Duquesne University
Pittsburgh, Pennsylvania

UNDERGRADUATE CATALOG
1981-1982

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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-performance 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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The provisions of this catalog are to be considered direct in character. The University reserves the right to make any changes that seem necessary or desirable, including fees, tuition and room and board.
ACADEMIC CALENDAR

1980-1981
FALL SEMESTER—1980

July 18  Friday  Pre-Registration with Pay-By-Mail option closes
(To Be Announced)
August 20  Wednesday  39 Practical Pharmacy begins
August 21  Thursday  Final Registration
August 22  Friday  Final Registration
August 23  Saturday  Latest date to Register without Late Fee
August 23  Saturday  Latest day to Cancel Fall '80 Registration without Penalty
August 25  Monday  Fall Semester Begins
August 30  Saturday  Latest Date to Register and for Change of Schedule

SEPTEMBER
September 1  Monday  Holiday Labor Day
September 6  Saturday  Latest Date for 80% Tuition Remission for TOTAL WITHDRAWAL from the University
September 12  Friday  Latest Date for December '80 Graduates to Apply for Graduation
September 13  Saturday  Latest Date for 40% Tuition Remission for TOTAL WITHDRAWAL from the University
(To Be Announced)
(To Be Announced)
September 20  Saturday  Latest Date for 20% Tuition Remission for TOTAL WITHDRAWAL from the University

OCTOBER
October 8  Wednesday  Reading Day
October 9  Thursday  Reading Day
October 10  Friday  Reading Day
October 10  Friday  Latest Date for Undergraduates to remove Temporary I Grades from Spring Semester and Summer Session 1980 I Grades not removed on or before this date convert to F's

November 1  Saturday  Holiday All Saints Day

SPRING SEMESTER—1981

December 5  Friday  Spring '81 Pre-Registration with Pay-By-Mail option closes, registration suspended after this date until January 8, Thursday

January 8  Thursday  Final Registration
January 9  Friday  Final Registration
January 10  Saturday  Latest Date to Register without Late Fee
January 10  Saturday  Latest Date to Cancel Registration without penalty fee
January 12  Monday  Spring Semester Begins
January 17  Saturday  Latest Date to Register, Change Class Schedule, Declare Pass/Fail No refund of tuition for reduced class schedule obtained after this date

January 17  Saturday  Latest Date to Apply for May Graduation
January 23  Friday  Latest Date for May Graduates to Submit Thesis Outlines
January 24  Saturday  Latest Date for 80% Tuition Refund for TOTAL WITHDRAWAL from the University
January 31  Saturday  Latest Date for 40% Tuition Refund for TOTAL WITHDRAWAL from the University
February 7  Saturday  Latest Date for 20% Tuition Refund for TOTAL WITHDRAWAL from the University
February 16  Monday  Reading Day
February 17  Tuesday  Reading Day
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 27</td>
<td>Friday</td>
<td>Latest Date for Undergraduates to Remove Temporary I Grades from the Fall 1980 Semester (i.e., Grades not removed on or before this date convert to F)</td>
</tr>
<tr>
<td>March 6</td>
<td>Friday</td>
<td>Latest Date for Undergraduates other than First Semester Freshmen to Withdraw with a W Grade</td>
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<tr>
<td>March 30</td>
<td>Monday</td>
<td>Pre-Registration for Fall 1981 Begins (See Fall '81 Directory of Classes for complete registration schedule)</td>
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<tr>
<td>April 14</td>
<td>Tuesday</td>
<td>Latest Date for May Graduates to Submit Thesis and Take Comprehensives</td>
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<tr>
<td>April 28</td>
<td>Tuesday</td>
<td>Latest Date for First Semester Freshmen to Withdraw with W Grade</td>
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<tr>
<td>May 5</td>
<td>Tuesday</td>
<td>Final Examinations End of Semester Ends Latest Date for Graduating Students to Complete Degrees</td>
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<tr>
<td>May 8</td>
<td>Friday</td>
<td>Honors Day Baccalaureate and Graduation Mass</td>
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<tr>
<td>May 28</td>
<td>Thursday</td>
<td>Holiday Ascension Day</td>
</tr>
<tr>
<td>July 17</td>
<td>Friday</td>
<td>Latest Date for Fall 1981 Pre-Registration with Pay-By-Mail Option</td>
</tr>
<tr>
<td>September 5</td>
<td>Saturday</td>
<td>Fall Semester Begins Latest Date to Register and for Change of Schedule Latest Date to Declare Pass/Fail (No remission of tuition for reduced class schedule obtained after this date)</td>
</tr>
<tr>
<td>September 7</td>
<td>Monday</td>
<td>Holiday Labor Day</td>
</tr>
<tr>
<td>September 12</td>
<td>Saturday</td>
<td>Latest Date for 80% Tuition Remission for TOTAL WITHDRAWAL from the University</td>
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<tr>
<td>September 19</td>
<td>Saturday</td>
<td>Latest Date for 40% Tuition Remission for TOTAL WITHDRAWAL from the University</td>
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**FALL SEMESTER—1981**

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<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>October 16</td>
<td>Friday</td>
<td>Latest Date for Undergraduates to remove Temporary I Grades from Spring Semester and Summer Session 1981 I Grades not removed on or before this date convert to F's</td>
</tr>
<tr>
<td>October 23</td>
<td>Friday</td>
<td>Latest Date to Submit Mid-term Grades</td>
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<tr>
<td>October 26</td>
<td>Monday</td>
<td>Latest Date for December Graduates to submit Thesis Outline</td>
</tr>
<tr>
<td>November 1</td>
<td>Sunday</td>
<td>Pre-Registration for Spring Semester Begins Other Dates Nov 18, 19, 20, 21, 30, Dec 1, 2, 3, (W, H, F, S, M, T, W, H)</td>
</tr>
<tr>
<td>November 17</td>
<td>Tuesday</td>
<td>Holiday All Saints Day</td>
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<tr>
<td>November 21</td>
<td>Saturday</td>
<td>Last Class Day Before Thanksgiving Holidays</td>
</tr>
<tr>
<td>November 30</td>
<td>Monday</td>
<td>First Class Day After Thanksgiving Holidays</td>
</tr>
<tr>
<td>December 4</td>
<td>Friday</td>
<td>Latest Date for Spring Semester Pre-Registration with Pay-By-Mail Option</td>
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<tr>
<td>December 7</td>
<td>Monday</td>
<td>Latest Date for December '81 Graduates to submit Thesis and Take Comprehensives</td>
</tr>
<tr>
<td>December 8</td>
<td>Tuesday</td>
<td>Holiday Immaculate Conception</td>
</tr>
<tr>
<td>December 11</td>
<td>Friday</td>
<td>Latest Date for First Semester Freshmen to Withdraw with W grade</td>
</tr>
<tr>
<td>December 16</td>
<td>Wednesday</td>
<td>Final Examinations Begin Other Dates Dec 17, 18, 19, 21, 22 (H, F, S, M, T)</td>
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<tr>
<td>December 22</td>
<td>Tuesday</td>
<td>Fall Semester Ends Latest date for December Graduating Students to pay accounts and complete degrees</td>
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<tr>
<td>December 22</td>
<td>Tuesday</td>
<td>Latest Date for Graduate Students to Remove I Grades for the 1981 Spring Semester and Summer Session</td>
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<tr>
<td>December 22</td>
<td>Tuesday</td>
<td>Latest Date for Spring Semester Pre-Registration without Pay-By-Mail Option</td>
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**SPRING SEMESTER—1982**

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<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>January 7</td>
<td>Thursday</td>
<td>Final Registration</td>
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<tr>
<td>January 8</td>
<td>Friday</td>
<td>Final Registration</td>
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<tr>
<td>January 9</td>
<td>Saturday</td>
<td>Final Registration</td>
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<tr>
<td>January 9</td>
<td>Saturday</td>
<td>Latest Date to Register without Late Fee</td>
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<tr>
<td>January 11</td>
<td>Monday</td>
<td>Spring Semester Begins</td>
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<tr>
<td>October 16</td>
<td>Friday</td>
<td>Latest Date for Spring Semester Pre-Registration with Pay-By-Mail Option</td>
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<tr>
<td>October 23</td>
<td>Friday</td>
<td>Latest Date to Submit Mid-term Grades</td>
</tr>
<tr>
<td>October 26</td>
<td>Monday</td>
<td>Latest Date for December Graduates to submit Thesis Outline</td>
</tr>
<tr>
<td>November 1</td>
<td>Sunday</td>
<td>Pre-Registration for Spring Semester Begins Other Dates Nov 18, 19, 20, 21, 30, Dec 1, 2, 3, (W, H, F, S, M, T, W, H)</td>
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<tr>
<td>November 17</td>
<td>Tuesday</td>
<td>Holiday All Saints Day</td>
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<tr>
<td>November 21</td>
<td>Saturday</td>
<td>Last Class Day Before Thanksgiving Holidays</td>
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<tr>
<td>November 30</td>
<td>Monday</td>
<td>First Class Day After Thanksgiving Holidays</td>
</tr>
<tr>
<td>December 4</td>
<td>Friday</td>
<td>Latest Date for Spring Semester Pre-Registration with Pay-By-Mail Option</td>
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<td>Monday</td>
<td>Latest Date for December '81 Graduates to submit Thesis and Take Comprehensives</td>
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<td>Date</td>
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<td>Event Description</td>
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<tr>
<td>January 16</td>
<td>Saturday</td>
<td>Latest Date to Register and for Change of Schedule, Latest Date to Declare Pass/Fail No remission of tuition for a reduced class schedule obtained after this date</td>
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<td>January 22</td>
<td>Friday</td>
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<tr>
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<td>February 6</td>
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<tr>
<td>February 15</td>
<td>Monday</td>
<td>Reading Day</td>
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<tr>
<td>February 16</td>
<td>Tuesday</td>
<td>Reading Day</td>
</tr>
<tr>
<td>February 26</td>
<td>Friday</td>
<td>Latest Date for Undergraduates to Remove Temporary I Grade from the Fall 1981 Semester I Grades must removed on or before this date convert to F</td>
</tr>
<tr>
<td>March 5</td>
<td>Friday</td>
<td>Due Date for Instructors to Submit I Grade Removal</td>
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<tr>
<td>March 5</td>
<td>Friday</td>
<td>Latest Date for Reporting Mid-term Grades</td>
</tr>
<tr>
<td>March 12</td>
<td>Friday</td>
<td>Latest Date for Undergraduates other than First Semester Freshmen to Withdraw with a W Grade</td>
</tr>
<tr>
<td>March 29</td>
<td>Monday</td>
<td>Latest Date for May '82 Graduates to Submit Thesis and Take Comprehensive Exams</td>
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<tr>
<td>March 30</td>
<td>Tuesday</td>
<td>Pre-Registration for '82 Fall Semester Begins Other dates March 31, April 1, 2, 3, 5, 6 (W, H, F, S, M, T) Last Class Day before Easter Holidays</td>
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<tr>
<td>April 6</td>
<td>Tuesday</td>
<td>First Class Day after Easter Holidays</td>
</tr>
<tr>
<td>April 14</td>
<td>Wednesday</td>
<td>Latest Date for May '82 Graduates to Pay Accounts</td>
</tr>
<tr>
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<td>Wednesday</td>
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</tr>
<tr>
<td>April 23</td>
<td>Friday</td>
<td>Final Examinations Begin Other dates April 29, 30, May 1, 3, 4 (H, F, S, M, T) First Class Day before Easter Holidays</td>
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<tr>
<td>May 4</td>
<td>Tuesday</td>
<td>Latest Date for Graduate Students to Remove '81 Fall Semester I Grades</td>
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<tr>
<td>May 4</td>
<td>Tuesday</td>
<td>Spring Semester Ends Latest Date for May '82 Graduating Students to complete Degrees</td>
</tr>
<tr>
<td>May 7</td>
<td>Friday</td>
<td>Honors Day Baccalaureate Exercise</td>
</tr>
<tr>
<td>May 7</td>
<td>Friday</td>
<td>Graduation Mass</td>
</tr>
<tr>
<td>May 8</td>
<td>Saturday</td>
<td>Commencement Exercises</td>
</tr>
<tr>
<td>May 20</td>
<td>Thursday</td>
<td>Holiday Ascension Day</td>
</tr>
<tr>
<td>July 16</td>
<td>Friday</td>
<td>Latest Date for Fall Semester Pre-Registration with Pay-By-Mail Option</td>
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</table>
All Degrees and Programs Offered in the University

SCHOOL BACHELOR'S DEGREE MASTER'S DEGREE DOCTORATE

**SCHOOL OF LIBERAL ARTS AND SCIENCES**
- Ancient History
- Classical Languages
- Philosophy
- Physics
- Chemistry
- Psychology
- Classics
- Social Sciences
- Computer Science
- Human Sciences
- Criminal Justice
- Social Work
- Economics
- Communication
- English
- Sociology
- French
- Spanish
- German
- Speech Pathology
- Gerontology
- Speech
- History
- Psychology
- Art
- Audiology
- Liberal Arts
- Theatre/MA
- Engineering
- Theology
- Mathematics
- World Literature

**SCHOOL OF BUSINESS AND ADMINISTRATION**
- Accounting
- Administration
- Economics
- Management
- Finance
- Marketing

**SCHOOL OF EDUCATION**
- Early Childhood Education
- Elementary Education
- Secondary Education
- Special Education (Mentally and/or Physically Handicapped)

**SCHOOL OF MUSIC**
- Music Education
- Music Therapy
- Conservatory
- Composition
- Music Education
- Music Theory
- Folks Arts

**SCHOOL OF NURSING**
- Nursing
- Family Health
- Nursing

**SCHOOL OF MEDICAL TECHNOLOGY**
- Pharmacy
- Radiological Health
- Hospital Pharmacy
- Pharmacy

**SCHOOL OF LAW**
- Juris Doctor

HISTORY
Duquesne University first opened its doors as 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, a scenic 39-acre hilltop area 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 the city 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 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 12.5 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 is one of several major private, Catholic, urban universities in the United States. The University has nearly 7,000 students enrolled in its eight schools—College of Liberal Arts and Sciences (1878), Graduate School of Liberal Arts and Soences (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 94 areas, including 34 baccalaureate, two professional, 48 master's, and eight doctoral disciplines.

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 interest, capabilities and goals in life. Coupled with a broad spectrum of non-academic activities and programs, the curriculum at Duquesne University seeks 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.
THE UNIVERSITY SETTING
Located adjacent to downtown Pittsburgh, Duquesne University's modern hilltop campus is readily accessible to the business, entertainment and shopping centers of the city, while still enjoying the privacy and peace of its own self-enclosed 39-acre site. Long noted as one of the world's greatest steel-producing centers, Pittsburgh combines the features of big-city 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 federal study of urban life, to have more cultural institutions and events per capita than any other American city. Although most visitors and new residents who come to the city are conditioned by the old "Smokey City" image, they soon learn that the Pittsburgh which emerged from its nationally acclaimed "Renaissance" 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.

Students from Duquesne and the other colleges and universities in the city can choose, from a wide range of cultural events and institutions. The world-renowned Pittsburgh Symphony Orchestra, Pittsburgh Opera, and Pittsburgh Ballet Theatre all perform regularly in the elegant Heinz Hall for the Performing Arts. The theatre-goer can choose from productions of the Pittsburgh Public Theatre, local college drama departments and programs, and a wide variety of summer and after-dinner club theatres. In the summer, the American Wind Symphony offers open-air concerts on Pittsburgh's riversides. Other seasonal events include the Three Rivers and Shadyside arts festivals, and the International Folk Festival, three prestigious events which draw national attention.

Duquesne students can visit such points of interest as Highland Park Zoo, the Conservatory-Awary, Buhl Planetarium, Pittsburgh History and Landmarks Museum, Duquesne Incline and Phipps Conservatory. Directly across the river from campus is Mount Washington, Pittsburgh's highest point, which offers a spectacular view of the city and its surroundings, particularly at night. Market Square, a redeveloped area in the heart of downtown Pittsburgh, and the Oakland-Shadyside area in the eastern end of the city are two of the major entertainment and nightlife centers.

The success of the various professional and major college sports teams has won for Pittsburgh the title of "City of Champions." The 1971 and 1979 World Champion Pirates and the four-time Super Bowl Champion Steelers play at Three Rivers Stadium. The Penguins, Spirit, and Duquesne teams nationally known basketball team, the 1977 Eastern Eight champions, all perform in the nearby Civic Arena, one of the largest indoor sports arenas in the United States and the only one in the world with a retractable dome. Facilities for such participatory sports as tennis, golf, hiking, skiing, skating, and many others are available throughout the Pittsburgh area.

PHYSICAL FACILITIES
The Administration Building, "Old Main," was the first building constructed on the Duquesne campus, dedicated in 1884. Recently renovated, it houses the Executive Offices of the University, Office of Admissions, Campus Ministry, Business Offices, Testing Bureau, Career Planning and Placement Office, Learning and Counseling Center, Financial Aid Office, and the Division of University Relations. Adjoining the building is the University Chapel, which offers daily Mass, and the Campus Theatre.

Assumption Hall, the oldest residence hall on campus, was dedicated in 1956. A four-story structure with a 279-student capacity, the facility has its own chapel and recreation area, and offers both double and single rooms.

Canevin Hall, the oldest classroom building on campus, was built in 1922 and completely renovated in 1968. A four-story building, it houses the School of Education, Curriculum Library, Reading Clinic, Guidance and Counseling Clinic, and the Institute of Formative Spirituality.

College Hall, a six-story classroom and office building dedicated in 1970, is the seat of the College of Liberal Arts and Sciences and the Graduate School of Liberal Arts and Sciences, housing 12 of their individual departments and faculties. The School of Nursing is located on the sixth floor. Special instructional facilities include journalism, speech, psychology, numerical analysis, multi-media, and practice skills laboratories, along with two lecture halls.

The Duquesne Towers, a 17-story, air-conditioned double-tower residence for 1,200 men and women in separate wings, was dedicated in 1970. The facility features an indoor Olympic-sized swimming pool with a sundeck, offices of the Residence Life Division, the Campus Health Services area, a main student lounge and smaller lounges on each floor, telephones in each room, and a resident dining hall with a 2,500-student capacity.

The Duquesne Union, a modern architectural facility with an innovative concrete and glass design, is the center of campus activities and student life. Dedicated in 1967, it houses the offices of the Dean of Students, the Athletic Department, and various student organizations and interest groups. Facilities include three separate dining areas, a ballroom and student lounge, the campus bookstore, the campus information center, and a recreation center which features eight bowling lanes, pocket billiards, table tennis, table soccer, a music listening room, pinball, a Rathskellar, and an arts and crafts center.

The G & G Building, in addition to housing various administrative offices of the University, is the site of some undergraduate classes and is the center of the College of Liberal Arts and Sciences Concentrated Studies Program.

The Guidance Building houses the University's Center for Training and Research in Phenomenological Psychology, a facility operated by Duquesne's renowned Department of Psychology.

The Gymnasium is used as a practice facility by various inter-collegiate athletic teams of the University and as the center for indoor sports of the University's intramural sports program. The gym features a modern, fully equipped weight training facility, the Dukes Court Weight Room, which is open to the student body as well as the University's varsity teams. McCloskey Field, dedicated in the mid-1970s, is the center for outdoor intramural activity. Other athletic facilities include three self-enclosed tennis courts and two outdoor basketball courts, one of which is converted for street hockey in the winter months.

The Library Resource Center, dedicated in 1978, is a modern, attractive five-story structure whose completion signaled the crowning achievement of the University's expansion and redevelopment program. Housed in over 100,000 square feet of space is a collection of over 402,000 bound volumes, more than 3,600 periodicals, and an extensive microprint and audiovisual collection. The facility also contains a number of special collections, including the African Collection on African culture, society and politics, the Rabbinic Haim Collection on Medieval Christian and Jewish intellectual and religious thought, the Collection on Phenomenological Psychology, and the University Archives. With seating capacity for approximately 1,000 patrons, including graduate study carrels and conference facilities, the new Library constitutes a highly functional facility that should remain responsive to the needs of the Duquesne community for many years to come.

Architects for the Library Resource Center, Gerard Associates, were cited by the Pittsburgh Chapter of the American Institute of Architects for creative design in their renovation and expansion of the original structure, an old garage and warehouse con-
structed in the 1920s, into the present facility. The Music School and College Hall also resulted from conversions of older structures.

Richard King Mellon Hall of Science, an attractive, four-story structure dedicated in 1968, houses the Departments of Biological Sciences, Chemistry, Physics, and the School of Pharmacy. Designed by one of the world’s most renowned architects, Mies van der Rohe, the building won the “Laboratory of the Year” award in 1969. Instructional facilities include two large amphitheatre-style lecture halls with seating capacities of 248 each.

The Music School, dedicated in 1967, has 73 pianos, including 56 Steinways, five organs, and over 300 orchestral and band instruments available for student use. The school offers training and degrees in conservatory and music education, jazz and sacred music, and as well as an innovative program in music therapy. Individual and group practice areas are available in the building, along with acoustically equipped classrooms. Performances are given throughout the school year in the recital hall, and the school hosts the annual Mid-East Instrumental Music Conference.

Rockwell Hall, dedicated in 1958, is a 10-story structure which houses the School of Business and Administration and the Law School. Its Business Simulation Laboratory contains 12 conference rooms equipped with television cameras and microphones for observation and recording of activity in the individual rooms. The Law School’s library is the most accessible facility of its kind in the city, with Monday through Saturday hours from 7 a.m. to midnight, and Sunday hours from 10 a.m. to midnight. Rockwell Hall also houses a snack bar, the Business School’s student study lounge, the University’s Systems Center, and Peter Mills Auditorium.

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 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.

University Hall, a newly renovated building, serves as headquarters for the University’s Public Safety Office, Military Science Department, the campus television studio, and WDUQ-FM, the campus radio station and an affiliate of the Public Broadcasting System (PBS). Also housed in the building is the Women’s Recreation Center, including a gymnasium and slimnastics room.

**ACCREDITATION AND AFFILIATION**

**University**
- Accreditation: Commission on Higher Education
- Accreditation: Middle States Association of Colleges and Schools
- Membership: State Board of Education of the Pennsylvania Department of Education

**School of Business and Administration**
- Accreditation: American Assembly of Collegiate Schools of Business
- Accreditation: Middle Atlantic Association of Colleges of Business Administration

**School of Education**
- Accreditation: Pennsylvania Department of Education
- Membership: American Association of Colleges of Teacher Education
- Membership: Council for Exceptional Children
- Membership: Pennsylvania Association for Teacher Educators
- Membership: Pennsylvania Association of Colleges for Teacher Education
- Membership: Pennsylvania Association of Liberal Arts Colleges for the Advancement of Teaching
- Membership: Pennsylvania Association for Retarded Citizens

**School of Music**
- Accreditation: American Association of Music Therapy
- Membership: National Association of Schools of Music
- Membership: National Association of Music Therapists
- Membership: National Catholic Music Educators Association

**School of Nursing**
- Accreditation: National League for Nursing
- Membership: Pennsylvania State Board of Nurse Examiners
- Membership: American Association of Colleges of Nursing
- Membership: National League for Nursing (Council of Baccalaureate and Higher Degree Programs)
School of Pharmacy
Accreditation
American Council on Pharmaceutical Education
Pennsylvania State Board of Pharmacy
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 of one and two week duration, usually at the graduate level, are scheduled before and after the regular session.
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 university status and approved the amendment in favor of the corporate title, Duquesne University.

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 evaluations 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

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td></td>
<td>Proficiency at the 102 level</td>
</tr>
<tr>
<td>Modern or Classical Language</td>
<td></td>
<td>Proficiency at the 202 or 212 level</td>
</tr>
<tr>
<td>Natural Sciences (Biology, Chemistry, Earth Sciences, Physics, Mathematics)</td>
<td>Nine Credits</td>
<td>One two-semester sequential course must be completed</td>
</tr>
<tr>
<td>Social Sciences (Political Science, Psychology, Sociology)</td>
<td>Nine credits</td>
<td>At least two disciplines must be represented</td>
</tr>
<tr>
<td>History, Literature</td>
<td></td>
<td>Nine credits</td>
</tr>
<tr>
<td>Philosophy, Theology</td>
<td></td>
<td>Nine credits</td>
</tr>
<tr>
<td>Communications (Journalism, Linguistics, Speech)</td>
<td>Three credits</td>
<td></td>
</tr>
<tr>
<td>Completion of Major Program</td>
<td></td>
<td>As determined by department (Minimum of 24 credits)</td>
</tr>
<tr>
<td>Completion of Minor Program</td>
<td></td>
<td>As determined by department offering the minor (Minimum of 12 credits above the introductory courses)</td>
</tr>
</tbody>
</table>

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 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 or 18 credits.
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 over-all quality point average of 2.0
A minimum cumulative quality point average in the major of 2.0
Removal of I and F grades in required courses
Completion of sequential courses in proper sequence
Completion of the residence requirement The last 30 credits must be taken at the University
Submission of application for the degree No student is considered a degree candidate until he files an application for the degree on a form provided by the Registrar

DEGREES
The College confers two undergraduate degrees Bachelor of Science and Bachelor of Arts Students who complete the major in biology, chemistry, and physics receive the B.S. degree Students who complete the major in classics, economics, English, history, journalism, modern languages, philosophy, political science, psychology, sociology, speech, and theology receive the B.A. degree Students majoring in mathematics can follow a curriculum leading to either a B.A. or B.S. degree

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>001,002</td>
<td>BASIC LANGUAGE SKILLS</td>
<td>4 cr. each semester</td>
</tr>
<tr>
<td>003</td>
<td>BASIC CONCEPTS OF PSYCHOLOGY</td>
<td>4 credits</td>
</tr>
<tr>
<td>004</td>
<td>HISTORY OF THE UNITED STATES</td>
<td>4 credits</td>
</tr>
<tr>
<td>005,006</td>
<td>FOUNDATIONS OF LANGUAGE</td>
<td>4 cr. each semester</td>
</tr>
<tr>
<td>007</td>
<td>PHYSICAL GEOLOGY</td>
<td>4 credits</td>
</tr>
<tr>
<td>008,009</td>
<td>STUDY SKILLS</td>
<td>1 cr. each semester</td>
</tr>
</tbody>
</table>

COOPERATIVE EDUCATION
The University sponsors a Cooperative Education Program Its purpose is two-fold 1) to provide students with opportunities in which they can apply classroom learning to practical work and business settings, while learning and gaining the types of experience unavailable in any classroom, and 2) to offer employers a source of talented students who can serve in pre-professional capacities as full- or part-time employees, and who will be prime candidates for full-time employment after graduation

The program is open to any upper class students who have a minimum 2.5 quality point average The full-time co-op student is limited to a four or six month work period (or tour), during which he would be a 40 hour a week paid employee of the cooperating employer The work tour can be repeated with the same or a different cooperating employer upon the student’s completion of a full semester of academics after the first work tour

The part-time co-op (or parallel co-op) student is in effect a part-time employee, while carrying a full academic load at the University Parallel co-ops can be engaged in semester after semester Students in either program register for a credit course, Cooperation Work Experience, College of Arts and Sciences, which carries three to six credits for full-time co-op, and one credit for parallel co-op Full-time co-op students also have the option of registering for one or more academic courses during their co-op work tour For additional information contact the College Cooperative Education Advisor, or the Director, Career Planning and Placement

PROGRAM IN WORLD LITERATURE
The Departments of Classics, English, and Modern Languages jointly offer a World Literature program—with both major and minor sequence The program is designed to give the student an awareness of the historical and cultural framework in which Classical, British, American, and Continental Literatures have evolved, their influence upon each other, and an in-depth study of selected major literary works in these areas

COURSE OFFERINGS
Major 24 credits (6 in the core and the remaining 18 credits distributed equally among Classics, English, and Modern Languages)
Minor 15 credits (6 in the core and the remaining 9 credits distributed equally among Classics, English, and Modern Languages)
Core Course Readings in World Literature I and II (English)

DEPARTMENTAL COURSE OFFERINGS
Classics Any of the current offerings in Classical Literature, either in translation or in the original language, at the 200 level or above
English Any of the current course offerings in British or American Literature at the 400 level, or other departmental offerings as approved by the department chairman
Modern Languages Any of the current offerings in Modern Languages, either in translation or in the original language, at the 300 level or above

BACHELOR OF ARTS—LIBERAL ARTS AND GENERAL SCIENCES
This program is designed for those students who prefer not to choose a formal major or minor offered in a traditional discipline All requirements other than the major and minor must be completed Students must select one area of concentration Humanities, Social Sciences, Natural Sciences A concentration requires a minimum of 30 credit hours and a maximum of 39 hours Courses must be chosen from courses 200 and above

PRE-LAW
Students who intend to prepare for a career in law may select any subject area for the undergraduate major They will be expected to meet degree requirements in the major department, as well as admission requirements of the law school of their choice

PRE-PROFESSIONAL HEALTH EDUCATION
Students who intend to prepare for a career in medicine, dentistry, veterinary medicine, or related fields may major in the subject area of their choice and should select a major as soon as possible They must meet degree requirements of the major department, as well as admission requirements of the professional school of their choice A faculty committee on Pre-Medical Education assists the medically-oriented student

INTER-SCHOOL MINORS
Inter-school minors are available in Business and Administration, Education, Music, and Pharmacy For complete details students should consult the Director of Academic Advisement

BACHELOR-MASTER’S
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 are expected 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 in three years then enter an engineering program at Case.

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

For complete details consult with the Liaison Officer for the Binary Program in Engineering in the Mathematics 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.

CLEP AND ADVANCED PLACEMENT
See page 208.

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 or 18 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, 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 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 February 15, 1980.

MAJORS
The College of Arts and Sciences offers the following majors:
- Biochemistry
- Biology
- Chemistry
- Classics
- Classical Civilization
- Computer Science
- Criminal Justice
- Economics
- English
- French
- German
- Gerontology
- History
- Journalism
- Latin
- Mathematics
- Music
- Pharmaceutical Sales
- Philosophy
- Physics
- Psychology
- Political Science
- Social Communication
- Sociology
- Spanish
- Speech Pathology/Audiology
- Theatre/Media
- Theology
- World Literature

MINORS
- American Government
- American Literature
- Art
- Biochemistry
- Biology
- Business and Administration
- Chemistry
- Classical Civilization
- College Administration
- Comparative Government
- Computer Science
- Criminal Justice
- Earth Science
- Economics
- Education
- English Literature
- French
- General Speech Communication and Theatre
- German
- Gerontology
- Greek
- History
- International Relations
- Journalism
- Latin
- Mathematics
- Music
- Pharmaceutical Sales
- Philosophy
- Physics
- Psychology
- Russian
- Social Communication
- Social Services/Human Services
- Sociology
- Spanish
- Speech Pathology/Audiology
- Theatre/Media
- Theology
- World Literature
- Writing
Course Descriptions

ART DIVISION

Director Mrs Patricia S Ingram

Survey and period courses in the history of western art are offered by the Art Division of the Classics Department to introduce the concepts of art history to those who wish to extend their visual perimeter and to understand the role of the visual arts in Western culture. Qualified students are advised to take collateral courses in classics, history, philosophy, and psychology, and 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, historic preservation, and urban redevelopment.

REQUIREMENTS FOR THE MINOR

The minor consists of 6 semester hours on the 100 level and 12 semester hours on the 200 level or above.

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 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.

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 formative force in Western art. (Offered in alternate years)

207 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 in formulating Christian Art, Renaissance Art and Neo-Classicism is analyzed. (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. Areas of emphasis are Carolingian, Romanesque, Gothic, Renaissance, Rococo, and Modern art. (Offered in alternate years)

209 SPANISH ART EL GRECO TO PICASSO 3 cr
An examination of a selected group of art objects created in Spain. The aim of this course is to define the dramatic intensity of the imagery, forms, and content of these art objects. (Offered in alternate years)

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 in England, France, Italy, and Germany. (Offered in alternate years)

321 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)

331 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.

332 ART OF THE 20TH CENTURY 3 cr
A chronological survey 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.

341 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 intent involves arriving at a clear understanding of America's concept of reality during these years, particularly in the 20th century.

342 AMERICAN ARCHITECTURE 3 cr
Construction, style, building types, and concepts of city planning in American architecture from the 17th century to the present. Field trips to important monuments in the Pittsburgh area, including Falling Water, are scheduled.

370, 371, 372, 373 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.

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. Weekly seminars are conducted, trips to local and out-of-town museums are arranged, and individual research is programmed. Prerequisite: Permission of instructor.

DEPARTMENT OF BIOLOGICAL SCIENCES

Chairman Howard G. Ehrlich, Ph.D.

Biology is the scientific exploration of life in its many forms and details. Being one of the closest of all disciplines to ourselves, it is, therefore, a basic element in a balanced liberal education and offers both intellectual insight and knowledge vital to societies facing serious problems having biological implications. The undergraduate program is basic and flexible, providing a core of experience around which continuous, future personal development may be centered. It offers opportunity 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,
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, and 220 will not be counted toward a major in biology.

Extradepartmental requirements: Calculus 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 extradepartmental electives in chemistry and mathematics.

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 courses prerequisites must be met.
2. Academic Minor which consists of 107, 108 or 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, activity, 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.

201 Biology of Microbes 3 cr
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 some of them cause disease. Not for Biology Major credit. Lecture.

202 Biology of Microbes Laboratory 1 cr
Examines 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. Prerequisites: Biology 201 (or concurrent registration). Laboratory.

MAJOR COURSES

111, 112 General Biology 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 to understanding living systems, their activity and interrelationships. 111 is prerequisite to 112. Lecture and laboratory.

203 Microbiology A 4 cr
Introduction to microorganisms, their morphology, metabolism, ecology, and cultural characteristics, with emphasis on their interaction with other organisms, including man. Principles of medical and health related aspects of microbiology, chemotherapy, industrial, agricultural, and marine microbiology are presented. Prerequisites: Biology 111, 112, and organic chemistry (or concurrent registration). Lecture and laboratory.

204 Microbiology B 4 cr
Introduction to viruses and immunology, with emphasis on host-parasite interactions and patterns of infectious diseases in populations. Prerequisites: Biology 111, 112, and organic chemistry (or concurrent registration). 203 is not prerequisite to 204. Lecture and laboratory.

226 Genetics 4 cr
A study of the mechanisms of inheritance and their resulting effects on individuals and populations, including their implications in the life of man. Principles and details, methods and applications are illustrated with specific examples drawn from a wide range of species, from microorganisms to man. Prerequisites: Biology 107, 108, or 111, 112. Lecture and laboratory.

232 Vertebrate Macrostructure 4 cr
A comparative study of the gross structure of vertebrates and the relationship of that structure to function and evolution. Prerequisites: 111, 112 Lecture and laboratory.

238 Vertebrate Microstructure 4 cr
A study of tissue and organ structure and the relationship of that structure to function. Prerequisites: 111, 112 and 232 or permission of the instructor. Lecture and laboratory.
A comparative study of the morphological and physiological aspects of animal development emphasizing current experimental approaches. Prerequisites: 111, 112. Lecture and laboratory.

250 PLANT DEVELOPMENT
4 cr
Examines the unique features of representative types of plants, as revealed by interrelationships of form, function, and morphogenesis. Prerequisites: 111, 112. Lecture and laboratory.

306 PLANT PHYSIOLOGY
4 cr
Varied studies of the growth requirements and regulatory mechanisms of important plant types, with emphasis upon environmental control. Prerequisites: 111, 112 and 250. Lecture and laboratory.

312 ANIMAL PHYSIOLOGY
4 cr
Examination of the physiological mechanisms of body function in animals, including consideration of the basic components of biological control systems and the manner in which various organ systems contribute to the maintenance of physiological homeostasis. Prerequisites: Biology 111, 112. Lecture and laboratory.

318 PHYSIOLOGY OF REPRODUCTION
4 cr
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 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, and 312 or 444. Lecture and laboratory.

330 INVERTEBRATE BIOLOGY
4 cr
The morphology, systematics, life histories and ecology of invertebrate animals, with emphasis on diversity of forms. Prerequisites: 111, 112 or equivalent. Lecture and laboratory.

336 ANIMAL PARASITOLOGY
4 cr
The principles of parasitism, and general biology of animal parasites from protozoans through arthropods. Prerequisites: 111, 112 and 330. Lecture and laboratory.

348 EVOLUTION
3 cr
The history, development, concepts, and evidences of evolution with emphasis on modern studies in evolutionary biology, including an introduction to population genetics. Prerequisites: 111, 112 and 226. Lecture.

359 SPECIAL TOPICS
1-3 cr
Treatment of topics of current or special interest in biology. Lecture, laboratory, or combinations.

398, 399 UNDERGRADUATE RESEARCH
2 cr each
Opportunity for selected students to work in the laboratory on research problems under the direction of a faculty member. Prerequisite: 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. Not open to students with previous similar course. Lecture, and laboratory.

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. Not open to students with previous similar course. Lecture and laboratory.

Descriptions of the Following Courses are Provided in the Graduate School Catalog

503 CELL AND ELECTRON MICROSCOPY
3 cr
505 MOLECULAR GENETICS
3 cr
507 LABORATORY TECHNIQUES
3 cr
511 COMPARATIVE VERTEBRATE PHYSIOLOGY
3 cr
512 MAMMALIAN PHYSIOLOGY
3 cr
513 GENERAL ENDOCRINOLOGY
3 cr
520 EXPERIMENTAL EMBRYOLOGY
3 cr
523 INVERTEBRATE PHYSIOLOGY
3 cr
524 IMMUNOLOGY
3 cr
526 PATHOGENIC MICROBIOLOGY
3 cr
528 MICROBIAL PHYSIOLOGY
3 cr
531 BIOLOGY OF FUNGI
3 cr
535 MICROBIOLOGY SEMINAR
1 cr
580 URBAN ECOLOGY
3 cr

DEPARTMENT OF CHEMISTRY

Chairman Andrew J Glaid, III, 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, organic, physical chemistry, and biochemistry. Because of the fundamental nature of chemistry as a science, numerous opportunities for advanced study, as well as immediate employment, are open to the chemistry major. 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, and management positions in the chemical and related industries, the space industry, the health professions, education, and the environmental sciences. The major in biochemistry 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, two biology electives should be selected from Biology 203, 444, 505  Students planning to enter a graduate chemistry department should take 322, 324

To meet the American Chemical Society's requirements for Professional Certification, the Chemistry Major must elect two additional courses from the following: 401, 523, 524, 537, 538, 545, 546, 571, 572, Mathematics 216 or 308, Biology 505, Pharmacy Sciences 525, 539, one of these must be a laboratory course This laboratory requirement can also be fulfilled with 480  The Biochemistry Major must take 322, 324, and 422 for certification  Course descriptions of the 500 level courses can be found in the Graduate 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, the basic concepts of chemistry are developed for the non science student and applied to current topics such as air and water pollution, energy, pesticides, etc  The second semester deals with the biochemistry of living systems  Chemical principles are used to explain the normal life processes of photosynthesis, respiration, etc as well as abnormal conditions such as drug action, poisons, etc on metabolic processes  Students with a good high school background do not require the first semester as a prerequisite, others should see the instructor before registering for the second semester  Lecture, three hours

111, 112 PRINCIPLES OF CHEMISTRY  4 cr each
The course is divided into three segments, physical, organic, and biochemistry  In the section devoted to physical chemistry the laws of chemical behavior are developed with particular reference to the simple molecules of inanimate nature  The organic section deals primarily with the structural features of organic compounds, the chemistry of functional groups and the practical applications of organic compounds in the synthesis of polymers, of carbohydrates, lipids, proteins, nucleic acids, enzymes, vitamins, etc  Biochemistry is treated in terms of the digestion and metabolism of nutrients, the function of enzymes in the metabolic process and the abnormal metabolic conditions that prevail in disease  Lecture, three hours, Recitation, one hour, Laboratory, two hours

121, 122 GENERAL CHEMISTRY
The fundamental principles and concepts of chemistry are presented from the standpoint of atomic and molecular structure with illustrative examples from descriptive chemistry  The basic concepts of thermodynamics, chemical kinetics and equilibrium are introduced  The laboratory portion of the first semester illustrates physical and chemical properties in a quantitative manner, and the laboratory portion of the second semester illustrates the principle of ionic equilibria including qualitative inorganic analysis

121  Lecture, three hours, Recitation one hour, Laboratory, three hours  4 cr
122  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  kinetics and an introduction to chemical physics  Prerequisites Physics 202 or 212, Chemistry 122, Mathematics 116  Lecture, four hours

323, 324 PHYSICAL CHEMISTRY LABORATORY
Laboratory portion of Chemistry 321, 322, four hours

326 THE COMPUTER IN CHEMISTRY
The computer will be introduced as a tool in the solution of problems from the fields of analytical, biological, organic and physical chemistry  The student will progress from the use of the computer as a check 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 library programs which permit the computer to simulate laboratory equipment in the production of experimental data  Prerequisite Chemistry 321  Lecture, three hours

401 INTRODUCTORY BIOCHEMISTRY
An introduction to biochemistry at the cellular level  The structure and chemistry of cellular components (proteins, nucleic acids, etc), of cellular reagents (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
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
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 project under the direction of a staff member

524 MOLECULAR BASIS OF BIOCHEMISTRY
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  Stephen T Newmyer, Ph D
The study of Classics is a unique discipline  It is not the study of a language or a literature alone  It is rather the investigation of one of the world’s inspired civilizations, the Graeco-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/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, history, art, and archeology. Students majoring in Classical Civilization can create programs with the close advice and 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 12 credits above the 100 level), a minor in Greek (a minimum of 12 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 BASIC LATIN 4 cr each
Study of the fundamentals of Latin grammar and syntax combined with occasional exercises in translation from Roman authors.

