities and Conduct.

ATHLETICS
Duquesne University is a member of the National Collegiate Athletic Association (Division I) and the Atlantic 10 Conference. All rules of these two organizations, including those pertaining to a student-athlete's eligibility for a varsity team, are followed. Duquesne University believes in and promotes the concept of the student athlete, manifested in part by the appointment of the Academic Supervisor for Intercollegiate Athletics. Athletic grants-in-aid are available for most varsity sports.

The Athletic Department fields men's varsity teams in baseball, basketball, cross-country, football (Division I), swimming, tennis and volleyball; women's varsity teams in basketball, softball, swimming, tennis and volleyball; coed varsity teams in golf and rifle; and club teams in bowling and hockey.

Duquesne sponsors a very active intramural program in such fields as tennis, touch football, volleyball, chess, street hockey, basketball, softball, ultimate frisbee and marathons.

CAREER PLANNING AND PLACEMENT
Students and graduates of Duquesne University have available to them the full services and programs of Career Planning and Placement. Persons with uncertain or changing vocational goals may seek career planning through personal contact with the professional staff and use of the career resources. Early use of this service is encouraged.

The individual with well-defined career goals may seek employment advice including resume preparation, job application and interview techniques, job referrals and credentials. The graduating student may also be interested in campus interviews with visiting employers.

Undergraduate students may earn academic credit approved for preprofessional work under the University's Cooperative Education Program which is administered by the Career Planning and Placement Office.

The part-time and summer employment programs are important to students in financing their education and to those seeking practical experience to augment college training. Placement in campus jobs is largely, though not totally, dependent upon financial need. Part-time and summer jobs in the community are also available.

DEAN OF STUDENTS OFFICE
This office is directly responsible for implementing several programs and services which provide individual students and groups with opportunities for personal, intellectual and social growth. Chief among these programs and services are the University Judicial System, Orientation, Freshman/Transfer Assistance Program, College Skills, Special Scholarships and Awards, Disabled Student Services, Life Planning Seminars, Positive Profile Records, Commuter Concerns, National Honor Societies and Counseling Services.

The University Judicial Board plays an important role in developing responsible student conduct, serving to protect the rights and freedoms of all students while insuring that these rights and freedoms are not misused within the context of students' responsibilities to the University. The Board, comprised of administrators, faculty, students and a student chairperson, minimizes legal technicalities and instead focuses on the developmental process.
DUQUESNE UNION

The Duquesne Union is more than a unique building; it is a unique partnership of professional staff, faculty and students working together to provide the experience necessary to develop mature, effective members of society. The Union staff provides advice and assistance for all phases of campus programs and services, including student orientation, counsel and direction. The Union programs and services are based on the belief that a University-wide perspective is essential in developing and presenting a balanced series of cultural, educational, recreational and social programs. With the goal of community, all aspects of the Union are open to the entire campus. It is not the “Student” Union, but the Duquesne Union.

The Union staff works closely with the Union Program Board, which is the student organization exercising executive control over the planning and implementation of University-wide programming through a series of special committees. The Union Program Board offers its members the opportunity to develop effective skills in leadership, communication, organization and group process.

Facilities within the Union include administrative and student organization offices, meeting rooms, information center, recreation center, bookstore, cafeteria, vendor space, ballroom, Rathskellar Restaurant and student lounge.

HEALTH SERVICE

The University Health Service provides primary health care to all resident students and to commuters enrolled in the University Commuter Health Plan. Services include evaluation, treatment of illness and injury, student counseling, allergy injections, diagnostic tests, routine screening physicals, health counseling referrals and health education materials and programs. Additionally, emergency care is given to faculty, staff and visitors. In addition to Regular Nurses and a Nurse Practitioner, the staff includes a Board Certified Physician and Consulting Psychiatrist.

Although in-patient facilities and services are provided by local medical centers adjacent to and close by Duquesne’s Campus, a completely equipped ambulatory is maintained by the University.

It is strongly recommended that each student carry some form of health insurance. The University provides a Student Health Care Plan designed to meet the needs of students and which is priced lower than individual health insurance policies.

RESIDENCE LIFE

The Office of Residence Life is committed to creating an environment in each of the four Living Learning Centers in which the student may grow and develop as a total person. Its philosophy and programs are based on the belief that the Living Learning Center experience is an important part of the total University education. Therefore it is the purpose of the Office of Residence Life to facilitate the personal and academic growth of the resident student. To this end the professional and resident assistant staff will provide the means to foster such development.

All freshmen students, except those residing with their parents or relatives, are required to live in one of Duquesne’s Living Learning Centers. All students living on campus are further required to take their meals at the Residence Cafeteria. Housing Agreement terms are effective for the entire academic year, with room and board rates being determined on an individual basis. Additional information regarding programs, policies and regulations for the Living Learning Centers is included in the Residence Life Handbook.

RETENTION OFFICE

The Retention Office, under the direction of the Vice President for Student Life/Retention, coordinates the efforts of the entire University community to ensure that the personal and educational experience for all students is the best possible. Policies, programs, services and opportunities are constantly reviewed, refined and improved in an effort to meet the legitimate needs of students consistent with the mission and goals of the University.

TESTING BUREAU

The primary role of the staff of the Testing Bureau is to provide the student with the opportunity to explore interests and abilities as they pertain to choosing a degree major or minor and planning a career. Trained counselors focus upon test results to help the student develop a personal style when considering the student’s questions or concerns. Counseling is also available to students whose concerns are of a more personal nature such as adjusting to college life, anxiety, etc. Professional assistance with study skills, test anxiety and personal concerns is available in both individual and group counseling formats. Information about the applications for national qualification examinations (CLEP, GRE, LSAT, MAT, SAT, etc.) is available at the Testing Bureau.

B OTHER DEVELOPMENTAL SERVICES

INTERNATIONAL EDUCATION

One of the five (5) primary tenets of Duquesne University centers on International Education. Committed with this focus is the continued growth of the number of International Students from an increasing variety of countries who are pursuing undergraduate and graduate degrees at the University.

The responsibility of the International Student Advisor is to provide an effective service to all International Students in the areas of adjustment, personal counseling, preparation of forms and facilitating the integration, understanding and communication among International Students and American students. Additionally, the International Student Advisor coordinates opportunities for Duquesne students interested in studying abroad as part of their education.

LEARNING SKILLS PROGRAM

The Learning Skills Program is an ancillary academic service whose prime charge is the intellectual development of students. Services are provided in coordination with academic offices of the University.

As part of its academic assistance efforts, the Learning Skills Program delivers diagnostic and prescriptive services, individualized developmental programs in reading, writing, mathematics and science, and offers to students who seek to upgrade their academic skills and advance their intellectual growth.

A free tutorial service provides students with competent tutors in numerous subject areas. In addition, a comprehensive study skills program is available to help students prepare study skills as well as to assist students experiencing academic difficulties.

PSYCHOLOGICAL CENTER FOR TRAINING AND RESEARCH

The Psychological Center for Training and Research is staffed by the Psychology Department and is available to students for personal counseling. Counseling interviews provide the student with an opportunity for personal growth through the development of the student’s ability to find one’s own solutions for difficulties of a personal nature. Single conferences or a series of interviews in individual or group counseling can be arranged at the Center’s Office.

C STUDENT GOVERNMENT

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association is a student-created structure designed to provide a forum for the expression of student views and interests to maintain academic freedom and responsibility and to foster intelligent and active participation in all phases of university life. Two major functions of the SGA are to serve as student representatives on important University committees and to serve as the body that recognizes and funds student organizations.

COMMUTER COUNCIL

The Commuter Council is an officially recognized student governmental organization open to all students at the University. The purpose of the Council is to identify commuter concerns and to provide educational social and service-oriented programs for the University’s large commuter population.

PANHELLENIC COUNCIL

Panhellean Council is established for the purpose of strengthening women’s fraternities as organizations and for promoting cooperation among and among groups through scholastic, athletic and social activities. Membership in the Panhellean Council is comprised of the presidents and elected representatives of each of the six women’s social fraternities. Panhellean Council establishes all rules concerning the rushing and pledging of new fraternity members.

D STUDENT ORGANIZATIONS

GENERAL

There are more than 80 active student organizations at Duquesne. Some serve the needs of specific interest groups as well as those of residents and commuters. Others relate directly to major areas of study. Some honor academic achievement. Many are formed to meet religious, service or social needs. Whatever their purpose, these organizations and their activities comprise a major part of campus life.

HONOR SOCIETIES

These societies have as their primary purpose recognition of academic excellence and leadership achievement and are members of the Association of College Honor Societies.