103, 104 BASIC GREEK 4 cr each
Study of the fundamentals of Greek grammar and syntax combined with frequent exercises on translation from Greek authors.

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

201, 202 INTRODUCTION TO LATIN READINGS 3 cr each
Survey of major Latin authors.

203, 204 INTRODUCTION TO GREEK READINGS 3 cr each
Survey of major Greek authors.

205, 206 BIBLICAL AND PATRISTIC 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 Sanskrit texts including Mahabharata, Hitopadesa, Kathasaritsagara, Manavadharmasastra, Rigveda, and Meghaduta.

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
Herodotus, Thucydides, Aeschylus, Sophocles, Euripides, and Aristophanes.

303 FOURTH CENTURY 3 cr
Greek orators, Plato, Aristotle, Xenophon, Menander.

304 ALEXANDRIAN PERIOD 3 cr
Apollonius Rhodus, 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, and Tibullus.

307 IMPERIAL LITERATURE 3 cr
Seneca, Lucan, Petronius, Martial, Plutarch, Tacitus, Juvenal, Pliny the Younger, Suetonius, Apuleius, and Lucan.

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)

121 GENERAL ETYMOLOGY 3 cr
A study of Greek and Latin words to facilitate comprehension of modern English as it is written by our acknowledged modern masters.

122 ETYMOLOGY OF SCIENTIFIC TERMS 3 cr
Introduction to Greek and Latin elements of scientific terminology.

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.

124 WORLD MYTHOLOGY 3 cr
Investigation of the dominant themes of non-Classical mythologies with special reference to Near Eastern, Celtic, Teutonic, African, and American Indian myths.

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 narrative techniques. Readings from Homer, Herodotus, Xenophon, Apollonius of Rhodes, the Greek Romances, Lucan, Petronius, and Apuleius.

233 ANCIENT SATIRE 3 cr
Investigation of the satirical element in classical literature with special reference to the writings of Lucan, Lucretius, 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 interconnection 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 Septimius Severus to the death of Justinian.

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.

250 THE CLASSICAL TRADITION IN AMERICA 3 cr
A study of the influences of Graeco-Roman civilization on American cultural life, with special emphasis on its influence on American literature.

300 SEMINAR 1-3 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 in formulating 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.

COLLEGE ADMINISTRATION
This program is designed to introduce liberal arts students to the fundamentals of college and university management. The program includes two essential features, first, it provides theoretical background and a framework of general understanding of college management, second, it provides field experience or internship in the areas of greatest interest to the participating students. The minor program will consist of 15 credit hours, 12 in coursework and 3 in internship.

202 COLLEGE PERSONNEL ADMINISTRATION 3 cr
An overview of the process for administering a college personnel program including personnel management, fringe benefits, labor relations and affirmative action. This course will be roughly divided into four segments dealing with the above basic components of a comprehensive personnel program as they are administered in a college or university.

204 STUDENT SERVICES ADMINISTRATION 3 cr
This course explores the process of human development and the dynamics of organizational structure and administration of such services as Residence Life, Counseling, Health Services, Orientation, Union, Activities and Organizations. Parallel to personal development, students will be given the opportunity to become involved in the dynamics of organizational structure and administration. Within this framework they will learn social organization and structure, systems analysis, group dynamics, and leadership theory and effectiveness. The application of these leadership skills may be attained through practical experiences, independent studies, and classroom discussions.

206 AUXILIARY ENTERPRISES ADMINISTRATION 3 cr
A study of the Administration, Management and Operation of Auxiliary Enterprises which focuses upon those questions: What are Auxiliary Enterprises? Who do they serve? What services do they provide? How are they funded? Administered? Managed? Do they meet the objectives of the University? How do you measure their effectiveness?

207 HIGHER EDUCATION ADMINISTRATION I 3 cr
An overview of college administration which will introduce the basic concepts and techniques of planning, budgeting, management, measurement, evaluation, institutional research and record keeping.

208 HIGHER EDUCATION ADMINISTRATION II 3 cr
A continuation of Higher Education I, which will concentrate on managerial behavior techniques, as they apply to College Administration. An in-depth study of the Admissions process will analyze the Administrative, Counseling and Marketing aspects of College Administration.

210 INTERNSHIP 3 cr
Provides an opportunity for a supervised program of study by active participation in an area of the University.

DIVISION OF COMPUTER SCIENCE
The curriculum in Computer Science is designed to allow maximum flexibility in direction while providing adequate background for students desiring Business concentration, Technical concentration or Computer Science concentration. The curriculum is designed to provide the student with sufficient knowledge to enter his field of choice or proceed to graduate school upon receipt of the undergraduate degree.

REQUIREMENTS FOR THE MAJOR
REQUIREMENTS FOR THE MINOR
A minimum of 18 semester hours is required for a minor. These credits must include 101, 102 or 203 and twelve hours of Computer Science courses approved by the advisor and division. Flexibility will be maintained to fit the program to the student’s major field.

101 BASIC 2-2-3
This is an introduction to computer science and to the BASIC language. Ideas concerning the structure of digital computers, problem analysis, flowcharting, algorithms and files are introduced.

102 COBOL 3-0-3
Structured Programming principles and techniques are introduced using the COBOL language. Other topics discussed are top-down techniques, program and project documentation, file structures, and the organization of programming languages.
Prerequisite: 101 Basic or ability to program in another language.

203 FORTRAN 2-2-3
This course introduces the student to the details of the FORTRAN language. Topics emphasized are writing clear expressions, control structure, program structure, input and output, efficiency and documentation.
Prerequisite: 101 Basic.

204 FUNDAMENTALS OF COMPUTER LOGIC 3 cr
The purposes of this course are to enhance the student’s ability to solve problems gained in previous computer science courses through the use of logical thought processes, and to extend these processes to serve as a basis for the explanation of fundamental computer architecture and the mechanics of information transfer and control within a digital computer system. Topics include logical approaches to problem solving, flowcharting, Boolean functions, and logical properties of elementary computer devices. Functional logic design levels will be emphasized rather than specifics of electronic circuitry.
Prerequisite: 203 Fortran or consent of the instructor.

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: 204 Fundamentals of Computer Logic.

306 OPERATING SYSTEMS AND COMPUTER ARCHITECTURE 3 cr
This course develops an understanding of the organization and architecture of computer systems at the register-transfer and programming levels of system description, introduces the major concept areas of operating systems principles, teaches the inter-relationships between the operating system and the architecture of computer systems.
Prerequisite: 305 Introduction to File Processing.

308 NUMERICAL METHODS OF CLASSICAL ANALYSIS 3 cr
This course is designed to teach the student the basic algorithms of numerical computation, their theoretical foundations, and practical applications. Programming assignments are made to demonstrate the algorithms, the related theory, the benefits, and pitfalls associated with the method.
Prerequisite: 203 Fortran and Math 215.

309 COMPUTERS AND SOCIETY 3 cr
A course designed to keep the student abreast of the current state of the art of computer science and technology and of the role that computers play in society. This seminar format course will discuss in the uses and misuses of computers in society and will underline the basic assumptions, values and ethics which should govern the use of computer systems.

311 DATA BASE MANAGEMENT SYSTEMS DESIGN 3 cr
Introduction of 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.

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, and turning machines are among topics considered.

314 SOFTWARE DESIGN AND DEVELOPMENT 3 cr
An overview of system software. Examination of design and development of microassemblers, compilers and control program functions.

315 THEORY OF PROGRAMMING LANGUAGES 3 cr
A study of programming languages design. Topics include list processing and string processing, implementation of compilers, code generation and optimization and storage allocation.

318 NUMERICAL METHODS OF LINEAR SYSTEMS 3 cr
This course is designed such that students can take it without CS 308. It deals with basic algorithms of numerical computation of linear algebra instead of analysis. Floating point arithmetic and use of mathematical subroutine packages are also included.
Prerequisite: 203 Fortran, Math 116, Math 306.

319 MICROCOMPUTERS AND MICROCOMPUTING 3 cr
A course designed for the technically oriented student who wishes to learn the fundamentals of microprocessors and the programming and applications of these devices. Topics include basic constituents of microprocessors, microprocessor programming, microprocessor I/O, and interfacing the microprocessor applicability of specific types of microprocessors.

420 COMPUTER SIMULATION 3 cr
The fundamentals of simulation via digital and analog computer will be presented. Modern development and solution by numerical and analytical methods will be discussed in depth with emphasis on practical applications.

421 INTRODUCTION TO DECISION SCIENCES 3 cr
Application of mathematical techniques to solutions of business problems. Various models are studied and methods of applying them to business situations are discussed. Models used include linear programming, simulation, queuing, and inventory optimization.

423 MANAGEMENT INFORMATION SYSTEMS 3 cr
A study of problems of editing and preparing data for management decision-making purposes. Current practices in management information systems are studied. Design of input-output data for invoicing, payroll, inventory control and related topics.

DEPARTMENT OF ECONOMICS
Chairman Geza Grosschmid J U D

REQUIREMENTS FOR THE MAJOR
Twenty-four semester hours are required for a major. These credits must include 211, 221, 222, 321, and 322 plus nine elective credits, alternately a student may take 221, 222, 321, and 322 plus 12 elective credits.

Extra-departmental requirements: analytic methods 281, 282 in the School of Business and Administration or Mathematics 225 in the Mathematics Department of the College. Students planning to do graduate work in Economics are advised to take calculus.
REQUIREMENTS FOR THE MINOR
Eighteen semester hours are required for a minor in Economics. These credits must include 121, 221, and 222 plus nine elective credits, alternately a student may take 221 and 222 plus 12 elective credits. 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 99 to 114

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 for 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 102, 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 307 and 308).

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 four separate emphases that the student may follow:
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 477
3. Writing 203 and nine hours in 300 level Writing Workshops
4. 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 either an 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. Enrollment with instructor's permission only.

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 American and British novels and to methods of discussing 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 Moliere to Camus (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
Special areas treated in these seminars will vary and will be designated in the schedule of courses each semester. Enrollment in the Honors Seminar(s) by invitation of the Honors Committee of the Department of English.

307 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>380, 381, 382, 383, 384, 385, 386, 387, 388, 389</td>
<td>WRITING WORKSHOPS</td>
<td>3 cr</td>
<td>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 Poetry Workshop, Drama Workshop, Fiction Workshop, Writing for Business and Industry. Admission by instructor's permission only. 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.</td>
</tr>
<tr>
<td>409</td>
<td>CHAUCER</td>
<td>3 cr</td>
<td>A study of <em>The Canterbury Tales</em> and minor poems.</td>
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<tr>
<td>410</td>
<td>MEDIEVAL SPECIAL TOPICS</td>
<td>3 cr</td>
<td>Studies in the ideas and attitudes of the medieval period approached through one of its dominant genres such as the romance, the drama, the lyric, etc. or through some of its major writers other than Chaucer or through international readings in Old and Middle English, Old Icelandic, Medieval French and German (all read in English translation).</td>
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<tr>
<td>413</td>
<td>SIXTEENTH CENTURY ENGLISH LITERATURE</td>
<td>3 cr</td>
<td>Survey including non-Shakespearean drama, Sidney, Spenser, Shakespeare, Marlowe and minor figures.</td>
</tr>
<tr>
<td>414</td>
<td>SEVENTEENTH CENTURY ENGLISH LITERATURE</td>
<td>3 cr</td>
<td>Survey of drama, prose and poetry to 1660.</td>
</tr>
<tr>
<td>415</td>
<td>MILTON</td>
<td>3 cr</td>
<td>A survey of Milton and his times. A close scrutiny of the minor poems, and <em>Paradise Lost</em> and <em>Samson Agonistes</em>.</td>
</tr>
<tr>
<td>419</td>
<td>RENAISSANCE SPECIAL TOPICS</td>
<td>3 cr</td>
<td>Studies in Renaissance thought and aesthetic in the works of one or more of its great writers such as 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.</td>
</tr>
<tr>
<td>433</td>
<td>SHAKESPEARE I</td>
<td>3 cr</td>
<td>Comedies and romances.</td>
</tr>
<tr>
<td>434</td>
<td>SHAKESPEARE II</td>
<td>3 cr</td>
<td>Tragedies and histories.</td>
</tr>
<tr>
<td>439</td>
<td>SHAKESPEARE SPECIAL TOPICS</td>
<td>3 cr</td>
<td>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.</td>
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DEPARTMENT OF HISTORY

Chairman Samuel J. Astorino, Ph.D.

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 fulfills 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 service. 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

At least 24 credits in addition to 111, 112, or 113, 114. Of these 24 credits, at least six credits must be taken in American and six credits in European history, at least six credits from the sophomore survey courses, 211, 212, 221, 222, 231, 232 (twelve credits from this level are recommended), and three credits of an undergraduate historiography course, 481, 483, or 484. Transfer students may apply for equivalency.

The stated requirements aim to provide the student with a structured program of learning within which considerable flexibility is encouraged. 111, 112 acquaints the student with the basic themes of world history, 113, 114 deals with the history of the West. A variety of second-year survey courses supply essential knowledge of the major periods of European and American history. Upper and advanced-level courses provide intensive studies of historical methodology of the major cultural areas of the world and of significant themes in history. 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 should consult with the department's undergraduate advisor. The student is required to take 12 hours beyond 111, 112 or 113, 114 including either 221, 222 or 231, 232, the remaining six credits should be scheduled with the advice of the Department advisor.

Introductory Surveys

111, 112 APPROACHES TO WORLD HISTORY 3 cr each
A survey of world history covering important aspects of human evolution. The first semester deals with prehistory and the major civilizations. The second semester concentrates on major trends significant to the development of the contemporary world.

113, 114 WESTERN CIVILIZATION 3 cr each
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.

211 THE ANCIENT WORLD 3 cr
A survey of the ancient cultures and their contribution to civilization with emphasis on the Greeks and the Romans.

212 EUROPE IN THE FEUDAL AGE 3 cr
The world of the Middle Ages—a survey of medieval men's political, social, and cultural activities.

213 EUROPE FROM RENAISSANCE TO REVOLUTION 3 cr
The history of Europe from the fourteenth through the eighteenth centuries—the era of transition and change from the medieval to the modern world.

222 EUROPE INDUSTRIALISM AND THE MASSES 3 cr
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.

231 DEVELOPMENT OF THE UNITED STATES TO 1877 3 cr
The historical development of American institutions, ideals, and society from earliest times to 1877.

232 DEVELOPMENT OF THE UNITED STATES SINCE 1877 3 cr
The historical development of American institutions, ideals, and society since 1877.

243 HISTORY OF WESTERN LAW 3 cr
Primary emphasis will be placed on the rise of customary law, especially its development in England into Common Law.

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 Seven to the death of Justinian.

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.

253 THE MIDDLE EAST FROM MUHAMMED TO NAPOLEON 3 cr
A historical survey of the Near East from the rise of Islam to the decline of the Ottoman state, with particular attention to political, social, and cultural trends.
254 THE HISTORY OF THE MODERN MIDDLE EAST
A study of the modern Near East with concentration upon the conflict between imperialism and nationalism, traditionalism and western influences, in the area

255, 256 HISTORY OF ASIA
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 their 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

261 LATIN AMERICA COLONIAL PERIOD
From the Age of Discovery through the revolutions of the early 19th century

262 LATIN AMERICA NATIONAL PERIOD
From the revolutions to the present, with emphasis on Argentina, Brazil, Chile, and Mexico

263 THE COLONIAL PERIOD—WESTERN HEMISPHERE
A comparative examination of the economic, social, and political factors influencing European expansion to 1890

265 ENGLAND BEFORE 1715
The foundations of England, emphasizing the origins of the common law, the rise of parliament, the development of English society, and England's contribution to western thought

266 MODERN BRITAIN
A study of the first industrial nation, with special attention to the achievement 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

274 CHURCH HISTORY I
A religious and historical exploration of 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

275 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

276 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 often-controversial interaction between the Church and American culture, the place of religion in the creation of the American character, and the unique separation of church and state

280 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

281 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

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

371 HISTORY OF TECHNOLOGY AND MATERIAL CULTURE
Explores the tools and physical resource of human civilizations. It is a study of the man-made physical world around us. The course will consider eras of material scarcity and plenty, technological revolutions which change the course of history, and the development of historical forms of material survival

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

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

American Political and Diplomatic History
351 DIPLOMATIC HISTORY OF UNITED STATES I
From the Revolution to 1890 with the emphasis upon the establishment of the nation and its diplomatic methods and goals

352 DIPLOMATIC HISTORY OF UNITED STATES II
The second half of the course will be Diplomatic History of the United States 1890 to present. 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 an investigation and evaluation—personal, political, contemporary, and historical—of each president with some attention to the growth of the office

358 CIVIL WAR AND RECONSTRUCTION
An intensive study of the American experience before and after the War for the Union
360 CONSTITUTIONAL HISTORY OF THE UNITED STATES 3 cr
An analysis of the Supreme Court and constitutional development, stressing the major controversies in the field

361, 362 HISTORY OF THE UNITED STATES' POLITICAL PARTIES 3 cr each
A detailed examination and analysis of the origins, leadership, and operation of the major political parties in the U.S.

Intellectual and Cultural History

363 CULTURAL HISTORY OF MEDIEVAL EUROPE 3 cr
The development of the body of literature, secular and religious, from the decline of the Roman Empire to the Renaissance

365 THE ORIGINS OF THE MODERN MIND 3 cr
Intellectual changes between 1300 and 1800 that set the stage for the modern temper

366 THE MODERN MIND 3 cr
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

367 THE IMPACT OF SCIENCE ON SOCIETY 3 cr
The economic, social, and cultural consequences of the rise of modern science

368, 369 THE AMERICAN MIND I, II 3 cr each
The origins, development, and contemporary modes of American thought, including major "climates of opinion," diverse movements, and selected scientific, political, religious, social, and artistic topics

European Political and Diplomatic History

373, 374 DIPLOMATIC HISTORY OF THE FAR EAST 3 cr each
Western imperialism in Asia, rise of Asian nationalism, analysis of international problems in current tension areas

377 EUROPEAN EMPIRE IN THE NINETEENTH CENTURY 3 cr
Examines the growth of the great colonial empires in the nineteenth century and their decline before the forces of nationalism

378 EUROPEAN DIPLOMATIC HISTORY 1870-1960 3 cr
A study of European international politics since 1870, with emphasis upon the major developments, their origins and historic significance, and the evolving styles of diplomacy

379 REVOLUTIONS IN THE MODERN WORLD 3 cr
An analysis of the major political and social revolutions in Europe since 1789, the nature of the revolutionary phenomenon, and the inevitable counter-revolutionary trend

380 EUROPEAN FASCISM 3 cr
An intensive study of the major fascist movements and regimes of the twentieth century in light of the political, economic, social, intellectual, and psychological tensions which produced them

Social and Economic History

370 CURRENT HISTORY 3 cr
What are the major forces affecting our lives today? Where do they come from? Where will they lead to? Resources will be current media such as newspapers, TV, etc

384 FAMILY AND SOCIETY IN HISTORY 3 cr
Interactions between the family, the traditional basic unit of society, and the larger world in modern times. Working through family histories, the course will investigate the changing nature of the family in an effort to better understand the modern institution

385 WOMEN IN HISTORY 3 cr
The too often neglected history of one half of the human race, with special emphasis on the life experience of women in past ages

387 FRONTIER, ENVIRONMENT, AND FUTURE 3 cr
A historical view of man's attempts to create new societies, concentrating upon ecological issues, world frontier experiences, and utopian or futurist ventures

389 SOCIAL HISTORY OF MODERN EUROPE 3 cr
An examination of major demographic, economic, and social trends in modern European history

391 SOCIAL HISTORY OF RUSSIA 3 cr
The study of the development, role, and interrelations of the social classes in Russia and the Soviet Union, and in East Central and Southeastern Europe

392 THE EAST EUROPEAN ETHNIC (IMMIGRANT) EXPERIENCE 3 cr
The examination of the social and economic conditions and cultural milieu that the various waves of East European immigrants left behind in Europe and found in America, and the study of their inter-ethnic relationships and adjustment to American society

393 ECONOMIC HISTORY OF THE UNITED STATES TO 1865 3 cr
Investigates the economic factors in the development of the U.S. and their impact on social and political issues

394 UNITED STATES' LABOR HISTORY 3 cr
Concentrates chiefly on the relations between worker and employer from the early craftsmen to the industrial union member

395 URBAN HISTORY UNITED STATES 3 cr
The rise of urban America, from the colonial period to World War I

396 HISTORY OF AMERICAN IMMIGRATION SINCE 1880 3 cr
Focuses on the nature and problems of the more recent immigrant, his cultural contributions, the effects of selectivity and changing native attitudes

397 REFORM IN MODERN AMERICA 3 cr
A study of political, economic, and social reform movements in the United States since the late nineteenth century

398 ECONOMIC HISTORY OF THE UNITED STATES SINCE 1865 3 cr
Investigates the economic development of the United States after the Civil War, emphasizing its impact on social and political issues as background for current economic problems

399 THE SEARCH FOR IDENTITY—UNITED STATES SINCE 1945 3 cr
A discussion of selected contemporary issues, foreign and domestic, which illustrate the identity crisis in the U.S.

Historiography

481 THE MODERN HISTORIAN 3 cr
The development of modern historiographical thought and scholarship as it is related to the major intellectual and social currents of modern times
DEPARTMENT OF JOURNALISM

Chairman Nancy C. Jones, Ph.D.

The Department of Journalism tries to encourage 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 of mass communication as advertising, broadcasting, newspapers, public relations, magazines, and specialized publications. A transfer student must take at least 12 credits from the department to graduate as a Journalism major.

REQUIREMENTS FOR THE MAJOR

Twenty-seven semester hours are required for a major. Required courses are 167, 267, 268, 367, 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.

167 INTRODUCTION TO MASS COMMUNICATIONS 3 cr
An introduction to the role, principles, and responsibilities of newspapers, broadcasting, magazines, advertising, and public relations. Course open to non-majors. (Offered both semesters.)

199 LANGUAGE FOR JOURNALISTS 3 cr
Aimed at improving and polishing language skills of prospective or beginning majors. Emphasis on word usage, grammar, spelling, introduction to style and copy symbols. Open to Freshmen and Sophomores.

267 BASIC REPORTING AND WRITING I 3 cr

268 BASIC REPORTING AND WRITING II 3 cr
Advanced writing of the more complex types of news stories. Applied practice in laboratory sections. Typing ability required. Prerequisite: 267.

367 RADIO-TELEVISION PRINCIPLES AND WRITING 3 cr
A lecture-laboratory course in the study and application of writing principles and practices for radio and television. Two hours lecture, two hours laboratory. Open to non-majors. Prerequisites: 267, 268, or approval of Department.

369 ADVERTISING PRINCIPLES AND WRITING 3 cr
A lecture-laboratory course in the study and application of writing principles and practices for advertising. Two hours lecture, two hours laboratory. Open to non-majors. Prerequisites: 267, 268, or approval of Department.

370 DEVELOPING THE BROADCAST PROGRAM 3 cr
Creation, development, and presentation of the radio and television program including documentaries, panels, dramatic and non-dramatic programs. Theory and practice of direction. Two hours lecture, two hours laboratory. Prerequisite: 367 or approval of Department.

371 MASS COMMUNICATIONS AND PUBLIC OPINION 3 cr
A study of the nature of public opinion and the mass communications process, effects of propaganda, and barriers to effective communication. Open to Juniors and Seniors.

372 COMMUNICATIONS LAW 3 cr
A study of the legal rights, responsibilities, and ethics of the mass media. Open to Juniors and Seniors.

375 EDITING 3 cr
A lecture-laboratory course in editing and presenting the written word for the mass media. Prerequisite: 267 or approval of Department.

376 HISTORY OF THE MASS MEDIA 3 cr
Concentrated lecture-discussion course in an historical context of major social influences affecting American Journalism from the colonial press period to contemporary society. Open to Juniors and Seniors.

378 PHOTOGRAPHY FOR JOURNALISM 3 cr
A lecture-laboratory course in the preparation and use of photography for publication. Fundamentals of camera work, developing, printing, print evaluation and editorial uses of photography. Emphasized: Prerequisite: 267 or approval of Department.

379 GRAPHIC COMMUNICATIONS 3 cr
A laboratory-demonstration course to introduce students to all elements of the graphic design process related to preparing publications for print. Using a grid, transfer type and borders, greening, paper, color, overlays, line and clip art, preparing a key and photos. Open to Juniors and Seniors. Prerequisites: 267, 268, 375 or approval of Department. (This course recommended prior to 380.)

380 SPECIALIZED PUBLICATIONS 3 cr
A study of association, business, industrial, professional, and religious communications with emphasis on the internal and external publications in industry. Prerequisites: 167, 267, 268, 375.

405 ADVANCED WRITING FOR JOURNALISM 3 cr
A lecture-laboratory course in gathering and interpretive writing of news of urban affairs. Analysis of major political, economic, and social developments that have local news interest and significance. Two hours lecture, two hours laboratory. Prerequisites: 267, 268.

409 ADVANCED WRITING FOR ADVERTISING 3 cr
A lecture-laboratory course in copywriting and design for advertising. Two hours lecture, two hours laboratory. Prerequisite: 369.

411 MAGAZINE ARTICLE WRITING 3 cr
A lecture-laboratory course in writing for the general and specialized magazine. Two hours lecture, two hours laboratory. Open to Juniors and Seniors. Prerequisite: 267.

413 ADVANCED WRITING FOR RADIO AND TELEVISION 3 cr
A lecture-laboratory course in writing for Radio and Television. Two hours lecture, two hours laboratory. Prerequisites: 367, 370.
420 INTERNATIONAL COMMUNICATIONS 3 cr
A study of world news systems and an analysis of their roles as instruments of world understanding
Open to Juniors and Seniors

430 PUBLIC RELATIONS PRINCIPLES AND WRITING 3 cr
Study of the principles and concepts of public relations, needs, significance and influence. Students
work in "agencies" on solving practical PR problems for campus groups. Work on news releases,
newsletters, brochures, special events, etc. Open to Juniors and Seniors Prerequisites: 267, 268,
375 or approval of Department

440 WRITING REVIEWS/CRITICISM 3 cr
Analysis, discussion and writing of reviews/criticism of books, theater, films, television, music and the
visual arts. Lab sessions stress the writing of reviews and accompanying interviews, as well as
critiques of published reviews. Guest speakers include local critics and artists. Prerequisites: 267, 268
or approval of Department

441 SECONDARY SCHOOL COMMUNICATIONS 3 cr
Function of publications and broadcasting in the secondary school. Role and responsibilities of
school-press advisors. Teaching of Journalism on the high school level. Course is directed at students
seeking a Pennsylvania teacher's certificate in communication with emphasis on high school
journalism. Open to Juniors and Seniors Prerequisites: 167, 267

466 PROFESSIONAL INTERNSHIP ADVERTISING 3 cr
A supervised observation-experience program of study and assignment to an assigned advertising
agency or industrial advertising department in conjunction with the Business/Professional Advertising
Association Pittsburgh Chapter. Prerequisites: 167, 267, 268, 367, 372 or 376, 409 (Offered
both semesters)

468 PROFESSIONAL INTERNSHIP BROADCASTING 3 cr
A supervised observation-experience program of study and assignment to an assigned commer-
cial/educational broadcasting station in the Pittsburgh area. Prerequisites: 167, 267, 268, 367, 370,
372 or 376, 413 (Offered both semesters)

470 PROFESSIONAL INTERNSHIP NEWSPAPERS 3 cr
A supervised observation-experience program of study and assignment to a member newspaper of
the Pennsylvania Newspaper Publishers Association in Allegheny County. Prerequisites: 167, 267,
268, 367, 375, 372 or 376, 405 (Offered both semesters)

476 PROFESSIONAL INTERNSHIP PUBLIC RELATIONS 3 cr
A supervised observation-experience program of study and assignments to an assigned public rela-
tions agency, association, industrial, or non-profit educational group in the Pittsburgh area.
Prerequisites: 167, 267, 268, 367, 369, 375, 372 or 376, 380, 430 (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, print-
ing, plate-making and media selection. Prerequisites: 167, 267, 268, 367, 369

490 INDIVIDUAL PROJECTS IN MASS COMMUNICATIONS 1-3 cr
Individual research projects in the mass media. Open to Junior and Senior majors only. Prerequisite:
Permission of instructor and department chairman

DEPARTMENT OF MATHEMATICS
Chairman Charles A. Loch, M.A.
The Department of Mathematics offers a sequence of modern courses which will 1) aid
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 manipu-
lative 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.
Extradepartmental Requirements: Computer Science 101 Basic or 203 Fortran

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. Exceptionally able seniors are encouraged to seek departmental
approval to include 500 level mathematics courses listed in the graduate catalog.
Extradepartmental Requirements: 20 hours in science 211, 212 General Analytical
Physics and Computer Science 101 Basic or 203 Fortran must be taken. The remaining
courses may be selected from Biology 111, 112 and 226 and above, Chemistry 121 and
above, Physics above 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 science majors, 215, 216, 315, 321 are recommended.
For economics and social science majors, 222 or 308, 325 or 301, 306 are recom-
mended.

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 3 cr
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
Diferentiation 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. Considers 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.

222 BASIC COMPUTER SCIENCE
3 cr
An introduction to programming electronic digital computers, operating systems and compilers. Machine language and an assembly language are presented and used to solve several problems. Prerequisite: One year of high school algebra. Not counted toward a major. Not offered on a regular basis but available on request.

225 FUNDAMENTALS OF STATISTICS
3 cr
A basic course in probability theory and descriptive and inferential statistics for non-majors. Prerequisite: High school algebra. 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 transformations, expectation, point and interval estimation, sampling distributions. Prerequisite: 116 or equivalent.

303 PRINCIPLES OF MODERN ALGEBRA
3 cr
A study of basic properties of groups, rings, modules, and fields. Prerequisites: 115, 116.

306, 307 LINEAR ALGEBRA I, II
3 cr each
A study of linear transformations and matrices, and models.

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.

311 INTRODUCTION TO NUMBER THEORY
3 cr
A discussion of divisibility, congruences, quadratic residues, diophantine equations and arithmetical 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.
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 progression. Credit toward the major or minor will not be given for 201, 202, 211, 212, or 239, 240 which are intermediate level courses, 302 is the recommended prerequisite to all courses numbered 312 and above.

It is recommended that majors in the Department include a course in the art of the country in whose language they specialize as well as one course of literature in translation in the literature of a country other than that of their major.

A maximum of 12 transfer credits will be accepted toward the major.

Junior Year Abroad Majors are strongly encouraged but not obliged to participate in programs approved in advance by the Department. Further information may be obtained at the Department office.

REQUIREMENTS FOR THE MINOR

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

490 INDEPENDENT FIELD STUDY (All Languages) Var cr

The student will participate, under the supervision and guidance of the instructor, in selected tours to various foreign countries to undertake independent study on selected and approved projects involving the exploration and study of history, life, work, arts, and culture. Prerequisite Prior permission of the instructor and Department Chairman.

French

101, 102 ELEMENTARY FRENCH 3 cr each
Fundamentals of oral and written French. 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 and minors in music to provide them with those skills in French to meet their professional requisites. 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 FRENCH 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 WORKSHOP IN FRENCH LITERATURE AND CULTURE 3 cr each
All courses numbered 320 through 345 are workshops in literature and culture. The following courses represent current workshop offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All workshop courses carry three credits a semester. Recommended prerequisite French 302 or its equivalent.

320 STYLISTICS 326 THE LITERATURE OF THE EXISTENTIALIST MOVEMENT
321 PHONETICS 327 THE SYMBOLIST MOVEMENT IN FRENCH POETRY
322 THEATRE DE L'AVANT-GARDE 323 MAUPASSANT
324 BALZAC 328 FRENCH POETRY MIDDLE AGES TO 19TH CENTURY
325 REALISM AND NATURALISM 329 17th CENTURY FRENCH LITERATURE
330 FRENCH PROSE FICTION-19th CENTURY

460-475 SEMINAR IN FRENCH 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 a semester. French 462 and 463 are recommended prerequisites for these courses.

460 HISTORY AND CULTURE OF FRANCE SINCE THE REVOLUTION 465 18TH-CENTURY FRENCH THEATRE
461 HISTORY OF THE FRENCH LANGUAGE 466 19TH-CENTURY FRENCH POETRY
462 CHANSON DE ROLAND THROUGH 17TH CENTURY 467 19TH-CENTURY FRENCH NOVEL
463 18TH CENTURY TO MODERN PERIOD 468 19TH-CENTURY FRENCH THEATRE
464 17TH-CENTURY FRENCH THEATRE 469 20TH-CENTURY FRENCH POETRY
465 18TH-CENTURY FRENCH THEATRE
466 19TH-CENTURY FRENCH POETRY
467 19TH-CENTURY FRENCH NOVEL
468 19TH-CENTURY FRENCH THEATRE
469 20TH-CENTURY FRENCH POETRY
470 20TH-CENTURY FRENCH NOVEL
471 20TH-CENTURY FRENCH THEATRE
472 SARTRE AND CAMUS

480 DIRECTED READINGS  Var cr
Readings of literary texts under close faculty supervision, for majors only and only with permission of the Department. Variable credit.
German

101, 102 ELEMENTARY GERMAN 3 cr each
Fundamentals of oral and written German. Three lecture hours and one laboratory hour 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 and minors in music to provide them with those skills in German to meet their professional requisites. 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 AUTHORS 3 cr each
Selections from modern works of literature. Do not carry credit toward a major or minor. Prerequisite: 202 or equivalent.

251 COMMERCIAL GERMAN 3 cr
Prerequisite: 102 or equivalent.

252 READINGS IN SCIENTIFIC GERMAN 3 cr
Prerequisite: 201 or equivalent.

301, 302 GERMAN COMPOSITION AND CONVERSATION 3 cr each
Prerequisite: 202 or equivalent.

320-345 WORKSHOP IN GERMAN LITERATURE AND CULTURE 3 cr each
All courses numbered 320 through 345 are workshops in literature and culture. The following courses represent current workshop offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All workshop courses carry three credits a semester. Recommended prerequisite: German 302.

320 HISTORY OF GERMAN CULTURE FROM THE FRANKS TO HITLER
321 HISTORY OF GERMAN CULTURE FROM HITLER TO THE PRESENT
322 GERMAN CORRESPONDENCE PERSONAL, COMMERCIAL, LITERARY
324 POPULAR TRADITION IN GERMAN LITERATURE THE FAIRY TALE, THE HEROIC TALE
325 POPULAR TRADITION IN GERMAN LITERATURE LEGEND, ANIMAL FABLE
326 WOMEN FIGURES IN GERMAN LITERATURE FROM GOETHE TO BOLL
327 GERMAN WOMEN AUTHORS AND CRITICS
328 INTRODUCTION TO GERMAN DRAMA
329 INTRODUCTION TO GERMAN POETRY
330 MODERN GERMAN PROSE
331 MODERN GERMAN THEATRE

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 a semester. Recommended prerequisite: German 302.

460 GERMAN LITERATURE TO LESSING
461 GERMAN LITERATURE FROM LESSING TO THE PRESENT
462 ADVANCED GERMAN STYLISTICS
463 THE ART OF TRANSLATION FROM ENGLISH TO GERMAN
464 GERMAN ROMANTIC LITERATURE
465 THE ARTIST AND THE PROCESS OF ALIENATION IN CONTEMPORARY GERMAN LITERATURE
466 CONCEPTS OF "TOLERANCE" IN THE AGE OF GERMAN CLASSICISM
467 THE AGE OF GOETHE
468 GOETHE'S FAUST
469 CONCEPT OF LOVE IN THE GERMAN MEDIEVAL EPIC AND LYRIC
470 LITERATURE OF ENLIGHTENMENT AND STURM UND DRANG

Italian

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

201, 202 INTERMEDIATE ITALIAN 3 cr each
Intensified review and continuation of 101, 102. Prerequisite: 102 or equivalent.

314, 315 INDIVIDUAL STUDY Var Cr
Prerequisite: 202 or equivalent.

Russian

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

201, 202 INTERMEDIATE RUSSIAN 3 cr each
Intensified review and continuation of 101, 102. Prerequisite: 102 or equivalent.

301-302 RUSSIAN CONVERSATION AND COMPOSITION 3 cr each
Prerequisite: 202 or equivalent.

314, 315 INDIVIDUAL STUDY Var Cr
Prerequisite: 202 or equivalent.

320-345 WORKSHOP IN RUSSIAN LITERATURE AND CULTURE 3 cr each
All courses numbered 320 through 345 are workshops in literature and culture. The following courses represent current workshop offerings. They will be offered on a rotated basis and/or as circumstances warrant from semester to semester. All workshop courses carry three credits a semester.