PROFESSIONAL AND DEPARTMENTAL ORGANIZATIONS

These professional organizations exist to provide the fertile ground for the growth of informed exchange of ideas pertinent to the students academic pursuits. With this purpose in mind, these organizations sponsor numerous programs including debates, symposia, and lectures.
SERVICE ORGANIZATIONS
The purpose of these student-organized organizations is to provide a high standard of service to the campus and local communities while at the same time developing leadership qualities of and cooperation among each member of the organization. With this purpose in mind service organizations sponsor a wide variety of professional service charitable and social programs.

SOCIAL ORGANIZATIONS
Social organizations are composed of college men and women who have joined together to enhance their identities by sponsoring and promoting social athletic cultural and academic events. Many of these organizations belong to Inter-Fraternal Council or PanHellenic Council.

PERFORMANCE GROUPS

TAMBURITZANS
The Duquesne University Tamburitzans were founded in 1937 at the University and are the first university-based performing folk ensemble in the United States. The group takes its name from the Tamburitzan family of stringed instruments indigenous to the folk cultures of southeastern Europe. The group exists for the dual purpose of preserving and perpetuating the Eastern European cultural heritage in the United States and offering scholarship opportunities to deserving students.

THEATRE
The Red Masquers serve to provide an extra-curricular outlet for students who wish to participate in the theatre. Its aim is to provide the University and its students with educational and cultural benefits that accrue from a dramatic program. In line with these objectives the Masquers' program offers a variety of stage entertainment—one-act plays musicals comedies tragedies. Any Duquesne student is eligible for membership.

MEDIA ORGANIZATIONS

WDUQ RADIO AND TELEVISION
The University's radio station (WLUQ-90.5 FM) and television (closed circuit) provide academic support to the individual schools and departments through seminars workshops laboratory experience and extra-curricular opportunities in communication skills for individuals and groups. Most positions on the staff are filled by students. The University radio station operates on a 25,000 watt frequency over a radius of seventy miles.

WDRC
This radio station, purchased by Residence Council and operated by students, provides music and announcements in the Duquesne Tower's Cafeteria during the lunch and dinner hours. Students interested in being disc jockeys and/or announcers on WDRC should contact Residence Council.

PUBLICATIONS

The Duquesne University Code of Student Rights, Responsibilities and Conduct
The Student Code is the definitive statement of standards, policies and procedures regarding student rights and responsibilities. Campus organizations, student governance, student record, student conduct, and the University Judicial System. Copies are available at the Duquesne Union Information Center.

The Duquesne Duke
The Duquesne Duke is the University campus newspaper written and edited by the students for the students. It appears every Thursday during the academic year except during examination periods and holidays and provides an array of campus news, student opinions, editorials and advertisements. The paper is geared to all members of the University administrators, faculty members, employees, and most of all students. Membership in the Duquesne Duke is open to all students.

The Duquesne Magazine
The Duquesne Magazine is a literary publication, published each semester which affords students the opportunity to submit writing, artwork and photographs. It appears every Thursday during the academic year except during examination periods and holidays and provides an array of campus news, student opinions, editorials and advertisements.

L'Esprit Du Duc
The yearbook, highlights the events of the previous year to remind all graduates of their alma mater. It is mailed to all seniors after their graduation.

The Student Handbook
The Student Handbook contains information about the University which concerns the students. Copies are available at the Duquesne Union Information Center.

Part IV: Campus Ministry

The Campus Ministry is deeply concerned with the religious life and growth of Duquesne students and all campus residents. Its policies and programs are oriented to furthering that growth at the personal as well as the community level. For Catholic students, Eucharistic liturgies are celebrated daily and the Sacrament of Reconciliation is available by appointment. For all students, whatever their faith, the chaplains are available to help with spiritual direction, counseling advice, or sympathetic listening. The Campus Ministry provides a listing of Sunday services in nearby churches or synagogues, referrals can be made to introduce the student to the various ministers or rabbis in the area. The University Chapel is open each day for private prayer and quiet meditation. It is available too, to groups for specific services of a religious nature.

The Campus Ministry sees itself at the service of all in an open, unstructured, non-threatening relationship and invites the entire Duquesne Community to make use of its services.

The Ministry's activities are announced by posters in residence halls, and almost all other campus buildings. Its main office is Room 102 on the first floor of the Administration Building, with additional offices in Duquesne Towers, Assumption Hall and St. Martin's dormitories.
Part V: Admission, Financial Aid, Tuition and Fees

Admission

OFFICE OF ADMISSIONS

The Office of Admissions is located on the first floor of the Administration Building. Telephone (412) 434-6200, 434-6221, 434-6222. Office hours Monday through Friday from 8:30 A.M. to 4:30 P.M.

POLICY

It is the policy of Duquesne University to admit applicants who are best qualified to profit from opportunities which the University offers for intellectual spiritual and social growth. In general admission is based upon past academic performance, scholastic ability and personal characteristics. Information about religious preference, sex, racial characteristics, and ethnic origin is not taken into consideration by the Committee on Admissions.

ADMISSION REQUIREMENTS

1. A candidate should have been graduated from an approved secondary school in the upper three-fifths of the class, and demonstrated exemplary personal conduct in that institution. Applicants who have not completed four years of high school must submit a High School Equivalent Diploma issued by their state department of education.

2. High School curriculum must include 16 units distributed as follows: four units in English, eight units in any combination from the area of social sciences, language, mathematics, and science, and four elective units for which the secondary school offers credit toward graduation. In specific instances, and at the discretion of the Committee on Admissions, the genuine equivalent of these requirements may be accepted in lieu of the precise requirements specified (Note: Candidates planning to enroll in Pharmacy or Pre-Health programs: Medical Technology, Radiological Health, or a science or mathematics major should have completed a minimum of seven units in mathematics and sciences.)

3. Scores in accordance with the standards adhered to by the University must be presented for the required College Entrance Examination Broad Scholastic Aptitude Test (SAT) or the American College Testing Program (ACT) (Note for admission to the School of Music, an audition is required.)

EARLY DECISION

Students who desire Duquesne University as their first choice for college should consider the Early Decision Plan. This plan requires that the student apply by November 15 of his/her senior year. The student is notified of the decision by December 15 and is required to send his/her non-refundable tuition deposit within two weeks. This offers the candidate the advantage of knowing of the admissions decision early in his/her senior year.

APPLICATION—NEW FIRST-YEAR STUDENTS

Application should be addressed to the Director of Admissions, Duquesne University, Pittsburgh, Pennsylvania 15282. It may be submitted at any time during the candidates' senior year up to July 1. The application procedure is as follows:

1. Obtain, complete, and file the Application for Admission with the Office of Admissions.
2. Include the $20 non-refundable application fee with the application form. International students must pay a $30 non-refundable application fee. No application will be processed for consideration by the Committee on Admissions unless accompanied by the required fee.
3. Request the secondary school principal or guidance counselor to submit a transcript of the candidate's academic record. A recommendation is requested.
4. Complete the required SAT or ACT examination during the spring of junior year and/or fall of senior year. It is the personal responsibility of each candidate to have test scores forwarded to the University.
5. An interview is highly recommended for prospective students. Auditions are required for School of Music applicants.
6. Students interested in being considered for University Scholarships should submit their application by February 1 of their senior year.

7. Early Decision Deadline (for students who have Duquesne as their first College choice) is November 15. Notification will be by December 15. If accepted under the Early Decision Plan, commuting students are asked to submit a non-refundable tuition deposit of $100 within two weeks. Resident students are asked to submit a $250 non-refundable deposit.

8. Notification of decisions for regular admissions is given once Early Decision applicants have been notified. If accepted students are asked to submit non-refundable tuition deposit of $100 for commuters or $250 for resident students by May 1 of their senior year. International students must submit a non-refundable tuition and room and board deposit of $650.

It is the responsibility of the applicant to have all supporting credentials file with the Office of Admissions and the Financial Aid Office prior to the deadline dates.

EARLY ADMISSION

Although the University believes that most students profit from four years in the secondary school, the Early Admission Plan is open to outstanding students. This is a plan whereby unusually able and mature candidates who have completed less than four years of a secondary school program may apply for consideration to begin college after their junior year. The high school diploma is awarded following successful completion of a freshman year in college. Two separate interviews are required. Information may be obtained by telephoning or writing to the Admissions Office.

APPLICATION—OTHER CATEGORIES

It is the responsibility of applicants who apply for evening study or as international students postgraduate readmission students, transfers, transfers and veterans, or for the Summer Session to arrange to have all supporting credentials file with the Office of Admissions and the Financial Aid Office prior to the deadline dates.

ADMISSION OF UNDERGRADUATE INTERNATIONAL STUDENTS

All international applicants must meet the admissions requirements for freshmen and/or transfer candidates as determined by the academic unit in which they propose to study. In addition, official transcripts of all degrees, diplomas, mark sheets, and examination records in original or photocopy copies must be sent with certified translations, where applicable, from all schools, colleges and universities attended to the Admissions Office.