320 HISTORY OF RUSSIAN CULTURE FROM THE FRANKS TO HITLER
321 HISTORY OF RUSSIAN CULTURE FROM HITLER TO THE PRESENT
322 RUSSIAN CORRESPONDENCE PERSONAL, COMMERCIAL, LITERARY
324 POPULAR TRADITION IN RUSSIAN LITERATURE THE FAIRY TALE, THE HEROIC TALE
325 POPULAR TRADITION IN RUSSIAN LITERATURE LEGEND, ANIMAL FABLE
326 RUSSIAN WOMEN AUTHORS AND CRITICS
327 INTRODUCTION TO RUSSIAN DRAMA
328 INTRODUCTION TO RUSSIAN POETRY
329 MODERN RUSSIAN PROSE
330 MODERN RUSSIAN THEATRE
331 MODERN RUSSIAN LITERATURE
320 CHEKHOV  
321 19TH CENTURY RUSSIAN SHORT STORY  
322 COMMERCIAL RUSSIAN  

Spanish  
101, 102 ELEMENTARY SPANISH  
111, 112 ELEMENTARY SPANISH FOR READING  
120 INTENSIVE SPANISH  
201, 202 INTERMEDIATE SPANISH  
211, 212 INTERMEDIATE SPANISH FOR READING  
220 INTENSIVE SPANISH  
239 READINGS IN MODERN SPANISH AUTHORS  
240 READINGS IN MODERN SPANISH-AMERICAN AUTHORS  
301, 302 SPANISH CONVERSATION AND COMPOSITION  
320-345 WORKSHOP IN SPANISH LITERATURE AND CULTURE  
320 MODERN SPANISH-AMERICAN WOMEN AUTHORS  
321 BORGES AND THE SHORT STORY IN SPANISH AMERICA  
322 SPANISH REALISM AND THE 19TH CENTURY NOVEL  
323 RUSSIAN FOLKLORE  
324 CONTEMPORARY RUSSIAN LITERATURE  
325 CONTEMPORARY SPANISH NOVEL  
401 SPANISH LITERATURE FROM THE CID THROUGH THE SIGLO DE ORO  
402 SPANISH LITERATURE FROM THE 18TH CENTURY TO THE PRESENT  
453, 454 TRENDS IN LATIN AMERICAN LITERATURE  
460-475 SEMINAR IN SPANISH LITERATURE  
466 THE AGE OF ENLIGHTENMENT  

DEPARTMENT OF PHILOSOPHY  
Chairman  John Sallis, PhD  
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, 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  
Five courses are required for a minor one 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

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<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>104</td>
<td>INTRODUCTION TO PHILOSOPHY</td>
<td>3 cr</td>
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<tr>
<td>105</td>
<td>ETHICS</td>
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<td>106</td>
<td>INTRODUCTORY LOGIC</td>
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<td>107</td>
<td>MEDICAL ETHICS</td>
<td>3 cr</td>
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<td>108</td>
<td>BUSINESS ETHICS</td>
<td>3 cr</td>
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<tr>
<td>200</td>
<td>INTRODUCTION TO PHENOMENOLOGY</td>
<td>3 cr</td>
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<tr>
<td>201</td>
<td>PHILOSOPHY OF BEING</td>
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<td>202</td>
<td>PHILOSOPHY OF RELIGION</td>
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<td>203</td>
<td>PHILOSOPHY OF RELATION</td>
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<td>3 cr</td>
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<tr>
<td>206</td>
<td>SOCIAL PHILOSOPHY</td>
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### Basic Courses

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<tr>
<th>Course Code</th>
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<tr>
<td>210</td>
<td>PHILOSOPHY OF FEMINISM</td>
<td>3 cr</td>
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<tr>
<td>211</td>
<td>MARXISM</td>
<td>3 cr</td>
</tr>
<tr>
<td>212</td>
<td>POLITICAL PHILOSOPHY</td>
<td>3 cr</td>
</tr>
<tr>
<td>213</td>
<td>PHILOSOPHY AND AMERICAN POLITICAL THOUGHT</td>
<td>3 cr</td>
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<tr>
<td>214</td>
<td>PHILOSOPHY OF SEX</td>
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<td>215</td>
<td>PSYCHOANALYSIS AND PHILOSOPHY</td>
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<td>COMMUNICATION AND PHILOSOPHY</td>
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<tr>
<td>217</td>
<td>ELEMENTARY SYMBOLIC LOGIC</td>
<td>3 cr</td>
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<tr>
<td>218</td>
<td>SPECIAL TOPICS</td>
<td>1-3 cr</td>
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<tr>
<td>220</td>
<td>PHILOSOPHY OF DEATH AND LIVING</td>
<td>3 cr</td>
</tr>
<tr>
<td>223</td>
<td>PHILOSOPHY OF HISTORY</td>
<td>3 cr</td>
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### Historical Sequence

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>300</td>
<td>ANCIENT PHILOSOPHY</td>
<td>3 cr</td>
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301 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.

302 EARLY MODERN PHILOSOPHY 3 cr
Explores the beginning of modern thinking in the 16th century and proceeds to the time of the French Revolution. Course work consists in analysis of several important texts chosen from such philosophers as Montaigne, Descartes, Pascal, Hobbes, Spinoza, Leibniz, Locke, Hume, Kant.

304 LATER MODERN PHILOSOPHY 3 cr
This course examines the period of modern philosophy initiated by Kant. It deals primarily with the crucial thinkers of the 19th century including Hegel, Feuerbach, Kierkegaard, Marx, Mill, and Nietzsche.

305 CONTEMPORARY PHILOSOPHY 3 cr
A study of contemporary philosophy from 1900 to the present, covering the methods and history of selected 20th century movements.

322 AMERICAN PHILOSOPHY 3 cr
Puritanism, Enlightenment, Transcendentalism, Pragmatism, with emphasis on key figures in American Philosophy. Peirce, Dewey, James, Royce, Santayana, Whitehead, etc.

323 ORIENTAL PHILOSOPHY 3 cr
Introduction to Oriental thought through a study of its major ideas. Such traditions as Confucianism, Taoism, Buddhism, Hinduism will be discussed.

325 CONCENTRATED PHILOSOPHICAL READINGS 3 cr
This course is an in-depth study of one or several philosophers such as Plato, Aristotle, Aquinas, Occam, Descartes, Kant, Wittgenstein, Strawson, Heidegger, etc., varying in subject matter from time to time.

Advanced Courses

312 PHILOSOPHICAL ANTHROPOLOGY 3 cr
The course examines several philosophical conceptions of man, under the guiding question, "What is man?" Man's place in the world, his relationship to society, the impact of science and the historical consciousness. The course should be of interest to social science majors in addition to philosophy majors and minors.

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 mathematics and interpretation, and other issues will be discussed in relation to past and contemporary philosophical and scientific thought.

314 PHILOSOPHY OF NATURAL SCIENCES 3 cr
A study of the philosophical implications of the methodology and conceptual framework of modern and contemporary science. Contrast between Newtonian and contemporary physics regarding such philosophical questions as the nature of matter, space-time, technique and technology.

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 (Mantain, Gilson and the school of Marechal and Rahner).

403 PHILOSOPHY OF GOD 3 cr
This course introduces students to selected texts and basic themes in types of religious experience such as Babylonian, Greek, and Judeo-Christian. It emphasizes such questions as: What is the Holy? What is the relation between scientific knowledge and religious knowledge? What are the various arguments about the existence of God and the immortality of the soul? Why is there human suffering if God is good and all-powerful? What do the symbols of the end of the world mean? Attention is given both to traditional and to contemporary philosophical texts.

406 AESTHETICS 3 cr
An examination of theories of art which explore such questions as the beautiful, creativity, imagination, and the role of art in life. Authors such as Aristotle, Lessing, Kant, Hegel, Nietzsche, Heidegger, and Camus will be read.

415, 416, 417 ANCIENT THINKER 3 cr each
A course devoted to detailed study of a single ancient thinker, such as Plato or Aristotle.

418, 419, 420, 421, 422 MEDIEVAL THINKER 3 cr each
A leading Medieval thinker or thinkers, such as Augustine, Avicenna, Maimonides, Bonaventure, will be studied.

423, 424, 425, 426, 427, 428 MODERN THINKER 3 cr each
In-depth examination of the work of a single or a group of historically modern authors such as rationalism (Descartes, Spinoza, Leibniz), empiricism (Locke, Berkeley, Hume), Kant, Hegel, Nietzsche.

429, 430, 431, 432, 433, 434 CONTEMPORARY THINKER 3 cr each
Concentration upon a single contemporary philosopher such as Husserl, Heidegger, Sartre, Merleau-Ponty, Whitehead, Wittgenstein.

435 SENIOR SEMINAR 3 cr

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

The program in the Department of Physics aims at not only providing today's students with a fundamental background in physics and its interrelationships with other sciences and disciplines, but also providing a suitable flexibility of program which will best fit the graduate for the challenge of today. While the Department is hopeful that students majoring in Physics will continue their professional growth, it is also realized that professional growth is not confined to a single path. The undergraduate program, therefore, provides the essential background for success in graduate work, and also provides students with fundamental qualifications which will equip them for available positions in a research institution, government agency, or private corporation.

REQUIREMENTS FOR THE MAJOR
A minimum of 32 semester hours is required for a major. These credits must include 211, 212, 301, 329, 330, 361, 372, 402, 429, 430, 473, 474, 483, 484, or 485 may be substituted for 474 with departmental approval.


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 the 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, 303, 304, 305 as available to the curriculum. Not all courses are taught each semester. Earth Science 101 is prerequisite to all courses.

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, light, 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 a general introduction to the basic physical theories and concepts. An attempt is made to develop in the science student the quantitative approach of the physicist to the physical universe. Some of the topics which may be included are vectors, Newton's Laws of Motion, the motion of a particle in space, momentum, energy, rigid body motion, fluids, gravity, wave motion, the first and second laws of thermodynamics, electricity and magnetism, optics. 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, 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: 211, Mathematics 215.

306 APPLIED ELECTRONICS LABORATORY
2-3 cr
This course seeks to combine a 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, impedance matching, linear and digital devices. Emphasis will be on proper use of instrumentation rather than on advanced principles of design. Prerequisite: Permission of instructor.

329 ADVANCED LABORATORY I
1 cr
This course is concerned with electromagnetic phenomena and basics of modern electronics. A set of programmed experiments is performed and analyzed by the students. Subjects covered are the use of electronic instruments, dynamics in electric and magnetic fields, electric circuits. Prerequisite: 212 or 202 and consent of instructor.

330 ADVANCED LABORATORY II
1 cr
A continuation of Advanced Laboratory I and includes the following items: basic semiconductor electronics, transistor amplifiers and oscillators, the klystron and microwave optics. Prerequisite: 329 or consent of instructor.

361 MECHANICS
4 cr
An intermediate course in the application of Newtonian Mechanics to simple systems. A short introduction to Vector Calculus precedes the main discussion. The topics normally covered are dynamics of a mass point, systems of particles, generalized coordinates and Lagrange's Equations. Other topics which may be included are normal modes, rigid bodies, two bodies with a central force, and waves on a string. Prerequisites: 212, Mathematics 215.

372 ELECTROMAGNETISM
4 cr
The following topics are usually discussed: electrostatics, energy relations in electrostatic fields, dielectrics, currents and their interaction, magnetic properties of matter, AC circuits, Maxwell's equations, reflection and refraction of electromagnetic waves, dipole and plane sheet radiation. Prerequisites: 212, Mathematics 215.

402 OPTICS
3 cr
This course introduces the student to classical principles of geometrical and physical optics and shows how these are applied in the construction of optical instruments. Reflection, refraction, interference, diffraction and polarization phenomena are treated, as well as an introduction to quantum optics. Prerequisite: 202 or 212, or consent of instructor.

429-30 ADVANCED RESEARCH
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 departmental seminar or meeting of 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 Schrödinger 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:

483 NUCLEAR PHYSICS
3 cr
Many of the experimental and theoretical aspects of the atomic nucleus are discussed. Some of the usual topics are two-nucleon systems, radioactivity, (alpha, beta, and gamma decay), radiometric
dating, interaction of radiation with matter, nuclear structure, nuclear reactions, and nuclear fission

Prerequisite 202 or 212

484 INTRODUCTORY SOLID STATE PHYSICS 3 cr
Bulk properties of matter are discussed from both the phenomenological and microscopic approaches. Typical topics are the geometric structure of solids, waves and diffractions, thermal properties, the free electron model, band 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 Theorems of Relativity. A list of topics which may be discussed are absolute space, Einsteinian Kinematics, Einsteinian Optics, spacetime 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, soldering 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

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. Geological 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 LABORATORY 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 LABORATORY 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
Introduction to the study of astronomy and the basics of observation. Study will include telescopic types and the known universe as identified from present study. Course will, if possible, include arrangements with Buhl Planetarium and Allegheny Observatory. Star types and distances will also be examined

DEPARTMENT OF POLITICAL SCIENCE
Chairman William E. Markus, M Ed
Political science is concerned with developing the person. Through the study of the science of politics, students will develop their analytical and intellectual skills. Political science graduates pursue careers in many diverse fields including governmental administration and service, teaching careers at various levels, law, and business

REQUIREMENTS FOR THE MAJOR
Twenty-four semester hours are required for a major in political science in addition to 101, these credits must include 208, 309, and 405 or 406.
Political Science 101 is prerequisite to all courses

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, 233, 309, and 405 or 406.

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

1. American Government 233 and a minimum of nine credits from among 240, 241, 242, 301, 302, 326, 403, and 407
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.

101 INTRODUCTION TO POLITICAL SCIENCE  3 cr
(Prerequisite to all courses)
An investigation of 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 of the American social and economic systems. In addition to the three branches of government, political parties, interest groups and elections are considered.

240 AMERICAN POLITICAL PARTIES  3 cr
An intensive study of the roles of interest groups and political parties in 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.

301 STATE AND LOCAL GOVERNMENT  3 cr
A study of the position of the state and local governments in the Federal Union.

302 MUNICIPAL GOVERNMENT  3 cr
A study of the role of local government in the state and federal systems.

306 COMPARATIVE COMMUNIST POLITICAL SYSTEMS  3 cr
A comparative analysis of the political systems existing in the Soviet Union, Communist China and Yugoslavia.

309 INTERNATIONAL RELATIONS  3 cr
A study of the major factors involved in international relations including such concepts as sovereignty, nationalism, balance of power, and 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 emphasis on the role of nationalism in the developing nations.

320 UNITED STATES FOREIGN POLICY  3 cr
A study of American foreign policy since the Second World War 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-Stalin era.

326 CONSTITUTIONAL LAW  3 cr
An intensive investigation of the role of the Supreme Court in the American system of government, concentrating upon the study of selected key court decisions. Prerequisite: 233.

402 SOVIET FOREIGN POLICY  3 cr
An analytical study of the development of Soviet foreign relations since 1917, with special emphasis upon the post-Stalin era.

403 AMERICAN POLITICAL SYSTEM  3 cr
Case studies in the American Political System—an intensive investigation of selected problem areas in the American System of government.

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 perennial western political heritage.

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.

413 GOVERNMENT AND POLITICS OF THE USSR  3 cr
An intensive analysis of the origin and evolution of the Soviet political system, with particular emphasis upon the developments of the post-Stalin era.
DEPARTMENT OF PSYCHOLOGY

The undergraduate program of the Department of Psychology is designed 1) to 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. To these ends, the department offers a wide variety of courses covering psychology conceived as a human science, a natural science, and within a historical perspective. Further study in graduate school prepares students for careers in mental hospitals, schools, mental health and social welfare agencies, business and industry. In our rapidly changing society the demand for professionally trained psychologists is increasing.

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 who 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 course advisor.

The psychology department has set up a dual advisement system: the course advisor and the faculty advisor. Prospective majors should consult the Department Course 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, plus 400 level courses with permission of the department head. A minimum of nine credits in psychology must be taken at Duquesne University for the minor.

103 INTRODUCTION TO PSYCHOLOGY
3 cr
(Prerequisite to all courses)
Introduction to fundamental concepts and methods of psychology, examined from both traditional and phenomenological perspectives. Prerequisite for all other departmental courses

220 SYSTEMATIC PSYCHOLOGY
3 cr
For majors only. Traditional approaches (behavioristic, physiological, psychoanalytic) to sensation, perception, learning, and motivation. Required for majors.

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.

226 DEVELOPMENTAL PSYCHOLOGY II (adolescence and maturity)
3 cr
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, 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 opportunity for working directly with professionals. Settings have included psychiatric hospitals and community centers. Majors only, permission of Department head. Repeatable once.
around the problem of what men in groups actually do, how they interact to meet needs where they are with what men in groups try to achieve and how successful they are. Sociology is oriented towards the study of individual and collective behavior in social contexts.

AREAS 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, 102, 201, 205, 211, 214, 304, 306, 308, 309, 312, 313, 315, 323, 325, 326, 341, 486, 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, 213, 310, 335, 345, 346, 360, 364, 365, 366, 457, 484

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, 250, 317, 318, 324, 330, 331, 410, 411

Social Services/Human 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, 203, 212, 314, 319, 320, 321, 322, 450, 451

REQUIREMENTS FOR THE MAJOR

A minimum of 24 semester hours, not including 101, is required for a major in Sociology. These credits 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 concentrated areas are listed above with the corresponding titles and descriptions.

REQUIREMENTS FOR THE MINOR

A minimum of 12 semester hours, not including 101, is required for a minor in Sociology. These credits must include 201 and 304. In consultation with the undergraduate academic advisor, the minor 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 102 and 203. 102 can be substituted for 101 as a prerequisite for 211 and 306. All 300 and 400 courses are for juniors and seniors only.
214 SOCIOLOGY OF THE CHILD AND ADOLESCENT 3 cr
Discussion of the child and adolescent socialization process in American society

304 METHODS IN SOCIOLOGY 3 cr
Discussion and application of techniques and research procedures used in sociological research

306 PERSONALITY AND CULTURE 3 cr
A cross-cultural examination of human social systems in terms of their relevance to personality development and interaction

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

312 SOCIOLOGY OF SPORTS 3 cr
Study of the institutions of sports and their relation to American culture and other institutions

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 socializing process from the infant state to the dying state

323 MEDICAL SOCIOLOGY 3 cr
Study of the impact of values and related structures on health maintenance, personnel and institutions, discussion of the social system of health organizations

325 FAMILY SYSTEMS 3 cr
Comparative study of the family, the interaction of the family with other community institutions

326 URBAN SOCIETY 3 cr
Analysis of the metropolitan complex of central city, suburbs, and urban fringe, and its impact of structures within its environs

345 PROCESSING JUVENILE OFFENDERS 3 cr
Study of the movement of juvenile offenders through the criminal justice system—police, prosecution, courts, and corrections

346 PROCESSING ADULT OFFENDERS 3 cr
Study of the movement of adult offenders through the criminal justice system

360 POLICE RESEARCH AND ANALYSIS 3 cr
Study of the public policy and practical implementation of funding trends in providing for the needs of the criminal justice system

364 POLICE COMMUNITY RELATIONS 3 cr
Discussion of the context of police—community relations, their interaction improvement and change strategies

365 CRITICAL ISSUES IN LAW ENFORCEMENT (POLICE) 3 cr
Analysis of police in a free society, ethnic tension, police discretion, civil disobedience, police conduct and integrity

366 CRIME PREVENTION 3 cr
Study of contemporary crime prevention programs involving criminal justice agencies, citizens and community politics

467 CORRECTIONAL CASEWORK AND COUNSELING 3 cr
Study of the counseling styles and individualized models for offender classification, and group and process models of counseling

484 EVALUATIVE RESEARCH IN CORRECTION 3 cr
Study of techniques for using research to make corrections more effective

Gerontology

250 PUBLIC WELFARE AND THE AGED 3 cr
A survey of public welfare policies and agencies, their services and effectiveness in dealing with the aged in American society

317 AGED AND SOCIAL SERVICE 3 cr
Study of problems associated with the elderly and the social services developed to assist them

318 AGING—AN OVERVIEW 3 cr
Introduction to the sociological, social work, legal, sociopsychological, public health, and psychiatric aspects of the aged person in America

324 SOCIAL ASPECTS OF DEATH AND DYING 3 cr
A study of American values, behavior custom practices and other institutional practices related to dying and death with special attention to the older Americans

330 COMMUNITY RESOURCES FOR THE AGED 3 cr
Review of public and private community resources, retirement communities, foster care arrangements, and other arrangements of area agencies on aging

331 RETIREMENT—SOCIAL AND CULTURAL ASPECTS 3 cr
Discussion of pre-retirement plans, retirement choices, and retirement problems
SOCIOLGY OF AGING 3 cr
Discussion of the socialization, role subcultural, and problem aspects of aging

AGING AND HEALTH 3 cr
Discussion of medical aspects of aging, diseases of aging, and health maintenance

Social Services/Human Services

SURVEY OF SOCIAL WORK 3 cr
Survey of the history and areas of social work—casework, group work and community organization, public and private welfare programs

THE HELPING PROCESS 3 cr
Discussion of the social process of helping others, ranging from the consideration of the professional, the population a person serves and the dynamics of the interaction. The perspective is person-social

SOCIAL WORK METHODS 3 cr
Study of case study and diagnosis—therapy process, interviewing, counseling, and program planning. Prerequisite Sociology 203. For sociology majors and minors only

SOCIAL LEGISLATION—SOCIAL SECURITY TO PRESENT DAY 3 cr
Study of the provision of social legislation applicable to client needs in a social work situation

COMMUNITY AGENCY RESOURCES AND REFERRAL 1 cr
Study of the various agencies which have been established to provide for needs of social work clients

PROCESS II INTERVENTION SKILLS 3 cr
Discussion of social work skills, practice in field evaluated

PROCESS III GROUP WORK AND COMMUNITY ORGANIZATION 3 cr
Examination of group processes and community organization strategies utilized in social work

FIELD WORK I 3-6 cr
Internship in a social work agency, criminal justice or gerontology setting. Majors only

FIELD WORK II 3-6 cr
Internship in a social work agency, criminal justice or gerontology setting. Majors only

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 program 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 3
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.
Recommended courses 101, 102, 204, 206, 302, 304, 311, 402

Theatre/Media 3
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 onstage and backstage in Red Masquers productions and by participating in on-and-off-the-air work at WDUS (90.5). Duquesne's twenty-five thousand watt National Public Radio affiliate.
Recommended courses 140, 190, 251, 263, 264, 280, 351, 370, 360, 385, 390, 391, 400, 470, 471, 490

Speech Pathology/Audiology 3
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 3.00 QPA in his/her major, completion of all required courses and the permission of the department chairman.
Recommended courses 120, 140, 204, 220, 320, 321, 420, 426
Co-requirements Psychology 225, 352
Advised Mathematics 225

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 four courses 101, 102, 140, 190. Speech Pathology/Audiology concentrates 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.

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, 304, 311, 402
2. Theatre/Media 140, 190, plus 12 credits in any of the following 251, 263, 264, 280, 351, 370, 360, 385, 390, 391, 470, 471, 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 321, 420, 425
4. General Speech Communication and Theatre 190 and either 101 or 102, with 12 additional credits apportioned in the following manner: six credits in any of the following 204, 206, 302, 304, 311, 402, plus six credits in any of these 140, 251, 263, 264, 280, 351, 370, 380, 385, 390, 391, 471, 490

Suggested activities for majors and minors in Speech Communication and Theatre include the Red Masquer Dramatic Organization, WDUS Radio and Television, the Debate Team, the Duke (student newspaper), and United Nations Organization. Suggested courses for fulfilling Communication Area requirements for non-Speech majors 101, 102, 140, 190.
An approach to the English language based upon the fundamentals of vocal and articulatory speech sounds as systematized by the International Phonetic Association.

**Social Communication**

101 PROCESS OF COMMUNICATION 3 cr
The Process of Communication examines how man, a being who must believe, communicates his beliefs and how he utilizes certain kinds of beliefs which have proven fundamental through the ages to assist or exploit his fellow man.

102 TECHNIQUES OF ORAL COMMUNICATION 3 cr
Develops those communicative skills necessary to critically analyze verbal 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 consideration 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 situation.

301 ORGANIZATIONAL COMMUNICATION 3 cr
Stresses the acquisition and application of skills that will bring success in an organizational setting.

304 PERSUASION 3 cr
A study and application of principles and practices that influence people's beliefs and actions. Prerequisite: Either 101 or 102 or permission of the instructor.

311 PROCESS OF COMMUNICATION II 3 cr
Develops more completely and philosophically the rhetorical perspective established in "Process of Communication I" by applying that particular perspective to contemporary systems of belief. Prerequisite: 101 or permission of the instructor recommended 304.

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 advancing, defending, and refuting a proposition of policy. Prerequisite: Either 101 or 102 or permission of the instructor.

**Speech Pathology/Audiology**

120 DEVELOPMENT OF LANGUAGE 3 cr
Focus will be on the acquisition of sound, meaning and grammar systems from infancy through childhood with emphasis on the comparative analysis of theories of communication development. Physical, neurological, psychological, and social bases of language will be discussed. Socio-linguistic differences will be discussed with reference to Black language and regional variations.

121 SIGN LANGUAGE (MANUAL COMMUNICATION) 1 cr
Sign language systems used by and with the deaf and hearing impaired will be presented in an overall introductory methods course. Participants will be able to demonstrate ability to fingerspell 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 systematized by the International Phonetic Association.

204 INTERPERSONAL COMMUNICATION 3 cr
Designed to investigate the various aspects of interpersonal communication. Primary consideration will be given face-to-face human interaction in a variety of situations.

220 INTRODUCTION TO PROBLEMS IN SPEECH 3 cr
A survey of speech disorders, their causes, recognition and possible therapy.

320 CLINICAL TECHNIQUES IN SPEECH PATHOLOGY 3 cr
This course will focus upon the clinical management of speech and hearing problems. Past and current therapeutic approaches and techniques will be presented in relation to disorders of speech and hearing. Different organizational procedures and practices will also be included. Prerequisite: 220 or permission of the instructor.

321 ANATOMY AND PHYSIOLOGY 3 cr
This course will study the basic neurological, skeletal, and muscular structures involved in the speech and hearing process. Prerequisite: 220 or permission of the instructor.

322 SPEECH PATHOLOGY/AUDIOLOGY EXTERNSHIP 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 language 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. Prerequisite: 220 or permission of the instructor.

422 SPEECH PATHOLOGY/AUDIOLOGY CLINICAL PRACTICUM 3 cr
Provides an opportunity for active participation with professionals in their work in varied settings. For Speech Pathology/Audiology concentration majors only. Written permission of department chairman required.

425 AURAL REHABILITATION 3 cr
The human communication systems are presented including acoustic and visual components. Communication problems of the hearing impaired are discussed with regard to amplification, residual hearing, visual perception and manual communication. Programs of rehabilitation for individuals with mild to profound hearing impairments are reviewed.

426 HEARING AND AUDIOLOGY 3 cr
This course will consider the nature of sound, the process of hearing and hearing impairment. The different types, causes, and the measurement of hearing impairment will be discussed. Exposure to audiometric testing will also be available. Prerequisite: 220 or permission of the instructor.

**Theatre/Media**

140 PHONETICS 3 cr
An approach to the English language based upon the fundamentals of vocal and articulatory speech sounds as systematized by the International Phonetic Association.

190 INTRODUCTION TO THEATRE ARTS 3 cr
A survey of theatre as an art form, involving the selective integration of a number of skills and disciplines to bring about the aesthetic of the theatrical moment. Beginning with lectures on the roles of the director, actor, designer, and various craftsmen, the course will work up to a sampling of the various modes and forms of drama in terms of exigencies or production.
204 INTERPERSONNEL COMMUNICATION 3 cr
Designed to investigate the various aspects of interpersonnel communication. Primary consideration will be given face-to-face human interaction in a variety of situations.

251 RADIO ANNOUNCING 3 cr
Application of the principles of good speech to the announcing of news, sports, weather and commercials, and to the art of interviewing.

263 STAGECRAFT 3 cr
Stagecraft is a detailed examination and application of the methods and materials in the area of set construction, scene painting, and property construction to increase the awareness of accepted building, design, and safety practices in technical theatre. Prerequisite 190 or permission of the instructor.

264 SCENE DESIGN 3 cr
Scene Design is a study of the preparation and presentation of theatrical set design. The study will include rendering techniques, scale models, drafting techniques, designing within a budget, the use of lighting, and designing for different types of performance spaces.

280 ACTING I 3 cr
A study of the basic principles, theories, and techniques of acting, including various problems confronted by the actor in the creation and interpretation of a role.

351 TELEVISION ANNOUNCING 3 cr
Continuation of Radio Announcing but with the added skills necessary to TV. Prerequisite 251.

370 ORAL COMMUNICATION OF LITERATURE 3 cr
An approach to literature in terms of its oral traditions with special emphasis on techniques preparatory to the act of oral presentation.

380 ACTING II 3 cr
An advanced course dealing with the principles and techniques of various acting styles with major concentration on the oral communication of a dramatic role. Prerequisite 280 or permission of the instructor.

385 STAGE DIRECTING 3 cr
Studies principles, theories, and practices involved in the staging of a play for performance, emphasizing problems of staging and interpretation confronting the director. Prerequisite 190.

390 DEVELOPMENT OF THE THEATRE I 3 cr
A study of the origin and development of theatre and drama from pre-Grecian civilizations to the seventeenth century, investigated in light of the particular world view which it expresses.

391 DEVELOPMENT OF THE THEATRE II 3 cr
A study of the development of theatre and drama from the seventeenth century to the early twentieth century, investigated in light of the particular world view which it expresses.

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.

471 ORAL COMMUNICATION OF BIBLICAL LITERATURE 3 cr
A course devoted to the consideration of the Bible in terms of the spoken language with its accompanying oral interpretative connotations and techniques. Prerequisite 370 or permission of the instructor.

490 AMERICAN THEATRE AND DRAMA 3 cr
Survey of the major American theatrical movements and dramatic literature from the Colonial period to the present with emphasis on the twentieth century. Playwrights, designers, and theatrical companies are studied as reflections of American culture.

DEPARTMENT OF THEOLOGY
Chairman Rev. Francis X. Malinowski, C.S.Sp., Ph.D.
Duquesne’s Department of Theology affirms that the academic study of man’s religious experience is essential to a complete education of man. 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 man’s universal search for religious meaning and experience, and seeks not only to offer the possibility of a study of the varying 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 beyond the 100 level. These must include 201, 213, 214, 220, 498, the remaining credits will be chosen in consultation with the student’s advisor.

REQUIREMENTS FOR THE MINOR
A minor consists of four courses beyond the 100 level. The department has also prepared suggested sequences which may be helpful to a student wishing to concentrate in a certain area of theology, e.g., Biblical Studies, Roman Catholic Theology, World Religions, Religion and Culture, Christianity in History, etc. These sequences are available in the department upon request.

COURSE INFORMATION
The numbering of the course indicates the level of approach. These courses are of the basic, survey type, wherein emphasis is on breadth rather than on depth, and serve as background for other courses.

100 These courses treat of subject matter in a specific area of theology and in greater depth than in the 100 category.

200-300 These courses are dealt with at a more advanced level, independent research is required.

Biblical Studies

114 INTERPRETING THE BIBLE 3 cr
A presentation of tools necessary to understand the Old and New Testament as ancient literary works, affording a united view of historical events, as well as the prominent religious experiences reflected in these events, emphasis on practical interpretation of biblical passages.
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, theologies, and themes, including 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 from the point of view of their literary makeup, historical origins and testimony, and theological content, practical approaches in interpreting key passages of the New Testament

313 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

321 JESUS IN THE GOSPELS 3 cr
A portrait of the person of Jesus, elements of such a portrait drawn exclusively from an in-depth study of the four gospels, with ample usage of accepted scholarship on who Jesus says He is and who others say He is

413 THEOLOGY OF THE OLD TESTAMENT 3 cr
Examination of the Theology of the various books or 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

414 THEOLOGY OF THE NEW TESTAMENT 3 cr
A presentation of the major theological traditions of the New Testament, emphasizing the diversity of Christian beliefs and practices, as well as the underlying unifying principles of the early Christian experience, an explanation of advanced techniques of biblical interpretation with opportunity for the student to practice such techniques

490 FIELD EXPERIENCE IN BIBLICAL ARCHAEOLOGY 6 cr
Six weeks of supervised participation in an archaeological excavation in the Ancient Near East, experience in stratigraphic digging, pottery identification, scientific analysis of finds, and recording methods. Offered every two or three years, approval of participants by core staff required

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 HISTORY OF CHRISTIAN WORSHIP 3 cr
The meaning of ritual and worship in Christianity, an analysis of the major steps in the development of the Eucharist, esp. in the western tradition, the impact of the Reformation on the meaning and form of Christian worship, a discussion of some symbols and devotions in Roman and Protestant Christianity

260 ORIGINS OF PROTESTANTISM 3 cr
An introduction to the thought of the principal reformers - Luther, Calvin, Zwingle, Wesley, a study of speculative and practical forces operative in the fifteenth-sixteen centuries which gave rise to the reforming movement, the formulation of Protestant Orthodoxy

271 EASTERN CHRISTIAN THEOLOGY 3 cr
A study of the main theological developments in the Eastern Church from the Patristic age on through the medieval times until the modern days as they shape its distinctive spirit and mentality and as they are interpreted in the Eastern Churches

274 CHURCH HISTORY I 3 cr
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

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 IN 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

346 DEATH, CULTURE, AND THEOLOGY 3 cr
A Christian theological response to a broad scope of dying and death issues as encountered in various cultures (e.g., African, Asian, North American) and as interpreted through diverse disciplines (e.g., literary, medical-legal, sociological) an exploration of how perception of death influences the quality of life

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 VALUE OF HUMAN LIFE AND CURRENT ETHICAL PROBLEMS 3 cr
A discussion of the fundamental moral principles involved in making any of the “life decisions,” the problem of the definition of life, 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 embryology

361 QUESTIONS IN PROTESTANT THEOLOGY 3 cr
An analysis of current issues in Protestant theology, e.g., the authority of Scripture, the mission of the Church, the relationship between the historical study of the gospels and dogmatic Christology, the question of God-in-process, the Spirit and teaching authority

370 EARLY CHRISTIAN THOUGHT 3 cr
A study of the early Christian thinkers with emphasis on the Apostolic Fathers, the Apologists, Ongon, Athanasus, the Cappadocian Fathers, Tertullian, and Augustine as they interpret Christian revelation and lay ground for the systematic development of Catholic theology

470 CHRISTIAN MYSTICISM 3 cr
A study of the manifold Christian experience of mysticism, i.e., experiential contact with God, as seen in famous exemplars of mystical experience, e.g., Jesus Christ, Paul, Ignatius of Antioch, Augustine, John Ruysbroeck, Catherine of Siena, Theresa of Avila, John of the Cross, Venerable Liberman

Roman Catholic Theology

106 RATIONAL FOUNDATIONS OF THE CATHOLIC FAITH 3 cr
An investigation of the reasonableness of the Catholic Faith beginning with an inquiry into the existence of God and the possibility of His intervention in human affairs, study of the Gospels as reliable documents, of Christ’s claim to be God, His life, works, and especially His resurrection, of His founding of Church and its identity today
201 INTRODUCTION TO THEOLOGY AND THEOLOGICAL METHOD 3 cr
An inquiry into, and an analysis of, the resources of theology—faith, revelation, inspiration, and Church teaching, a presentation of the various approaches to theological study and the schools of theological thought in Christianity.

202 CATHOLICISM 3 cr
An explanation of the major beliefs and practices of Roman Catholicism, including the nature and work of the God Man as well as the privileges of Mary, study of the nature of the Church and its inerrancy in teaching, consideration of the norms of morality, the Commandments, the sacraments, and the spirit of 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 man and the new era in the spiritual destiny of mankind inaugurated by the Incarnation and the Passion-Death-Resurrection event.

230 THE CHURCH 3 cr
A study of the Christian community of believers as an expression 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 unbiblical, Christian and secular humanism, the future with reference to hope, heaven, hell, afterlife, reincarnation, and resurrection, sin in a secular age, suffering and evil, the occult, the charismatic movement within the Church.

250 MORAL PERSPECTIVES IN HUMAN DEVELOPMENT 3 cr
A Catholic perspective of the basic issues involved in the formulation of moral values within the developing person, and of the sources upon which moral systems are based, a discussion of the absolute vs. the relative, traditional morality vs. "the new morality," an application of these principles to modern problems, e.g., homosexuality, drugs, consumerism.

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 Judeo-Christian tradition with special focus on Catholic development.

301 MARRIAGE 3 cr
A personally 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 the development of man 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 man's needs for ritual and symbol, discussion of recent revisions and developments in sacramental theology.

442 THEOLOGICAL ANTHROPOLOGY 3 cr
A study of man in his unique dignity as image of God and as responsible for the development of the universe, his experience of sin and alienation, and his liberation of divine grace given through his union with the Risen Christ.
373 RELIGION IN AMERICA  3 cr
Analysis of the role of religion in the discovery, colonization, constitutional development, immigration trends, and growth of the American republic, with an emphasis on some uniquely American religious phenomena, e.g., religious liberty, indigenous American religious movement, civil religion, black religious experience.

481 ISLAM  3 cr
An analysis of Islam as a religious, political, and cultural entity. Mohammed and the Arabian setting, history, beliefs, practices, and divisions within Islam, the Koran and Hadiths, the contemporary Muslim world.

482 RELIGIONS OF INDIA  3 cr
An analysis of significant religious groups in India such as Hindus, Jains, Buddhists, Parsees, Muslims, Sikhs, and Christians, a study of the origin, development, beliefs, practices, and interrelationships among the religions and interaction between religion and Indian culture.

492 INDEPENDENT STUDY IN THEOLOGY  1-3 cr
A critical analysis by an individual student of selected topics in the areas of biblical studies, Christian studies, Roman Catholic theology or selected religious studies, or of some outstanding authors and their works under the direction of a faculty member.
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 activity 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 the 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 worthy 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, business core program, an elective area of advanced business subjects chosen on the basis of professional interests 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 responsibility, 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.

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.

BUREAU OF RESEARCH AND COMMUNITY SERVICES
Activity complementing direct instruction takes place in five 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.

Center for Administration of Legal Systems
The Center serves as the focal point for research activity in the administration of law. Its approach encompasses the outlook and makes use of the investigative techniques of the physical scientist, the educator, the lawyer, the social scientist, the behavioral scientist, and the administrator. Present research activities include studies of the interactions of law and psychology, the administration and management of the courts, educational programs in fundamentals of the law of youth.

Bureau of Research and Community Services
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. Its approach encompasses the outlook and makes use of the investigative techniques of the physical scientist, the educator, the lawyer, the social scientist, the behavioral scientist, and the administrator. Present research activities include studies of the interactions of law and psychology, the administration and management of the courts, educational programs in fundamentals of the law of youth.

The Center also serves as the coordinating agency for education and training programs of a non-credit nature for persons currently employed within the legal system. Such programs are tailored to meet the needs of specific groups and agencies. The objectives, content, time and length of all programs are cooperatively determined with the agency involved. The Center calls upon professionally trained practitioners from the local community as well as full-time faculty to instruct in these programs.

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 competency in the school systems of the area.

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 by 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 on 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.

Center for Management Development

The Division conducts management training programs for industry ranging from the foreman level up through executive personnel, touching every phase of management to make the individual a better rounded person in meeting the current demands of business. Also administered are non-credit programs which consist of courses in business and administration or special areas, these courses are offered for the continuing education of adults in the community.

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 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 juniors in the highest five percent of their class and to seniors in the highest 10 percent of their class. The Phi Chi Theta is a national professional commerce sorority. The Student Accounting Association provides for the interests of those who intend to become accountants. The American Marketing Association, the student chapter, affords membership to students whose major interest 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. Omicron Delta Epsilon, a national honor society in Economics, is open to all students specializing in studies in Economics. The society is open to those having an overall academic average of B in their Economics courses. Delta Sigma Pi, a national professional business fraternity, is represented by Theta Rho chapter.