A declaration of finances must be submitted which has been completed and certified by the appropriate persons. Acceptance letters will not be issued until the Admissions Office is in receipt of this form and approval has been granted.

If English is the applicant's principal language of instruction, SAT results must be submitted. If English is not the applicant's native language, the Test of English as a Foreign Language (TOEFL)* is required unless the applicant has finished one year of college in the United States and has successfully completed at least 15 semester credit hours and demonstrated proficiency in English. All TOEFL accepted international students must take English diagnostic tests upon arrival at the University, for appropriate placement regardless of the academic level of acceptance. If the results of the diagnostic examinations indicate the need for remedial work in English to assure satisfactory progress in the projected plan of study, the student must enroll in a course in developmental English during his/her first semester at the University.

A letter of reference from at least one school official which contains information on the applicant's academic, personal and social strengths and weaknesses, and also the length of time the writer has known the student is required.

Admissions decisions will not be made until all information has been received, completed, and certified.

Upon acceptance, the International Students Advisor will issue the necessary documents for obtaining a student visa to the United States. To complete on-campus registration, international students who are admitted should plan to arrive one week before the term begins.

POST-GRADUATES

Post-graduates are students who already have a Bachelor's degree but desire to take undergraduate courses at Duquesne. A Post-graduate student must submit a Postgraduate application to the Division of Continuing Education of the Bachelor's degree or was received from an institution other than Duquesne. If the bachelor's degree was received from Duquesne, an application for readmission must be submitted. In both instances, proof of degree is required either by an official transcript or a certificate of graduation.

READMISSION

Any student who withdraws from the University must apply for readmission through the Office of Admissions regardless of the time interval involved since withdrawal. A student who is dismissed for academic reasons must appeal to the Committee on Student Standing of the school to which application of admission or readmission is being made, once the application has been submitted to the Admissions Office.

TRANSFERS

A student who wishes to transfer from another college or university must have the complete transcripts of high school and college records forwarded to the Office of Admissions and must submit an application for admission. When accepted,
the student must supply to the dean of his school a description of the courses which appear on the transcript. The student should contact the Admissions Office of his school for placement and curricular planning following a reasonable period for evaluation of transcript.

The College of Liberal Arts and Sciences and School of Education and Pharmacy award 60 semester hours of transfer credit to those transfer applicants who have an Associate Degree in Arts from a regionally accredited two-year institution.

Students transferring from a regionally accredited institution must present academic records which show an overall average of C (2.0 on a 4.0 quality point system).

Persons seeking admission to the University as transfer students from a state approved college which does not have regional accreditation must have attained a cumulative average of 3.0 based on a 4.0 quality point system.

In addition such prospective students must take the College Entrance Examination Board official SAT test as well as placement, for achievement that merits such consideration. Subjects included in the program are English composition, history, history of art, modern foreign languages (French, German, Spanish), Latin, mathematics AB, mathematics BC, physics B and C chemistry biology.

Credit will be given on a minimum advance placement score determined yearly by the College of Liberal Arts and Sciences. For current information the minimum scores acceptable for each subject and the credits granted, consult with the University’s Director of Testing Bureau or the Office of Academic Advisement, College of Liberal Arts and Sciences.

Applications who hope to receive advanced placement credit must request that scores be sent to the University. Information about equivalent University courses for which qualifying students may receive credits must be obtained from the University’s Director of Testing Bureau or the Assistant Dean for Administration, College of Liberal Arts and Sciences.

College Level Examination Program

The special examinations for which the College of Liberal Arts and Sciences will award credits, with acceptable scores, are:

1. General Examinations
2. Subject Examinations

American government, American history, analysis and interpretation of literature, biology, college algebra, college algebra-trigonometry, college composition computer and data processing, elementary computer programming, FORTRAN IV, general chemistry, general psychology, history, introductory calculus, introductory business management, introductory marketing, introductory money and banking (only validation is included for accounting students), Latin, mathematics AB, mathematics BC, music theory, musicology, philosophy, political science, psychology, public administration, public relations, psychology, sociology, statistics, world civilization.

A student who has accumulated 30 or more credits is not eligible to take the General Examination for credits. When a student has acquired 60 credits, he or she may be given credits on the basis of CLEP exams. This total of 60 includes the CLEP credit i.e. if a student has completed 57 credits, he could not receive more than 3 credits on CLEP exams. The University is continuing to evaluate CLEP exams and you are expected to take Duquesne Credit will be given on a minimum score determined yearly by the College of Liberal Arts and Sciences.

Exams must be taken according to the usual progression of courses. The exam in College Algebra or College Algebra-Trigonometry must be taken before a student registers for Calculus I.

Information about the time and place that examinations are given may be obtained from the University Testing Bureau, the College Level Examination Program, Box 977, Princeton, New Jersey (85840). Information about equivalent University courses for which qualifying students may receive credit may be obtained from the University’s Director of Testing Bureau or the Assistant Dean for Administration, College of Liberal Arts and Sciences.

Credit Hour Bank

The Credit Hour Bank is designed for high school students and adults who would like to sample college courses prior to official enrollment. The maximum number of credits that may be taken is 15. Credits completed in the Credit Hour Bank are held in reserve until the applicant applies and fulfills all regular admission requirements. Upon regular admittance all credits are then evaluated toward a degree program.

To apply to the Credit Hour Bank Program, submit a $20 non-refundable application fee, and attach a letter indicating full comprehension of the credit hour bank program. A form is available for this purpose and can be obtained by contacting the Office of Admissions.

Generally, all first year courses in the College of Liberal Arts and Sciences are open to Credit Hour Bank students. The school of music also participates in the Credit Hour Bank program providing the applicant passes a music audition.

Financial Aid

Duquesne University subscribes to the philosophy that “no student should be denied the education of his/her choice for lack of sufficient financial resources.” The Office of Student Financial Aid has been established to help students locate the financial support they require. Students and parents should not be overwhelmed by the variety and apparent complexities of modern student financial aid. Rather, a patient thorough examination of aid opportunities should be undertaken to locate the most advantageous forms of assistance available to the individual student.

PRINCIPLES OF AID

FINANCIAL NEED

The major criterion of most aid programs is the student’s need for funds. In general, parents and the student will accept responsibility for the cost of the student’s education. However, to the extent they cannot reasonably be expected to meet this expense, there is a demonstrated financial need or eligibility for aid. Methods of determining need may vary slightly among aid sources, but all have the common objective of identifying the difference between educational costs and the individual family’s ability to contribute to these costs. The costs considered include tuition, fees, room and board, or an allowance for maintenance at home, travel or commuting expenses, books, and necessary personal expenditures. Need analysis presumes the family’s ability to contribute to these costs will approximate that of families of similar size and financial strength, with consideration given for individual circumstances. It is extremely important that all financial information reported by the family be complete, accurate, and updated for any major changes. Such information is confidential and treated confidentially by aid administrators.

AWARD CONDITIONS

All financial aid awards are subject to terms and conditions set forth in applications and award notifications. It is important that the student carefully read all information provided by aid sources and promptly notify them of changes pertinent to their applications or awards.

STUDENT SELF-HELP

As the primary beneficiary of higher education, the student is expected to accept at least partial financial responsibility for the cost. This principle is reflected in both the determination of need and the types of aid available. In determining need, consideration is given for at least a minimum contribution to cost from the student’s summer earnings, part-time work, and self-help resources. Two types of self-help programs of aid are available: loans and work. Student loans provide rates, terms, and conditions superior to those offered by commercial lenders, and offer the student the opportunity to help himself/herself by accepting future repayment responsibility. Student employment programs provide the opportunity to help earn a portion of the educational costs.

GIFT ASSISTANCE

Non-repayable scholarships or grants are available in accordance with one or a combination of the following criteria: 1) Financial Need, 2) Superior Academic Potential or Achievement, and 3) Special Ability, which reflects proficiency in a specialized field or activity, such as music, debate, athletics, etc. It should be noted that many sources of
meet and expect the student to accept some form of self-help assistance

MEETING STUDENT NEED
The Financial Aid Office attempts to provide aid equal to need for all student applicants. Normally, this requires an "aid package" consisting of funds from a combination of aid sources and programs. These programs which are under the direct control of the Financial Aid Office are not usually sufficient to meet full need or provide an aid package of the most beneficial composition. It is expected that students who apply for assistance to the University will also apply to federal state and other available sources.

PROGRAM FUNDING
All programs of financial aid are subject to limitations of available funds. Therefore, in addition to the eligibility requirements of a particular program, assistance depends upon the level of funding in the program. First consideration always goes to applicants who apply within deadline dates and who provide complete and accurate information. All programs are subject to change, elimination, or replacement. Changes in government programs are routine since these require periodic legislative review.