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, the latter of which can be several of the junior courses indicated in 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 free to select any junior and senior courses from the School of Business and Administration curriculum to complete the 15 hours required for graduation. Regulations for certification in Accounting make the program very rigid, this is dealt with in the paragraphs following the Sample Program. The faculty advisor in the School of Business and Administration plays an extremely important role in the academic guidance of students. Because of this, students are permitted to select their own advisors based on personal knowledge and available biographical sketches.

FOUR YEAR SAMPLE PROGRAM

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<tr>
<th>Courses</th>
<th>Fall Semester</th>
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<tr>
<td>101 English Comp</td>
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<td>221 Prin of Economics</td>
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<td>332 Money and Banking</td>
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<td>371 Prin of Marketing</td>
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<td>322 Inter. Accounting or</td>
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*Course may be taken in either semester.

**Executive Action Simulation or Executive Policy

The accounting faculty recommends that students concentrating in accounting take Accounting 211, 212, 311, 312, 314, 315, 411, 413, and 251-Legal Process, as well as at least one of the following: Law 353, 354, 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.
Students enrolled in the accounting program are encouraged to take the AICPA Level II Achievement Test. This will normally be taken in the Spring Semester during which Accounting 315 will be completed.

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.

DIVISION OF QUANTITATIVE SCIENCE

Chairman: Arthur G. Wentz, M.B.A., Ph.D.

ACCOUNTING CURRICULUM

CPA Requirements

Students who desire to become certified public accountants in Pennsylvania and who have graduated from a four-year program in a college approved by the State 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

An introduction to the language of accounting, basic accounting concepts and brief exposure to recording financial information. An extensive study is made of accounting information for management decisions. Laboratory attendance to two hours a week is required.

3 cr each

311, 312 INTERMEDIATE ACCOUNTING

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 topics are accepted and alternative methods in the accounting cycle, financial statements, their form, content and use, accounting problems of the corporation, detailed analyses of the balance sheet accounts, determination of net income, statement of source and uses of working capital. Prerequisites: 211, 212

3 cr each

313 MANAGERIAL ACCOUNTING

A study of the technique involved in the gathering, recording, and 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 operating and financial standards, measurement of managerial performance, use of budgets in managerial control, use of cost data and interpretation of cost reports, use of quantitative data in the formulation of policies, consideration of various aspects of Federal, State and local taxes and their effect on managerial decisions. Prerequisites: 211, 212

3 cr

314 ADVANCED ACCOUNTING

This course applies fundamental theory to a number of important activities in business. Activities studied are partnerships, special sales procedures, consolidations and fiduciaries. Prerequisites: 311

3 cr

315 COST ACCOUNTING

Basic costing accounting procedures are discussed from the following viewpoints: cost principle, cost determination, cost control, cost analysis. Topics treated include cost terminology, planning and control techniques, and development and application of overhead rates. Cost behavior patterns are studied 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

3 cr

411 AUDITING

3 cr

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 illustrate the application of the principles studied. Prerequisite: 312

412 INTRODUCTORY INCOME TAX ACCOUNTING

3 cr

This course is a study of basic tax and procedure affecting primarily individuals and to a lesser extent partnerships and corporations. Principal topics include returns, rates, exemptions, income, deductions, sales and exchange of assets, and credits. Emphasis is placed on problems to illustrate the application of the principles studied and used in trial of official forms for demonstration purposes. Prerequisites: either 312 or 313

413 BUSINESS INFORMATION SYSTEMS

3 cr

A course designed to introduce students to management information processing systems and the transformation of information systems to meet specific 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 as covered in the Analytic Methods sequence.

419 SEMINAR IN ACCOUNTING

3 cr

This course is designed to develop a student's ability in technical expression, deepen his understanding of accounting theory, and acquaint him with contemporary accounting problems and literature. Students are made acquainted with the philosophy and methodology of research, and required to prepare a research paper. Prerequisite: 314

FINANCE CURRICULUM

Students who desire to function in finance, either in the world of private business, government bodies, or in the 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 used by those in the securities industry. The designation in the life insurance area for professional personnel is (CLU) or Chartered Life Underwriter. The completion of the Real Estate course and others will satisfy the educational requirements necessary to sit for the Pennsylvania Real Estate Salesman's License.

331 BUSINESS FINANCE

3 cr

The aim of this course is to combine the study of internal and external sources of funds with the tools of financial management in order to maximize the wealth of the business entity. Primary attention is given to personal business entities. While many of the tools and instruments used in the demonstrations are those of large business concerns, entities of all sizes are covered. Special attention is given to 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 consolidations, and reorganization. Prerequisites: Accounting 211, 212 or the equivalent.

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 portfolios 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. Also, through the media of a research paper, the student has the opportunity to develop a major area in depth. Emphasis is primarily on the role money and banking take in relationship to business entities. Prerequisite: 331
333 FINANCIAL MANAGEMENT 3 cr
Financial Management is a "follow-up" course to 331-Business Finance. It is designed for all business students. The course is designed to provide a theoretical or conceptual framework that a financial manager can use to reach decisions in the real world. 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, and a research project are tools to be used. Prerequisite 331

334 RISK MANAGEMENT 3 cr
A study of the broad spectrum of risk exposures in 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-maker in making decisions under constraints of uncertainty. Methods of alleviation, avoidance, and insurance are studied. Attention is given not only to the traditional forms of insurable hazards, but also to implicit risks such as those of loss in market value of assets, capital budgeting decisions, new product financing techniques, mergers and other areas where risk is present in the decision. Prerequisite 331

335 BUSINESS FINANCIAL PROBLEMS 3 cr
The aim of this course is to provide a vehicle through 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 how 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

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 useful 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

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 be subject to and further the importance of the various risks to the various types of portfolio holders is undertaken. The basic elements of portfolio theory as it has been developed by Markowitz and others is presented. Various quantitative and descriptive approaches 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 without 336

431 FINANCIAL COMMERCIAL TRANSACTIONS 3 cr
The aims of the course are two-fold: 1) to make the student aware of the various types of transactions which are used in business and the basic elements of the transactions, 2) to look at the problem of working capital management from the point of view of the models available as they relate to the management of cash, accounts receivable, marketable securities, and various inventories. Consideration is given to the decision-making process for these assets under cases of both certainty and uncertainty, examining the models, their uses, and limitations. Prerequisite 331

432 CREDIT MANAGEMENT 3 cr
This course will be taught in such a manner so as to give to 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 vehicles 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

433 FINANCIAL MARKETS 3 cr
An extensive and intensive study of the markets in which the financing of needs takes 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 act 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

434 LIFE INSURANCE 3 cr
A study 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 coverages, group plans, pensions, and regulation of the industry.

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.

436 ADVANCED CASE PROBLEMS IN FINANCE 3 cr
The aim of this course is to provide a vehicle through which the student can take material from prior courses and employ it in solving the more complex situations arising from comprehensive problem-solving situations. Emphasis is given to the decision-making process in such areas as asset management, budgeting, financial structure, organizational format, and advanced theoretical material being employed in the business world. The vehicle used may be case material, actual field experience, comprehensive literature assignments, or any combination. Prerequisites 331, 335, or special permission of the instructor.

437 FUNDAMENTALS OF REAL ESTATE 3 cr
A study of the problems involved in financing residential, commercial, and industrial real estate from the points of view of both owner and lender. Methods of financing covered include use of individual and business equity, loans secured by mortgages, land contracts, sales and lease-back arrangements, and cooperatives, syndicates, and real estate trusts. Attention is given to procedures for on-mortgaging, servicing, and foreclosing loans and mortgage arrangements by principals, agents, and mortgage bankers. Case problems either in class or on the field type are used to illustrate the techniques employed in determining the feasibility of a location. Special attention is given to an intensive research project in some area of interest to the student as related to real estate. Attention is also given to the requirements necessary to sit for the Pennsylvania Real Estate Salesman's License. Prerequisite 331

439 SEMINAR IN FINANCE 3 cr
The topics will vary, depending upon current developments and the needs and interests of the students. As a part of the course requirement the student will be expected to develop a research
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 entry into the sequence, Mathematics 109 and/or 111 in the College may be required of those students failing to satisfy entry requirements with respect to competence in basic algebra and calculus.

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 the Fortran language. Brief treatment is also given to other business-related languages. Prerequisite: Mathematics 109 in the College or equivalent.

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. Prerequisites: 181 and Mathematics 111 in the College or equivalent.

381 INTRODUCTION TO DECISION SCIENCES 3 cr
The application of the scientific method of problem solving to 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.

**DIVISION OF BEHAVIORAL SCIENCE**

**Chairman**: Serge Grosset, Ph.D.

**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, or
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
- 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
A survey of the evolution of Western economic institutions and business practices. The course concerns itself essentially with man's utilization of natural resources in earning a living. Attention is given to the geographical foundations of operations and operations of major industries including agriculture, manufacturing, extractive activities, and transportation. Principal domestic and world trade movements are analyzed.

142 ECONOMIC DEVELOPMENT OF EUROPE AND AMERICA 3 cr
A survey of the evolution of Western economic institutions and business practices. The course concerns itself essentially with man's utilization of natural resources in earning a living. Attention is given to the geographical foundations of operations and operations of major industries including agriculture, manufacturing, extractive activities, and transportation. Principal domestic and world trade movements are analyzed.

441 INTERNATIONAL BUSINESS 3 cr
A study of the techniques of international trade. Emphasis is placed on analyzing economic issues, particularly the evolution of business institutions within a historical context.

442 INTERNATIONAL ECONOMICS 3 cr
A study of the techniques of international trade. Emphasis is placed on analyzing economic issues, particularly the evolution of business institutions within a historical context.

**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.

Students in this program should take these courses:

453 Administration of Legal Systems 462 Public Administration, and either
362 Behavioral Science 465 Administrative Organization, or
364 Personnel Management 413 Business Information Systems

To supplement the basic core, students in the Law Administration sequence select the following or related courses in satisfaction of the School of Business and Administration requirement regarding liberal arts electives.
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, relation of the judicial to the executive and legislative functions, law as an instrument of social change and control, understanding of the legal rights and duties of persons. Acquaintance with areas of legal concern to the administrator such as labor, environmental controls, products liability, anti trust concerns such as pricing and mergers.

353 CONTRACTS
Study of the law pertaining to the formation of contracts, the legal requisites of an enforceable agreement, the transfer of contractual rights and duties, the discharge of contracts, the relationship between principal and agent. Prerequisite 251.

354 COMMERCIAL TRANSACTIONS
Study of the provisions of the Uniform Commercial Code with reference to the nature and legality of sales of goods, the formality of sale contract, transfer of title to goods, warranties, nature and kinds of commercial paper, requisites and meaning of negotiability methods of transfer. Prerequisite 251.

355 LAW OF BUSINESS ORGANIZATIONS
Consideration of the nature, creation and dissolution of the proprietorship, various types of partnerships, other unincorporated organizations, and the corporation. Duties, rights, remedies, and liabilities of owners and managers are studied. Prerequisite 251.

453 ADMINISTRATION OF LEGAL SYSTEMS
Study of the legal system and the procedures by which legal rights and duties are effectuated and enforced, current problems and issues related to the system in the attainment of its objectives, administrative problems in the legal system. Prerequisite 251.

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
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. Planning, organizing, actuating, and controlling comprise the fundamental functions 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.

362 BEHAVIORAL SCIENCE
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, game theory, and decision theory. This interdisciplinary approach to behavior provides an integrative framework for transfer to any organizational setting. Prerequisite 361.

363 PRODUCTION MANAGEMENT
A follow-up course to Principles of Management in which all important phases of management are developed. Topics such as purchasing, inventory control, motion and time study, plant layout, pricing, etc. are covered. An intermediate course to be used as a basis for further specialized treatment of management areas in the advanced courses. Prerequisites 361 and 261, 262—Probability and Statistics. Other related organizational problems are considered.

364 PERSONNEL MANAGEMENT
A course presenting techniques of manpower management. Involves 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. Prerequisite 361.

365 INDUSTRIAL RELATIONS
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. Prerequisite 361.

461 HUMAN RELATIONS IN ADMINISTRATION
An advanced course treating of the human aspect as it is encountered in the industrial organization. Involves an analysis of behavioral patterns of individuals as individuals and as members of work groups. Deals with motivation, goals, needs, frustrations, etc. as they relate to the industrial situation. Prerequisites: Senior standing and 361.

462 PUBLIC ADMINISTRATION
This course introduces the student to the content of public management and to the work of the public manager at federal, state, and local government levels. It also compares and contrasts public and private management and links management theory and practice. Lecture-discussions and participative methods are employed. Prerequisite 361.

463 COLLECTIVE BARGAINING
Study of the relation of federal and state legislation to collective bargaining, analysis of substantive issues and administrative aspects of collective agreements, specific provisions including adjustment of grievances, conciliation, mediation and arbitration, collective bargaining and public policy.
464 ADMINISTRATIVE ORGANIZATION
A course presenting organizational concepts as they relate to the operation of an enterprise Line staff, and functional relationships are thoroughly developed Both formal and informal relationships are considered as they are developed and exist within a firm Authority, responsibility, delegation, centralization and decentralization of control and other related organizational problems are considered Prerequisite 361

465 DEFENSE MANAGEMENT
A three hour study of management practices in one of the largest, most complex organizations in the world The U.S. Department of Defense The course highlights the interaction of planning programming, budgeting, coordinating, decision making, and procurement within DOD Discusses DOD's application of accepted management of business concepts The importance of effective management at all levels will be emphasized in view of the impact of all defense operations

466 WAGE AND SALARY ADMINISTRATION
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 such technically oriented practices have on the functional areas of management Prerequisite 361

491 EXECUTIVE ACTION SIMULATION
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 Prerequisites Senior standing and 361

492 EXECUTIVE POLICY
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 Prerequisites Senior standing and 361

493 INDEPENDENT SCHOLARLY STUDY
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 Prerequisite Student must qualify as a University Scholar

494 FIELD STUDY
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 Prerequisite Approval of the instructor

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
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 programs Marketing strategy and designing a marketing mix are 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

372 MARKETING PROBLEMS
This course employs the case method illustrative of typical marketing problems such as merchandising, 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, agents, and similar functionaries Theories of marketing are subjected to a 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 Prerequisite 371

373 SALES ADMINISTRATION
An introduction to 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, employing, supervising, and controlling salesmen Prerequisite 371

471 MARKETING RESEARCH
This course examines the means and methods business management uses to get the necessary information for decision making involving what to produce, how much to produce, and how to distribute goods that are produced The various types of marketing research—consumer research, motivational research, market analysis, sales analyses and sales forecasting, product research, and advertising research—are studied in some detail Prerequisite 371

472 TRANSPORTATION
A comprehensive analysis of the historical evolution, operation and economic development of the railroads, motor carriers, water carriers and air carriers of the United States The Interstate Commerce Act, with its amendments and the public regulation, state and federal, of the various carriers will be emphasized Prerequisites Mkgt 371, Econ 221, 222

473 TRAFFIC MANAGEMENT
This course deals with the organization and functioning of traffic departments of industrial concerns Topics treated are organization of shipping departments, car records for the control of private cars, claims, routing, service and rating departments, regulations governing packing, shipping and sales, shippers relations with carriers, freight and express tariffs, delays in transit, receipt and delivery of property Intensive work in the rate structures of the United States will be an important item Prerequisites Econ 221, 222

DIVISION OF ECONOMIC SCIENCE
Chairman Geza Grosschmid, J.U.D

ECONOMIC SCIENCE CURRICULUM
121 ELEMENTS OF ECONOMICS
Economics 121 is an introductory course in economics intended to afford an understanding of how our economic system works, of the forces which affect the level, composition, and distribution of the output of the economy, and of the issues behind current economic problems The course content will define concepts, provide background materials, and develop economic ideas necessary to an understanding of the policy issues currently before a complex dynamic economy
221 PRINCIPLES OF ECONOMICS I
The first course in economics for the student who plans to major or minor in economics. The course seeks to acquaint the student with concepts and the logical basis to economic reasoning. Emphasis is placed on understanding the behavior of households and firms under competitive and imperfectly competitive market conditions.

222 PRINCIPLES OF ECONOMICS II
This course is primarily concerned with aggregative economic relationships. The theory of the determination of national income is developed and attention is given to the construction of national income accounts. Attention is given to monetary and fiscal policy and their implications. Prerequisite: 221.

321 NATIONAL INCOME ANALYSIS
A conceptual analysis of national income theory, its tools, its basic principles and its social and economic significance. The course treats the macroeconomic method of economic analysis. It is concerned with explaining the development and nature of national income aggregates. The basic principles of national income theory are developed and explained in order to place into focus the operations of the American economy and the many problems relating to it. Prerequisites: 221, 222.

322 PRICE AND PRODUCTION ECONOMICS
An intensive study of the theory of demand, production and distribution. In addition, recent developments in the theory of imperfect competition and oligopoly are carefully examined. Prerequisites: 221, 222.

323 PUBLIC FINANCE
A study of the organization and management of government revenues and expenditures with emphasis on American practices and policies at the various levels of government. Benefit-cost and cost-effectiveness analysis with their implications for program and capital budgeting receive heavy consideration. The economic consequences of various tax structures and alternative social choice mechanisms are studied. Prerequisites: 321 or 322.

324 COMPARATIVE ECONOMIC SYSTEMS
A comparative study of capitalism, socialism, communism and other economic systems with emphasis on analysis rather than mere description of the economics of various countries. Prerequisites: 221, 222.

325 URBAN ECONOMICS
Urban economics is intended to afford an understanding of how the urban economy works, of the forces which affect the level, composition, and distribution of the output of the urban economy, and of the economic issues behind current urban problems. The course analyzes the processes, stages and determinants of urban economic growth and development. Urban economics focuses on the problems and policy in the urban economy: income inequality, manpower, public finance, housing and land use patterns, and transportation. A particular emphasis of the course is to provide the student with the theoretical tools and show their application to the dynamic, complex urban economy. Prerequisites: 221, 222.

420 LABOR ECONOMICS
Analysis of the principles for wage and employment determination in contemporary American economy under non-union conditions as well as under collective bargaining. The institutional development underlying labor supply and demand is studied with direct emphasis on its impact on employment and production, on the general wage-level and on wage differentials, on the distribution 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.

421 HISTORY OF ECONOMIC THOUGHT
Shows the development of economic thought from the Age of Mercantilism to 1890. Major emphasis is placed upon the writings of Mun, Petty, Quesnay, Smith, Ricardo, Malthus, Marx, Jevons, and the Austrian School. It offers a study of the fundamental concepts of the writers and the influence of institutional conditions upon their philosophy. Major emphasis is placed upon value and distribution theory as it developed. Prerequisites: 221, 222.

422 MODERN ECONOMIC THEORY
A brief review of classical tradition emphasizing Smith, Ricardo, and Mill, and Marxian socialism showing their influence upon the evolution of Twentieth Century economic theory. Emphasis is placed primarily upon the writings of Marshall, Schumpeter, and Keynes, applying their theories to the problems of contemporary economic policy. Special emphasis is given to economic growth and development and the essentials of welfare economics in today's society. Prerequisites: 221, 222.

423 BUSINESS CYCLES AND FORECASTING
This course is designed to study the process of economic change. Analyses of seasonal, cyclical, and secular movements will be undertaken. Theoretical and empirical aspects will be covered. Forecasting techniques will also be studied. Prerequisites: 221, 222.

424 BUSINESS AND PUBLIC POLICY
A study of the regulatory techniques used by government to influence and modify business behavior. This course also includes an analysis of market structure, conduct and performance considerations pertaining to the firm and the industry. Emphasis is given to the anti-trust laws and special regulatory problems. Prerequisites: 221, 222.

425 CURRENT ECONOMIC ISSUES
A seminar-like discussion of the state of the nation's economy and its current problems on the 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 begin developing in the graduating senior 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.

426 MONETARY THEORY AND POLICY
The course presents the chief theoretical contributions on money. The policy implications of these theories, past and present, will be emphasized. Concentration will center upon policy proposals and controversy in the monetary field since World War II. The theories and contributions of Hicks, Keynes, Friedman and Tobin among others, are reviewed. The role of interest rate is reviewed along with wage-price controversies, international gold flows, and the relationships between fiscal and monetary policies. Prerequisites: 221, 222.

427 THEORY OF ECONOMIC DEVELOPMENT
The course is designed to acquaint students with the area of economic development. The subject matter of this course conveniently divides itself into five major categories: the nature of development and problems of measurement, theories of development, factors and forces affecting economic growth, different approaches to a higher standard of living, and problems of domestic and international stability. Approach to this course encompasses detailed study as well as a strong emphasis on theoretical and critical analyses. Prerequisites: 221, 222.

429 SEMINAR IN ECONOMICS
The purpose of the seminar is to provide a vehicle for the advanced student to investigate separate subject areas in the field of Economic Theory. The intention is to provide a sound basis for further study at the graduate level. Seminar procedure will stress written and oral reports. Prerequisites: 321, 322 and permission of the instructor.
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 degrees 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, 1936, elementary education, 1937, guidance, 1952, school administration, 1952, library science, 1956, special education, 1964, reading specialist and reading supervisor, 1969, school psychology, 1969, early childhood education, 1975, school supervision, 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 15219). 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, judgment and tact, adaptability and resourcefulness, cultural appreciation, and social relationship

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

CURRICULUM

GENERAL EDUCATION
The School of Education requires completion of the established general education which includes courses in the humanities, social sciences, natural and behavioral sciences, and, for Catholic students, theology

PROFESSIONAL EDUCATION
The basic professional education program introduces the student to the teaching profession through thorough study of the principles and practices of education and the learning process. Special professional education programs introduce the student to the specific teaching techniques and methods required for specific fields of concentration—elementary, secondary, special (mentally and/or physically handicapped), or early childhood education

PROFESSIONAL LABORATORY EXPERIENCES
The School has developed a broad and diversified professional laboratory experience program designed to provide opportunities for observing and working with children and youth. These include:

1. Programs in neighborhood and community centers, hospitals, recreational and youth organizations, and summer camps
2. Planned observation in public and private school classrooms
3. Group observation in schools and institutions dedicated primarily to the care of exceptional children
4. Teacher-aide or tutorial service in public and private schools
5. Student teaching in a public or private school for an entire semester or year
   All of these experiences are completed under professional supervision from the University and from the off-campus agency or public school.

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 interest is interpreted as reflecting social and educational development. The organizations are:
- Duquesne University Chapter of the Council for Exceptional Children, state and national student organizations in Special Education
- Kappa Delta Epsilon, national education sorority
- Kappa Phi Kappa, national education fraternity

HONOR AWARDS
These awards, presented at the annual Honors Day 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 Secondary Education
- Faculty Award for General Excellence in Elementary Education
- Faculty Award for General Excellence in Special Education
- Kappa Delta Epsilon National Professional Education Sorority Award for outstanding member of Alpha Kappa Chapter
- Kappa Delta Epsilon National Professional Education Sorority President’s Award
- Lawrence A Roche Memorial Award to a junior student for general excellence in the School of Education
- Philip C Niehaus Memorial Award for outstanding achievement in the School of Education
- Council for Exceptional Children Award for outstanding work in the organization

TEACHER CERTIFICATION
Through completion of a degree, a student will be eligible for a Pennsylvania Instructional I (Provisional) Certificate to teach a subject or in an area for which the curriculum pursued is designed. All programs are approved by Pennsylvania Department of Education, and certification in Pennsylvania enables a student to meet certification requirements in various other states. Application for the certificate must be made through the Dean’s Office during the semester in which the student expects to be graduated.

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 credit units, not in periods the class meets, in other words, three cuts for a three credit course.

DEGREE
The School of Education offers programs leading to the Bachelor of Science in Education degree. All programs are approved by the Pennsylvania Department of Education for the Instructional I (Provisional) Certificate.

PROGRAMS
The School of Education has program-approval of the Pennsylvania Department of Education for Elementary, Secondary and Teaching the Mentally and/or Physically Handicapped. Also, in consortium with Carlow College students can become certified in Early Childhood by pursuing courses at the Carlow College Campus.

The programs, in accord with the philosophy and objectives of the School of Education, offer students opportunity to qualify for:
1. The Instructional I (Provisional) Certificate to teach classes in the schools of Pennsylvania for a period of three years.
2. Admission to graduate programs in education.

These programs cannot be completed on a part-time basis. The last 30 credits must be earned at Duquesne University. The minimum number of credits for graduation is 120.

All students are responsible for the following general education courses in each program:

GENERAL EDUCATION

<table>
<thead>
<tr>
<th>Course Area</th>
<th>Credits</th>
</tr>
</thead>
<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>
<tr>
<td>Communication Area (Speech, Journalism, English)</td>
<td>3</td>
</tr>
<tr>
<td>Any Combination Mathematics/Science/Foreign Language</td>
<td>12</td>
</tr>
<tr>
<td>Social Science</td>
<td>12</td>
</tr>
<tr>
<td>(Anthropology, Economics, Geography, History, Political Science, Sociology, and Psychology)</td>
<td></td>
</tr>
<tr>
<td>Philosophy/Theology</td>
<td>6</td>
</tr>
<tr>
<td>Catholics-minimum of 3 Theology credits</td>
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</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 domains: 1) Becoming a person, 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.

Competency Core Curriculum (All Courses Required in All Programs) 27
- Introduction to Education 3
- Developmental Foundations of Education I 4
- Developmental Foundations of Education II 4
- Curriculum and Instruction I 8
- Curriculum and Instruction II 8

EARLY CHILDHOOD EDUCATION

As this program has been cooperatively developed by Duquesne University and Carlow College for Pennsylvania Department of Education approval, some of the professional courses in Early Childhood Education are offered on the Carlow campus.

Professional Preparation (Required and Elective Courses) 51
- Child Development I & II 6
- Early Childhood Education I & II 7
- Curriculum Development for Early Childhood Education 3
- Curriculum Development for Day Care 3
- Curriculum Development for Specialized Early Childhood Education 3
- Language Development & Reading 3
- Teaching Art in the Elementary School 3
- Eurhythmics 1
- Music for Classroom Teacher 2
- Teaching Elementary Social Studies 3
- Teaching Elementary Mathematics 3
- Early Childhood Education Teaching Seminar 2
- Field Placement in Early Childhood Education 4
- Student Teaching 10

*Required courses taken at Carlow College

ELEMENTARY EDUCATION

Professional Preparation (All Courses Required) 39
- Teaching Art in the Elementary School 3
- Eurhythmics 1
- Music for the Classroom Teacher 2
- Teaching Reading in the Primary School 3
- Teaching Reading in Intermediate and Middle Schools 3

MUSIC EDUCATION

General and professional course work and professional education courses required for this program are outlined in the School of Music section, page 125.

SECONDARY EDUCATION

Professional Preparation (All Courses Required) 47
- Reading in the Secondary School 3
- Specific Methods Course 2
- Teaching Secondary Grammar and Composition 3
- Teaching Secondary Mathematics and Science 3
- Teaching Secondary Foreign Languages 2
- Teaching Secondary Social Studies 3
- Student Teaching 12

Education Electives 4
- Developmental Psychology I & II 3
- Abnormal Psychology 3
- Independent Study 1-2
- Problems in Teaching Reading 3
- School Law and the Pupil 2

SUBJECT AREA CERTIFICATION REQUIREMENTS

A minimum of 30 credits (semester hours) is required for certification in the following disciplines: biology, chemistry, communication, English, general science, Latin, mathematics, modern languages, physics, and social studies. This is in addition to the General Education requirements.

<table>
<thead>
<tr>
<th>Major</th>
<th>Major Field Requirements</th>
<th>Supporting Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Consult with Biology Department</td>
<td>Mathematics, chemistry, and physics</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Consult with Chemistry Department</td>
<td>Mathematics and physics</td>
</tr>
</tbody>
</table>
COURSE DESCRIPTIONS

EDUCATIONAL FOUNDATIONS AND PSYCHOLOGY

101 INTRODUCTION TO EDUCATION 3 cr
An overview of professional education programs and careers, introduces students to the competency based format of undergraduate curriculums and gives them opportunities to meet faculty and staff in informal information-giving and counseling relationships.

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 experimental learning environment.

203, 204, 205, 206, 207 FIELD EXPERIENCE 1 cr each
Classroom and other school experience as an aide or observer. Enrollment with consent of the Director of Student Teaching or a School of Education faculty advisor, one credit each semester for a maximum of five semesters.

215-216 DEVELOPMENTAL FOUNDATIONS OF EDUCATION I 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.

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. Required for all types of state certification.

302 THE DYNAMICS OF GROUP PRESENTATIONS 3 cr
An interdisciplinary approach to the study of organizational leadership designed to acquaint the student with the dynamics of the leadership process. The two principal objectives are developing student proficiency in the art of effective oral communication through practical exercises and formal instruction and providing the student with an understanding of the concepts of leadership theory and group processes as these relate to managerial functions.

315-316 CURRICULUM AND INSTRUCTION I 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 centers, 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 Foundations 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 culminates in the mini-instruction experiences in an actual classroom.

335 MAINSTREAM SEMINAR
This seminar is designed to acquaint the regular teacher with the nature of the exceptionalities which are characteristic of the handicapped child who may be mainstreamed into the regular classroom. Emphasis will be on teaching strategies in developing instructional programs for the mainstreamed handicapped child.

351 ADOLESCENT DEVELOPMENT
Examines the developmental processes, psychological, physical, and social, which affect student and student-teacher behavior and relationships in the classroom.

361 PSYCHOLOGY OF IDENTITY AND FULFILLMENT
Implications of the psychology of personality for the wholesome development of personality and for the prevention of lasting personality disturbances.

410 INTERPERSONAL CLASSROOM MANAGEMENT FOR TEACHERS
Focuses on four major concerns for maximizing learning and minimizing conflict, the four areas 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.

478 YOUTH AND DRUG ABUSE
Problems of drug abuse and today's youth, including drugs used, the primary toxic and psychological effects, historical and legal aspects. Methods of teaching drug abuse at various levels in the school system are covered, together with availability of literature and visual aids and demonstrations of drugs.

480 INDEPENDENT STUDY
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
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
Reading difficulties on 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.

496 EVALUATION OF LEARNING
Principles of test construction, examination analysis, and interpretation of other media for appraisal of pupil growth and achievement.

498 DEVELOPMENTAL READING
A survey course in the teaching of reading, appropriate for both elementary and secondary education majors. Major emphasis is on methods of teaching reading, the materials for evaluating pupil growth in reading, and reading in the content subjects.

499 SCHOOL LAW AND THE PUPIL
School law as it affects the child—census, admission practices, vaccination, compulsory attendance the neglected, dependent, and delinquent child, work periods, graduation requirements, special school services, and other regulations pertaining to the health and welfare of the child.

EARLY CHILDHOOD EDUCATION

301 CHILD DEVELOPMENT I
Focuses upon the substantive developmental growth in the child from conception through the fourth year of life. Specific emphasis is given to normative physical, intellectual, social, and emotional facets developing during infancy (ages 0 through 2 years) and during the pre-school years (ages 3 and 4). The role of the family as primary socializing agent is stressed.

302 CHILD DEVELOPMENT II
Emphasizes normative physical, intellectual, social and emotional growth and development in the child through the pre-primary and primary school years (ages 5 through 8). Attention is given to the role of the school as socializing agent during these years.

304 EARLY CHILDHOOD EDUCATION I
The first half of the course encompasses the complete history of child development and early childhood education beginning with the contributions of early educators, Pestalozzi, Froebel, etc., and continuing through the eighteenth, nineteenth, and twentieth centuries. The second half of the course examines recent trends, such as Day-Care Centers, Head Start, Project Follow Through, etc., with participation in child-care programs required.

305 EARLY CHILDHOOD EDUCATION II
Students will examine the humanistic, behavioristic, cognitive-developmental, and psychodynamic theories of child development. In-depth study of early childhood education models—Montessori Method, Bank Street Early Education Program, Demonstration and Research Center for Early Education, Berenstain-Engleman Curriculum, etc.—will be a requirement along with participation in pre-school programs.

307 CURRICULUM DEVELOPMENT FOR EARLY CHILDHOOD EDUCATION
Curriculum planning and methodology of early childhood education in the nursery, kindergarten, and early elementary settings. Content areas that will be covered include play, art, music, creative dramatics, language arts and reading, mathematics, physical and social sciences, nutrition, and physical education. A one-credit field placement in an early childhood setting accompanies the course.

308 CURRICULUM DEVELOPMENT FOR DAY CARE
Curriculum planning and program design for day care programs serving children from birth to eight years. Special topics explored include parent involvement and communication, legal and health requirements, equipment selection, staffing patterns and relationships, and current research on the impact of day care in the development of the young child. Content areas in 307 will be applied to the day care classroom. A one-credit field placement in a day care setting accompanies the course.

309 CURRICULUM DEVELOPMENT FOR SPECIALIZED EARLY CHILDHOOD EDUCATION
Historical development and current status of early childhood programs designed to provide compensatory, remedial, therapeutic, or early intervention experiences to young children and their families. Curriculum design and implementation for such programs will be examined in depth, and content areas in 307 will be applied to the specialized setting. A one-credit field placement in a specialized setting accompanies the course.
FIELD PLACEMENT IN EARLY CHILDHOOD EDUCATION 1 cr each
On site experience in 375a is provided in primary classrooms in 375b, it is in day care centers, in 375c, it will involve specialized early childhood programs, and in 375d, it is in primary classrooms as part of 402. All experiences are in local schools and provide opportunity for interaction with students and the use of a variety of methods, materials, and techniques.

LANGUAGE DEVELOPMENT AND READING 3 cr
Emphasis is given to a well planned oral expression program as a base for successful development of language skills, including reading. Current status of reading curricula appropriate to the primary level will be examined in a variety of settings. A one-credit field placement in a primary classroom accompanies the course.

STUDENT TEACHING IN EARLY CHILDHOOD EDUCATION 10 cr
The student teaching experience is considered to be one of the most important single elements of the program. The prospective teacher is involved in a pre-school primary setting where he/she shares the teacher role, applies and constructs theory and develops his/her own teaching style. Prerequisites: Senior status, good academic standing, and completion of required professional courses. No other credits may be taken while the student is involved in 451 and 452.

EARLY CHILDHOOD EDUCATION TEACHING SEMINAR 3 cr
Classroom discussion of student teaching experiences, as well as the shared analysis of goals, program design, and curricula of various early childhood programs in which student teaching is completed.

ELEMENTARY EDUCATION

INTRODUCTION TO THE PROBLEMS OF SPEECH 3 cr
A survey of various speech and hearing disorders, and causes, recognition and possible therapy. Prerequisite: Speech 201.

TEACHING ART IN THE ELEMENTARY SCHOOL 3 cr
Designed to acquaint the student with materials, methods, and techniques used in relating arts and crafts to purposeful learning activities, with particular attention given to the needs of the mentally retarded child.

TEACHING READING IN THE PRIMARY SCHOOL 3 cr
Major emphasis is on the pre-school, readiness, and primary grades. Content deals with language, experiential, 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.

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, necessary for students to 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.

TEACHING ELEMENTARY LANGUAGE ARTS AND READING 3 cr
Presents psychological principles and historical perspectives 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 experience.

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.

TEACHING ELEMENTARY MATHEMATICS 3 cr
Theories, techniques, practices, and content pertaining to mathematics are presented. Emphasis is on exploratory and systematic instructional styles, games as an instructional strategy.

TEACHING ELEMENTARY SCIENCE 3 cr
Study of theories, techniques, practices, and content of the science area. Accent is on discovery and inquiry instructional styles, organizing for learning.

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 interests, needs, and abilities of children.

ELEMENTARY STUDENT TEACHING 12 cr
Student teaching in an approved public elementary school under the direct supervision of a cooperating teacher. Prerequisites: Senior status, good academic standing, and completion of required professional courses.

SECONDARY EDUCATION

TEACHING SECONDARY GRAMMAR AND COMPOSITION 3 cr
Deals with various approaches to teaching grammar, language, and composition, also provides opportunities for students to develop and use the different techniques in mini-teaching situations.

TEACHING SECONDARY MATHEMATICS AND SCIENCE 2 cr
Designed to acquaint the student with methods and materials for teaching specific models, research and field-based activities are expected.

TEACHING SECONDARY SOCIAL STUDIES 3 cr
Provides experiences in process education, inquiry teaching, curriculum development, testing, measurement, group processes, reading problems, use of varied materials, and new teaching methods.

TEACHING SECONDARY FOREIGN LANGUAGES 2 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.

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.

METHODS SEMINAR IN SECONDARY TEACHING AND TECHNIQUES LABORATORY 3 cr
This is a learning experience that uses videotape technology to aid students toward mastery of five teaching competencies: planning, questioning, using varied materials and techniques, working with small groups, and evaluation. Evaluation is done via self-analysis, peer evaluation, and instructors' feedback.

SECONDARY STUDENT TEACHING 12 cr
Student teaching in an approved public secondary school under the direct supervision of a cooperating teacher. Prerequisites: Senior status, good academic standing, and completion of required professional courses.
### 497 READING IN SECONDARY SCHOOLS 3 cr
A survey course in the teaching of reading, appropriate for secondary education majors. Major emphasis is on methods of teaching reading, the materials for evaluating pupil growth in reading, and reading in the content subjects.

### SPECIAL EDUCATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>211, 212, 213, 214</td>
<td>FIELD EXPERIENCE</td>
<td>2 cr each</td>
</tr>
<tr>
<td>309</td>
<td>FOUNDATIONS OF SPECIAL EDUCATION</td>
<td>3 cr</td>
</tr>
<tr>
<td>374</td>
<td>MUSIC FOR THE EXCEPTIONAL CHILD</td>
<td>3 cr</td>
</tr>
<tr>
<td>376</td>
<td>METHODS IN SPECIAL EDUCATION I</td>
<td>3 cr</td>
</tr>
<tr>
<td>377</td>
<td>METHODS IN SPECIAL EDUCATION II</td>
<td>3 cr</td>
</tr>
<tr>
<td>486</td>
<td>TEACHING THE MILDLY HANDICAPPED</td>
<td>3 cr</td>
</tr>
<tr>
<td>487</td>
<td>TEACHING THE SEVERELY HANDICAPPED</td>
<td>3 cr</td>
</tr>
<tr>
<td>488</td>
<td>VOCATIONAL EDUCATION FOR THE HANDICAPPED</td>
<td>3 cr</td>
</tr>
<tr>
<td>491-492</td>
<td>STUDENT TEACHING—SPECIAL EDUCATION</td>
<td>12 cr</td>
</tr>
</tbody>
</table>

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**School of Music**

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- Classroom and other experiences in educational, social welfare, and vocational settings as an observer and participant. Enrollment with consent of Director of Student Teaching and School of Education faculty advisor. Student will choose between 211 (Elem) and 212 (Sec) which is a field experience with the mildly handicapped while 213 is with the severely handicapped and 214 is vocational/pre-vocational. The latter two are mandatory.

- Survey of the social, psychological, and physical characteristics of the various types of exceptional children and of methods for meeting their educational needs. Includes field trips to schools and classes which specialize in the education of the typical child. Prerequisites: 201, 202.

- Singing and rhythmic movement activities are basic to this course. It also includes folk dance, listening, and instrumental (percussion instruments) experiences.