CURRENT INFORMATION
Because programs of aid and conditions of eligibility do change from time to time, the student should attempt to keep abreast of new developments. The high school guidance office, the University Financial Aid Office, and the college or university's education in the student's home state are excellent sources of information. Students should avoid the error of disqualifying themselves for specific forms of aid because of a lack of information. A decision not to apply to particular aid sources should be made only upon the advice of an aid officer.

UNIVERSITY AID
APPLICATION PROCEDURE
1. Applicants must be currently enrolled in the University or be in the process of applying for admission. Incoming students should not wait for official acceptance to the University before applying for financial assistance.

2. Obtain the formal application for financial assistance. (Freshmen and transfer students should obtain the form through Admissions Office publications or through the Financial Aid Office. Currently enrolled students may obtain the form only through the Financial Aid Office.) Complete this application and submit it to the Financial Aid Office Duquesne University. Pittsburgh, Pennsylvania 15282 PRIOR to these deadline dates. For the Fall Semester or the academic year, no later than May 1 for the Spring Semester, no later than December 1. Late applicants will be considered on the basis of available funds. Students interested in being considered for scholarships should submit their financial aid application by February 1.

3. Obtain from the high school guidance office or the Financial Aid Office a Financial Need Document. Complete and submit it, according to instructions, Statements take four to eight weeks to process and therefore should be submitted as early as possible.

4. A reply to this application, if filed by deadline dates, should be anticipated as follows: Freshmen and transfers between mid-February and late March; Freshmen accepted (with financial aid application has been accepted for admission) Upperclassmen should be anticipated in June or July

5. Applications must be filed annually.

PROGRAMS
The following programs for which the foregoing application procedures apply, are administered directly by the Financial Aid Office.

University Scholarships Awards. The University awards scholarships annually to exceptional high school scholars. These awards are not based on a demonstrated need and may be renewed each year provided the student maintains a high level of academic achievement. The minimum academic requirement is a cumulative Quality Point Average of 3.0. These awards are given to students of outstanding ability and achievement who also demonstrate financial need. They are renewable yearly based on continued academic achievement and continued need. Continued need is normally reflected by a cumulative Quality Point Average of 3.0 or above. Renewal amounts may vary relative to the level of need.

Competitive Scholarships. These awards are given to students who demonstrate financial need. They are renewable yearly based on continued academic achievement and continued need. Continued academic achievement is normally reflected by a cumulative Quality Point Average of 2.75 and above. Renewal amounts may vary relative to the level of need.

Supplemental Educational Opportunity Grants. Federal aid assistance is available to full or half-time undergraduate students with financial need. It should be noted that due to limited funding, these grants are normally awarded only to full-time students. Recipients are selected in accordance with guidelines published by the Federal Government.

National Direct Student Loans. National Direct Loans are available to both full-time and half-time undergraduate students. These are awarded based on need and are making acceptable progress toward a degree. It should be noted that due to limited funding, these grants are normally awarded only to full-time students. Recipients are selected in accordance with guidelines published by the Federal Government.

STATE GRANT ASSISTANCE. General. Depending upon the student's state of residence, direct grant assistance from the state may be available for study at Duquesne University.

Non-Pennsylvania residents should contact their high school guidance counselor or state Department of Education to determine if grants are available, and to determine application procedures.

Pennsylvania residents should obtain the State Grant Application from high school guidance offices, the University Financial Aid Office, or the Pennsylvania Higher Education Assistance Agency (PHEAA). At current levels, grants ranging from $100 to $1500 are available to full-time undergraduate students, based on considerations of financial need. Filling deadline is normally May 1.

GUARANTEED STUDENT LOANS
This program provides long-term, low interest student loans available through the cooperative efforts of federal and state governments and participating private lending institutions. These loans are available to students enrolled in an institution of higher learning on at least a half-time basis. They are provided by commercial lending institutions in every state. To apply, the student should inquire at a local lending institution where the student or parents have an account. The maximum amount that can be borrowed for any academic level is $2,500. A four to six week processing period should be anticipated.

Parent Loans for Undergraduate Students/Auxiliary Loans to Assist Students. Loans are available to parents of DEPENDENT undergraduate students. Features include: loans are available to undergraduates and graduates may apply themselves. The maximum amount that can be borrowed for any academic level is $3,000. Repayment begins 60 days after disbursement of funds. Applications and information are available through banks and other lending institutions.

OTHER POSSIBILITIES
In addition to mass programs of aid previously described, financial assistance may be obtained from a wide variety of sources. Since application procedures and requirements differ greatly, it is not possible to provide specific information. In general, the student seeking potential sources of funds may inquire of:

1. High school guidance counselors, 2. Parents' employers or labor unions, 3. Private, religious, or professional organizations.

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1. High school guidance counselors, 2. Parents' employers or labor unions, 3. Private, religious, or professional organizations.
be granted on the recommendation of the Chairman of the Journalism Department assisted by the Journalism faculty. Loan inquiries and applications should be made to the Chairman of the Department of Journalism.

The 1st Annual Pols Capone Memorial Award is awarded in perpetuity the memory of Eleonor P. Capone. The scholarship consists of the total annual income from a restricted growth endowment fund and is awarded to an undergraduate student enrolled at the University, who will be selected on the basis of merit in the field of creative writing with need a secondary consideration. Interested students should contact the Chairman, Honors and Awards Committee, English Department prior to January 15.

The Reu Joseph A. Lauritis C. S. S. P. Journalism Scholarship is an annual scholarship in tribute to the Rev. Joseph A. Lauritis C. S. S. P., founder of the Department of Journalism and the University's radio station WDUQ-FM. It is available to a freshman entering Duquesne University who is planning on a major in the field of journalism. The award is administered by the Lauritis Scholarship Committee of Journalism faculty and friends. Deadline for application is April 1.

The Edward J. Leech Scholarship This annual scholarship was established in 1971 by the Scrpars-Howard Foundation for journalism junior/senior students who demonstrate outstanding academic performance, concurrent financial need, and are preparing for a journalism career in the newspaper or broadcasting fields. It is administered by the faculty of the Department of Journalism.

Colecchia Scholarship Award. The award honors in perpetuity the memory of Albert and Ambrosia Colecchia. The Scholarship award is available to junior/senior students enrolled in the Undergraduate College of Arts and Sciences majoring in any of the following disciplines: Modern Language Literature, the Classics, Philosophy, English, Math, Chemistry, Computer Sciences, Physics, and Biology. Recipients must be full-time, full-freighted students of proven scholastic achievement. The character and demonstrate a potential for leadership. The scholarship is awarded annually.

SCHOOL OF BUSINESS AND ADMINISTRATION

Alcoa Scholarships. Two awards are made annually, one in transportation and one in accounting, to undergraduate students in the School of Business and Administration. Recipients are selected by the School on the basis of academic achievement.

Ryan Honors Scholarship. This award is made to an undergraduate student in production. Recipient is selected by the School based upon academic achievement.

Traffic Club of Pittsburgh Scholarship. This award is made to an undergraduate student in transportation. Recipient is selected by the School based upon academic achievement.

SCHOOL OF EDUCATION

School of Education Competitive Scholarships. These awards are available to freshmen and transfer students who are among the top fifth of their high school class or who maintained a 3.0 high school average. Transfer students applying for these scholarships must have a cumulative B average from the school they last attended. Applicants are required to submit three recommendations representing the areas of academic performance and personal achievement. An interview is also required to discuss individual perceptions and ideals as well as a statement of career goal. Freshmen applicants must have an SAT score of at least 900, with a minimum of 400 on any one test. Transfer applicants must be new students to Duquesne. To apply, contact the School of Education. For renewal requirements and procedures contact the Office of Financial Aid.

Lawrence Roche Memorial Scholarship. The award will be made to a student who, as a junior in the School of Education, has demonstrated to the Awards Committee, that he possesses those qualities of scholarship, character, and professionalism which merit special recognition. The award is made to the student who maintains a minimum Quality Point Average of 3.0 at the time of application. The student must be a declared Pharmacy major, and must have attained a minimum quality point average and good standing in the School of Pharmacy.

SCHOOL OF PHARMACY

Galen Pharmaceutical Society Student Loan Fund. This revolving fund was established in 1984 through the generosity of Francis P. Eddy, Chairman of the Department of Pharmacy, to provide financial assistance to worthy students in their last year of the pharmacy program. This revolving fund makes available partial tuition loans to students of pharmacy in their last five semesters for payment of tuition, fees, and books.

Galen Pharmaceutical Society Scholarship. This award is made annually to a nursing student who is in good academic standing. The award is based on need, academic achievement, and potential." First Chair" performers.

SCHOOL OF NURSING

Beahan Scholarship. The R. J. Beahan Annual Nursing Scholarship is a $500 scholarship awarded annually to a nursing student who is in good academic standing. The award is based on need, professional involvement and future aspirations. Students may apply in the School of Nursing in early fall.

SCHOOL OF MUSIC

Women's Advisory Board Scholarships. This fund provides scholarships in varying amounts each year to voice performers. These scholarships are available to entering freshmen and upperclassmen.

Jazz Scholarship. Available to all full-time undergraduate music students involved in the jazz program. Applications available in the Dean's Office.

George Barre Memorial Scholarship. The Pittsburgh Flute Club offers a scholarship in flute in memory of George Barre, founder of the first flute club in the United States. This $300 scholarship is awarded to a freshman or a sophomore majoring in music.

Polish Iris League Scholarship. This award is made annually by the Polish Iris League of Pittsburgh to an outstanding student in the School of Music. Preference will be given to a student of Polish descent. The award is not exclusive to Polish students. Students will not be excluded from consideration.

Music School Scholarships. These awards are made by donations from individuals and organizations in appreciation of performances by School of Music students.

University Scholarships. These scholarships are awarded to students having outstanding talent in piano.

SCHOOL OF EDUCATION

Men of Galen. The Men's Auxiliary of the Galen Pharmaceutical Society of Pittsburgh annually provides scholarships to be awarded to deserving Pharmacy students in their last years of attendance in the School of Pharmacy.

Rieth Memorial Scholarships. These annual awards to deserving Pharmacy students are made on the basis of merit in the field of pharmaceutical Fraternity. Maintains a revolving loan fund for members of the undergraduate chapters.

Rite-Aid Scholarship. A $1,000 scholarship from the Rite Aid Corporation is available to students entering the first year of the pharmacy program. Letters of application should be addressed to the Dean, School of Pharmacy by May 1. Selection is based on financial need, demonstration of normal progress, and good standing in the pharmacy program.

Peter and Dorothy Manzzone Memorial Fund. A revolving fund donated by Rosetta and Geraldine Manzzone and friends of the family is available to all students in the School of Pharmacy.

Clarence Eddy Goodwin Memorial Scholarship. This scholarship was established to honor the memory of Clarence Eddy Goodwin by making annual awards to deserving Pharmacy students. Candidates must be declared Pharmacy majors, and be in good academic standing.

May McPandall Beck Scholarship Award. Scholarship funds are available from earnings on a fund started by a bequest to the School of Pharmacy in 1970.

Nard Foundation. Established by the National Association of Retail Druggists in honor of its executive secretary, John W. Dargavel, this foundation awards a $100 annual scholarship to a qualified student in the School of Pharmacy as well as loans to students of pharmacy in their last five semesters for payment of tuition, fees, and books.

Galen Pharmaceutical Society Student Loan Fund. This revolving fund was established in 1963 for the purpose of providing financial assistance to worthy students of pharmacy during times of urgent financial distress.

Fred Schiller Loan Fund. This loan fund was established by Mr. Fred Schiller, Pittsburgh pharmacists in the memory of the late Emanuel Spector for worthy and qualified students in the School of Pharmacy. This revolving fund makes available partial tuition loans of varying amounts depending on the applicant's need and general ability.

John Cloherer Sims Memorial Fund. This revolving fund, established in 1954, was made possible through the generosity of the friends of the late Mr. Sims, executive of Sun Drug (now Eckerd) Company, Pittsburgh. Partial tuition loans are made available to students under the conditions that apply to the Fred Schiller Loan Fund.

Pittsburgh Graduate Chapter of Kappa Psi Pharmaceutical Fraternity. Maintains a revolving loan fund for members of the undergraduate chapters. These funds are available from the School of Pharmacy.

Rite-Aid Scholarship. A $1,000 scholarship from the Rite Aid Corporation is available to students entering the first year of the pharmacy program. Letters of application should be addressed to the Dean, School of Pharmacy by May 1. Selection is based on financial need, demonstration of normal progress, and good standing in the pharmacy program.
The Pittsburgh/Centennial Scholarship was created at the close of Duquesne University's Centennial year (1978) in the spirit of the University's founding mission to provide ready access to higher education for all. The scholarship will be provided to deserving students who have demonstrated high academic performance and need. Emphasis will be on performance in selection of recipient. Inquiries should be directed to the Office of Financial Aid.

**DUSSO Scholarship Fund**

Annualy the Duquesne University Student Scholarship Organization sponsors scholarships to help make it possible for deserving students to attend Duquesne. Applicants must be enrolled on a full-time basis, show proven academic ability, be of good moral character and demonstrate financial need. Application materials may be obtained through the SGA office and must be filed by April 1.

**McCloskey Memorial Fund**

This award is given to students who have demonstrated scholastic ability, good character and volunteer service to the community. Applications are to be made directly to the Office of Financial Aid.

**Vincenzo Trefz Award**

This fund was established to provide an educational and cultural opportunity for promising young women students. Applications are to be made directly to the Office of Financial Aid.

**Nathan and Hani Dahi Scholarship**

This is an annual award that is to be made to "such deserving person or persons from Butler County, Pennsylvania attending Duquesne University." Selections made by a committee appointed by the Office of Financial Aid. Candidates must be of academic achievement and financial need. Interested students should apply directly to the Office of Financial Aid.

**Minnie Hyman Scholarship**

Recipient students must apply through the Financial Aid Office.

**James H and Margaret LaVelle Ferry Memorial Scholarship**

This award was established to honor, in perpetuity, the memory of James H. and Margaret LaVelle Ferry by awarding annually a prize to a deserving student in their name. Recipients are selected by the University, with the primary consideration being financial need and academic achievement. As a secondary consideration, recipients must be enrolled as undergraduate students. Interested students should apply through the Financial Aid Office.

**Melville Alexander Eberhardt Memorial Fund**

This fund was established to provide scholarships for the benefit of students residing in the United States. Worthy students are recommended by the University to the Trustees of the Fund, and are on the basis of merit and need. Interested students should apply through the Financial Aid Office.

**Louis and Ida Andrusky and Benjamin Andrusky Memorial Fund**

This fund was established to assist Jewish students who are residents of Allegheny County. Recommendations are made by the University to the Trustees of the Fund, and are on the basis of merit and need. Interested students should apply through the Financial Aid Office.

**J W Rahde Memorial Scholarship Fund**

A newly-established fund in honor of J W and Ruth Lewis Rahde in recognition of their long-time affection for the City of Pittsburgh. Factors to be considered for inclusion include leadership qualities, good character, strength of potential for civic contributions (especially to the City of Pittsburgh) and the ability to relate well with others. Interested students should apply through the Financial Aid Office.

**Stella and Charles Guttman Scholarship Foundation**

Awards are based on need with academic considerations secondary. Interested students should apply through the Financial Aid Office.

**John Joseph Mongillo Memorial Scholarship Fund**

Awards are based on financial need. The fund was established through a gift to the University from Marie Locher in memory of her brother, John Mongillo. Interested students should apply through the Financial Aid Office.

**UNIVERSITY DISCOUNT**

Clergy/Religious Discount: Members of University-recognized Christian and Jewish Religious organizations who have been ordained or professed, may be eligible to receive a discount of one-half tuition for undergraduate or graduate studies.

**Restrictions**

1. University fees, laboratory costs, room and board, and other non-tuition related expenses will be charged at full rate. Discount is one-half tuition only.

2. Only one Duquesne degree may be obtained utilizing the discount and no other form of discount or remission may be received simultaneously.

3. Discount is not extended for studies in the following fields: Medicine, Law School, Master of Liberal Studies, doctoral degree programs or any designated special programs with differential rates.

**Catholic School Lay Teacher Discount**

Full-time teachers in catholic schools, who have completed a minimum of two years teaching at an approved diocesan school, may be eligible to receive a discount of one-half tuition for undergraduate or graduate studies. The same restrictions indicated under the section on clergy/religious discounts apply.

**Senior Citizen Discount**

Men and women who are 60 years of age or older may be eligible to receive a discount of one-half tuition for undergraduate or graduate studies. The same restrictions indicated under the section on clergy/religious discounts apply.

**Tuition and Fees**

The University reserves the right to change tuition and fee charges if exigencies require such action. The figures shown apply to the 1983-84 term only, unless otherwise indicated.