- An introduction to the educational management techniques utilized in programs for exceptional persons. Information covering assessment procedures, general classroom management, designing individual educational programs, and prescriptive teaching will be included. Prerequisites: 309, 325, 332.

- A sequel to 376-Methods in Special Education I in which skills in consulting with parents, specific classroom management procedures, and individual tutoring skills are introduced. Participants will be required to tutor a student at a selected site one full morning a week. Prerequisite: 376.

- Evaluation and integration of the various theories, methodologies, curriculum content, instructional techniques, and evaluation procedures for the mildly handicapped.

- Evaluation and integration of the various theories, methodologies, curriculum content, instructional techniques, and evaluation procedures for the severely handicapped.

- An overview of the pre-vocational, vocational, career, and occupational education programs designed 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 persons. Prerequisites: 485, 487.

- A full semester of supervised classroom experience at a carefully-selected school for mentally and/or physically handicapped pupils. Prerequisites: Senior status, good academic standing, and completion of required professional courses.
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 1930. 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 Cliburn 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 in classes 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 caliber 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 and the Wind Ensemble, in their many performances on and off campus, present 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 and/or education.

ADMISSION
Students who are interested in applying for admission to the School of Music should request an application from the Office of Admissions, Duquesne University, Pittsburgh, Pennsylvania 15219. After applications have been processed, candidates will receive a notice requesting that they contact the Office of the School of Music to arrange an appointment for an audition and a theory entrance examination. Specific instructions concerning the audition will be mailed to the applicant. A tape recording will be accepted for those living more than 150 miles from the University. However, in the event the recording is not satisfactory, a personal audition may be required. All applicants will be notified of the status of their candidacy as soon as possible.

Students planning to major in Music are urged to begin study of piano and theory prior to entrance.

ADVICE
At initial enrollment, every student is assigned a faculty advisor who provides assistance with academic matters, especially during pre-registration periods. Guidance in professional objectives will also be provided by faculty committees established for that purpose.

SPECIAL FEES

<table>
<thead>
<tr>
<th>Type of Fee</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Teaching</td>
<td>$25</td>
<td></td>
</tr>
<tr>
<td>Instrumental rental for use in major study</td>
<td>$75</td>
<td></td>
</tr>
<tr>
<td>Instrumental rental for use in minor study</td>
<td>$30</td>
<td></td>
</tr>
<tr>
<td>Instrument for class use</td>
<td>$10</td>
<td></td>
</tr>
<tr>
<td>Organ practice (major or minor) each semester</td>
<td>$20</td>
<td></td>
</tr>
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</table>

Summer Session

<table>
<thead>
<tr>
<th>Type of Fee</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Instruction Fees</td>
<td>$100</td>
<td></td>
</tr>
<tr>
<td>Instrumental Rental</td>
<td>$25</td>
<td></td>
</tr>
<tr>
<td>Instrument for use in six-week Summer Session</td>
<td>$5</td>
<td></td>
</tr>
<tr>
<td>Organ practice for use in six-week Summer Session</td>
<td>$5</td>
<td></td>
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Special Students—Private Instruction

<table>
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<tr>
<th>Type of Fee</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction in voice or instrument as a minor, each semester</td>
<td>$37.00</td>
<td></td>
</tr>
<tr>
<td>One hour a week (major)</td>
<td>$158.50</td>
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</tr>
<tr>
<td>One half hour a week</td>
<td>$158.50</td>
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Fees Which are Applicable for Full-time Students and Which May Be Applicable for Students Taking Fewer Than 12 Credits

<table>
<thead>
<tr>
<th>Type of Fee</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction in voice or instrument as a major, each semester</td>
<td>$158.50</td>
<td></td>
</tr>
<tr>
<td>Practice room</td>
<td>$15</td>
<td></td>
</tr>
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</table>

DEGREES
The School offers programs leading to two undergraduate degrees: Bachelor of Music and Bachelor of Science in Music Education. The Bachelor of Music degree may be earned with a major in piano, organ, voice, orchestral instruments, jazz, and in sacred music with a major in organ or voice. The programs are intended for students interested primarily in performance careers in concert, television, radio, symphony orchestra, opera or teaching in colleges and private studios, and for those interested in pursuing careers as church musicians.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Music</td>
<td>Music fee $10</td>
</tr>
<tr>
<td>Bachelor of Science in Music Education</td>
<td>Music fee $10</td>
</tr>
</tbody>
</table>
Two Music Education programs are offered, one in general music and the other in music therapy, the former is designed to meet certification requirements for teaching in elementary and secondary schools while the latter leads to certification as a registered music therapist. All programs begun at the undergraduate level, except music therapy and jazz, may be continued at the graduate level.

### EQUIPMENT
The School of Music has 73 pianos including 56 Steinways. All practice rooms have Steinway uprights. There are two Moeller and one Fischer practice organs, a three-manual Moeller organ, and an electronic organ. More than 300 orchestral and band instruments are available for instrument classes, including an EMS Sound Synthesizer. 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 of Music Therapists. Student Council is the organization which is designed to represent the total student body of the School of Music. In addition, it provides an excellent vehicle of communication among students, faculty, and administration.

### HONOR AWARDS
The Dean's Award is presented to a senior music student for general excellence. The Seibert Medal is presented to a senior for excellence in violin or piano. George Barrere Memorial Scholarship. The Pittsburgh Flute Club offers a scholarship in flute in memory of George Barrere, founder of the first flute club in the United States. This $300 scholarship is awarded to a freshman or sophomore flute major. Polish Arts League Scholarship is made annually by the Polish Arts League of Pittsburgh to an outstanding performer in the School of Music. Preference will be given to a student of Polish ancestry. Other students will not be excluded from consideration. Pittsburgh Flute Club Award is given to an outstanding woodwind student. Louis Rocereto Memorial Scholarship is given to an outstanding junior studying a woodwind instrument.

### TEACHER CERTIFICATION
The undergraduate music education program has been approved by the Pennsylvania Department of Education for the issuance of the Instructional I (Provisional) Certificate. Application for the certificate must be made in the semester in which the student plans to graduate.

### RECITAL ATTENDANCE
All students are required to attend a minimum of 25 recitals and concerts sponsored by the School of Music per year (minimum of 100 by graduation).

### 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.

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## CONSERVATORY
### MAJOR IN PIANO

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus 103,104</td>
<td>4</td>
</tr>
<tr>
<td>Mus 111,112</td>
<td>4</td>
</tr>
<tr>
<td>Mus 131,132</td>
<td>4</td>
</tr>
<tr>
<td>Mus 133,134</td>
<td>4</td>
</tr>
<tr>
<td>Mus 143,144</td>
<td>4</td>
</tr>
<tr>
<td>Mus 121,122</td>
<td>4</td>
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<tr>
<td>Eng 101,102</td>
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<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Mus 203,204</td>
<td>4</td>
</tr>
<tr>
<td>Mus 211,212</td>
<td>4</td>
</tr>
<tr>
<td>Mus 231,232</td>
<td>4</td>
</tr>
<tr>
<td>Mus 233,234</td>
<td>4</td>
</tr>
<tr>
<td>Mus 243,244</td>
<td>4</td>
</tr>
<tr>
<td>Mus 251,252</td>
<td>4</td>
</tr>
<tr>
<td>Mus 241,242</td>
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<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Credits</th>
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<tr>
<td>Mus 303,304</td>
<td>4</td>
</tr>
<tr>
<td>Mus 351,352</td>
<td>4</td>
</tr>
<tr>
<td>Mus 343,344</td>
<td>4</td>
</tr>
<tr>
<td>Mus 335,336</td>
<td>4</td>
</tr>
<tr>
<td>Mus 341,342</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>4</td>
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<tr>
<td>Mus 253</td>
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<table>
<thead>
<tr>
<th>Senior Year</th>
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<tr>
<td>Mus 403,404</td>
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<tr>
<td>Elective</td>
<td>4</td>
</tr>
<tr>
<td>Mus 491</td>
<td>4</td>
</tr>
<tr>
<td>Mus 313,314</td>
<td>4</td>
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<td>Mus 441,442</td>
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<td>Mus 443,444</td>
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<td>Mus 340</td>
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<tr>
<td>Mus 379</td>
<td>4</td>
</tr>
<tr>
<td>Mus 400</td>
<td>4</td>
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</tbody>
</table>

1. Includes performance classes required by the piano department
2. If 313, 314 Piano Methods is offered in the student's junior year it should be taken, and counterpoint should be taken in the senior year.

## PROGRAMS
Students' interests are served and their abilities furthered through their selection from among nine different programs, four in applied music, two in music education, two in sacred music, and one in jazz.
### MAJOR IN ORGAN

#### Freshman Year

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus 103,104 Applied Music (Organ)</td>
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<tr>
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<tr>
<td>Mus 131,132 Theory</td>
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<tr>
<td>Mus 133,134 Solfeggio</td>
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<tr>
<td>Mus 143,144 Ensemble Chorus</td>
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<tr>
<td>Mus 121,122 Eurhythmics</td>
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<tr>
<td>Eng 101,102 English Composition</td>
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#### Sophomore Year

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>Mus 203,204 Applied Music (Organ)</td>
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<td>Mus 211,212 Applied Music Minor (Piano)</td>
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<td>Mus 231,232 Theory</td>
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<tr>
<td>Mus 233,234 Solfeggio</td>
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<tr>
<td>Mus 251,252 Music and Western Civilization</td>
<td>3</td>
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<tr>
<td>Fr 101,102 Elementary French</td>
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<tr>
<td>Mus 243,244 Ensemble Chorus</td>
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#### Junior Year

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>Mus 303,304 Applied Music (Organ)</td>
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<tr>
<td>Mus 351,352 Music and Western Civilization</td>
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<td>Mus 343,344 Ensemble Chorus</td>
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<td>Mus 340 Orchestration</td>
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<td>Mus 397 Conducting</td>
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<td>Mus 478 Choral Conducting and Methods</td>
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<tr>
<td>Elective Math or Science Elective or</td>
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<tr>
<td>Elective Visual Arts</td>
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#### Senior Year

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<tbody>
<tr>
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<td>Mus 491 Physical Science (Acoustics)</td>
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<td>Mus 431,432 Improvisation</td>
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<tr>
<td>Mus 451,452 Organ Literature</td>
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<tr>
<td>Elective Organ Design and Maintenance</td>
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<tr>
<td>Mus 413 Organ Pedagogy</td>
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<tr>
<td>Mus 443,444 Ensemble</td>
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<td>Elective Elective</td>
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<td>Elective Recital</td>
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<tr>
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1 Includes performance classes required by the organ department

2 If 451,452 Organ Literature is offered in the student's junior year it should be taken, and counterpoint should be taken in the senior year

### MAJOR IN ORCHESTRAL INSTRUMENT

#### Freshman Year

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<tr>
<th>Courses</th>
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<tbody>
<tr>
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<td>Mus 111,112 Applied Music Minor (Piano)</td>
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<tr>
<td>Mus 131,132 Theory</td>
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<tr>
<td>Mus 133,134 Solfeggio</td>
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</tr>
<tr>
<td>Mus 143,144 Ensemble Orchestra or Band</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Mus 121,122 Eurhythmics</td>
<td>2</td>
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<tr>
<td>Eng 101,102 English Composition</td>
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<tr>
<td>Mus 141,142 Chamber Music</td>
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1 Includes performance classes required by the voice department

2 If 451,452 Organ Literature is offered in the student's junior year it should be taken, and counterpoint should be taken in the senior year
### Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Mus 203,204</td>
<td>Applied Music (instrument)</td>
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<tr>
<td>Mus 211,212</td>
<td>Applied Music Minor (Piano)</td>
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<tr>
<td>Mus 231,232</td>
<td>Theory</td>
</tr>
<tr>
<td>Mus 233,234</td>
<td>Solfeggio</td>
</tr>
<tr>
<td>Mus 243,244</td>
<td>Ensemble Orchestra or Band</td>
</tr>
<tr>
<td>Mus 251,252</td>
<td>Music and Western Civilization</td>
</tr>
<tr>
<td>Mus 241,242</td>
<td>Chamber Music</td>
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### Junior Year

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<tr>
<td>Mus 203,204</td>
<td>Applied Music Major</td>
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<tr>
<td>Mus 231,232</td>
<td>Theory</td>
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<tr>
<td>Mus 233,234</td>
<td>Solfeggio</td>
</tr>
<tr>
<td>Mus 251,252</td>
<td>Music and Western Civilization</td>
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<tr>
<td>Mus 241,242</td>
<td>Chamber Music</td>
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### Senior Year

<table>
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<tr>
<td>Mus 203,204</td>
<td>Applied Music Major</td>
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<tr>
<td>Mus 231,232</td>
<td>Theory</td>
</tr>
<tr>
<td>Mus 233,234</td>
<td>Solfeggio</td>
</tr>
<tr>
<td>Mus 251,252</td>
<td>Music and Western Civilization</td>
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<tr>
<td>Mus 241,242</td>
<td>Chamber Music</td>
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**SAFRED MUSIC—MAJOR IN ORGAN**

### Freshman Year

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<tr>
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<td>Applied Music (Organ)</td>
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<td>Mus 111,112</td>
<td>Applied Music (Piano)</td>
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<tr>
<td>Mus 131,132</td>
<td>Theory</td>
</tr>
<tr>
<td>Mus 133,134</td>
<td>Solfeggio</td>
</tr>
<tr>
<td>Mus 143,144</td>
<td>Ensemble (Chorus)</td>
</tr>
<tr>
<td>Eng 101,102</td>
<td>English Composition</td>
</tr>
<tr>
<td>Theo 213,214</td>
<td>Old and New Testament</td>
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### Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Mus 203,204</td>
<td>Applied Music (Organ)</td>
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<tr>
<td>Mus 231,232</td>
<td>Theory</td>
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<tr>
<td>Mus 233,234</td>
<td>Solfeggio</td>
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<tr>
<td>Mus 251,252</td>
<td>Music and Western Civilization</td>
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<tr>
<td>Mus 241,242</td>
<td>Chamber Music</td>
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### Junior Year

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Mus 303,304</td>
<td>Applied Music (Organ)</td>
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<tr>
<td>Mus 411</td>
<td>Applied Music (Piano)</td>
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<tr>
<td>Mus 209</td>
<td>Children's Choirs</td>
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### SACRED MUSIC—MAJOR IN VOICE

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<th><strong>Courses</strong></th>
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<tr>
<td>Mus 103,104 Applied Music (Voice)</td>
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<tr>
<td>Mus 111,112 Applied Music (Piano)</td>
<td>1 1</td>
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<tr>
<td>Mus 131,132 Theory I, II</td>
<td>2 2</td>
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<tr>
<td>Mus 133,134 Solfeggio I, II</td>
<td>2 2</td>
</tr>
<tr>
<td>Mus 121,122 Eurhythmics</td>
<td>2 2</td>
</tr>
<tr>
<td>Mus 143,144 Ensemble</td>
<td>1 1</td>
</tr>
<tr>
<td>Eng 101,102 English Composition</td>
<td>3 3</td>
</tr>
<tr>
<td>Theo 213,214 Old and New Testament</td>
<td>3 3</td>
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<td><strong>Sophomore Year</strong></td>
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<tr>
<td>Mus 203,204 Applied Music (Voice)</td>
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<tr>
<td>Mus 211,212 Applied Music (Piano)</td>
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<tr>
<td>Mus 231,232 Theory III, IV</td>
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<tr>
<td>Mus 233,234 Solfeggio III, IV</td>
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<tr>
<td>Mus 243,244 Ensemble</td>
<td>1 1</td>
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<tr>
<td>Mus 251,252 Music &amp; Western Civilization</td>
<td>3 3</td>
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<tr>
<td>Theo Liturgics</td>
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<td>Mus 193,194 Italian Diction</td>
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<td><strong>Junior Year</strong></td>
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<td>Mus 303,304 Applied Music (Voice)</td>
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<td>Mus 311,312 Applied Music (Organ)</td>
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<td>Mus 209 Children's Choruses</td>
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<tr>
<td>Mus 351,352 Music &amp; Western Civilization</td>
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<td>Mus 343,344 Ensemble</td>
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<tr>
<td>Mus 335,336 Counterpoint</td>
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<td>Mus 340 Orchestration</td>
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<td>Mus 322 Sacred Choral and Solo Literature</td>
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<tr>
<td>Acad Electives</td>
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### Senior Year

<table>
<thead>
<tr>
<th><strong>Courses</strong></th>
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<tbody>
<tr>
<td>Mus 403,404 Applied Music (Voice)</td>
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<td>Mus 411,412 Applied Music (Organ)</td>
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<tr>
<td>Mus 407,408 Service Playing</td>
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<tr>
<td>Mus 434,444 Ensemble</td>
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<tr>
<td>Mus 421 Gregorian Chant</td>
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<tr>
<td>Mus 420 Hymnody</td>
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<td>Acad Electives</td>
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<td>Mus 464 Church Music Administration</td>
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<td>Mus 476,479 Choral Conducting &amp; Methods</td>
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<tr>
<td>Mus 451,452 Organ Literature</td>
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### MUSIC EDUCATION

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<tr>
<td>Gen 101,102 English Composition</td>
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<tr>
<td>Mus 131,132 Theory I, II</td>
<td>2 2</td>
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<tr>
<td>Mus 133,134 Solfeggio and Ear Training</td>
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<tr>
<td>Mus 181,182 Woodwind Class or</td>
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<tr>
<td>Mus 183,184 Woodwind Class for the Instr Major</td>
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<tr>
<td>1 Mus 101,102 Applied Music Major</td>
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<tr>
<td>2 Mus 111,112 Applied Music Minor</td>
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<tr>
<td>Gen 121,122 Eurhythmics</td>
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<tr>
<td>Mus 143,144 Ensemble</td>
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<tr>
<td>Prof 189,190 Field Observation</td>
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<tr>
<td>Mus 231,232 Theory III, IV</td>
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<tr>
<td>Mus 233,234 Solfeggio III, IV</td>
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<tr>
<td>Mus 185,186 Voice Class</td>
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<tr>
<td>2 Mus 213,214 Piano Class or</td>
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<tr>
<td>3 Mus 211,215 Applied Music Minor &amp; Piano Class</td>
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<tr>
<td>Gen 251,252 Music and Western Civilization</td>
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<tr>
<td>Mus 281,282 Brass Class or</td>
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<tr>
<td>Mus 283,284 Brass Class for Instr Majors</td>
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<td>1 Mus 201,202 Applied Music Major</td>
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<tr>
<td>Mus 243,244 Ensemble</td>
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<tr>
<td>Prof 289,290 Field Observation</td>
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<td>*for keyboard majors only</td>
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<tr>
<td>Gen 103 Introduction to Psychology</td>
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<tr>
<td>Prof 301 Foundations of Education or*</td>
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<tr>
<td>Gen 351,352 Music &amp; Western Civilization</td>
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<td>Prof 381,382 String Class Methods</td>
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<td>Mus 340 Orchestration</td>
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<td>Mus 379 Conducting</td>
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<td>Gen 491 Physical Science Acoustics</td>
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<tr>
<td>Mus 385 Choral Techniques or</td>
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<tr>
<td>Mus 387 Marching Band Techniques</td>
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<tr>
<td>1 Mus 301,302 Applied Music Major</td>
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**MUSIC EDUCATION—MAJOR IN MUSIC THERAPY**

### Freshman Year

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<td>Music Theory</td>
<td>2</td>
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<td>Solfeggio</td>
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<td>Applied Music Major</td>
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<td>Applied Music Minor</td>
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<td>Music Therapy Orientation</td>
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<td>Survey of Sociology</td>
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<td>Euthymthms</td>
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<td>Ensemble</td>
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### Sophomore Year

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<th>Courses</th>
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<th>Fall</th>
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<tbody>
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<tr>
<td>Music Theory</td>
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<tr>
<td>Solfeggio</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Music and Western Civilization</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Woodwind Class (for voice, piano, organ majors)</td>
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<td>Woodwind Class (for instrumental majors)</td>
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### Junior Year

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<td>Applied Music Major</td>
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<td>Piano Class</td>
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<tr>
<td>Ensemble</td>
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### Senior Year

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<tbody>
<tr>
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<td>Percussion Class Methods</td>
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<td>Abnormal Psychology</td>
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### Electives

- Includes performance classes required by individual departments. String majors are required to participate in chamber music and string orchestra.
- Piano majors in Music Education select another instrument or voice for their Applied Music Minor. They also continue with the Applied Music Minor 211 (Organ Majors are required to select piano as their secondary instrument).
- For Orchestral Instrument and Voice Majors only.
- For Piano and Organ Majors only.
- Electives in psychology, sociology, and special education will be selected following consultation with advisor.

**In accordance with the recommendations made by the School's faculty, the National Association for Music Therapy, and the American 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 juries 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**

  The study of voice, piano, organ, string, wind, or percussion instruments throughout all semesters.
103, 104, 203, 204, 303, 304, 403, 404 APPLIED MUSIC MAJOR FOR THE
BACHELOR OF MUSIC Var cr
Private study of voice, piano, organ, string, wind, or percussion instruments throughout all semesters
Credits are distributed according to departmental curricula

The candidate for the Bachelor of Music degree must give a recital during the senior year. The
recital will be presented to a faculty committee for approval at least one month prior to the date of the
performance.

111, 112, 211, 212, 218, 219, 311, 312, 411, 412 APPLIED MUSIC MINOR
FOR ALL BACHELOR DEGREES 1 cr each
All students must choose an applied music minor upon entrance. Those students who do not elect
piano as a major must study it as a secondary instrument.

Students not majoring in piano must satisfy the following piano requirements before graduation:
(a) construct and play with facility major and minor scales and cadences in all keys, (b) read simple
four-part music, (c) play a simple Clementi Sonatina and excerpts from Schumann’s ‘Album for the
Young’ or their equivalent. A student majoring in piano or organ will select an applied music minor
with the guidance of his advisor. Students who fail to meet the minimum requirements in the time
allotted for their particular degree must continue study until the requirements have been fulfilled.

218, 219 APPLIED MUSIC MINOR—JAZZ 1 cr each
For non-piano majors: Jazz piano techniques including comping, harmonic continuity through common
chord progressions, using triads and 7th chords. 219 may include more advanced comping, harmonic
continuity through standard and jazz songs, and harmonic extensions of 9ths, 11ths, and 13ths.

Transfer of Applied Music Credit: Transfer credit in the undergraduate Applied Music program can
be granted only after the student’s proficiency has been evaluated by a faculty panel in the student’s
area of specialization.

Changing Assigned Music Teacher: Changes in assigned teachers can become 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 2-3 cr each
Scales and arpeggios in all keys. Kovar’s scales. Five note studies and interval studies, selected studies
and Weissenborn and Milde, solos by Weissenborn, Foret and Mouquet.

171 BASSOON REED-MAKING No Credit
A course designed to encourage one’s own reed-making. Includes the various aspects of shaping,
soaking, and trimming the cane.

203, 204 3-4 cr each
Continue scales and arpeggios, Kovar technical studies. Oubradous, Scales and Daily Drills, Milde,
Concert Studies, Handel, Sonata in C minor solos by Bozza and Vidal.

303, 304 4 cr each
Oubradous, 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.

403, 404 3-4 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.

Clarinets
103, 104 2-3 cr each
Scales and arpeggios in various articulations. Langenus, Scale Studies, Rose, Forty Studies

203, 204 3-4 cr each
Scales and arpeggios continued. Rose, Twenty Studies after Rode, Jeanjean, Twenty-five Etudes
Weber, Concertos, Mozart, Quintet for Clarinet and Strings, representative contemporary solos, or
chestral studies.

303, 304 4 cr each
Oubradous, 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.

403, 404 3-4 cr each
Jeanjean, Sixteen Modern Studies, Pernier, Vingt-deux Etudes Modernes, Spotnitz Concerto, Debussy,
Premier Rhapsodie, representative contemporary solos and sonatas.

Double Bass
103, 104 2-3 cr each
Scales and intervals in all keys. Simandl, Thirty Etudes, Selected pieces, Orchestral studies.

203, 204 3-4 cr each
Hrabe, Eight-six Etudes, Short pieces by Koussevitsky and Bottesini, Orchestral studies.

303, 304 4 cr each
Nanny, Etudes de Kreutzer et de Pianillo, concertos by Koussevitsky, Dittersdorfy and Bottesini,
Orchestral studies.

403, 404 3-4 cr each
Nanny, Dix Etudes Caprices, Storch, Twenty Concert Etudes, concertos by Koussevitsky and
Dragoneff, Orchestral studies.

Flute
103, 104 2-3 cr each
Analysis of student’s playing and basic corrections if necessary. Taffanel-Gaubert, scales, scales in
thrits, trills, Selected studies by Berbiguer, Anderson, Etudes Op 33 and 37, Boehm-Wummer,
Caprices Op 26, Kuhlau Duets Op 10, Sonatas of the Baroque Period, Solos by Doppler, Chaminade,
Mozart, Moyse, Three Grand Solos Op 57 by Kuhlau.

203, 204 3-4 cr each
Taffanel-Gaubert Scales, scales in thrits and sixths, chromatic scales, arpeggios and trills, Anderson
Etudes Op 21, Hughes, 40 New Studies, Moyse, De la Sonorite, The Modern Grandus and
Parnassum, Selected duets by Kuhlau, Koechlin and River, concertos by Haydn and Mozart, sonatas
by Leclair, J.S. Bach and W.F. Bach, solos by Faure, Debussy and Gaubert.

303, 304 4 cr each
Continue scale study, Taffanel-Gaubert, Progressive Studies, Barrere, The Flutists Formulae,
Anderson, Etudes Op 30, Altes-Barrere, 26 Selected Studies, Moyse, Etudes et Exercices
Techniques, Torchio-Wummer, Orchestral Studies, Bach, b minor Suite, Sonatas and arias from the
religious works Arnou, Sonatina, Gaubert, Sonata No 2, Telemann Suite in a minor, Solos by Hue,
Enesco, Griffes, Gaubert, and Varese.
Taffanell Gaubert Scales the half note equals MM 120, scales in thirds, sixths, octaves and tenths.

Mozz Keule Sonate Mechanism and Chromatics, Anderson, Etudes Artistiques Op 15 including the memorization of certain selected studies, Anderson Op 63, Jean Jean Etudes Modernes, Orchestral Studies Bach Sonata in A minor for unaccompanied flute, sonatas by Hindemith Reinecke, Concerto by Ibert, works by representative contemporary composers.

Concerto by Albret, works by representative contemporary composers.

Anderson Op 63, Jeanjean Eludes Modernes Op 303, 304 3-4 cr each.

Moyse De la Sonante Mechanism and Chromatics Anderson, Eludes Artistiques Op 15 including the memorization of certain selected studies, Anderson Op 63, Jean Jean Etudes Modernes, Orchestral Studies Bach Sonata in A minor for unaccompanied flute, sonatas by Hindemith Reinecke, Concerto by Ibert, works by representative contemporary composers.

Guitar—Classical.

Evaluation of student s abilities and basic corrections if 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.

All scales major and minor, two and three octaves, Henze Method, Sor Concert Etudes, ne suite and selected pieces from the Renaissance and Baroque works by Luis Milan, Tarrega, Ponce, and Villa-Lobos.

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, Scheider Ibert, Paganini.

Bach suite, a sonata or suite by a 20th century composer, concerto by Vivaldi, Giuliani, Carulli, or by a 20th century composer.

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, basic chord theory, basic position folk chords and alterations, all barre chords, and a working knowledge of basic jazz chord forms, beginning study of chord-melody solo playing and single-note techniques, standard guitar solos.

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, Books intensive rhythm jazz chord studies (may use Bucky Pizzarelli s A Touch of Glass or Ronny Lee s Jazz Guitar Method Bk II) intensive chord-melody playing, including arrangements done by the student, beginning single note improvisation, standard guitar repertoire, Berklee Method Book I.

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, Johnny Smith, Tony Mottola, George Van Eps, Single string studies, Bach inventions, Kreutzer violin studies, Paganini violin studies.

Intensive single note improvisation and improvisational lines, REH Publications for single-note study, Doro Carlson, Mock, Kate, Hutchison, Joe Pass Jazz Solos and Jazz Classics, Charlie Christian Studies Howard Roberts Method and Materials, Wes Montgomery s Octave-Style Playing under standing fusion music chord melody arranging from traditional and contemporary literature record transcriptions both already existing and ones done by the student (Coryell, Pass, Barnes, Burrell, Roberts, DeMeola, Benson and others).

Harp.


Technical studies, Orchestra parts Bochsa Etudes Opus 34, Pieces of grade difficulty of Hindemith, Sonata, Handel, Concerto in Bb major, Ravel, Introduction and Allegro.

Technical studies, Pieces of grade difficulty of Tournier Fantaisie, CPE Bach, Sonata, Salzedo, Fantasie, Debussy, Danses Sacre et Profane.

Horn.

Scales and arpeggios in all keys, review of fundamentals of tone production, Alphonse Deux Cents Etudes Nouvelles, Gallay, Thirty Studies, review of muting and trill techniques, Dubois, Cavatine, Franz Strauss, Concerto.


Alphonse Deux Cents Etudes Nouvelles, Kopprasch Studies, Gallay, Twelve Caprices, Beethoven Sonata, Handel, Concerto Rondo, orchestral studies.


Oboe.

Review of basic technique, Barret Studies, Alphonse Vade Mecum, scales and arpeggios in all keys, Telemann Sonata in A minor, solos by Schumann, Handel and Bach.

Continue scales and arpeggios including scales in thirds and measured trills, Barret, Grand Etudes and Duets, Alphonse Vade Mecum, Bleuzet, selected studies from Technique of the Oboe, Handel, torrents, Marcello Concerto.

Continue scales and arpeggios, Bleuzet, selected studies for range and endurance, orchestral studies, Cimarosa, Concerto, Paris Conservatory solos, representative contemporary compositions.
103, 104 2-3 cr each
Review of basic organ technique Selected works from the early English Italian German and French schools Bach, Orgelbuchlein selected preludes and fugues Vienne 24 Pieces, Langlais, Dupre, Franck Organ Class I Pedal scales in all major keys pedals alone Hymn playing, transposition modulations to closely related keys Introduction to figured bass and harmonization of simple melodies

203, 204 2-4 cr each
Selected works by Brahms Mendelssohn, Schumann, Hindemith Joseph Willcox Jenkins, Six Pieces Dupre Antiphons, Messaen, Le Banquet Celeste or Ascension Suite, mvts 1 or 4, Langlais, Franck Schroeder or Peping, Vienne Pieces de Fantaise Bach, Orgelbuchlein Schubler Chorales, Concerti, Preludes and Fugues Tho Sonatas
Organ Class II Continuation of pedal scales, hands and feet Hymn playing, Modulation, transposition counterpoint and figured bass Continued harmonization of melodies Score and clef reading

303, 304 2-4 cr each
Selected works by D' Aquin, deGrigny, Handel, Mozart Sweelinck Franck, Langlais, Messaen, Bach Preludes and Fugues, Tho Sonatas, Orgelbuchlein 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 2-4 cr each
Franck Chorales Messaen, Natwte Lizst, Dupre Durufle, Langlais, Vienne and Widor, Symphonies Alain, Tournemire and selected works by contemporary composers Bach, Passacaglia and Fugue, extended Preludes and Fugues Clavierubang Part III selections Recital

431, 432 Organ Improvisation Var cr
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 materials of teaching both beginning and advanced students Junior standing is required

Percussion

103, 104 2-3 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 3-4 cr each
Advanced snare drum studies, repertoire Three and four tympani exercises orchestral literature Intermediate xylophone studies transcriptions for solo
134

303, 304

403, 404

103, 104

203, 204

303, 304
Continue scales and arpeggios. Selections from Rode, Caprices, and Gambine. Twenty-four Matinees Sonatas by Brahms and Creston. Viola parts from orchestral and chamber music literature

403, 404

103, 104
Scales and arpeggios in three octaves. Scales in thirds, sixths, octaves, tenths, harmonics. Fiorillo or Kreutzer. Concertos by Bach, Mozart, Vieuxtemps, Wieniawski, Bruch, Lalo. Short pieces from the romantic period

203, 204
Continued study of repertoire listed above. Kreutzer or Rode

303, 304
Scales and arpeggios continued. Rode or Gambine. Bach Solo Sonatas and Partitas. Any of the major sonatas and concertos (Beethoven, Brahms, Mendelssohn, Bartok, Sibelius, Tchaikovsky)

403, 404
Scales and arpeggios continued. Dinh Op. 35 or Paganini Caprices. Continue solo Bach and study of major concertos and sonatas

303, 304

403, 404

103, 104

203, 204
Scales and arpeggios in three octaves with various articulations. Rochut. Melodious Studies Vol. II. Blume Studies Vol. II. Selected solos, orchestral and band studies

135

134

303, 304

403, 404

103, 104
Scales and arpeggios in three octaves. Selected scales in thirds, sixths, and octaves. Fiesch, Scale Studies, Sevcik. Studies. (Lifschoy), Campagnoli. Forty-one Caprices, Fuchs, Twelve Caprices, Enescu, Concert Piece

203, 204

303, 304
Continue scales and arpeggios. Selections from Rode, Caprices, and Gambine. Twenty-four Matinees Sonatas by Brahms and Creston. Viola parts from orchestral and chamber music literature

403, 404

103, 104
Scales and arpeggios in three octaves. Scales in thirds, sixths, octaves, tenths, harmonics. Fiorillo or Kreutzer. Concertos by Bach, Mozart, Vieuxtemps, Wieniawski, Bruch, Lalo. Short pieces from the romantic period

203, 204
Continued study of repertoire listed above. Kreutzer or Rode

303, 304
Scales and arpeggios continued. Rode or Gambine. Bach Solo Sonatas and Partitas. Any of the major sonatas and concertos (Beethoven, Brahms, Mendelssohn, Bartok, Sibelius, Tchaikovsky)

403, 404
Scales and arpeggios continued. Dinh Op. 35 or Paganini Caprices. Continue solo Bach and study of major concertos and sonatas

VIOLIN

103, 104
Scales and arpeggios in three octaves. Scales in thirds, sixths, octaves, tenths, harmonics. Fiorillo or Kreutzer. Concertos by Bach, Mozart, Vieuxtemps, Wieniawski, Bruch, Lalo. Short pieces from the romantic period

203, 204
Continued study of repertoire listed above. Kreutzer or Rode

303, 304
Scales and arpeggios continued. Rode or Gambine. Bach Solo Sonatas and Partitas. Any of the major sonatas and concertos (Beethoven, Brahms, Mendelssohn, Bartok, Sibelius, Tchaikovsky)

403, 404
Scales and arpeggios continued. Dinh Op. 35 or Paganini Caprices. Continue solo Bach and study of major concertos and sonatas

VIOLONCELLO

103, 104
Scales and arpeggios in three octaves with varied bowings. Duport Studies, Franchomme, Twelve Caprices. Sonatas of Veracini, Locatelli, and Bocchenni

203, 204
by Romberg, Popper and Saint-Saëns, sonatas by Boccherini and Haydn. Orchestral studies Contemporary works.

303, 304

403, 404

Voice

103, 104
Technical exercises to fit the needs of the student. Literature from all periods to fit the needs of the student.

203, 204
Continuation of technical exercises. More challenging repertoire from all periods.

303, 304
Continuation of technical exercises. Opera and oratorio repertoire emphasized in addition to more advanced concert repertoire and including contemporary theater repertoire.

403, 404
Continuation of technical exercises. All students must have at least one complete oratorio and one complete opera role ready for performance before graduation. The student's repertoire should contain representative songs in Italian, French, German, and English, including significant examples of contemporary vocal literature. The student's senior recital should include examples from all of these.

116, 117, 216, 217, 316, 317, 416, 417
OPERA WORKSHOP
1 cr each
A performing class in which students learn standard and other opera repertoire in English and original languages. There is one major production each semester plus several outside performances.

349, 350, 449, 450
VOCAL REPERTOIRE
1 cr each
Study and performance of vocal solo and ensemble literature. Four semesters encompass Italian, German, French, and Contemporary (United States and Britain) music, with concentration on one category each semester.

MUSIC EDUCATION

Bassoon

101, 102
2 cr each
All scales and arpeggios. Weissenborn Op 8 Vol I, Milde Studies, Galliard, 6 Sonatas for Bassoon.

201, 202
2 cr each
Continue scales and arpeggios with various articulations. Weissenborn Op 8 Vol II, continue Milde Studies, Kvar Studies, Weinberger, Sonatine.

301, 302
2 cr each
Milde, Studies in All Keys, Jancourt, Grand Method Book II, Kavor Studies, solos by Marcello and Cools, orchestral studies.

401, 402
2 cr each
Selected studies from Milde, Concert Studies Vol I, Telemann, Sonata, orchestral studies.

171
BASSOON REED-MAKING
No credit
A course designed to encourage one's own reed-making. Includes the various aspects of shaping, soaking, and trimming the cane.

Clarinet

101, 102
2 cr each

201, 202
2 cr each
Continue scales and arpeggios in various articulations, continue Klose Method, Rose, 32 Studies for Clarinet, Voxman, Duets, selected solos.

301, 302
2 cr each
Langenus, Scale Studies, continue Rose, 32 Studies, Klose, 20 Characteristic Studies, Weber, Fantasy and Rondo, orchestral and band studies.

401, 402
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.

201, 202
2 cr each
Scales continued including thumb positions, Simandl Method continued, selected pieces.

301, 302
2 cr each
Scales and intervals continued. Simandl Method completed, Simandl, Thirty Etudes, selected pieces, violoncello sonatas by Marcello and others, orchestral studies.

401, 402
2 cr each
Simandl, Thirty Etudes, selected studies from Hrable, Eighty-six Etudes, pieces by Koussevitzky and others, orchestral studies.

Flute

101, 102
2 cr each
Kohler, Etudes Book I, Terschak Studies, Drouet, 25 Celebrated Etudes, scales and arpeggios in all keys, selected solos, Sonatas by Marcello, Handel, and Blavet.

201, 202
2 cr each
301, 302
Anderson Etudes, Op 33 and Op 21, Tarfanel-Gaubert Daily Studies, all scales and arpeggios in various articulations, pieces by Anderson Widor, Quantz, Handel sonatas. 2 cr each

401, 402
Anderson, Etudes Op 30, Bergiguer, 18 Studies, Tarfanel-Gaubert Scales scales in thirds and in sixths, chromatic scales, arpeggios and trills, pieces by Quantz, Donjon, Thomas Ibert, sonatas by Handel, Telemann and Blavet, representative contemporary pieces. 2 cr each

Guitar-Classical
101, 102
Evaluation of student’s abilities and basic corrections if 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. 2 cr each

201, 202
All scales major and minor, two and three octaves, Henze Method, Sor Concert Etudes, ne suite and selected pieces from the Renaissance and Baroque, works by Luis Milan, Tarrega, Ponce, and Villa-Lobos. 2 cr each

301, 302
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, Schenieder, Ibert, Paganini. 2 cr each

401, 402
Bach suite, a sonata or suite by a 20th-century composer, concerto by Vivaldi, Giuliani, Carulli, or by a 20th-century composer. 2 cr each

Guitar-Jazz
101, 102
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, basic chord theory, basic position folk chords and alterations, all barre chords, and a working knowledge of basic jazz chord forms, beginning study of chord-melody solo playing and single note techniques, standard guitar solos. 2 cr each

201, 202
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 Books, intensive rhythm jazz chord studies (may use Bucky Pizzarelli’s A Touch of Glass or Ronny Lee’s Jazz Guitar Method Bk II), intensive chord-melody playing, including arrangements done by the student, beginning single-note improvisation, standard guitar repertoire, Berklee Method Book I. 2 cr each

301, 302
Continue rhythm playing studies, chord melody playing, and single-note improvisation studies, Berklee Method Book III, Chor solos and development of repertoire, including solos by George M Smith, Eddie Lang, Dick McDonough, Carl Kress, Johnny Smith, Tony Motolla, George Van Eps, Single-string studies Bach inventions, Kreutzer violin studies, Paganini violin studies. 2 cr each

401, 402
Intensive single-note improvisation and improvisational lines, REH Publications for single-note study (Dono, Carlson, Mock, Kate, Hutchinson, Joe Pass’ Jazz Solos and Jazz Classics), Charlie Christian Studies, Howard Roberts’ Method and Materials, Wes Montgomery’s Octave-Style Playing, under-standing ‘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, DeMeola, Benson and others ). 2 cr each

Harp
101, 102
Laniere Exercices and technical studies Standard orchestra parts Bochsa Etudes opus 318, Book II Pieces grade of difficulty of Grandjany, Arias in Classic style, Tournier, Images (Suite I), Saint Saens, Fantasie. 2 cr each

201, 202
Technical studies, Bochsa Etudes opus 62 Standard orchestra cadenzas Pieces grade of difficulty of Tournier, Feene, Rousseau, Variations Pastorales, Grandjany, Fantasie on a Theme of Haydn. 2 cr each

301, 302
Technical studies. Orchestra parts Bochsa Etudes, Opus 34 Pieces grade of difficulty of Hindemith, Sonata, Handel, Concerto in Bb major, Ravel, Introduction and Allegro. 2 cr each

401, 402
Technical studies. Pieces grade of difficulty of Faure, Impromptu, CPE Bach Sonata, Salzedo, Scintillation, Debussy, Danses Sacre et Profane. 2 cr each

Horn
101, 102
Fundamentals of tone productions, scales and arpeggios in various articulations, chromatic scales, ability to read in at least two clefs, Mozart, Concerto No 3, selected melodic material. 2 cr each

201, 202
Extend range of all scales and arpeggios, diminished seventh chords, muting and preparatory trill studies, ability to read in three or four clefs. Alphonse Deux Cents Etudes Novelles Book II, selected solos orchestral studies. 2 cr each

301, 302
Continue scales, arpeggios and other drills, Alphonse, Deux Cents Etudes Novelles Book III selected studies from Kopprasch 63 Studies Book I, R Strauss Concerto, orchestral studies. 2 cr each

401, 402
Continue scales arpeggios and technical drills, Kopprasch, 60 Studies, Galloy 30 Studies solos by Mozart, Godard, Corelli, representative contemporary solos, orchestral studies. 2 cr each

Oboe
101, 102
Review of previous work by student and corrective exercises as necessary, scales and arpeggios, Barret, Exercises in Articulation and Progressive Melodies, selected solos Barret, Exercises in Articulation and Progressive Melodies, selected solos. 2 cr each

201, 202
Scales and arpeggios in all keys, continue Barret, selected studies from Bleuzet Technique of the Oboe Vol I, solos by Handel and Schumann. 2 cr each

301, 302
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. 2 cr each
Organ

101, 102  
George, Method of Organ Playing, Stanley, Voluntaries, Franck, l’Organist, Vierne, 24 Pieces, Dupe, 
D’Aquin, Clerambault, Sweelinck Franck, Langlas, Messaen, Le Banquet Celeste of Ascension Suite, mvts 1 or 4. Langlas, Franck, selected works by contemporary composers, Bach Orgelbuchlein, Schubler Chorale, selected preludes and fugues Organ Class II pedal scales hands and feet in all major and minor keys, hymn playing, introduction to figured bass and harmonization of simple melodies

301, 302  
Selected works by D’Aquin, Clerambault, Sweelinck Franck, Langlas, Messaen, Bach, preludes and fugues, trio sonatas, Orgelbuchlein, Great 18 Chorales, works by contemporary composers Organ Class III continuation of pedal scales, hymn playing, score reading, transposition, figured bass, counterpoint accompaniments of anthems and canticles

301, 302  
Selected works by Franck, Langlas, Tournemire, Vierne, Alain, and other contemporary composers Bach, preludes and fugues, partitas, Clavierubung Part III selections Organ Class IV pedal scales, free hymn accompaniments anthem accompaniments and conducting from the console

Percussion

101, 102  
Rudimentary snare drum technique, analysis of existing methods Elementary tympani technique, uses of tympani in classical literature, tuning

201, 202  
Intermediate snare drum studies, elementary xylophone technique Intermediate tympani studies, orchestral literature Beethoven to Wagner Performance techniques of most commonly used equipment

301, 302  
Use of tympani 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

401, 402  
Deployment of instruments in band and orchestra 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  
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  
Bach, two and three 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

301, 302  
Bach, selected preludes and fugues from Well-Tempered Clavier, Beethoven, Op 10 and Op 14 sonatas, Chopin, Preludes and Nocturnes, selections from Impressionistic and Contemporary repertoire Continuation of major and minor scales, dominant and diminished seventh, and major arpeggios

401, 402  
Bach, French Suites, selected preludes and fugues, Beethoven, Op 2 No 2 and 3, Op 31, Preludes and Impromptus of Chopin, Brahms, Intermezzos, selections from Contemporary repertoire Continue scales, domiant and diminished seventh, and major and minor arpeggios

Saxophone

101, 102  
All major and minor scales and arpeggios, Universal Method for Saxophone or equivalent material Bassi-lasilli, Concert Etudes, selected solos

201, 202  
Continue scales and arpeggios with various articulations Bassi-lasilli, Concert Etudes, selected solos

301, 302  
Mule, Scales and Arpeggios, Gatti-lasilli, 35 Melodious Technical Exercises, pieces by Faure and Jeanren

401, 402  
Mule, Scales and Arpeggios, Gatti-lasilli, 35 Melodious Technical Exercises, Labanchi-lasilli 33 Concert Etudes, Premier Solo de concours by Pares, Moritz, Sonata for Saxophone, representative contemporary solos

Trombone and Baritone Horn

101, 102  
Studies and exercises in tone production and flexibility by Shiner, Arban, Method for Trombone, major and minor scales through two octaves, selected solos

201, 202  
All scales and arpeggios, continue drills and Arban Method for Trombone, selected studies from Cimera, 170 Etudes, Study of single, double and triple tonguing Pryor solos and other selected materials, band and orchestral studies
<table>
<thead>
<tr>
<th>Instrument</th>
<th>301, 302</th>
<th>401, 402</th>
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<tbody>
<tr>
<td>Trumpet</td>
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<td></td>
<td>Continue technical exercises, Stacey Lip Flexibility, Melodious Etudes Book I, Blume, Studies Book I, La Fosse, Sight Reading Studies, study of tenor clef, Croce-Spinelli, Solo de Concours, Alary, Contest Pieces, Morel, Piece in F minor</td>
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<td>Tuba</td>
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<td>Continue technical exercises, Stacey Lip Flexibility, Kopprasch Book I, Rochut, Melodious Etudes Book III, Blazhevich, Clef Studies, study of bass trombone, Guilmant, Morceau Symphonique, Camara, Valse Petite, Ripartiz, Andante and Allegro</td>
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<td>Violin</td>
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<td>Scales and arpeggios continued, Kreutzer or Rode, concertos of Bach, Mozart, short pieces of the Romantic period</td>
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<td>Violin</td>
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<td>Scales and arpeggios continued, Rode or Gavinies, Bach Solo Partitas, standard concertos and sonatas</td>
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</table>
Continuation of technical exercises Opera and oratorio repertoire included when vocally suitable in addition to concert repertoire

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<tr>
<th>Course Code</th>
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<tr>
<td>301, 302</td>
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Continuation of technical exercises More advanced opera, oratorio, and concert repertoire and contemporary theater literature

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<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>401, 402</td>
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CONDUCTING

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<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>379</td>
<td>CONDUCTING</td>
<td>2 cr</td>
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</table>

This course provides a study of the fundamentals of conducting as a performing skill, teaching technique, and as an interpretive art. Use of the baton, choral and instrument rehearsal techniques, and score reading. Two hours a week.

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>327</td>
<td>JAZZ PEDAGOGY &amp; DIRECTING</td>
<td>1 cr</td>
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</table>

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.

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<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>511</td>
<td>CHORAL CONDUCTING AND METHODS</td>
<td>2 cr each</td>
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</table>

Development of conducting technique. The study, rehearsal and class performance of choral works in various styles.

ENSEMBLE

<table>
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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>143, 144, 243, 244, 243, 443, 444, 445, 445, 446</td>
<td>ENSEMBLE IN MUSIC EDUCATION</td>
<td>1 cr each</td>
</tr>
</tbody>
</table>

Voice, Piano, and Organ Majors will participate in a choral ensemble for each semester of enrollment. Instrumental Majors will participate in Band, Orchestra and/or other instrumental ensemble for each semester of enrollment. Instrumentalists are encouraged to take advantage of opportunities to participate in choir, keyboard or voice majors when participation is available in the instrumental ensembles.

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>147, 148, 247, 248, 347, 348, 447, 448</td>
<td>SMALL ENSEMBLE</td>
<td>1 cr each</td>
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</tbody>
</table>

The Small or Minor Ensembles include: Tamburitza Ensemble, Brass Ensemble, Percussion Ensemble, Woodwind Ensemble, Jazz Ensemble, and Guitar Ensemble. May be taken by freshmen and sophomores for extra credit or by juniors and seniors for required credit or by juniors and seniors for required credit provided that Major Ensemble requirements have been satisfied, and that permission of the conductor has been granted.

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<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>116, 117, 216, 217, 316, 317, 416, 417</td>
<td>OPERA WORKSHOP</td>
<td>1 cr each</td>
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</table>

A performing class in which students learn standard and other opera repertoire in English and the original languages. There is one major production each semester plus several outside performances. May be taken by freshmen and sophomores for extra credit or by juniors and seniors for required credit provided that Major Ensemble requirements have been satisfied, and that permission of the conductor has been granted.

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<th>Course Code</th>
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<tr>
<td>141, 142, 241, 242, 341, 342, 441, 442</td>
<td>CHAMBER MUSIC</td>
<td>1-2 cr each</td>
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</table>

Study and performance of all types of chamber music for the various instrumental combinations.

EURHYTHMICS

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<th>Course Code</th>
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<tr>
<td>121, 122</td>
<td>EURHYTHMICS</td>
<td>2 cr each</td>
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</table>

Fundamentals of rhythmic movement. Study of pulse, meter, rhythm, and duration, the expressive qualities of music such as tempo, dynamics, and phrasing realized and expressed through bodily movement. Two hours a week.

MUSIC EDUCATION

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<th>Course Code</th>
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<tr>
<td>189, 190, 289, 290, 389, 390</td>
<td>MUSIC FIELD OBSERVATION</td>
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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.

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<th>Course Code</th>
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<tr>
<td>181</td>
<td>WOODWIND CLASS I</td>
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Fundamental principles and techniques of playing and teaching the clarinet. Study of literature which is appropriate for beginning class instruction. For voice, piano, and organ majors in the music education program. Offered in the fall semester. Two hours a week.

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<th>Course Code</th>
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<tr>
<td>182</td>
<td>WOODWIND CLASS II</td>
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Performance technique on clarinet continued. Teaching technique of oboe, bassoon, and saxophone covered. For voice, piano, and organ majors in the music education program. Prerequisite: Music 181. Offered in spring semester. Two hours a week.

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<th>Course Code</th>
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<tr>
<td>183</td>
<td>WOODWIND CLASS III</td>
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Fundamental principles and techniques of playing and teaching the clarinet. Study of literature which is appropriate for beginning class instruction. For woodwind, brass, string, and percussion majors in the music education program. Offered in the fall and spring semesters. Two hours a week.

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<tr>
<td>184</td>
<td>WOODWIND CLASS IV</td>
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Fundamental principles and techniques of playing and teaching the saxophone, oboe, flute and bassoon. Study of mechanism and evaluation of class methods and materials. Students are expected to develop a reasonable performing skill on each instrument. For woodwind, brass, string, and percussion majors in the music education program. Music 183 is not a prerequisite for this course. Offered in the fall and spring semesters. Two hours a week.

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<td>185, 186</td>
<td>VOICE CLASS</td>
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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.

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<tr>
<td>213, 214</td>
<td>PIANO CLASS</td>
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The development of functional keyboard skills in sight reading, transposition, harmonization of melodies, and improvisation of accompaniments. Required of all Music Education students with the exception of piano majors. Two hours a week. Prerequisites: Piano 111, 112 or Advanced Standing Examination.

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<td>215</td>
<td>PIANO CLASS FOR PIANO MAJORS IN MUSIC EDUCATION</td>
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Piano majors in Music Education study the development of functional keyboard skills in sight reading, transportation, accompaniments. Required of all Piano Majors. Two hours a week.
281 BRASS CLASS I 2 cr
Fundamental principles and techniques of playing and teaching the trumpet. Study of literature which is appropriate for beginning class instruction. For voice, piano and organ majors in the music education program. Offered in the fall semester. Two hours a week.

282 BRASS CLASS II 2 cr
Performance technique on trumpet continued. Teaching technique of French horn, trombone, baritone, and tuba. For voice, piano, and organ majors in the music education program. Prerequisite: Music 281. Offered in the spring semester. Two hours a week.

283 BRASS CLASS I 2 cr
Fundamental principles and techniques of playing and teaching the trumpet. Study of literature which is appropriate for beginning class instruction. For voice, piano, and organ majors in the music education program. Offered in the fall and spring semesters. Two hours a week.

284 BRASS CLASS II 2 cr
Fundamental principles and techniques of playing and teaching French horn, trombone, baritone, and tuba. Study of construction, fingering, and evaluation of class methods and materials. For woodwind, brass, string, and percussion majors in the music education program. Music 283 is not a prerequisite for this course. Offered in the fall and spring semesters. Two hours a week.

381 STRING CLASS METHODS I 2 cr
Each student selects one of the string instruments and studies it throughout the semester in order to attain greater technical proficiency. Two hours a week.

382 STRING CLASS METHODS II 2 cr
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
Principles, practices, and materials for the general program in the elementary grades. A program of student presentations and discussion periods will be required. Two hours a week. Prerequisite: 214 or 215, Piano Class.

384 SECONDARY METHODS 2 cr
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 TECHNIQUES 1 cr
This course deals with 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 curricular trends as applied to the total music program of the secondary school. Offered Spring Semester only.

387 MARCHING BAND TECHNIQUES 1 cr
Principles, practices, and materials for the marching band are studied, including its role in the total music program, organization and maintenance, planning and executing of the field show, basic maneuvers and rehearsal procedures. Offered Fall Semester only.

481 PERCUSSION CLASS TECHNIQUES 2 cr
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 6 cr
Practice teaching in approved elementary and secondary schools under the guidance of a full-time 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 MUSIC AND WESTERN CIVILIZATION 3 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.

451, 452 ORGAN LITERATURE 2 cr each
A survey of organ literature and organ building as it relates to organ registration. The first semester treats organ music from the Renaissance through J.S. Bach. The second semester deals with the literature from 1750 to the present. Outside listening and readings will be required.

459, 459, 450 VOCAL REPERTOIRE 1 cr each
Study and performance of vocal solo and ensemble literature. Four semesters encompass Italian, German, French, and Contemporary (United States and Britain) music, with concentration on one category each semester.

253 VISUAL ARTS 3 cr
Designed to give the student a basic vocabulary in the visual arts (painting, sculpture, architecture, and the graphic arts) and to make him conversant with the most important styles he will encounter. During the course of the semester, the course will include several visits to the museums and galleries in the Pittsburgh area.

151 EVOLUTION OF JAZZ STYLES I 3 cr
A study of the origin, development and styles of jazz music and its ramifications with an emphasis on recorded music as well as scores.

152 EVOLUTION OF JAZZ STYLES II 3 cr
A study and analysis of recorded improvised solos by major jazz artists from 1940 to the present.

455 MUSIC AND MASS MEDIA 1 cr
The use of music in television and film, industrial shows, stage shows, etc., and the composer/performer rights under U.S. copyright law, as well as agreements and relations between producers, directors, performers, writers and booking agents involved.

MUSIC THEORY

The Theory Department recognizes the individual differences of students and provides an opportunity for them to advance according to their abilities.
131, 132 THEORY  
2 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. Three hours a week.

133, 134 SOLFEGGIO AND EAR TRAINING  
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, rhythm, chords, and complete compositions, and to develop inner hearing and memory. The devices used are solfeggio (singing unison and ensemble music, prepared and on sight), drills on intervals and broken chords, unison and two-part rhythm exercises, keyboard work and clef reading and systematically graded dictation. 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 SOLFEGGIO AND EAR TRAINING  
2 cr each  
A continuation of 134. Two hours a week.

335 COUNTERPOINT  
2 cr  
The course is devoted to a study of the polyphonic technique of the sixteenth century.

336 COUNTERPOINT  
2 cr  
A course study concerned with the harmonic contrapuntal technique of the period of J. S. Bach.

340 ORCHESTRATION  
2 cr  
A study of the basic problems of scoring for individual instruments, particularly orchestral choirs, the entire orchestra, and unique instrumental combinations. Analysis of the techniques of orchestration of selected composers of the 18th, 19th, and 20th centuries.

440 JAZZ ARRANGING  
2 cr  
A study of the basic techniques of scoring for individual instruments and jazz ensembles of various sizes, from small groups to studio orchestras. Analysis of scores by contemporary big band arrangers.

430 ADVANCED JAZZ ARRANGING  
2 cr  
Advanced arranging techniques for the jazz and studio ensemble.

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  
1-3 cr  
Beginning study and practice of melodic improvisation, conventional forms and chord progressions, employing idiomatc jazz rhythms and articulations, major-minor and modal scales.

227 JAZZ IMPROVISATION II  
1-3 cr  
A continuation of 226 with an introduction to altered scales and chords.

426 JAZZ IMPROVISATION III  
1-3 cr  
A continuation of 227 with an emphasis on chromatically altered scales, chords, and extended forms.

427 JAZZ IMPROVISATION IV  
1-3 cr  
Extension and continuation of 426 with an emphasis on the practical application of advanced techniques to standard and jazz literature.

453 JAZZ COMPOSITION I  
2 cr  
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.

MUSIC THERAPY

107 MUSIC THERAPY ORIENTATION  
2 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, 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  
2 cr  
A course designed to increase the student's self-identification as a music therapist by weekly assignments to rehabilitation settings. Understanding goals and relationships of treatment or education, learning to make systematic observations through written progress reports, and discussions about specific writings related to personal experiences are included in the course work. Prerequisite: Music Therapy 107.

307 PSYCHOLOGY OF MUSIC  
2 cr  
An exploration of musical behaviors, and to 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: Psychology.

308 INFLUENCE OF MUSIC ON BEHAVIOR  
2 cr  
A study of the uses of music in society including movies, television, industry, churches, schools, hospitals, etc., and the rationale thereof. Discussion, reading, and individual research projects will be assigned. Prerequisites: General Psychology or equivalent and Junior standing.

309 DIRECTED STUDY IN MUSIC THERAPY  
2 cr  
A course study concerned with the harmonic contrapuntal technique of the period of J. S. Bach.

315 CLASS PIANO 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, 223, 224, 323, 324, 423, 424 MUSIC THERAPY PRACTICUM  
1 cr each  
Supervised field work in an approved agency.

SACRED MUSIC

209 CHILDREN'S CHOIRS  
1 cr  
Materials and techniques used in dealing with children's choirs.

431, 432 IMPROVISATION  
Var cr  
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 2 cr
Development of conducting technique. The study, rehearsal, and class performance of choral works in various styles.

464 CHURCH MUSIC ADMINISTRATION 2 cr
Seminar in practical aspects of church music, establishing the music program in a church, graded choir systems, children's choirs, instruments in worship, contracts, cantor systems, worship commissions, etc.

421 GREGORIAN CHANT 2 cr
The history, notation, and model 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 hymns.

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 the pipes and console. Tuning, voicing, and esthetics of organ design will be discussed.

322 SACRED CHORAL AND SOLO LITERATURE 2 cr each
A survey of choral and vocal literature for the church with emphasis on practical materials for church choirs, soloists, and congregations.

408 SERVICE PLAYING 1 cr each
An introduction to service playing for students minoring in organ. Hymn playing, score reading, anthem and canticle accompaniments and conducting from the console will be emphasized.

TAMBURITZANS INSTITUTE OF FOLK ARTS

154 INTRODUCTION TO FOLKLORE 3 cr
An introductory examination of the definition and scope of folklore studies and the role of folklore in people's lives. Examined are various forms of folklore and folk expression such as tales, ballads, myths, legends, beliefs, games, proverbs, riddles, folk songs, and folk customs and their roles in societies.

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 Balkans highlighting their development, form, indigenous characteristics, differences and similarities from one ethno-geographic region to another.

147, 148, 247, 248, 347, 348, 447, 448 TAMBURITZA ENSEMBLE 1 cr each
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. May be taken by freshmen and sophomores for extra credit or by juniors and seniors for required credit provided that Major Ensemble requirements have been satisfied, and that permission of the conductor has been granted.

NON-MUSIC MAJORS

253 VISUAL ARTS 3 cr
Gives students a basic vocabulary in the visual arts (painting, sculpture, architecture, the graphic arts) and to make them conversant with the most important styles they will encounter. During the course of the semester, the course will include several visits to museums and galleries in the Pittsburgh area.

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.

GENERAL EDUCATION

491 PHYSICAL SCIENCE (ACOUSTICS) 3 cr
A course in the science of sound designed to give the student a knowledge of the basic principles of the nature of sound, its production and transmission. Consideration is also given to the mechanism of hearing and the physical basis of harmony, scales, electronic recording, and reproduction of recorded sound.

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 the several curricula will be found in the College of Liberal Arts and Sciences and School of Education sections of this Catalog.
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. In the fall of 1975, a graduate program in Family Health Nursing was initiated.

DEFINITION AND PHILOSOPHY OF NURSING
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. In articulating this definition, the philosophy of the School of Nursing evolves from that of the University. As such, it guides the development of a personal philosophy of life based on a Christian frame of reference and supports a commitment to the values which give meaning to life.

The faculty of the School of Nursing 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. Nursing focuses on helping individuals and families to promote health and enhance the quality of living. The nurse initiates interrelationships with families to help them describe their health, evaluate alternatives, and mobilize their resources for planning change. Central to nursing practice is the nursing process which is deliberate, systematic and individually designed. The nurse uses theories, concepts and research findings to substantiate nursing practice. The professional nurse is a creative innovator who finds satisfaction in giving service to others, regularly evaluates self and plans for continuing self-growth. The professional nurse promotes the evolution of nursing toward independence. The professional nurse is educated in an institution of higher learning in a program which grants a baccalaureate degree in nursing. The educational process is a co-constituted one in which the teacher and learner plan experiences and share knowledge. The emergence of new knowledge is encouraged through the ongoing interrogation of present knowledge and new experiences.

In making explicit the philosophy that underpins the theory of nursing, the concepts of man and health are studied through a synthesis of the concepts comprising Human Science Nursing.

Man is a sentient living unity, a creative act of God. Man and environment in their openness evolve unidirectionally. Existence with the world is recognized through patterns of expression. This existence is co-constituted, that is, man's relationship with environment is participative. Within limitations of situation, man has freedom to choose a way of being with the world, and in that choosing, gives meaning to the situation.

Health is a process of being and becoming 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 that 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 promoters of health care through a participative process which involves joint planning and decision-making.
The Duquesne University School of Nursing baccalaureate program graduates a generalist who has the flexibility to practice nursing in a variety of settings. The program emphasizes learning of the theoretical base of Nursing as a human science and builds a foundation for graduate study. The Graduate Program builds on the baccalaureate program and prepares a specialist in family health nursing who has a choice of three functional roles: teaching, administration, and practice. The Graduate Nursing Program emphasizes the creating and testing of concepts through the rigorous process of inquiry in areas of nursing process, nursing leadership, and nursing research.

PROGRAM PURPOSES, GOAL AND INDICATORS

The purposes of the program are:
1. To prepare the graduate for beginning levels of professional nursing in a variety of settings.
2. To provide the foundation for graduate education in nursing.

The program goal is to practice nursing as a human science in a variety of settings. Within the philosophy and purposes of the School of Nursing, the faculty has formulated a curriculum that provides learning experiences to assist students to acquire specific knowledge and skills. The indicators of this program state that upon completion of the program, the graduate:
1. Promotes the rights and dignity of man in health care.
2. Initiates health care from the perspective of client’s and family’s belief about health.
3. Engages client and family in a health care decision-making process relative to the man—environment inter-relationship.
4. Evaluates nursing as a human science in providing health care to clients and families and groups.
5. Promotes professional standards of responsibility and accountability in nursing practice.
6. Uses current research findings in providing a basis for change in nursing practice.
7. Participates in studies/projects which enhance nursing practice.
9. Synthesizes knowledge from related sciences and the humanities in the utilization of the nursing process.
10. Evaluates the values and goals of the nursing profession in light of the continued development of nursing.

DEGREE

The 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 baccalaureate degree to qualified high school graduates, registered nurses, and non-nursing baccalaureate degree graduates. The program includes four years of study, and is designed to provide the student with the knowledge and skills needed to practice as a professional nurse generalist upon graduation. The general and professional education required in this program provides a basis for the graduate to progress to positions of increasing responsibility and to undertake graduate study.

The curriculum design is basically that of a professional education program. Selected courses in the humanities and the behavioral, natural, and social sciences complement the courses in the nursing major. 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, in homes, and in the community.

strenthen and enrich the personal and professional development of the student, courses in the liberal arts are taken throughout the program.

The faculty of the School of Nursing conducts all professional nursing courses and also guides and directs the practicum learning experiences. Several 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 it believes are in keeping with the changing health needs of society and/or the best interests of the students and the School to maintain quality professional nursing education.

ADMISSION REQUIREMENTS

ADMISSION OF HIGH SCHOOL GRADUATES

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
   - Mathematics and 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 admissions is the secondary school academic record. This is considered to be the most important criterion of success at Duquesne University. It is the desire of the Admission 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 genuine equivalent of these requirements may be accepted in lieu of the foregoing precise requirements. See Admission section for other University requirements.

ADMISSION OF REGISTERED NURSE STUDENTS

Registered nurses who have completed a diploma or associate degree program in nursing who wish to pursue study for a bachelor’s degree must follow general admission procedures in addition, they should:

1. Present evidence of registration as a professional nurse in one state or territory before admission or during the first semester of enrollment.
2. Submit an official copy of school of nursing transcript.
3. Submit an official copy of transcript from previous college or university attended, if applicable.
4. Submit a recommendation for collegiate study from the director of nursing of the school of nursing from which the student was graduated or recommendation from present employer.
REGISTERED NURSES
Registered nurse students who are graduates of a diploma or associate degree program in nursing may receive credit for selected nursing courses by examination. Non-nursing courses taken at another college or university may be considered for transfer of credit, subject to University policy regarding transfer students stated elsewhere in this catalog.

SECOND BACCALAUREATE DEGREE PROGRAM
Applicants holding a baccalaureate degree 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.

TRANSFER STUDENT ADMISSION
See Admissions Section for further requirements.

Admission criteria for transfer students
1. A cumulative GPA 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 post-secondary institution.
3. Recommendation from an instructor from the transferring student's institution. The recommending instructor should be one who has taught the student in the area of the student's major field of study.

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 in the natural sciences, the limit is five years. The time limit may be evaluated in specific instances.

TEMPORARY TRANSFER
With the approval of the academic advisor and dean, 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 catalogue description of courses he or she wishes to take and the schedule for the summer session in which they are given. The academic advisor, in consultation with the dean, will evaluate the proposed courses and confirm the other institution's accreditation status.
2. 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.
3. A candidate for the Bachelor's degree must complete the last 30 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.

ADDITIONAL EXPENSES AND REQUIREMENTS
Student Liability Insurance (Professional) for three years $450.00
Uniforms, nurse's cap, duty shoes 100.00

Transportation to and from clinical agencies (weekly) $10 00 (approx)
School of Nursing pin, if desired 30.00
Physical examinations, diagnostic procedures, and immunizations (cost varies)

Students must complete specific health requirements by July 15 before proceeding to the Junior or Senior clinical practicum. An annual physical examination and certain immunizations and health tests are required for junior and senior years in addition to the general University health requirements. A list of these requirements may be obtained from the School of Nursing Office.

Students are individually responsible for arranging transportation to and from assigned agencies for practice experience. It is recommended that they have a car for community health experience. Students are requested to have tape recorders.

STUDENT ORGANIZATIONS
The 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.

Alpha Tau Delta is a national professional fraternity for persons in nursing. Theta Chapter was chartered on the Duquesne University campus on April 21, 1938. Only full-time students who have completed a minimum of one semester in the School of Nursing with a cumulative quality point average of 2.5 are eligible.

Sigma Theta Tau is the national nursing honorary. A chapter is presently being formed in the School of Nursing. The group has organized itself and has adopted bylaws and membership requirements. It is presently waiting for the completion of its probationary period before receiving its national charter. Membership is open to students, faculty, and alumni who meet the criteria for election.

Class Organizations. Each of the four classes is an officially recognized organization in the School of Nursing. Each class elects its own officers and conducts such programs and affairs as its members deem desirable toward achieving its goals. All students are included in these organizations.

HONOR AWARDS
In addition to graduation honors, these awards are presented at Honors Day.

The Mary W. Tobin Gold Medal and The Dean Johnson Memorial Medal are awarded annually to two outstanding seniors chosen by the faculty. The Mary W. Tobin Medal is sponsored by Theta Chapter of Alpha Tau Delta National Professional Fraternity for persons in nursing.

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. Successful completion of all clinical practicums
2. Completion of the required curriculum plan.
3. A candidate for the Bachelor's degree must complete the last 30 credits toward the degree at Duquesne University.

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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<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
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<td>Natural Science***</td>
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<td>N 212 — Pathology ***</td>
<td>N 460 — Nursing V**</td>
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<td>(General Biology I is recommended)</td>
<td>(Chemistry and Society II is recommended)</td>
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<td>Eng 101 — English Composition</td>
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<td>Psych 226 — Developmental Psychology II***</td>
<td>N 461 — Nursing VI***</td>
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<td>Speech</td>
<td>N 199 — Nursing I***</td>
<td>Pharm 3 — Basic Pharmacology ***</td>
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**Third Year***

N 340 — Nursing III**
Soc 325 — Family Systems
General Elective

N 460 — Nursing V*
Nursing Elective
N 470 — Research Process

**Fourth Year**

N 341 — Nursing IV**
Theology or Philosophy
Nursing Elective

N 461 — Nursing VI**
General Elective

N 460 — Creative Leadership in Nursing
General Elective

16
16
16
15


data missing from table

*Health Requirements must be met
**These courses must be taken during the semesters indicated
***Pre-requisites to Nursing III

**Student Rights**

Bill of Rights—A statement of the student Bill of Rights is available to all students in the Duquesne University Student Handbook. The student handbook can be acquired in either the student government office located in student union or in the secretary’s office of the School of Nursing.

School of Nursing Grievance Procedure—

Grievance procedures must be initiated within 30 days of the occurrence which gave rise to the grievance. With the knowledge of the involved parties, either party may request that another person be present during the discussions.

If a difficulty arises between student and faculty, the student should first discuss the difficulty with the person directly involved.

If the matter is not satisfactorily resolved, the appropriate course coordinator should be consulted.

In the event that a satisfactory agreement still has not been reached, the student should present his/her case before the student standing committee.

If the problem is not satisfactorily resolved, a consultation with the dean of the School of Nursing should be arranged.

Should the problem still remain unresolved, a “Request for Hearing” form should be filed with the Vice President for Academic Affairs within 20 days of the dean’s decision.

If the Academic Vice President’s findings determine that a legitimate grievance exists, he will convene the academic due process committee. In all cases, the decision of the academic due process committee is final. If the Academic Vice President finds that a legitimate grievance does not exist, he/she will inform the student within 30 days of his/her determination.

**Curriculum Standards**

To progress to the nursing practice courses, a minimum cumulative QPA of 2.5 is required with a minimum of a C grade in Anatomy and Physiology, (including laboratory) Nutrition, Pathology, and Nursing 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 nursing course. A Pass/Fail grade is given in clinical practice. An F in either theory or clinical practice will result in an F grade of the course.

Students may repeat non-nursing courses one-time only. This includes support courses offered in and out of the School of Nursing, that is, Anatomy and Physiology, Pathology, 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.

**School Nurse Certification**

Students who wish to qualify for School Nurse Certification upon graduation can usually complete the required courses within the four-year curriculum if they utilize elective credits and enroll for the required courses, the required courses are:

**COURSE DESCRIPTIONS**

Descriptions of courses in liberal arts and sciences may be found in the College of Liberal Arts and Sciences section, pages 22 to 84.

**212 PATHOLOGY**

Introduction to the basic scientific concepts of the disease process. Lecture, three hours

Prerequisites: Anatomy and Physiology, (Lecture and Laboratory) Only offered during Spring Semester.
255 Nutrition 3 cr
Nutrition principles and their importance to all ages, factors influencing food habits, exploration of ways in which nurses may help families and individuals apply nutrition concepts for promotion of health and well-being, recent research in relation to such national problems as heart disease, obesity, and increased life spans. Lecture, three hours.

199 Nursing I 3 cr
Introduces the students to the discipline of nursing as a human science. The students in the 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, inquiry, and family/nurse/client. Students explore the process of man's coming to know and investigate the historical emergence of nursing as a profession and a discipline.

200 Nursing II 3 cr
Builds on Nursing I. The students examine nursing as a human science in light of inter-relating health and man-in-his-family. Students will examine man as he lives his health situation and as he participates 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 and accountability and explore the concept of accountability 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 course. Prerequisite: Nursing I.

340 Nursing III 9 cr
This is the first clinical nursing course. It is built on Nursing II, in which the student examined the processes of life, change, valuing, inquiry, caring and nurse-client-family. In Nursing III, these processes are further explored in relation to man's unidirectional movement. The concept of health promotion is explored. The nurse-client-family process is the method used by the discipline of nursing to promote health. Use of theory as a basis for practice is introduced. Students utilize knowledge from the sciences and humanities as they practice the nurse-client-family process in a clinical setting with clients experiencing changing patterns of health. This course is offered during the Fall Semester. Prerequisites: Natural Sciences, Developmental Psychology I and II, Anatomy and Physiology, Pathology, Nutrition, Pharmacology, Nursing I and II.

341 Nursing IV 9 cr
This is the second clinical nursing course which builds on Nursing III and continues to provide experiences which guide the student in the practice of nursing as a human science. The course focuses on adult clients and their families as they are experiencing health. The community is explored in light of its support systems to the individual and his family. Nursing IV emphasizes the maturing family in the community and concepts related to family and family health, the maturing adult and the supporting community. Through the nursing process, the student explores the concepts of loss, power, and socialization as they relate to man's experience of health. Nursing IV offers a clinical component in which the student cares for selected clients in the acute medical-surgical setting and psychiatric setting. This course is offered during the Spring Semester. Prerequisite: Nursing III.

460 Nursing V 9 cr
This is the third clinical nursing course which builds on Nursing IV. The student examines nursing as a participant with emerging families. The student is encouraged to focus on the inter-relatedness and vulnerability of the family members as they strive toward family unity. The student initiates interpersonal relationships with emerging families as they experience separateness-togetherness to describe their health, evaluate alternatives and mobilize resources in planning for change. Clinical experiences include the client's home and community, primary and intermediate care agencies throughout the semester. The student is assigned a family in the community and is expected to plan and provide for the health promotion of that family throughout the semester. When possible, students will continue to follow their family in Nursing VI to provide for further continuity of health care as needed. Through the nursing process the student is guided to use the process of inquiry as he/she moves toward becoming a professional nurse. This course is offered during the Fall Semester. Prerequisite: Nursing IV, Family Systems.

461 Nursing VI 6 cr
This course is the final clinical nursing course. The focus of the course is the synthesis of the concepts of nursing as a human science through an investigation of the multi-dimensional health needs of families and groups in the community. Health needs of the community are explored and evaluated. Possible changes that would enhance the promotion of health. The student will participate in the community as a member of an interdisciplinary health team which collaborates and coordinates health care services. This course is offered in the Spring Semester. Prerequisite: Nursing V.

410 The Research Process 3 cr
This course offers students the opportunity to become discriminating consumers of nursing research. The students engage in critical questioning through a systematic process of inquiry. The course provides students an opportunity to encounter multiple variables in the research situation. The students are guided toward an understanding of the relationship between research and theory and the meaning of that relationship to nursing practice. Prerequisites: Fundamentals of Research, Nursing IV.

480 Creative Leadership in Nursing 3 cr
This course offers the student the opportunity to synthesize knowledge and develop skills relative to the leadership process. The student examines the alternatives of the nurse-leader within the health care system. Concepts such as values, power, and theories of problem-solving and decision making are explored in order to help the student prepare for leadership responsibilities in professional practice. The student is expected to participate in the leadership process through gaming, simulation, and group presentations. Prerequisite: Nursing IV.

Nursing Electives

201 Caring in Nursing 3 cr
This course offers the student a unique opportunity to examine critically, through systematic inquiry, the essential concept of care. The student is encouraged to examine the value of the nurse as a caring participant in the promotion of health of clients. The student will explore how the caring nurse is a creative innovator of the client's health who finds satisfaction in giving service to others. The student will explore ways of caring for self as a means of continuing self-growth. Further the student will examine the meaning of the caring nurse in relation to other members of the health team.

260 Ways of Healing 3 cr
This course is a nursing elective that examines man's participation in the healing process. Participants are further invited to examine the relationship of a caring presence with ways of health. Nursing I is a prerequisite, or may be taken concurrently.

421 Health Care in the School Setting 3 cr
This course is designed to enable nursing students to utilize the nursing process with children in the school setting. It offers students the opportunity to examine the traditional and expanded roles, functions and responsibilities of the school nurse in providing health services and health education for school populations. Attention is given to the inter-relationship of the child's growth and development with his health and learning. Principles of health maintenance and promotion within the framework of the school health program are also examined along with the relationship of the school program to the community and its resources.
THE SCHOOL AND THE LAW 3 cr
The study of the law as it relates to professional employees of the school, the pupil and the school nurse. It includes a study of the school nurse’s duties, rights and her relationship to other school personnel. Lecture three hours.

POLITICAL ACCOUNTABILITY IN NURSING PRACTICE 3 cr
This course builds on Creative Leadership in Nursing. The student is involved in taking appropriate action as a professional nurse in the political system of the United States. A position statement of a health care issue will be developed, consistent with the student’s personal philosophical framework.

An analysis of relevant data will be conducted, and the student will become acquainted with the resources available to the professional nurse to assist in data collection.

Knowledge of the law and legislative process will be used in making decisions on actions. The student will contact local, state and national legislators and lobbyists for the purpose of initiating dialogue, gathering data and stating a position. Prerequisite: Creative Leadership in Nursing.

DIRECTED STUDY 3 cr
By special permission only.