**TUITION**

| Undergraduate Tuition | $184
| Graduate Tuition | $194
| Auditors | $11 per credit

**FEES**

| Application (non-refundable) | $20
| Matriculation Deposit (non-refundable) | $100
| Residence Hall Pre-Payment (non-refundable) | $150
| Change of Schedule | $5
| Credit by Examination for Each Credit | $100 per credit
| Orientation (New Students) | $25
| Late Registration | $25
| Removal of Grade | $15
| Registration Correction Fee | $50
| Continuing Registration Fee | $20

**Corps**

| Undergraduate Business and Administration Student when carrying 12 or more credits | $20
| Undergraduate Music Student when carrying 12 or more credits | $30
| School of Pharmacy Undergraduate Fee | $150
| Undergraduate Pharmacy Student Activities (for Third, Fourth, and Fifth Year Students) | $25
| University Fee | $11 per credit

**Lab fees**

All charges are for one semester, where applicable, the yearly charge is double. In addition to the laboratory fee, some programs also require a breakage charge of $15.00 a semester, which is proportionately refundable, depending upon the losses incurred.
### Summer and Special Session Tuition and Fee Charges

<table>
<thead>
<tr>
<th>Undergraduate Tuition for each semester hour credit</th>
<th>Graduate Tuition for each semester hour credit</th>
<th>University Fee $11 per credit</th>
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<tbody>
<tr>
<td>$184</td>
<td>$194</td>
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</table>

### Graduation Fees

- Bachelor Degree: $30
- Master Degree: $40
- Doctor of Pharmacy Degree: $40
- Juris Doctor Degree: $85
- Doctor of Philosophy Degree: $55
- Thesis Binding Fee—Doctoral Dissertation: $80
- Thesis Binding Fee—Master Thesis: $70

### Withdrawal and Termination of Attendance

Upon officially withdrawing from the University, a student receives remission of part of the tuition charged for the semester or session in accordance with the Tuition Remission Schedule. The amount of the remission is added to payments, and a refund is made upon request where a credit balance is created on the student's total account.

The Effective Date of Withdrawal for determining the percent of remission is that on which the appropriate Academic Dean was notified by letter of the student's decision to terminate attendance and requested official withdrawal. It is also the recorded date of the student's separation from the University and regarded as the last day of attendance. A student's attendance is involuntarily terminated in a semester because of personal disability arising from injury or illness, any remission of tuition beyond the limits prescribed by the withdrawal refund policy is subject first to the approval of the Academic Dean, then to the Vice President for Academic Affairs, and finally, the Vice President for Business and Management.

#### Tuition Remission Schedule

<table>
<thead>
<tr>
<th>Within the Semester</th>
<th>Percent of Remission</th>
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<tbody>
<tr>
<td>First Week</td>
<td>80</td>
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<tr>
<td>Second Week</td>
<td>80</td>
</tr>
<tr>
<td>Third Week</td>
<td>60</td>
</tr>
<tr>
<td>Fourth Week</td>
<td>60</td>
</tr>
<tr>
<td>After Fourth Week</td>
<td>None</td>
</tr>
</tbody>
</table>

**Within the Summer Session—Based on a Six-Week Session Standard**

- First Week: 80
- Second Week: 80
- Third Week: 60
- Fourth Week: 60
- After Fourth Week: None

### Room and Board

The request for on-campus residence is made on a first-come, first-serve basis. Room assignments are made on a first-come, first-serve basis. Therefore, it is extremely important for the student to return his/her housing application immediately upon receipt of it. Overcrowded conditions have occurred in the past and students have been temporarily assigned, in a room or in lounges. Therefore, students returning their application after all rooms have been assigned will be housed in temporary housing, be placed on a waiting list, or not be assigned a space in the residence area.

All students occupying rooms in the University residence halls are required to take their meals at the Resident Dining Hall. Charges for full meals are for 20 meals a week, with meals served commencing with the evening meal of the day before the first day of classes. A commuter meal plan and a 14-meal plan for sophomores, juniors, and seniors are also available.

Residence Halls are closed during vacation (Thanksgiving, Christmas, and Easter) periods.

All resident students must present evidence of health and accident insurance coverage, such coverage is available through the University.

The University reserves the right to modify these charges if exigencies require such action.

The University charges apply to the student only, it does not apply to other charges, such as the University Fee, course fee, and laboratory fees. No reduction of credits resulting from course withdrawals made after the Change of Schedule period.

The University reserves the right to modify these charges if exigencies require such action.

#### Summer Sessions—Room and Board

- 6 Weeks: Single $504.84 (Double Room and Board)
- 8 Weeks: Single $812.00 (Double Room and Board)
- 12 Weeks: $673.12 (Double Room and Board)

#### Room and Board—Withdrawal and Refund

A resident student must notify the Assistant Director of Residence Life in advance of the planned withdrawal. No refund of room charges will be made where withdrawal occurs after the opening classes. In the event of withdrawal, board will be refunded at the rate of 75 percent of the balance remaining on the student's meal plan, up until mid-semester. After the mid-semester point, no refund will be made. No reduction of charges nor refund of payments to which a student may otherwise be entitled will be made if withdrawal is not in accordance with the official withdrawal procedure.

No student is permitted to remain in the residence halls after academic withdrawal from the University has been completed.

*Those desiring residence for the Summer Session should make reservations with the Assistant Director of Residence Life three weeks prior to opening date of your session. A non-refundable deposit of $20 must accompany each application. After occupancy the deposit is applied toward the room and board expenses. This deposit is not refunded if the room is not occupied. Rates shown are for 1985 summer session only. For day rates and three four and five week rates, contact the Office of Residence Life.
FINANCIAL MATTERS
All charges for tuition, fees, room and board, less financial assistance authorized by the Financial Aid Office, are payable at registration. For your convenience Master Charge and VISA (BankAmericard) can be utilized to pay tuition and fees.

BILLING PROBLEMS
Take the billing statement to the office indicated for an explanation or correction concerning these billing matters.

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Academic Policies

POLICIES

ACADEMIC ADVISOR

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ACADEMIC SUPERVISOR OF INTERCOLLEGIATE ATHLETICS

The academic progress of student athletes engaged in intercollegiate competition is monitored by the Asia. The delivery of academic support systems to those student athletes who need them is facilitated via this office.

AUDITING COURSES

Regularly enrolled Duquesne students are permitted to audit courses. In addition, non-degree students from the general community who wish to audit courses for personal enrichment and who are not matriculated but pursuing a degree program are also eligible to audit. Regular students should consult their academic advisor for details on auditing. Non-degree students should contact Duquesne's Division of Continuing Education to complete a brief application form. Admission is granted on a space available basis by consulting the Office of the Registrar and the individual schools. Fees for auditing are uniform for all students.

Registration in a course as an auditor must be declared at registration and is irrevocable after the last date for change of schedule each semester, as indicated in the University Calendar (see pages 2-7). Records will show "Audit" in the grade space on the transcript of a regularly matriculated student. A "Certificate of Attendance" for non-degree students will be awarded by the Division of Continuing Education. Audited courses are not eligible to be converted to matriculated credits. Courses audited may not be challenged later or completed via CLEP or other advanced standing tests.

Internal Revenue Code of 1954, or the child must claim the dependency test as defined in section 152 of the Internal Revenue Code of 1984, for the child must grant a waiver of rights given by FERPA. Students wishing to waive the requirement of FERPA relating to the release of academic information to parents must complete the waiver obtainable at the office of the academic advisor.

CLASS ATTENDANCE

Regular class attendance is normally essential for maximum educational advantage and is strongly encouraged. The responsibility for all course material rests wholly with the student. Schools may require attendance at every class.

It is the prerogative of each school to establish policy for attendance at classes, laboratories, tests, examinations, deadlines for reports, and specific school requirements. It is the instructor's responsibility to make the school's policy known at the first class session as it pertains to the course and school.

The student who is unable to attend class because of serious illness, hospitalization, a serious accident or other extenuating circumstance is responsible for notifying the office of his academic dean. He should supply the necessary written verification of his absence to his academic dean.

The student must submit the work assigned and take the examination in the course at the specified time. If the work is not submitted or an examination is not taken at the scheduled time, the policy is to assign a zero for that part of the course. An accumulation of zero grades could result in a final grade of 'F'. If a student has significant reasons missed part of the course or an examination, the grade may be submitted as an 'I'. If the temporary 'I' grade is to be replaced by a passing grade the work must be completed by the time stated in the Academic Calendar. Failure on the part of the student to remove the temporary grade results in a permanent 'I' grade to an 'F' record on the transcript.

CLASSIFICATION OF STUDENTS

Freshman: less than 30 credits completed
Sophomore: 30 to 59 credits completed
Junior: 60 to 89 credits completed
Senior: 90 or more credits completed

1. Full-time Student - A student with an academic schedule of at least 12 credits is considered a full-time student. With this status a student is entitled to the benefits of various activities. A student may not change status during the semester without the permission of the academic advisor and the Dean of the student's school.

2. Part-time Student - Anyone who carries under 12 credits is regarded as a part-time student.

3. Post-graduate Student - A person who has completed a baccalaureate degree and is seeking additional undergraduate credits.