CHALLENGING COURSES FOR CREDIT
The School of Nursing provides the opportunity to challenge for credit selected nursing courses in which the student feels he/she has mastered subject matter equivalent to the satisfactory completion of those courses in this University.

The School of Nursing will supply a course outline, with goals and indicators for each challengeable course at no cost to the student. This material is intended to assist the student in review and in no way insures that the detailed content of the challenge examination is covered.

A designated faculty member distributes the challenge examination material and determines the effective dates. The student is responsible for obtaining the required material. The designated faculty member for each challengeable course will administer, proctor, correct and evaluate the challenge examination.

Nursing I and Nursing Electives are not challengeable.

The following courses are available for challenge:
- Anatomy and Physiology 4 cr
- Nutrition 3 cr
- Pathology 4 cr
- Nursing II 3 cr
- Nursing III 9 cr (Prerequisites are Anatomy and Physiology, Nutrition, Pathology, Nursing I and II, and Pharmacology)

Challenge status to be determined:
- Nursing IV 9 cr
- Nursing V 9 cr
- Nursing VI 6 cr

The student should check with the Academic Advisor regarding the scheduling of challenge exams and also to insure curriculum progression. The student is responsible for fulfilling health requirements.

The designated faculty member notifies the Dean of the results of the challenge exam. The student is notified of the results of the challenge by the Dean within two weeks of the completion of the challenge.

A course may be challenged for credit one time only. Under no circumstances may a student take a re-examination. Review of the challenge examination is not permitted. If there is unsatisfactory achievement on a written challenge examination, the student must enroll in the course to earn the appropriate credit. If there is satisfactory achievement on the challenge examination, the student is granted the appropriate credit by examination.

The student will receive a copy of the Advanced Standing Report.

A fee of $20 per credit is charged for each challenge examination. The fee is payable at the Registrar’s Office any time before the testing date.

An official receipt is collected on the day of the examination and students not having this receipt will not be permitted to take the examination.

The student must sign a challenge exam contract indicating that he/she has read and will abide by the Rules and Regulations before taking each challenge examination. The signed form is filed in the student’s permanent record.
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, 1925, 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 annual Industrial Research, Inc. survey of new science buildings across the country. The School's specialized facilities include the Hugh C. Muldoon Model Pharmacy, animal operating room, electronics laboratory equipped with individual kits, bionucleonics laboratory, eight additional teaching laboratories, and a manufacturing pharmacy laboratory containing basic pharmaceutical manufacturing equipment and separate tableting and aerosol technology rooms.

PHILOSOPHY AND OBJECTIVES
The School of Pharmacy, as an integral part of the University, embodies as its own, the aims and objectives set forth by the University. Its primary purpose is to afford men and women with an education in the fields of Pharmacy and its allied sciences which will enable them to meet both the present and future demands of their chosen profession. Through a well-integrated curriculum which includes professional elective courses, laboratory work, careful supervision by experienced teachers, and coursework in the liberal and cultural areas, the School of Pharmacy seeks to develop the student both professionally and individually. The comprehensive and specialized nature of this 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 one of 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. Many pharmacists find employment as chemists or biologists 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 studies in other health professions leading to a second professional degree or an advanced degree in the basic pharmaceutical and medical sciences.

The Graduate School of Liberal Arts and Sciences of Duquesne University offers programs through the School of Pharmacy leading to the Doctor of Philosophy degree in pharmaceutical chemistry, and Master of Science degree in the fields of pharmacy, pharmaceutical chemistry, and pharmacology-toxicology.

The School of Pharmacy directs the professional program leading to the Doctor of Pharmacy degree in Hospital Pharmacy. These 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 of health physicist are available in hospitals and any laboratories and industrial facilities which use radioisotopes.
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 only in the third year of the five-year sequence. Legal requirements of all states are met with regard to graduation from an accredited college of pharmacy. Licensure 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. The 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 31 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 and Theology and six in the Social Sciences including Economics and ten credits chosen from either area in consultation with the advisor). Courses fulfilling the Theology requirement are listed under the Department of Theology in the College of Liberal Arts and Sciences section of this catalog. A minimum of 160 credits is required for graduation.

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 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 assumes no responsibility for such errors appearing in student records which may prevent the student from being graduated.

Curriculum

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*D—Didactic hours, L—Laboratory Hours, C—Credit hours

Courses are to be completed in the designated sequence.
Minimum credits for B.S. in Pharmacy Degree—160, sufficient elective courses must be taken to satisfy the minimum credit requirements.
AREAS OF CONCENTRATION

During the fourth year (earlier if possible) each pharmacy student is urged to select an area of concentration from one of the following areas: Community Practice, Institutional Practice, Industrial Practice, Radiopharmacy, or Pre-Graduate Study.

The course clusters represent depth in a professional area of choice. Students may make their own selection of courses in consultation with their advisors. The following courses are approved for the respective areas of concentration:

1. Community Practice
   29—Emergency Treatment
   50—Community Practice I
   59—Community Practice II
   All—Psychology
   All—Sociology
   201—Principles of Management
   39 41—Practical Pharmacy I, II
   567—Pathophysics
   200—Patient Education Techniques

2. Institutional Practice
   52—Hospital Pharmacy
   501—Manufacturing Pharmacy
   563—Pathology
   539—Bionucleonics
   567—Pathophysics
   39 41—Practical Pharmacy I, II
   54—Sterilization and Parenteral Pharmaceuticals

3. Industrial Practice
   29—Emergency Treatment
   501—Manufacturing Pharmacy
   502—Pharmaceutical Formulation
   539—Bionucleonics
   510—Advanced Bionucleonics
   52—Pathophysics
   541, 542—Radiological Health
   431—Introduction to Biostatistics

4. Radiopharmacy
   501—Manufacturing Pharmacy
   502—Pharmaceutical Formulation
   539—Bionucleonics
   540—Advanced Bionucleonics and Radio-Pharmaceuticals
   541—Radiological Health
   522—Spectral Methods of Analysis

5. Pre-Graduate Study

Students who elect this option must consult with the chairman of the department of their area of interest in order to select courses most adaptable to the program they desire to pursue. A combined B.S./M.S. program is available to qualified students.

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 Mercy Hospital’s 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 adviser to the Council on Medical Education of the American Medical Association. It is responsible for establishing and maintaining high standards of education in A&M-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 student must have a minimum quality point average of 3.0 in the sciences.
2. No student with a grade lower than C in any chemistry course will be considered for admission.

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, including Principles of Management). 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.
Fourth Year

The fourth year of the program will begin in June and continue for twelve consecutive months. Courses and laboratory assignments will be held primarily at Mercy Hospital. The following syllabus will be covered with 30 credits awarded for completion of the courses.

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<th>Courses</th>
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<td>71 Nuclear Pathology</td>
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All of the required course work, laboratories, supplies, facilities and faculty for the fourth year of the program will be provided by Mercy School of Medical Technology. The faculty of the School of Medical Technology is recognized as faculty at Duquesne University.

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 facilities 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.

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ADMISSION

Students who plan to enter any of the programs offered by the School of Pharmacy are encouraged to meet with the Dean of the School for a personal interview. Entrance requirements are listed under Admission Policies in the General Information section of this catalog. Applications 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 advisement 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 year of the pharmacy program. Procedures for entrance are outlined under Application Procedures in the General Information section.

All transfer students must be interviewed by the Dean or Assistant Dean of the School of Pharmacy. Students intending to transfer into the pharmacy program must have successfully completed the appropriate science and liberal arts prerequisites of the first two years 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 extenuating 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 requires the pharmacy students to complete a minimum of six semesters in residence as full-time students.

Advanced credit for courses completed 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 School's 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 and Challenge Examinations 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 professional technology program.

**Activities**

Instituted by student request, this fee of $25 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 fees, class dues and support of the pharmacy student newsletter, Phorum, and partial travel expenses for one required field trip to a pharmaceutical manufacturing firm. Payment is made at registration each semester. This fee is assessed 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 designated by the University. The fee 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 are basic requirements. 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 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 circumstance is responsible for notifying the office of the Dean of the School of Pharmacy. 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 requiring special assistance are urged to notify the class instructor before or at the first class.

2. **Academic Standards**

   All students who are admitted to the School of Pharmacy must maintain a 2.0 GPA (quality point average) in the required courses in the professional pharmacy curriculum throughout the program. Students who do not achieve a 2.0 GPA 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 GPA in all courses and in professional courses. A minimum 2.00 GPA in the pre-pharmacy science and math courses is required for entrance into the third year of the pharmacy program.

3. **Required Programs**

   Pharmacy students in the fourth year of the curriculum are required to participate in an industrial visit arranged by the School.

   The School of Pharmacy arranges for students to participate in a special course in surgical appliance fittings offered by a field representative of a manufacturer of such devices. The biennial programs are required for all pharmacy students in the last two years of the curriculum. Record of participation is made in the students' permanent files.

   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 setting may be required to conform to the health requirements of the hospital.

**STUDENT ORGANIZATIONS**

The Student American Pharmaceutical Association whose membership includes all pharmacy students registered in the last three years of the School of Pharmacy aims to promote their interests, scholastic, social and professional. Under its auspices, many worthwhile events are arranged during the school year. The executive committee meets regularly with the Dean and the faculty moderator to act as liaison between students and faculty. The annual membership fee includes one year's student membership in the 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.

The Alpha Beta Chapter of Rho Chi, national pharmacy honor society at Duquesne University, was organized to promote the advancement of the pharmaceutical sciences. Pharmacy students who have completed three and one-half years of work at the University level and have achieved a B average are eligible for membership. A maximum of 20 per cent of the class enrollment may be admitted to membership. Doctor of pharmacy candidates are eligible under the same conditions. Faculty and graduate students in the pharmaceutical sciences may also be invited to join.

Eta Chapter of Phi Lambda Sigma, a national professional pharmaceutical society, was chartered at Duquesne University in 1980. The society recognizes and encourages leadership in the profession of pharmacy. The society selects members who have completed
at least two and one half years in the pharmacy program and have demonstrated exemplary leadership qualities.

Tau Chapter of Lambda Kappa Sigma, an international pharmaceutical fraternity for women, was established 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 Beta Gamma Chapter of Phi Delta Chi, an international professional pharmaceutical fraternity, was chartered at Duquesne University in 1960. The fraternity endeavors to integrate academic, spiritual and social activities and thereby 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 in 1967. This international fraternity strives to develop industry, sobriety, and fellowship and to foster high ideals, scholarship, and pharmaceutical research while supporting all projects advancing the profession of pharmacy. Membership is open to students in pharmacy.

Class Organizations Each of the five classes is an officially recognized organization in the School of Pharmacy. Each class elects its own officers and conducts such programs and affairs as its members deem desirable toward achieving its goals. All students are included in these organizations regardless of major curriculum.

HONOR AWARDS

Allegheny Wholesale Drug Company Award. Annually an award of $25 is presented to the graduate who has shown outstanding ability and interest in the field of pharmacognosy.

American Institute of the History of Pharmacy Award. A recognition certificate and gift membership is awarded annually by the American Institute of History of Pharmacy for superior achievement in pharmaco-historical study or activity.

American Pharmaceutical Association Award. A certificate of recognition 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. Annually an award of $25 is presented to the graduate who has demonstrated an understanding of the value of the humanities and social sciences in his development as a professional person. This award is to be used for the purchase of books on any aspect of the humanities in which the student is interested.

Mary McPartland 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., New York City, 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., New York City, to the graduate who has in the opinion of the faculty attained unusual distinction in the work of pharmaceutical administration.

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 GPA of over 3.75.

Maunce H. Finnkepearl 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 the two members of the graduating class who have achieved the highest standing in the departments of pharmacology and pharmaceutical chemistry.

Samuel W. Curtis Award. Annually an award of $25 is presented to the graduate who has shown outstanding ability and interest in the field of pharmacetics.

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 scholastic 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 earns 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.

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. Annually an award is presented to the graduating student who has demonstrated through service, reporting, and activity, an avid interest in organization work.

Syntex 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 Pharmacy Interns, best exemplifies professionalism, ethics, and clinical practice.

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. Annually an award of $25 is presented to the graduating senior who demonstrates outstanding ability and interest in the area of Hospital Pharmacy.

Leonnard Company Award. A certificate and award of $150 to the graduating senior who has completed the degree program through unusual and extraordinary perseverance and determination in the opinion of the graduating class.

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 in the clinical program at Mercy Hospital.

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 curriculum requirements and the general University Graduation Requirements, as stated in 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 or 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 State Board of Pharmacy an 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 requirements 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 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 possessing a pharmacy education and to attract 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 for high school counselors on all matters relating to a pharmacy education and career. Pamphlets containing career information on pharmacy are also available through the Guidance Center. Inquiries should be directed to the Pharmacy Career Guidance Center, School of Pharmacy, Duquesne University, Pittsburgh, Pennsylvania 15219.

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, assists in the advancement of pharmacy by supporting the training of undergraduate and graduate students in industrial and research procedures, 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 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. Courses in the 800 series are generally restricted to Doctor of Pharmacy candidates.

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY AND PHARMACEUTICS

Chairman: Mitchell L. Borke, Ph.D.

Associate Chairman: Alvin M. Galinsky, Ph.D.

1 PHARMACEUTICAL ORIENTATION

Introduction to pharmacy. Discussion of various phases of pharmacy and their relationship to the profession as a whole. Pharmaceutical organizations are discussed and evaluated. The pharmaceutical literature is discussed and a brief history of pharmacy is presented. Lecture, one hour.

11 PHYSICAL PHARMACY

A course designed to acquaint the student with the theory on which the principles and processes of pharmacy are based. The theories of emulsification, drug extraction, isotonicity, hydrogen ion concentration, rheology, microemulsions, etc. are discussed and the instruments which are used in their measurements are described and utilized in the laboratory. Prerequisites: Mathematics 115, general physics, organic chemistry. Lecture, three hours, Laboratory, four hours.

12 PHYSICAL PHARMACY

A continuation of Physical Pharmacy 11. Prerequisite: Physical Pharmacy 11. Lecture, three hours, Laboratory, four hours.

14 PHARMACEUTICAL MATHEMATICS

A course designed to familiarize the student with the mathematical problems and calculations encountered in pharmaceutical practice. Lecture, two hours, Recitation, one hour.

16 BIOCHEMISTRY

Designed to emphasize primarily the manner in which energy is derived from food. Metabolism of carbohydrates, lipids, and proteins are discussed and interrelated. The function of enzymes, vitamins, and hormones is discussed in relation to their role in metabolism. The relationship of biochemistry to disease states is stressed. Prerequisite: Organic Chemistry. Lecture, three hours, Laboratory, three hours.

21 BIOPHARMACEUTICS AND DOSAGE FORMS

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 regimen. Prerequisite: Physical Pharmacy 12. Lecture, four hours.

22 BIOPHARMACEUTICS AND DOSAGE FORMS

A continuation of Biopharmaceutics and Dosage Forms 21 with emphasis on drug delivery systems. Prerequisites: Biopharmaceutics and Dosage Forms 21. Lecture, four hours, Laboratory, eight hours.

23 MEDICINAL CHEMISTRY

Relationship between chemical structure and the biological action of drug molecules. Emphasis is on underlying principles as well as specific therapeutic agents. Organization is by pharmacological classification, with chemical properties relating to mechanism of action, stability, biodistribution and metabolism considered for each class. Prerequisites: Physical Pharmacy 11, 12 or its equivalent. Lecture, three hours.

24 MEDICINAL CHEMISTRY

A continuation of Medicinal Chemistry 23. Prerequisite: Medicinal Chemistry 23. Lecture, three hours.

27 ANALYTICAL CHEMISTRY

Rigorous training in stoichiometric relationships and in the application of equilibrium principles, with laboratory experience in the principal methods of gravimetric and volumetric analysis. Prerequisites: Physical Pharmacy 11, 12 or Physical Chemistry. Lecture, three hours, Laboratory, seven hours.
26 ORGANIC PHARMACEUTICAL ANALYSIS
A course devoted to the identification and determination of the relative amounts of active constituents in pharmaceutical and medicinal substances. Prerequisite: Analytical Chemistry 27 Lecture, three 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 PHARMACOGNOSY
Chairman Norbert A Milewski, Ph D

26 PHARMACOGNOSY
4 cr
Deals with the important medicinal agents which are derived from natural sources. Emphasis is placed on the medically important antibiotics, alkaloids, glycosides, volatile oils, fixed oils, vitamins, carbohydrates, and enzymes. Includes a description of the natural sources of the drug, its precise chemical nature, its pharmacological effect on the body, and its importance in medicine today. Prerequisite: Organic Chemistry Lecture, four hours

35 MEDICAL MICROBIOLOGY AND IMMUNOLOGY
4 cr
Covers the general characteristics and morphology of bacteria, the important staining techniques, methods of growing bacteria on artificial media, testing the effects of chemotherapeutic agents on pathogenic bacteria, and immunology. It includes discussions of the important bacterial, rickettsial, viral, and protozoal diseases along with worm infestations, their causes, symptoms, and treatments. Lecture, three hours, Laboratory, three hours

36 PUBLIC HEALTH
3 cr
A discussion of Public Health measures such as immunization, water purification, sewage disposal, treatment of contaminated individuals and objects, control of rodents and insects, and the relationship of these to the spread of disease. Health statistics, disaster preparedness, and environmental pollution are also discussed. Lecture, three hours

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

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 beginning their collegiate studies. Admission to this course for students who have completed Pharmacology 33 or its equivalent is by approval of the instructor.

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 this course. Lecture, one hour a week. Open to students who have not completed Pharmacy 33.

5 PHARMACOLOGY AND TOXICOLOGY OF NON-PRESCRIPTION DRUGS
3 cr
A course designed to familiarize students with the pharmacological and toxicological properties of over-the-counter drugs. The course will prepare the student to counsel the public on the appropriate use of OTC drugs, to select the proper non-prescription drug for a particular disease state, and to determine if treatment with a non-prescription drug is appropriate. Lecture, three hours

7 CHEMICAL TESTING FOR INTOXICATION
3 cr
Deals with the pharmacology, toxicology, and biochemistry of ethanol and the physical and technical aspects of breath analyses. Various instruments will be discussed and the Breathalyzer will be used, specifically. This course is approved by the State of Pennsylvania, Department of Transportation and is offered only to individuals associated with law enforcement agencies. One week workshop course

17 ANATOMY AND PHYSIOLOGY
4 cr
An integrated course of the structure and function of tissue and organs. The organ systems of vertebrate species are discussed as integrated functional units. Laboratory consists of lecture presentations of gross anatomy and laboratory procedures including the microscopic examinations of tissues, hematology, and the clinical appraisal of physiological functions. Prerequisite: General Biology 112. Lecture, three hours, Laboratory, three hours

18 ANATOMY AND PHYSIOLOGY
4 cr
A continuation of Anatomy and Physiology 17. Prerequisite: Anatomy and Physiology 17. Lecture, four hours

29 EMERGENCY TREATMENT
3 cr
A lecture-demonstration course. The course teaches how to render first-aid cases of emergency, while awaiting the arrival of a physician. Special emphasis is placed on emergencies which the pharmacist is most likely to be confronted with such as, epileptic seizures, heart attacks, fainting, diabetic coma, etc. Prerequisites: Anatomy and Physiology 17 and 18. Lecture, three hours, demonstrations included during lecture hours.

33 PHARMACOLOGY
3 cr
A basic course in pharmacodynamics and pharmacotherapeutics. Special emphasis is placed on sites and mechanisms of action of therapeutic agents. Prerequisites: Anatomy and Physiology 17 and 18. Lecture, three hours

34 PHARMACOLOGY
4 cr
A continuation of Pharmacology 33. Prerequisite: Pharmacology 33. Lecture, four hours

40 PHARMACOLOGY
3 cr
A continuation of Pharmacology 34. Lecture, three hours

DEPARTMENT OF PHARMACEUTICAL ADMINISTRATION
Chairman Anthony J. Amadio, M.B.A.

12 PHARMACEUTICAL LAW
3 cr
A course designed to acquaint the student with the philosophy of law and its relationship to pharmacy. Federal, state, and local laws and regulations pertinent to the handling and sale of drugs.
cosmetics, narcotics, poisons, and alcohol are discussed. A review of amnestic laws, fair trade regulations, and other court decisions of importance to the pharmacist is included. Elements of business law and civil responsibilities of the pharmacist are also discussed. Lecture, three hours

38 PHARMACY ADMINISTRATION 3 cr
A course designed to familiarize the student with the laws of the diversified social, political, economic, and legal forces affecting the practice of pharmacy. The course considers the persons, places, and activities involved in providing health care services with special emphasis on the role of the community pharmacist. Lecture, three hours

39 PRACTICAL PHARMACY I 3 cr
Practical Pharmacy Program required of all final year pharmacy students and involving placement in operating pharmacies with a pharmacist preceptor. Off-campus placement may be necessary. Note: Calendar change for fifth year students may be required.

41 PRACTICAL PHARMACY II 3 cr
An extension of Practical Pharmacy 39 required for all final year students.

58 COMMUNITY PRACTICE I 3 cr
The course considers the principles and functions of management as applied to a community pharmacy operation so that the objectives of the pharmacist-manager are attained with maximum efficiency. Prerequisite: Pharmacy Administration 37. Lecture, three hours

59 COMMUNITY PRACTICE II 3 cr
The course concerns itself with the operational aspects of a community pharmacy with emphasis on the business or commercial matters pertinent to a successful operation. Prerequisite: Pharmacy Administration 37. Lecture, three hours

200 PATIENT EDUCATION TECHNIQUES 3 cr
A course designed to examine current counseling and communication techniques in terms of how they relate to patient education regarding personal health problems and compliance with medication regimens. The course will examine in detail basic interviewing techniques. Prerequisite: Introductory course in sociology and/or psychology. Lecture, two hours, Laboratory, two hours.

201 SOCIAL AND BEHAVIORAL ASPECTS OF ILLNESS AND HEALTH 3 cr
A course designed to examine the current theory and research in the psycho-social correlates and consequences of illness and health. Topics will include the general areas of social stress research, theories of psycho-social medicine, the impact of social environment upon health, and the impact of illness upon the emotional and social functioning of the person. Lecture, three hours.

805 PATIENT COMMUNICATION TECHNIQUES 3 cr
A course designed to develop in the student the ability to understand and communicate professionally with other medical disciplines and with patients. Lectures, presentations, role playing, case material, film, and tape will be used. Group time three hours weekly.

DEPARTMENT OF CLINICAL PHARMACY
Chairman: Thomas J. Mattei, Pharm. D

31 PROFESSIONAL AND CLINICAL PRACTICE I 4 cr
A course designed to prepare the student for professional pharmacy practice. Didactic, laboratory, and clinical experiences are integrated to develop the student's ability in providing pharmaceutical services to patients and to other members of the health team. Emphasis is placed on the use of modern medicinals in a variety of patient, sociological, and disease situations. Advanced teaching techniques utilizing case discussions, the computer and clinical interactions with patients requires the student to pool his background of social, physical, and biological sciences in dealing with complications of modern drug therapy. Prerequisite: Biopharmaceutics and Dosage Forms 22, Pharmacology 34. Lecture, three hours, Laboratory, six hours.

32 PROFESSIONAL AND CLINICAL PRACTICE II 4 cr
A continuation of Professional and Clinical Practice 31. Prerequisite: Professional and Clinical Practice 31. Lecture, three hours, Laboratory, six hours.

52 HOSPITAL PHARMACY 3 cr
An introductory course designed to acquaint the student with the history, organization, and development of pharmacy practice in hospitals. The responsibilities of the pharmacy service in the modern hospital are discussed. Field trips to area hospitals complement the lecture materials. Prerequisite: Physical Pharmacy 12. Lecture, three hours.

54 STERILIZATION AND PARENTERAL PHARMACEUTICALS 2 cr
A six-week lecture/laboratory mini-course for the practical application of the basic principles of sterilization, aseptic techniques, parenteral processing and quality control to the compounding of extemporaneous parenterals and intravenous admixtures in the hospital pharmacy. Lecture, two hours, Laboratory, weekly.

DEPARTMENT OF MEDICAL TECHNOLOGY
Director: Jeanne A. Cooper, M.D.
Education Coordinator: M. Elaine Linkhauer, M.T. (ASCP)

61 CLINICAL CHEMISTRY 7 cr
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 2 cr
The study of renal function and its abnormalities as portrayed by alterations in the composition of the urine.

63 HEMATOLOGY 5 cr
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 3 cr
Essentials and importance of proper selection of blood for transfusion, pretesting methods, records, and administration of blood. Also included are studies of tests pertaining to isosensitization.

65 BACTERIOLOGY 5 cr
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 2 cr
Methods of identification of the various parasites infesting man, with detailed study of their morphology and habitat.

67 IMMUNOLOGY 2 cr
Study of the procedures used in analysis of immune mechanisms of the body, and their application in disease processes.
69 MYCOLOGY  
1 cr  
The study of the pathogenic fungi, the diseases they cause, and the technical methods of identification.

70 VIROLOGY  
1 cr  
The study of the viruses causing disease and the technical methods of identification.

71 NUCLEAR PATHOLOGY  
2 cr  
The study of the use of radioisotopes in the diagnosis and treatment of disease.

DEPARTMENT OF RADIOLOGICAL HEALTH  
Chairman Mitchell L. Borke, Ph.D.

51 RADIOLOGICAL HEALTH PRACTICE  
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 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.

306 APPLIED ELECTRONICS LABORATORY  
2-3 cr  
This course seeks to combine a 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, impedance matching, linear and digital devices. Emphasis will be on proper use of instrumentation rather than on advanced principles of design. Prerequisite: Permission of instructor.

539 BIONUCLEONICS  
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: Chemistry 121, 122, Physics 211, 212 or general physics.

540 ADVANCED BIONUCLEONICS AND RADIO-PHARMACEUTICALS  
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.

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.

RECOMMENDED PROFESSIONAL ELECTIVES  
The following courses offered by the Graduate Department of Pharmaceutical Sciences are available to qualified upperclassmen in the School of Pharmacy:

1. MANUFACTURING PHARMACY  
2. PHARMACEUTICAL FORMULATION AND DEVELOPMENT  
3. ADVANCED BIOPHARMACEUTICS  
4. SPECTRAL METHODS OF ANALYSIS  
5. MEDICINAL CHEMISTRY  
6. BIONUCLEONICS  
7. ADVANCED BIONUCLEONICS AND RADIO-PHARMACEUTICALS  
8. RADIOLOGICAL HEALTH  
9. BIOSYNTHESIS OF NATURAL PRODUCTS  
10. GENERAL TOXICOLOGY  
11. PATHOLOGY  
12. PATHOPHYSIOLOGY  
13. TOXINS: THEIR CHEMISTRY, BIOLOGY, AND TOXICOLOGY  

Descriptions of these courses may be found in the Graduate School of Liberal Arts and Sciences Catalog.

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  
231, 232 DEVELOPMENT OF THE UNITED STATES  
305 HISTORY OF MEDICINE  
307, 308 HISTORY OF SCIENCE  
204 INTERPERSONAL COMMUNICATIONS  
121 ELEMENTS OF ECONOMICS  
203 GENETICS  

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) 207 plus courses in Film as Literature, Science Fiction, Literature of Crime and Detection Popular Culture Series
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) 231, 232 Development of the U S , 222 Industrialism
3) Man in History, World History, Western Civilization
4) Non-American History Sequence

Department of Classics—
1) 121 or 122, 123, 245, 246, 240 Greek Civilization
2) 121 or 122, 123, 246, 247, 248, 241 Roman 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.
Reserve Officers’ Training Corps

DEPARTMENT OF MILITARY SCIENCE

Department Head: Colonel E. L. Fitzsimmons, M.P.A.

PROGRAMS

The Army Reserve Officers’ Training Corps (ROTC) program is open to male and female students on a voluntary basis. Two-year and four-year programs are offered, both are taken in conjunction with the required course of study in all the University’s undergraduate degree programs. Interested incoming students are encouraged to enroll immediately so that the ROTC program and their academic major are phased properly for graduation.

For entry into the two-year program, the student must have two academic years remaining, either at the undergraduate or graduate level, or a combination of the two.

The ROTC program is a cooperative effort contractually agreed to by the United States Army and Duquesne University as a means of providing junior officers in the interest of national security. The goal of this cooperative enterprise is the production of well-educated young men and women with leadership potential for positions within the United States Army Reserves, the National Guard, and the Active Army. Only the latter involves a full-time commitment on the part of the commissioned graduate; three (3) years for the non-scholarship student, four (4) years for the scholarship student. The commissioned graduate who enters the Reserve or National Guard is obligated, after a 90 day officer orientation course, to serve one weekend per month and two-weeks active duty for training each summer.

FOUR YEAR

The first two years of the Four Year program are called the Basic Course. It provides an introduction to military science through instruction in fundamental military skills. The main purpose of the Basic Course is to identify leadership potential and to prepare the student for entry into the Advanced Course. In some cases, the Basic Course can be compressed into less than a two-year period if the student meets certain prerequisite conditions.

Basic Course curriculum

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<tr>
<th>Freshmen</th>
<th>Fall Semester</th>
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<tr>
<td>MS 205, 208 ORIENTEERING I, SURVIVAL TECHNIQUES</td>
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<td>MS 100 CADET CORPS LAB</td>
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<th>Sophomores</th>
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<tr>
<td>MS 203, 207 MARKSMANSHIP, GENERAL MILITARY SUBJECTS</td>
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<td>MS 100 CADET CORPS LAB</td>
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Advanced Course curriculum

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<tr>
<td>MS 301, 302 ADVANCED CAMP SEMINAR</td>
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<td>MS 100 CADET CORPS LAB</td>
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<th>Seniors</th>
<th>Fall Semester</th>
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<tr>
<td>MS 401, 402 PROFESSIONAL SEMINAR</td>
<td>4 cr</td>
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<td>MS 100 CADET CORPS LAB</td>
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<tr>
<td>Military Science</td>
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<tr>
<td>205 Orienteeing 1</td>
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<tr>
<td>100 Cadet Corps Lab</td>
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SAMPLE PROGRAM

Freshman Year (MS I)

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<td>205 Orienteeing 1</td>
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Sophomore Year (MS II)

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Junior Year (MS III)

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<td>Academic Major</td>
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<tr>
<td>302 Advanced Camp Seminar II</td>
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Summer

Attendance at six-week ROTC Advanced Camp

Senior Year (MS IV)

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<td>100 Cadet Corps Lab</td>
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<tr>
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MILITARY SCIENCE RELATED ELECTIVES

It is strongly recommended that students who are interested in the Advanced Course select courses from the military science related subjects listed below to supplement their academic major. These subjects have been identified for their strong correlation to the general knowledge requirements of the U. S. Army officer.

COLLEGE OF LIBERAL ARTS AND SCIENCES

English

101, 102 ENGLISH COMPOSITION

History

231 DEVELOPMENT OF THE U.S. TO 1877
232 DEVELOPMENT OF THE U.S. SINCE 1877
351, 352 DIPLOMATIC HISTORY OF THE U.S. I & II
358 CIVIL WAR AND RECONSTRUCTION
367 THE IMPACT OF SCIENCE ON SOCIETY
370 CURRENT HISTORY
399 THE SEARCH FOR IDENTITY—U.S. SINCE 1945
Army ROTC Scholarships

The Professor of Military Science invites both ROTC and non-ROTC students to apply for three and two-year scholarships. The scholarships are awarded on a merit basis, with preference given to students with a financial need. Applicants must be highly motivated for active military service. The scholarships include tuition, fees, and textbooks. For details, see ROTC Scholarships in the Financial Aid section, page 188.

Military Science Curriculum

The Common Hour and Cadet Corps Laboratory 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.

The Basic Course (Military Science Levels I and II)

MIL SCI 203 Marksmanship

With safety as a basic theme, the student is taught how to fire the small bore rifle (caliber 22) from the standard firing positions. The course prepares the student for competition in rifle matches.

MIL SCI 205 Orienteering I (or I)

The students learn the basic fundamentals of reading a map and of using a compass. In addition, they learn how to navigate a course overland in the shortest possible time.

MIL SCI 208 Survival Techniques

This course is designed to build self-confidence, mental discipline, and physical stamina. You study in the classroom but test outdoors. Students learn first aid and how to negotiate obstacles, build rope bridges and rappel. They are also taught how to find natural food and trap animals.

MIL SCI 207 General Military Subjects

Physical training (PT), basic marching movements, and rudimentary techniques of military instruction are the primary topics of this course. Once having learned the skills, the student is taught how to teach them.

The Advanced Course—Multiple Entry Points

Students who have two academic years remaining can reach the MS III level by either completing the Basic Course as described above or by compiling a minimum of 90 hours of contact with ROTC faculty in on-campus classroom training and/or off-campus weekend adventure training and formal social activities. Students can also enter the MS III level by having completed at least one year of active enlisted service with either the Army, Air Force, Navy, Marines, or Coast Guard. In addition, a student who has served with the National Guard or one of the Armed Forces Reserve units and has completed Basic Training, as a minimum, can qualify for entry into the Advanced Course.

Additional ways students can gain access to the Advanced Course are as follows:

1. To have completed the Junior ROTC Course during high school
2. To have attended a two-week ROTC Summer Compression Course offered locally
3. To have attended the ROTC Basic Camp (three cycles offered each summer) at Fort Knox, Kentucky

Prior to entering the Advanced Course, all students must execute a contract with the Army stipulating the student's desire and commitment to pursue a commission through the ROTC program. In return, the student is paid $100 per month for ten months of the academic year. The total earnings for the entire Advanced Course is approximately $2,500.

Early Commissioning

Many students, through an aspect of the multiple entry point concept, are able to complete requirements for the commission prior to graduation. 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.
THE ADVANCED COURSE (Military Science Levels III and IV)

MIL SCI 301 and 302 ADVANCED CAMP SEMINAR
This course requires a full school year to complete. In addition to the 2 hours per week of instruction and practical application exercises on campus, the student periodically attends training exercises on weekends throughout the school year. The course objective is to prepare the student for the six-week Fort Bragg, NC, ROTC Advanced Camp which is normally attended the summer following completion of MS III. During the conduct of the seminar, students will continue to develop in the areas of map reading (orientation), physical training, and marksmanship. In addition, the following subjects will be added: small unit tactics, first aid, weapons familiarization, radio communications, and leadership fundamentals.

MIL SCI 401 and 402 PROFESSIONAL SEMINAR
To reach the MS IV level, a student must satisfactorily complete MS III, to include Advanced Camp. In justifiable cases, however, students are permitted to take Advanced Camp after MS IV. The MS IV student spends two (2) hours per week (both semesters) in the discussion of subject matter designed to facilitate the transition from student/cadet to Second Lieutenant. Course matter deals with military law and the military justice system. In addition, the student obtains an understanding of the responsibilities of an officer relative to his/her people and equipment at the platoon and company levels.

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.

Like the Common Hour, weekend operations are cadet run and cadre 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, a Parents Reception and Cadet Awards Night, and the Annual ROTC Commissioning Program.

All of these activities (adventure and social) are conducted with the combined elements of the Pittsburgh Senior ROTC Instructor Group (PSRIG). Universities represented, in addition to Duquesne, are the University of Pittsburgh, Carnegie-Mellon University, and those institutions in the city which have students cross-enrolled into one of the three detachments of the PSRIG.

AIR FORCE RESERVE OFFICER TRAINING CORPS (AFROTC)

The Air Force Reserve Officer Training Corps (AFROTC) is open to all Duquesne students through a cross-enrollment agreement with the University of Pittsburgh. The student may take courses for information or to obtain a commission as an officer in the United States Air Force. There is both a four-year program and a two-year program.

In the four-year program, a student takes the General Military Course (GMC) during the freshman and sophomore years, attends a four-week summer training program, and then takes the Professional Officer Course (POC) in the junior and senior years. A student is under no contractual obligation to the Air Force until entering the POC or accepting an AFROTC scholarship. In the two-year program, a student attends a six-week summer training program and then enters the POC. In addition to the academic portion of the curriculum, each student attends one hour of leadership lab each week. Cadets who are pilot candidates also receive 25 hours of free flight instruction during their senior year. All GMC and AFROTC scholarship students receive $100 per month, tax free. AFROTC courses are open to all students in the University, regardless of whether or not they are enrolled in the AFROTC program. Four-, three-, and two-year scholarships are available on a competitive basis to qualified students. AFROTC scholarships cover all costs of tuition, books, incidental and lab fees, in addition to paying each recipient $100 per month.

GENERAL MILITARY COURSE

The subject of the freshman and sophomore years is developed from a historical perspective and focuses on the scope, structure, and history of military power with emphasis on the development of air power. The freshman courses explore the role of U.S. military forces, the Air Force in particular, through a study of the total force structure, strategic offensive and defensive forces, general purpose, forces, and support forces. The sophomore course also includes a review of the Military Justice System.

The Professional Officer Course, taken during the cadet's junior and senior years, concentrates on three main themes: the concepts and practices of leadership, the concepts and practices of management, and the role of national security forces in contemporary American society. During the first term of the junior year, the course concentrates on a study of the management function--planning, organizing, coordinating, directing and controlling. Basic and advanced management techniques, as found in the military and industrial environment, are explored. The second term deals with the application of general concepts of leadership to Air Force situations. As a basic study of human behavior and human relationships, the course emphasizes the similarities between the problems encountered in the military and civilian environment. The first term of the senior course concentrates on the nature of the American military profession, the role of the military in a democratic society, the fundamental values and socialization process, and the framework of defense policy. During the second term, the course concentrates on the strategic options available to the U.S. and on the manner in which policy choices are made. The course also includes a review of the Military Justice System.

For details about the two programs as well as information on the courses, scholarships, flying lessons, and base visits, interested students are encouraged to contact the Air Force ROTC detachment at the University of Pittsburgh, 624-6397, or write to the Professor of Aerospace Studies, University of Pittsburgh, Pittsburgh PA 15260.
AFROTC COURSE DESCRIPTIONS

GENERAL MILITARY COURSE

AS 001  AIR FORCE TODAY  1 cr *
Introductory course exploring the military as a profession, including Control of U.S. Armed Forces, functions and organization of the U.S. Air Force, organization and operations of U.S. strategic offensive forces, the military and human rights

AS 002  AIR FORCE TODAY  1 cr *
Introductory course exploring U.S. general purpose and defensive forces including mission and organization of the major U.S. Air Force Commands and separate operating agencies, major functions and conduct of joint service military operations. Discusses air defense, detection systems, close air support and air supremacy

AS 003  DEVELOPMENT OF AIR POWER  1 cr *
Introductory course in history of air power, from beginning of manned flight through the end of World War II, with emphasis on concepts governing employment of air power

AS 004  SEMINAR IN THE DEVELOPMENT OF AIR POWER  1 cr *
Introductory course in the history of air power from World War II to the present, with emphasis on concepts governing employment of air power

PROFESSIONAL MILITARY COURSE

AS 113  MANAGEMENT AND LEADERSHIP  3 cr *
A study of managerial communication, concepts and techniques of decision making, and the basic functions of management with particular emphasis on applications for Air Force officers

AS 114  MANAGEMENT AND LEADERSHIP  3 cr *
An interdisciplinary approach to leadership which includes study of human behavior and relationships, motivation, professional ethics and leadership styles. Communication skills are stressed through written and oral assignments

AS 115  NATIONAL SECURITY FORCES  3 cr *
Discusses nature of the military profession, civilian-military relationships and changes occurring within the American military. Examines characteristics of officer professionalism and the significance of public opinion to the military

AS 116  NATIONAL SECURITY FORCES  3 cr *
Discusses contemporary strategic thought, strategic options open to U.S., and nature of projected security challenges. Examines processes of defense policy making and identifies main institutional participants

*Credit value is based on University of Pittsburgh criteria. Actual value toward graduation at Duquesne University is based on individual student and school requirements. Prospective students should contact their advisors for further information.
Student Services, Programs and Organizations

DEVELOPMENTAL SERVICES

DEAN OF STUDENTS OFFICE
The Dean of Students Office provides leadership for coordination of and continuity to several services, programs and policies which are designed to meet the needs of students. Among these services and programs are those relating to personal counseling, University judicial system, orientation, disabled students, international students, commuter students, college skills and honor societies. There is also a Notary Public in the Dean of Students Office available to students.