COURSE EXAMINATIONS

Unit examinations are given on the dates announced by the instructor at the beginning of each semester. Grades for these are obtained from the instructor.

Final examinations are given at the end of each semester and summer session. No student is excused from taking the final examination.

CREDIT BY EXAMINATION

Examinations for recognition of proficiency in a subject, or for course credit, are authorized by the College or a particular School of the University. Students are required to present these examinations when proficiency in the knowledge in certain courses are demonstrated. An application fee of $20.00 is charged for course credit. Application forms may be obtained from the Office of the Registrar.

As policies vary among the Schools, students who feel they may qualify for credit by examination should consult the Dean of the school in which they are enrolled for specific information about courses open to this examination procedure.

GRADING SYSTEM

The officially recognized method of grading course work and the academic performance of undergraduate students at the University is as follows:

A — Excellent
B — Good
C — Average
D — Below average, passing
P — Pass (Used in some courses where scaled grading is inappropriate. Indicates satisfactory completion of course work with credits earned but without quality points and is independent of the quality point system)
program leading to a degree. Full credit and grade will be transferred.

Each college or university accepts registration in regularly accredited courses designated by it as open to cross-registration. First priority in registration shall go to the students of the host college.

The student's advisor or dean is responsible for ascertaining eligibility for the course in which the student intends to enroll. Each qualified student may enroll in no more than one course off campus in any one term or semester under this program. Cross-registration is conducted through the office of the home registrar.

Duquesne University students who are participating in this program are charged tuition and University fee in accordance with the current rates charged by Duquesne University. However, students are responsible for paying any course or laboratory fees to the host institution.

These policies on cross-registration are not effective at this time for enrollments in summer sessions including the spring term at the University of Pittsburgh.

LATE REGISTRATION
With approval of the appropriate dean and upon payment of any registration fees, qualified students may be permitted for a serious reason; however, no student may be registered and begin attending classes later than the Latest Date for Registration and Change of Schedule as announced in the Academic Calendar.

RECORDS AND REPORTS
SEMESTER GRADE REPORTS
Every registered student who is free of financial obligations to the University is sent a report of his academic calendar of at least 12 credits is regarded as a part-time student.

TRANSCRIPTS
Each student receives a summary transcript of his or her completed academic record at the close of each academic year. Students should carefully examine their records for accuracy and immediately report errors to the Registrar.

To obtain additional copies of their academic records students must write to the Registrar for transcripts for themselves or for the other institutions and agencies. All official transcripts issued by the Office of the Registrar bear the signature of the Registrar and the embossed seal of the Office of the Registrar. Whenever an official transcript is released directly to the student it will bear the stamped designation of the Student.

No transcript will be issued unless all financial obligations owed by the student to the University have been fulfilled. A fee of $2.00 is charged for the issuance of each transcript.

CONFIDENTIALITY OF STUDENT RECORDS
The University regards the student's personal information and academic record as a matter of confidence between the student and the University. The contents of either may be revealed only in accordance with the Family Educational Rights and Privacy Act of 1974 (Public Law 93-380. Section 438, as amended).

In order that parents of students may receive from University officials information concerning the college attendance academic record of their child, it is required by the Family Educational Rights and Privacy Act of 1974 (FERPA) (Public Law 93-380 as amended section 99, 31(8) that either the parents must prove financial dependence of their child upon them according to the dependency test as defined in section 152 of the Internal Revenue Code of 1954, or the child must child must grant a waiver of rights given by FERPA.

Students wishing to waive the requirement of FERPA relating to the release of academic information to parents must complete the waiver obtainable at the office of the academic advisor.

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The student must submit the work assigned and take the examination in the course at the specified time. If the work is not submitted or an examination is not taken at the school's time, the policy is to assign a Z for that part of the course. An accumulation of zero grades could result in a final grade of 'F'. If a student has failed to make any assignment, the grade may be submitted as an 'I.' If the temporary grade is to be replaced by a passing grade, the work must be completed by the time stated in the Academic Calendar. Failure on the part of the student to remove the temporary grade results in conviction that grade to an 'F' recorded on the transcript.

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Unit examinations are given on the dates announced by the instructor at the beginning of each semester. Grades for these are obtained from the Office of the Registrar.

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CREDIT BY EXAMINATION
Examinations for recognition of proficiency in a subject, or for course credit, as authorized by the College or a particular School of the University, are available to currently enrolled students who have previously passed the course or who have acquired mastery of the knowledge in certain courses.

An application fee of $20.00 is charged for each course credit. Application forms may be obtained from the Office of the Registrar.

As policies vary among the Schools, students who feel they may qualify for credit by examination should consult the Dean of the School in which they are enrolled for specific information about courses open to this examination procedure.

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The officially recognized method of grading course work is based on academic performance of undergraduate students at the University as follows:

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S — Satisfactory (Used in pass/fail elected courses and is independent of the quality point system)
F — Failure (Course must be repeated for credit)
U — Unsatisfactory — Failure (Used in pass/fail elected courses and is independent of the quality point system course must be repeated for credit)
I — Incomplete (A temporary grade given by an instructor when neither a passing nor failing grade can be determined because of incomplete course work. Unless a cogent explanation of extenuating circumstances acceptable to the instructor is presented and the missing examination or required assignment is made up by the date specified in the Academic Calendar the I becomes a permanent F grade)
W — Official Withdrawal (Used on a student's permanent record to indicate termination of attendance in courses under conditions of official withdrawal. See pages 158 and 151. Withdrawal from a Course and Withdrawal from the University)

QUALITY POINT SYSTEM

The student's overall academic quality point average (QPA) is obtained by dividing the total quality points earned by the total number of semester hours attempted. These quality point values of grades are used for each credit attempted:

A — four points
B — three points
C — two points
D — one point
F — zero points

Courses in which grades P, S, U, I, and W were given are not used in calculating the quality point average.

REPEATING COURSES AND COURSE RETROGRADATION

Students ordinarily are permitted to repeat courses in which D and F grades were received. The request for permission to repeat a course is to be submitted in letter form to the academic advisor before registering in the repeat course. All grades are retained on the permanent academic record. The result of the final attempt in a repeated course is the course in which the student's status in the course with regard to attempting prior earned credits and the completion of requirements.

Retrogradation is a corollary of the repeat credit rule under which a student may earn credit once only for a course prescribed that a student may not move backward from an advanced course to a lower level course and receive credit for both. Any doubtful situation must be decided by the department chairperson or dean involved.

PASS/FAIL ELECTIVES

One course a semester elected by a junior or senior and approved by the academic advisor as providing an opportunity to expand and enrich the student's experience may be taken on a pass/fail (S/U) basis. If passed, the credits will count for graduation, but neither grade nor credits will be calculated in the quality point average.

Once a course has been identified as a pass/fail elective, the course must be completed as such, and the grade submitted must be an S or U. No required course may be taken on this elective pass/fail basis.

The decision to elect the pass/fail option must be made during registration or no later than the close of the period provided for making schedule changes.

STUDENT STANDING

Progress toward a degree is measured by the cumulative quality point average. The scholastic record of students who fail to meet the minimum requirements as established by the faculty of each college or school will be submitted to the College or School Committee on Student Standing for review and appropriate action. Normally academic records will be reviewed annually at the conclusion of each academic year.

The policy of the Council of Academic Deans on Student Athletes vis-a-vis academic standards reads as follows:

a) To participate in the formal athletic program at the University a student must be currently enrolled as a full-time student. Full-time status is defined by University catalog as enrollment of 12 credits minimum per semester. Such a program would allow a student to graduate within five years.

b) A student athlete must be making satisfactory academic progress. This means that a student must have successfully completed 24 credits during the previous academic year. This would allow a student the fall, spring, and summer semesters in which to earn these 24 credits. In addition the student athlete must satisfy the student standing policy as outlined in the Student Handbook and University catalogs.

c) A student athlete (as all students in the University) is academically dismissed if the student athlete fails three courses in one semester. Student athletes can be readmitted by the student standing committee of the college or school to which the student athlete is returning. If a student transfers to another school within the University the student athlete can be admitted only by the Dean of that school.

For students who have attempted 15-30 credits, or more than 30 credits in one year, the guidelines are:

Academic Warning 1.75 to 1.99 QPA (Letter of warning may be sent by appropriate Dean)
Probation 1.50 to 1.74 QPA (Subject to the jurisdiction of the appropriate Committee on Student Standing and may be required to modify or restrict academic program)
Dismissal Less than 1.50 QPA (Readmission may be permitted on recommendation of the appropriate Committee on Student Standing)

For the students who have attempted 31-60 credits or who have attempted up to 61 credits within four semesters these guidelines prevail.

Academic Warnings 1.50 to 1.99 QPA (Letter of warning may be sent by appropriate Dean)
Probation 1.75 to 1.84 QPA (Subject to the jurisdiction of the appropriate Committee on Student Standing and may be required to modify or restrict academic program)
Dismissal Less than 1.75 QPA (Readmission may be permitted on recommendation of the appropriate Committee on Student Standing)

Students who have attempted 61 or more credits and who have a QPA of between 1.85 and 1.99 may continue on probation for one semester. However, students who have earned more than 90 credits are subject to dismissal unless they have a QPA of 2.0 or better. Students who accumulate three F grades in one semester are subject to dismissal.

Appeals of academic dismissal must be directed to the appropriate College or School Committee on Student Standing. Students subject to the jurisdiction of the appropriate Committee on Student Standing in accordance with the established guidelines who are permitted to re-enroll on a trial basis must be restricted to non-curricular and extra-curricular activities. Students will be without appeal if they are subsequently dismissed from the University for poor scholarship.

DEAN'S LIST

To achieve distinction of being named to the Dean's List a student must have a record for a semester that shows completion of a full-time schedule with a grade point average of at least 3.25 and no grade lower than C. The full-time schedule must include at least 12 credits exclusive of pass/fail credits.

GRADUATE COURSES FOR UNDERGRADUATE CREDIT

Qualified seniors may be permitted to register in certain graduate courses at the 500 level for undergraduate credit on the recommendation of the advisor and with the approval of the dean of the graduate school involved. All 500 level courses are described in the graduate school catalogs.

GRADUATION REQUIREMENTS

The candidate for a University degree must be a person of good moral character, who has satisfactorily completed all academic requirements for the degree program, and in addition has the recommendation of the appropriate Academic Dean, filed the Application for the University Degree with the Office of the Registrar on or before the latest date to apply for graduation as announced in the Academic Calendar and paid all indebtedness to the University.

It is the student's responsibility to determine that the courses taken in each semester are sequentially correct and necessary for the degree program.

The student must periodically review in consultation with the appropriate academic advisor progress toward graduation and seek, with the advisor, resolution of any question about fulfillment of graduation requirements.

Each school and department sets forth in this catalog requirements for graduation which the student is expected to know, as well as the aforementioned general requirements, and the following:

1. The bachelor's degree requires a minimum of 128 semester hours and a minimum of 60 credits in the following categories: English, mathematics, natural science, humanities, social sciences, foreign language, history, and a minor area or a coherent concentration of courses.

2. All bachelor's degrees require an overall minimum quality point average of 2.0 which is a C grade average in a 4.0 system. Students should further determine the need for minimum QPA requirements in their major, science course etc.

3. The last year's work (a minimum of 30 semester hours of credit) must be completed in residence at the University.

4. No less than three credits (or one course) in theology are required for all undergraduate Catholic students in every program at the University.

5. Students on academic probation may be candidates for graduation only with permission of the Committee on Student Standing of their schools.

The candidate who has satisfied graduation requirements by a Challenge Examination (credit by examination), when taken timely within the last 30 semester hours of study for the degree, will fulfill the residence requirement provided a minimum of 30 semester hours of credit has been earned in course work at the University in the last year's study.

HONORS

Degrees are awarded with special mention cum laude, magna cum laude or summa cum laude to students who have completed the regular course with academic distinction, and who have completed a minimum of 60 credits in residence. Honors are based on these standards:

Cum Laude — Quality Point Average 3.00 to 3.74
Magna Cum Laude — Quality Point Average 3.75 and above
Summa Cum Laude — Upon recommendation of the faculty and a 3.90 QPA, the Magna Cum Laude citation may be raised to Summa Cum Laude

UNIT OF CREDIT

The unit of credit is the semester hour i.e., one credit equals one semester hour. One semester hour of credit is granted for the successful completion of one hour of a week of lecture or recitation, or
a least two hours a week of laboratory work for one semester of 15 weeks.

TRANSFER WITHIN THE UNIVERSITY
It would be to the student's advantage to discuss the proposed transfer with the academic advisor of the new school no later than two weeks prior to preregistration. The advisor will then use the form and procedure established as uniform for the University to effect any change.

WITHDRAWAL FROM A COURSE
First semester freshmen may withdraw from courses with the approval of their advisor up to the period of final examinations and receive a grade of W by processing the proper form.

If a student wishes to withdraw from a course, he may do so with the approval of his academic advisor and by processing the proper form up to the date announced in the Academic Calendar for withdrawal with a W grade.

If a student wishes to withdraw from a course after the date announced in the Academic Calendar, the student must seek approval of the Committee on Student Standing of the student's School. The student will be notified of the Committee's decision. If approval is granted, the student then initiates the appropriate form through the advisor.

A student who is not granted approval of the request and withdraws from the course unofficially will receive an F grade for the course.

Part VII: Directories

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John E. Nader, C S Sp
Francis M. Phibben, C S Sp
Louis F. Dolan, C S Sp
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COLLEGE OF LIBERAL ARTS AND SCIENCES

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M.S.W., University of Pittsburgh

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J.D., Duquesne University

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M.A., University of Pittsburgh

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Anthony Barton
Professor of Psychology
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M.A., Ph.D., University of Chicago

E. Jane Beckwith
Lecturer in Journalism
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M.F.A., Pratt Institute

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M.A., University of Florida

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Associate Professor of English
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M.A., Ph.D., Duquesne University

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Professor of Political Science
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M.A., Fordham University
Ph.D., University of Pittsburgh

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M.A., Ph.D., Duquesne University

Frances Jahrling Chivers
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A.B., Smith College
A.M., Columbia University
Ph.D., University of Buffalo

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<td>St Anselm's College</td>
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<td>Patrick J Moore</td>
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<td>Kent F Moors</td>
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<td>Constanze Deucher Ramirez</td>
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<td>New School for Social Research</td>
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<td>Rev David L Smith</td>
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<td>B S, Ewha Womans University, Seoul, Korea</td>
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<table>
<thead>
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<th>Institution(s)</th>
<th>Degree(s)</th>
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<tr>
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<tr>
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<tr>
<td>Joan Bishop RN</td>
<td>Associate Administrator and</td>
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<tr>
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<tr>
<td>Deborah Straka RN</td>
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<td>Forbes Health System</td>
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<tr>
<td>Oxana Buczkal, MEd</td>
<td>Training Manager</td>
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<tr>
<td>Forbes Metropolitan Health Center</td>
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<tr>
<td>Maureen Kane, RN</td>
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<tr>
<td>Forbes Regional Health Center</td>
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<tr>
<td>Marie Langan, RN</td>
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<tr>
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Pharm. D., University of Cincinnati

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(Hematology, Urinalysis)
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M.T. (ASCP)
M.S., University of Pittsburgh

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B.S., Alexandria University
Ph.D., Duquesne University

Rita M. Winters
Associate Professor of Medical Technology (Clinical Chemistry)
B.S., Ph.D., Duquesne University
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ADMINISTRATION
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RESERVE OFFICERS TRAINING CORPS (ROTC)

Captain Kenneth P Bostelman
BS Professor of Military Science

FACULTY—DEPARTMENT OF MILITARY SCIENCE

Captain Gerald L Boldt
Assistant Professor of Military Science
BS, M.A., Mankato State University

Military Science

BS Eastern Kentucky University

Captain Richard F Sollner Jr
Professor of Military Science
BS United States Military Academy

Thrift Drug

Clifford Boswell, #5
McKnight Siebert Shopping Center
Pittsburgh PA

Dave Bricker
Grants Plaza
Coraopolis PA

James Carr #5
425 Beaver Road
Sewickley PA

Paul Culan
Kennawar Plaza
McKees Rocks PA

David Dolan
Ritzland Shopping Center
Pittsburgh PA

William F Donlev
1956 Greentree Road
Pittsburgh PA

Alan Kett
Southland Shopping Center
Pittsburgh PA

Frank Komeczek, #90
2200 Northway Mall
Pittsburgh PA

Mort Kuber #24
300 Mt Lebanon Boulevard
Pittsburgh PA

Joe Letrach, #80
Barb Greco
Hillcrest Shopping Center
New Kensington, PA

Don Lucodi, #100
Clive Mansfield
2 Olyma Shopping Center
McKeesport, PA

Arnold Robert
Franklin Plaza Shopping Center
Murraysville, PA

Linda Rocchi
12234 Frankstown Avenue
Pittsburgh PA

Jack Rubland
411 Corbett Street
Tarentum PA

David Saw #27
623-625 E. Ohio Street
Pittsburgh PA

John Saversky, #78
South Park Shop
Bethel Park, PA

Fred Wolken
Oakland/Squirrel Hill Area
Pittsburgh, PA

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