These services provide individual students with a constant source for personal, social and cultural growth as well as access beyond the classroom to the larger life of the University community. The student has the opportunity to benefit from a variety of experiences with fellow students, faculty members and administrators as well as initiating new programs, implementing change and participating in the essential processes of University governance on many levels.

As chief officer of the Student Services Division, the Dean of Students also coordinates the following departments: Athletics, Health Services, Residence Life, Duquesne Union and Duquesne University YMCA.

CENTER FOR ACADEMIC AND CAREER DEVELOPMENT (CACD)
The Center for Academic and Career Development (CACD) is a coordinated guidance, counseling, referral, and consultative program within Duquesne University, comprised of three services: Career Planning and Placement, Learning Skills Program, and Testing Bureau. The Center provides for both direct counseling and guidance service to students, assisting them through the educational process and the career development process. Through the Center, a student can seek any or all of the following services: academic planning, tutoring, academic skill development, vocational guidance, career planning, career information, job placement assistance, academic skill assessment, career assessment and personality assessment. Also, students can receive indirect assistance through referral to appropriate University and community programs. The Center can further assist all University departments and divisions as a source for their student referrals and as a consultative service for occupational, community and University surveys of academic and career needs.

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.

Any student group or academic department may contact Career Planning and Placement for aid in developing a career program and/or in securing a career speaker.

The part-time and summer employment program is important to students in financing their education and to those seeking practical experience to augment college training. Placement in campus job is largely, though not totally, dependent upon financial need.

Part-time and summer jobs in the community are also available, with new listing arriving daily.

Students and alumni are invited to call (434-6644), or visit (305 Administration Building). Career Planning and Placement. Hours are 8:30 A.M.—6:00 P.M. Monday and Thursday, and 8:30 A.M.—5:00 P.M., Tuesday, Wednesday and Friday.

Learning Skills Program
The Learning Skills Program, located on the third floor of the Administration Building, is an ancillary academic service, whose primary 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 are offered 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 and study skills as well as to assist students experiencing academic difficulties.

The program is free to all Duquesne University students. Appointments can be made by phoning 434-6661. Hours are 8:30 A.M. to 5:30 P.M., Monday through Friday.

Testing Bureau
The Testing Bureau provides counseling to students who have questions or concerns relating to some aspects of their personal and/or academic life. The name implies tests and inventories are incorporated whenever appropriate to aid in compiling as much information about students’ abilities, interests, and personality as possible, insofar as these relate to their concerns. The test results are used in conjunction with extensive interviews in order to facilitate the resolution of problems by looking at alternatives and trying to formulate viable plans.

The Testing Bureau has assisted students to make career choices, understand their abilities, interests, and personality factors, look at alternative careers, understand personal concerns, acquire referral information to University and neighborhood organizations, and acquire information concerning applications for national and other standardized tests. (example GRE, SAT, MAT, LSAT, CLEP, etc.)

The Testing Bureau is open, free of charge, to all Duquesne students, and is located in Room 308 of the Administration Building. Appointments may be made by telephone (434-6204). Hours are 8:30 A.M.—4:30 P.M., Monday through Friday.

DISABED STUDENTS
The Dean of Students Office coordinates and provides services available to students with disabilities. The office serves as an advocate for disabled students at Duquesne—surveying the needs of those students and developing programs to meet those needs.

Specific services currently available include reading, writing and typing service for blind or dyslexic students, orientation to campus facilities, mobility guides, and tapes of University events and recreational activities.

The Dean of Students Office serves as a liaison with the Registrars Office in changing classroom locations, if necessary, for students in wheelchairs, with the Department of Public Safety in obtaining special parking permits for disabled students, and with the Affirmative Action Officer and Physical Plant in identifying and correcting physical barriers.

The newly formed Disabled Students Organization (Delta Sigma Omicron) whose membership includes disabled and non-disabled students, serves as a focus for services and programs for disabled students.
INTERNATIONAL STUDENT ADVISEMENT

The responsibility of the International Student Advisor is to be of service to all international students in the area of personal counseling and adjustment. Other services include preparation of forms to obtain employment, extend their temporary stay, and to do practical training. Assistance is also provided for passport renewal.

The Advisor’s office, which is part of the Dean of Students Office, is in Room 309, Duquesne Union.

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 his ability to find his 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, which is located on the first floor of the Guidance Building. Hours are 8:30 A M to 4:30 P M, Monday through Friday.

RESIDENCE LIFE

Residence Life is dedicated to the task of creating an environment in which a student can grow and develop as a total person. Its program is based on two assumptions: 1) the student’s residence hall living experience can be an important part of the total university education, and 2) the residence hall staff with a defined educational mission can greatly enhance the opportunities for students to profit from their residence hall experience. Therefore, it is the purpose of Residence Life to facilitate the personal and academic growth of student living by striving to make the whole of residence life an educational experience. To this end, the professional and resident assistant staff will provide the wherewithal to facilitate such development.

Recognizing that each individual has unique talents and potentials, every effort is made to create a residence hall environment that is acceptable to each individual and open to his or her effort on this environment. It is the student who, actively becoming part of environment, enriches his or her own development. It is this aim that university living strives to accomplish.

In the belief that residence living adds to the educational opportunities of the individual student, the University reserves the right to require all undergraduate students who do not commute from their permanent home of residence to reside in University residence halls. Availability of space currently limits implementation of this requirement to freshmen and sophomore students.

Residence Hall space has been at a premium. Many students have not been able to reside on campus because they did not turn in their room contract and $100 deposit. Therefore, it is imperative that students wishing to live in the Residence Halls complete and return their contract and deposit as early as possible since students are assigned available space on a first-come, first-serve basis.

The University does not accept the responsibility for loss or damage (from any cause) to the personal property/effects of the student, nor will the University assume responsibility for any personal liability while the student is a resident. It is suggested that students carry personal liability and property insurance.

HEALTH SERVICES

The University Health Service is located on the second floor of the Duquesne Towers Residence Hall. Nursing service is available Monday through Friday 8:30 A M to 9:00 P M, Saturday and Sunday 1:00 P M to 5:00 P M. A physician is available Monday through Friday at specified hours.

Primary health care is given to all resident students and to commuter students who have enrolled in the University Commuter Health Plan. Emergency care is given to faculty, staff, and visitors. A completely equipped ambulance is maintained by the University. Should an emergency occur the Department of Public Safety should be contacted immediately at 434-6002 to provide services of EMT’s. Treatment or diagnostic procedures by non-University physicians, clinics, or hospitals must be paid by the student or his family.

HEALTH INSURANCE

It is recommended that each student carry some form of health insurance. The University provides a Student Health Care Program which has been designed to meet the needs of the student and is priced lower than individual health insurance policies. Complete information about this insurance plan may be obtained from the University Insurance Officer, Second Floor of the Administration Building. Note: The University is not responsible for medical expenses resulting from participation in intramural sports.

ACTIVITIES AND FACILITIES

Athletics

Duquesne University is a member of the National Collegiate Athletic Association, the Eastern Athletic Association, the Association for Intercollegiate Athletics for Women, the Eastern Association for Intercollegiate Athletics for Women, and the Penwood West Conference. The University follows the rules of these organizations in determining a student’s eligibility for a varsity team. The Athletic Department supports the following varsity teams: baseball, basketball, cross country, football, golf, rifle, tennis, women’s basketball, women’s tennis, women’s volleyball, men’s swimming/diving, women’s swimming/diving, as well as club bowling and hockey. The golf, rifle, bowling, and cross country teams are open to both men and women athletes.

Prospective candidates for any of the teams may obtain information from the Athletic Office on the Sixth Floor, Duquesne Union. Duquesne’s women’s varsity basketball, tennis, swimming/diving, and volleyball teams compete with women’s teams from other colleges and universities in the tri-state area. The bowling team competes in the Club League of Western Pennsylvania. Candidates for all teams, except football, bowling, swimming, and hockey may apply for athletic grants-in-aid.

The football program competes in NCAA Division III, and does not provide any athletic grants. The team competes in the tri-state area, and those interested in participating in football should contact Coach Dan McCann through the Athletic Department.

DUQUESNE UNION

Purpose

The Duquesne Union is more than a unique building. It is an organization, a program, a service, an experience, and a spirit that has spread through Duquesne since it opened in March 1967. It is a unique partnership of professional staff, faculty and students working together to provide the experiences necessary to develop mature effective members of society.

Participation in the Union offers individuals the experiences they need to develop their unique talents and personality, and allows them to synthesize and express their ideas and beliefs. Included in this is the opportunity to learn and apply leadership techniques, and plan and present programs and activities for the campus and community.

With a goal of community, all aspects of the Union—programs, facilities, and committees—are open to the entire campus. It is not the “Student” Union, but the Duquesne Union.
Union Staff

The Duquesne Union Staff consists of the Director, the Assistant Director, Operations, the Assistant Director, Programs, the Recreation Center Director, the Union Media Coordinator, the Coordinator of Scheduling and Student Activities, the Information Center Supervisor, and a Graduate Assistant.

Collectively, the Union Staff provides advice and assistance for all phases of campus programs, and establishes goals for, produces and presents a balanced series of cultural, educational, social and recreational programs which strives to meet the University Community’s needs.

This includes the PS Minicourse program, a series of non-credit classes offered each semester to provide experiences allowing an individual to expand his horizons and make more creative and meaningful use of leisure time.

Also included is LOTS, Leadership Orientation Training Session, which is a workshop and retreat sponsored each year for current and perspective student leaders. This program offers training and experiences in values clarification, time management, group process, organization and the communication skills required of effective leaders.

While the staff works most closely with the Union Program Board, services also extend to all students, faculty, staff and administration.

Union Program Board

The Union Program Board is a student organization designed to enrich the entire Duquesne Community. The UPB, through its various committees, provides cultural, recreational, educational and social programming for the entire campus.

The UPB provides a variety of entertainment including feature films, art exhibits, concerts, guest speakers, dance and theatre performances, and any other creative programming ideas that its members come up with. It also offers such services as promotion resources for other campus organizations and groups.

The UPB offers its members a chance to gain effective skills in leadership, group process and organization, and communication. It also provides the opportunity for students, faculty, administration and alumni to interact and get to know and understand one another through informal association.

The UPB consists of five committees.

The Committee on the Arts (COTA) strives to enrich Duquesne with fine arts and crafts exhibits and workshops, sponsors student and professional dance, theatre and mime performances, and offers various discount trips to such places as museums, galleries, Fallingwater and New York City.

The Social Committee seeks to satisfy various musical tastes while complimenting the social programs sponsored by other organizations on campus. These include concerts, TGIFs, magic, hypnotists, coffeehouses, the film series, Sound Theatres, and other social events.

The Forum Committee presents speakers as well as dramatic presentations concerning topics of contemporary interest. They also utilize campus resources in sponsoring mini-lectures on special subjects suggested by the faculty or administration.

Special events such as the College Bowl and the Union Christmas and Birthday parties are handled by the Union Affairs Committee. This Committee is also responsible for recruiting and the application process of UPB members.

The Promotion Committee serves all the other committees and student organizations with creative ideas in advertising and publicity for on campus, and also publicizes the Union through newsletters and activities calendars. Included in this is Dial-An-Activity, a free promotional telephone service for campus events (ext. 6696).

Everyone is welcome to join the Union Program Board and may do so by obtaining an application in the Union Staff Office (third floor Union).

Recreation Center

The Recreation Center, located on the First Floor, provides a wide variety of recreation activities including open and league bowling, shoe rental, billiards, ping pong, pinball machines, and various table games. Several tournaments, some offering regional and national competition, are held throughout the year.

During the academic year, the center operates from 9:00 a.m. to midnight, Monday through Thursday, from 9:00 a.m. to 1:00 a.m. Friday, from noon to 1:00 a.m. Saturdays, and from noon to midnight Sundays.

Other Recreation center services include Reading and TV Lounge, and a "pro shop" carrying many recreational and crafts items for sale at reduced prices.

The Swimming Pool is located in the towers and is open to all students, faculty and staff at no charge. Hours of operation are posted at the pool.

Information Center

The Union Information Center located on the third floor concourse provides a central point on campus for dispensing and obtaining information. It is, in short, a place to go when you don’t know where to go. Included among the numerous services provided by the Information Center are: Student organization mailboxes, newspapers (Pittsburgh Press and Post Gazette—daily and weekly, New York Times—available on a semester subscription basis), athletic event tickets, interoffice and U.S. mailboxes, paging, announcements, lost and found, student organization office keys, duplicating services, weekly and monthly PAT bus passes, Bell Telephone bill collection, and, in general, information. The Information Center is open from 8 a.m. until the Union closes.

Scheduling

All registered student organizations, and Duquesne University employees wishing to use space on campus for university related functions should make arrangements to do so through the Duquesne Union Scheduling Office. Refer to the scheduling policy, available in the Scheduling Office, for specific procedures to be followed.

Governing Council

Overall direction for the Union’s programs and operations is provided by its Governing Council. Specifically, the council advises the director, recommends internal policies, and insures the implementation of balanced programming through the allocation of program funds in accordance with established goals. A broadly representative body, the Governing Council, includes the Director and Assistant Directors of the Union, the Dean of Students, two faculty representatives, an alumni representative, a member of the Student Government Association, the Union Program Board Executive Chairperson, and representatives from Commuter Council and Residence Council.

TAMBURITZANS

The Duquesne University Tamburitzans were founded in 1937 at the University and were the first university-based performing folk ensemble in the United States. The group takes its name from the Tamburitza 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 serves to provide an extracurricular 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 Masquer’s program offers a variety of stage entertainment—one-act plays, musicals, comedies, tragedies. Any Duquesne student is eligible for membership.
WDQI RADIO AND TELEVISION
The University's radio station (WDQI—90.5 FM) and television (closed circuit) provide academic support to the individual schools and departments through seminars, workshops, laboratory experience, and extracurricular 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.

SYSTEMS CENTER
The Systems Center is a service department operated by the School of Business and Administration. Its main function is to make available to the students and faculty of the University the use of a modern computing system. Through the curriculum offered by the School of Business and Administration, the student is made cognizant of the potential uses for this new and powerful tool. Instruction in basic programming is provided to the students to aid them in fulfilling their class assignments. Individual research projects by the students and faculty are encouraged.

An auxiliary function of the Systems Center is to provide data-processing services for the administrative offices of the University. Two of the services being provided are automated registration and grade reporting. Students who work in the Systems Center become involved with the problems of setting up and operating the data processing system.

The Systems Center Staff is responsible for programming and operating specialized programs such as the Duquesne University Management Game which is an important part of both the undergraduate and graduate curriculum.

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 interest and 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 sole body that recognizes and funds student organizations.

COMMUTER COUNCIL
The Commuter Council is an officially recognized, funded 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. To involve the entire community in its program, the Council works closely with the Student Government Association, Residence Council, Union Program Board, and the administration.

RESIDENCE COUNCIL
The Residence Council coordinates residence hall activities and is involved with the Office of Residence Life in developing and implementing residence hall policies and procedures. All resident students are automatically members of Residence Council and are encouraged to attend meetings, functions, etc. sponsored by the group.

It is the aim of the Residence Council to serve as a link between the resident students and the administration. Aside from the council activities, representatives of the Residence Council serve on the Council on Student Services and the Food Service Committee to provide student input for the formulation and review of University policies affecting residence life.

INTER-FRATERNITY COUNCIL
The Inter-Fraternity Council serves as a clearing house for general fraternity social information and as a forum for airing constructive proposals for the improvement of the fraternity system. Membership in the Council is composed of three elected or appointed representatives from each of the nine member fraternities. The IFC establishes all rules governing inter-fraternity sports and regulates pledging.

PANHELLENIC COUNCIL
The Panhellenic Council was established for the purpose of strengthening women's fraternities as organizations and for promoting cooperation among the groups through scholastic, athletic, and social activities. Membership in the Panhellenic Council is composed of the presidents and elected representatives of each of the six women's social fraternities. Panhellenic Council establishes all rules concerning the rushing and pledging of new fraternity members.

STUDENT ORGANIZATIONS
There are more than 95 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 and interests. 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 scholarship achievement and academic excellence 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 informal exchange of ideas pertinent to the students' academic pursuits. With this purpose in mind, these organizations sponsor numerous programs including debates, symposiums, and lectures.

SERVICE ORGANIZATIONS
The purpose of these nationally-affiliated organizations is to provide a high standard of service to the campus and local communities while, at the same time, developing the 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-Fraternity Council or Panhellenic Council.

PUBLICATIONS
The Duquesne Duke, the University campus newspaper, is 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 is a literary publication, published each semester, which affords students the opportunity to submit writing, artwork, and photographs.

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.

A Student Handbook, published annually, contains information about the University which concerns the students. Copies are available at the Information Center, Third Floor, Duquesne Union.
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 at all times of the day there is easy access to the Sacrament of Reconciliation. For all students, whatever their faith, the Chaplains are available for help with spiritual direction, counseling, advice, or sympathetic listening. 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, nonthreatening relationship and invites the entire Duquense Community to make use of its services.

The Ministry’s activities are announced by posters in Residence Halls and the Union. Its Office is in Room 102 on the first floor of the Administration Building.
Part V: Admission, Financial Aid, Tuition and Fees

Admission

OFFICE OF ADMISSIONS
The Office of Admissions is located on the first floor of the Administrative Building
Telephone (412) 434-6220, 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 must have been graduated from an approved secondary school in the upper three-fifths of the class, and must have 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 studies, 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, Pre-Dental, or Pre-Medical programs, Medical Technology, Radiological Health, or as science or mathematics majors 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 Board 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 their senior year. The student is notified of the decision by December 15, and is required to send his/her non-refundable 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 15219. 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. 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 required.

4 Complete the required SAT or ACT examination during the spring of junior year 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 the University Scholars Award should submit their application by February 1.

7 Notification of decisions for regular admission begin once Early Decision applicants have been notified. If accepted, submit non-refundable tuition deposit by May 1 of senior year.

It is the responsibility of the applicant to arrange to have all supporting credentials on file with the Office of Admissions and 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 secondary school program may apply for consideration to begin college after their junior year. The high school diploma is awarded following successful completion of their freshman year in college. Two separate interviews are required. Further details may be obtained by telephoning or writing to the Admissions Office.

APPLICATION—OTHER CATEGORIES

It is the responsibility of persons who apply for evening study, or as international students, post-graduates, readmission students, transfers, temporary transfers, and veterans, or for the Summer Session to arrange to have all supporting credentials on file with the Office of Admissions and the Financial Aid Office before deadline dates.

INTERNATIONAL STUDENTS

International students are expected to meet the requirements for admission from secondary schools or from other colleges and universities as outlined below. In every instance, Duquesne must receive complete and official transcripts of all degrees, diplomas, marks sheets, and examination records six months prior to the student's expected date of entrance. Records should be in original or notarized photocopy of the applicant's academic record. A recommendation is required.

1 Academic: The student must rank in the upper half of his secondary school graduating class and present satisfactory scores from the SAT (Scholastic Aptitude Test).

2 English Proficiency: Students coming directly from foreign countries are required to take the TOEFL (Test of English as a Foreign Language)* in their country before a decision may be made on their admission to the University. Proficiency in English must be demonstrated in listening and reading comprehension and writing ability. Students who reside in this country at the time of application may be required to take the TOEFL at the discretion of the Admissions Office.

3 Financial Statement: They must present documented evidence that they have in their possession adequate funds for study at Duquesne. The University does not have a program of undergraduate scholarship assistance for foreign students.

*For information about testing in any country, the Educational Testing Service, Princeton, New Jersey 08540, should be contacted.

4 Letters of Reference: A minimum of three (3) academic reference letters from major professors and academic advisors which includes the following: the applicants rank in class, comparison with classmates, and the length of time the writer has known the student.

Upon completion of all academic and non-academic requirements, the International Student 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

A Post-graduate student must submit a Post-graduate application if the Bachelor's degree 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 they wish for admission or readmission to begin.

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 Advisement Office of his school for placement and curriculum planning following a reasonable period for evaluation of the transcript.

The College of Liberal Arts and Sciences and Schools of Education and Pharmacy award 60 semester hours of credit to accepted transfer students 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 tests and attain the appropriate scores.

An interview is highly recommended for all transfer students and will be required of those students whose Admissions Office notifies personally.

TEMPORARY TRANSFERS

Temporary Transfers are students who are enrolled in another college or university but who desire to take a course or courses at Duquesne for one semester.

No Temporary Transfer Student will be granted admission without formal application and an official transcript. A Temporary Transfer Student must reapply if he/she should desire to take a course or courses at Duquesne University beyond one semester.

No Temporary Transfer shall be permitted to register for more than two semesters without making arrangements to become a permanent transfer.

An interview is required of Temporary Transfer applicants before attendance for their third semester.
SUMMER SESSION

DUQUESNE STUDENTS

Any Duquesne University undergraduate student who was granted continuance at the close of the preceding Spring Semester is authorized to register in the Summer Session. Students who were dismissed by their school at the close of the preceding Spring Semester for academic reasons may register for summer classes by permission of the Committee on Student Standing of their school. All students must have their course selections approved by their academic advisor.

Graduates and other former students, including any who withdrew from the University, must obtain readmittance before they may register for summer classes.

STUDENTS FROM OTHER INSTITUTIONS

A student of another college or university who wishes to enroll for the summer session, and who intends thereafter to return to the original institution and is eligible to continue there may be admitted to the Summer Session. A tear-out admissions application and registration form for the summer study is provided in the announcement of summer offerings, which may be obtained from the Office of Admissions at mid-March. These students are considered to be Temporary Transfer Students.

ADVANCED PLACEMENT

Students who have followed the College Entrance Examination Board college level program in secondary schools and have performed satisfactorily in the advanced placement examinations are eligible for advanced placement. Duquesne University grants credit, 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 advanced placement score determined yearly by the College of Liberal Arts and Sciences. For current information about the minimal score 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.

Applicants who hope to receive advanced placement credits must request that scores be sent to the University. 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.

COLLEGE LEVEL EXAMINATION PROGRAM

The special examinations for which the College of Liberal Arts and Sciences will award credit, with acceptable scores, are:

1. General Examinations: Humanities, social sciences

2. Subject Examinations: American government, American history, analysis and interpretation of literature, biology, college algebra, college algebra-trigonometry, college composition, general chemistry, general psychology, introductory calculus, introductory sociology, microbiology, macro-economics, micro-economics, statistics, western 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 will not be given credit on the basis of CLEP exams. The 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 subject scores and performance at 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/Trig 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, or the College Level Examination Program, Box 977, Princeton, New Jersey 08540. 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 escrow 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, write Credit Hour Bank across the top of an application, submit the $20 non-refundable application fee, and attach a letter indicating full comprehension and acceptance of the conditions of the Credit Hour Bank Program. Generally, all first year courses in the College of Liberal Arts and Sciences are open to Credit Hour Bank students.
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 are expected to pay the expenses of 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 considered 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, savings and benefits such as Social Security. Two types of self-help programs of aid are available: loans and work. Students loans provide rates, terms, and conditions far 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, 3) Economic Opportunity, which aims to provide economic parity for the student with very limited family resources, and whose need is therefore exceptional, and 4) 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 gift aid except 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. Frequently, this requires an "aid package" consisting of funds from multiple aid sources and programs. Those programs which are under the direct control of the Aid Office are not usually sufficient to meet full need or provide an aid package of the most beneficial composition. It is advisable and 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 office of 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 hearsay or dated information. A decision not to apply to particular aid source 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 may obtain the form through the 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 15219 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.
3. Obtain from the high school guidance office or the Financial Aid Office a Financial Aid Form (FAF). Complete and submit it according to instruction, along with the processing fee, to the College Scholarship Service (CSS). 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 new transfers 60 days after CSS filing date, between mid-February and late March (providing student has been accepted for admission). Upperclassmen replies should be anticipated in June or July.
5. Applications must be renewed annually.

PROGRAMS
The following programs for which the foregoing application procedures apply, are administered directly by the Financial Aid Office.
University Scholars 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. Renewal amounts may vary relative to the degree of achievement.

Competitive Scholarships 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 demonstrated need. Continued academic achievement is normally reflected by a cumulative Quality Point Average of 3.0 or above. Renewal amounts may vary relative to the degree of achievement and level of need.

Supplemental Educational Opportunity Grants Federal grant assistance is available to full or half-time undergraduate students with exceptional 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 U.S. Office of Education.

Nursing Scholarships Scholarship assistance is available to full-time undergraduate nursing students with exceptional financial need. 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 students who demonstrate financial need and are making acceptable progress toward a degree. Recipients are selected in accordance with guidelines published by the U.S. Office of Education. Loan repayment does not begin until nine months after the borrower terminates at least half-time study, and is scheduled over a 10-year period at an interest rate of three percent a year.

Nursing Student Loans These loans are available to full-time undergraduate nursing students who demonstrate financial need and are making acceptable progress toward a degree. Recipients are selected in accordance with guidelines published by the Federal government. Loan repayment does not begin until nine months after the borrower terminates at least half-time study in nursing, and is scheduled over a 10-year period at an interest rate of three percent a year.

Health Professions Loans Health Profession Student Loans are available to full-time undergraduate students in the Bachelor of Science in Pharmacy program who demonstrate financial need and are making acceptable progress toward a degree. Recipients are selected in accordance with guidelines published by the Federal government. Loan repayment does not begin until one year after the student ceases to pursue a full-time course of study in pharmacy, and is scheduled over a 10-year period at an interest rate of seven percent a year.

Student Employment Two programs of employment are available to financial aid applicants who demonstrate need. The first is the College Work-Study Program which is financed principally by Federal appropriations and awarded as aid in accordance with guidelines published by the U.S. Office of Education. The second program is referred to as the General Program which is funded by the University. In addition to considerations of financial need, placement in a part-time position depends upon the student's qualifications for performing successfully in the job. Student employment is limited to a maximum of fifteen working hours a week when classes are in session. Students working under either program may not retain outside jobs during academic periods.

OTHER SOURCES OF AID

LAW ENFORCEMENT ASSISTANCE PROGRAMS (LEEP)
Programs of grants and loans for students of criminal justice are administered by the Law Enforcement Assistant Administration. Currently, LEEP funds are limited to students who are full-time employees in the law enforcement field. Contact the Financial Aid Office for additional information.

BASIC EDUCATIONAL OPPORTUNITY GRANTS
General Direct grant assistance through the Federal government is available to undergraduates based on an eligibility determination reviewed and adjusted each year by Congress. Grants may range from approximately $200 to a maximum of $1800 to students determined to be eligible. All undergraduates are advised to apply for this form of aid. Students receiving aid through the University are required to apply for a Basic Grant. Necessary forms may be obtained through the Financial Aid Office.

Non-Pennsylvania residents may apply by completing the Financial Aid Form (FAF) and submitting it to the College Scholarship Service.

Pennsylvania residents may apply by completing the Pennsylvania Higher Education Assistance Agency's Composite State/Basic Grants Application.

STATE GRANT ASSISTANCE
General Depending upon the student's legal 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 Composite State/Basic Grants Application from the state's Department of Education to determine if grants are available, and to determine application procedures.

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 any student who is 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 an undergraduate student may borrow in any academic year is $2,500. The interest rate of seven percent a year will be automatically subsidized. Repayment of these loans begins nine months after graduation or withdrawal from school. A four to six week processing period should be anticipated. Guaranteed Loans are generally considered an alternative or supplemental source of assistance to other forms of aid. Students who apply for or receive aid through the Financial Aid Office should apply for a Guaranteed Loan only after consulting with an Aid Officer.

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 aid may inquire of 1) high school guidance counselors, 2) library publications such as Guide to Financial Aid for Students and Parents, published by Simon & Schuster, 3) parents' employers or labor unions, 4) fraternal, social, religious or professional organizations, 5) major organizations utilizing the skills of the field for which the student is preparing, and 6) specific departments within the University

AID FROM DEPARTMENTS AND SCHOOLS

**COLLEGE OF LIBERAL ARTS AND SCIENCES**

*Pittsburgh Communications Foundation Loans* The Foundation has established a loan fund for deserving junior and senior full-time students in the Department of Journalism Students will be required to repay the loan within two years after graduation at three percent a year Such loans will 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 Eleanor Polis Capone Memorial Award* The award honors, in perpetuity, the memory of Eleanor 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

*Andrew Kozora Memorial Scholarship* This award was established to honor, in perpetuity, the memory of Andrew Kozora Full time third or fourth year students enrolled at Duquesne University and having declared a major field of study to be either Physics or Mathematics, are eligible for such scholarship The primary consideration will be financial need with academic achievement secondary Recipients are selected by the University’s Director of Financial Aid upon nomination by the Chairmen of the Physics or Mathematics Departments after they have previously consulted with the Dean of the College of Arts and Sciences

*The Rev Joseph A. Launtis, C S Sp., Journalism Scholarship* This is an annual scholarship in tribute to the Rev Joseph A. Launtis, C S Sp., 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 to major in journalism The award is administered by the Launtis Scholarship Committee of Journalism faculty and friends Deadline for application is April 1

*Edward T Leech Scholarship* This annual scholarship was established in 1971 by the Scrpps-Howard Foundation for journalism junior/senior students who demonstrate outstanding academic promise, 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

**SCHOOL OF BUSINESS AND ADMINISTRATION**

*Gulf Oil Corporation Honors Scholarships* This program provides grants of up to $1500 a year to outstanding undergraduate students in the field which may eventually qualify them for employment in the business world and, more particularly, in petroleum and related industries Normally, one scholarship is provided for each class, freshman through senior

*ALCOA Scholarship* This award is made annually to an undergraduate student in the School of Business and Administration Recipients are selected by the School on the basis of academic achievement and financial need

**SCHOOL OF EDUCATION**

*School of Education Competitive Scholarships* are available to freshmen and transfer students who were 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 "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 goals 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

*Lawrence Roche Memorial Scholarship* The award will be made to a student who, as a junior in the School of Education, has in the judgment of the Awards Committee, demonstrated those qualities of scholarship, character, and professionalism which merit special recognition The awardee must have a minimum Quality Point Average of 3 0 at the time of application The student must be officially registered as a junior in the School of Education of the University at the time of receiving the award Applications must be submitted to the Dean’s office no later than March 1

**SCHOOL OF MUSIC**

*Women’s Advisory Board Scholarships* This fund provides scholarships in varying amounts each year to vocal performers These scholarships are available to entering freshmen and upperclassmen

*George Barrere Memorial Scholarship* This Pittsburgh Flute Club offers a scholarship in flute in memory of George Barrere, founder of the first flute club in the United States This $300 scholarship is awarded to a freshman or a sophomore flute major

*Polish Arts League Scholarship* This award is made annually by the Polish Arts League of Pittsburgh to an outstanding performer in the School of Music Preference will be given to a student of Polish ancestry Other students will not be excluded from consideration

*Music School Scholarships* These awards are made possible by donations from individuals and organizations in appreciation of performances by School of Music students

*University Solo Wind Scholarships* These scholarships in varying amounts are awarded only to potential “First chair” performers

*University String Scholarships* These scholarships for tuition and applied music fees have been established by the University to promote the study of string instruments

*Pittsburgh Flute Club Award* This award is given to an outstanding woodwind student

*University Piano Scholarships* These scholarships are awarded to students showing outstanding talent in piano

*Ezio Pinza Memorial Scholarship* This award is presented to an outstanding vocal student, male or female, between the ages 17 and 25 who has not completed an undergraduate degree

**SCHOOL OF NURSING**

*Repayment of Educational indebtedness* Upon completion of professional training nurses may enter an agreement with the Secretary of Health, Education and Welfare to practice the profession of nursing in an area determined to have a shortage of nurses Minimum agreement is for two years, with a third year optional In return for such service, the Federal government will repay 60 percent of all bona fide educational indebtedness For three years service, 85 percent of indebtedness will be repaid
Behan Scholarship The R J Behan 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.

Other Programs Two additional programs, Nursing Student Loans and Nursing Scholarships, are described under University Aid, page 212.

SCHOOL OF PHARMACY

American Foundation of Pharmaceutical Education The Foundation annually allocates funds to accredited colleges of pharmacy. The college must provide a sum equal to that requested from the Foundation. Recipients, designated as Scholars of the American Foundation for Pharmaceutical Education, are selected from fourth and fifth year students.

Women of Galen The Women's Auxiliary of the Galen Pharmaceutical Society of Pittsburgh annually provides scholarship funds to be awarded to deserving pharmacy students in their last years of attendance in the School of Pharmacy.

American Pharmaceutical Association Women's Auxiliary Loan Fund This loan fund was established to support worthy women students in accredited colleges of pharmacy during the last two years of their attendance prior to graduation.

Beaver County Pharmaceutical Association Loan Fund This revolving loan fund provides financial assistance to students in the School of Pharmacy who are residents of Beaver County, Pennsylvania. Applications are to be made to the Dean of the School of Pharmacy.

Samuel W. Curtis Loan Fund This fund is intended to provide financial assistance for students in the School of Pharmacy.

Joel P. Laughlin Scholarship In honor of Joel P. Laughlin, a fraternity brother whose life was terminated early in his professional program, the Graduate Chapter of Phi Delta Chi annually awards three $200 scholarships to one fraternity brother in each of the three professional years. The recipients must have demonstrated academic achievement and active participation in the function of the Fraternity.

Peter and Dorothy Manzione Memorial Fund A revolving fund, donated by Rosetta and Gerladine Manzione and friends of the family, is available to all students in the School of Pharmacy.

Mary McPartland Beck Scholarship Award Scholarship funds are available from earnings on a fund started by a bequest to the School of Pharmacy in 1970.

John W. Dargavel Foundation Established by the National Association of Retail Druggists in honor of its executive secretary, John W. Dargavel, this foundation provides a $200 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 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 founded by Mr. Fred Schiller, Pittsburgh pharmacist, in memory of the late Emanuel Spector, for worthy and qualified students in the School of Pharmacy. This revolving fund makes available tuition loans of varying amounts depending on the applicant's need and general ability.

John Clothier 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 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. Details 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 final 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.

Tau Alumni Chapter of Lambda Kappa Sigma This professional pharmacy fraternity for women has established financial awards for members in their last three years of the pharmacy program. Awards are based on financial need and participation in the organization.

Dr. B. Olive Cole Graduate Educational Grant A $300 grant is offered by Lambda Kappa Sigma to financially assist an alumnae member who is enrolled in a program of graduate study and research in the pharmaceutical sciences. Applications must be received by the chairman of the grant committee by November 15. Applications are available in the School of Pharmacy Office.

GENERAL

The Duquesne University Parish Scholarship Program was created to benefit students from the nearly 300 parishes in the Diocese of Pittsburgh. Worthy students are recommended by the pastor to the University's Admissions Office, with both academic achievement and financial need being used in determining the recipients. One award per parish may be made to those students who meet the requirements established by the University. Inquiries should be directed to the Office of Admissions.

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.

McCloskey Memorial Fund is awarded 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 the Dean of Students.

Vira Heinz Travel Award This fund was established to provide an educational and cultural opportunity for promising young women students. Recipients are selected on the basis of academic achievement and evidence of interest in intercultural or international relations.

Clinton Eddy Goodwin Memorial Scholarship This scholarship was established to honor the memory of Clinton Eddy Goodwin by making annual awards to deserving Pharmacy students. Candidates must be a declared Pharmacy major, attain a minimum quality point average and have an interest in and demonstrated support of the University's Athletic Program.
Reserve Officer Training Corps (ROTC) Scholarships

Army ROTC offers a number of four-year scholarships for qualified students. These scholarships provide for tuition, fees, required textbooks, and $100 per month subsistence allowance. Interested high school students, who feel that they can meet the competitive standards, may apply. Army ROTC, Duquesne University, Pittsburgh, Pennsylvania, 15219. The application period begins in June of the student's junior year and ends on December 15 of their senior year.

For students already enrolled at Duquesne University, three-year and two-year scholarships are available. Individuals need not be participating in the ROTC program to apply. For additional information, contact the Military Science Department at 6614/6664.

**Tuition and Fees**

The University reserves the right to change tuition and fee charges if exigencies require such action.

**Tuition**

- Undergraduate Tuition: $117.00 per semester hour credit
- Graduate Tuition: $122.00 per semester hour credit
- Auditors pay the same as students taking courses for credits

**Fees**

- Application (non-refundable): $20
- Matriculation Deposit (non-refundable): $100
- Residence Hall Pre-Payment (non-refundable): $100
- Residence Hall Damage Deposit: $50
- Change of Schedule: $5 per processing each form
- Credit by Examination: $20 for each semester hour for recognition of proficiency of course credit (See policy in Section V, page 220)
- Late Registration: $10
- Removal of F Grade: $5

* Undergraduate Business and Administration Student when carrying: $5
- Less than 12 credits: $3

* Undergraduate Music Student when carrying: $25
- 12 or more credits

* School of Pharmacy Undergraduate Fee: $150

* Undergraduate Pharmacy Student Activities (for Third, Fourth, and Fifth Year Students): $25

* University Fee:
  - 12 or more credits: $152.50
  - 9 to 11 credits: $107.00
  - 5 to 8 credits: $76.00
  - 1 to 4 credits: $41.00

* Charged on each semester registration

**Laboratory Fees**

All amounts 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 per semester, this is proportionately refundable, depending upon the losses incurred. Laboratory fees apply to the 1980-1981 academic year. Lab fees will be increased in 1980-1981.

- Biology (each laboratory): $35
- Business 491: $5
- Chemistry (each laboratory): $35
- Computer Science: $35
- Education 490, 491 (Student Teaching): $25
- English 380, 381, 382, 383, 384, 385: $5
- Journalism 267, 268, 267, 369, 375, 379, 405, 409, 485: $10
- Journalism 370, 378, 413: $15
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 is considered enrolled and "in attendance" until he or she acts to terminate attendance in conformity with this policy even though absences from classes were observed and recorded before the Effective Date of Withdrawal.

When 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 the Vice President for Academic Affairs, and finally, the Vice President for Finance.

**TUITION REMISSION SCHEDULE**

This schedule applies to tuition only; it does not apply to other charges, such as the University Fee, course fee, and laboratory fees, nor to the reduction of credits resulting from course withdrawals made after the Change of Schedule period.

**Within the Semester**  
Percent of Remission

- **First Week**: 80
- **Second Week**: 80
- **Third Week**: 40
- **Fourth Week**: 20
- **After Fourth Week**: None

**Within the Summer Session—Based on a Six Week Session Standard**

- **First Week**: 60
- **Second Week**: 20
- **After Second Week**: None

**ROOM AND BOARD**

The request for on-campus residence is made on the same form used for application for admission to the University. After the student has completed the admission procedure and has paid the matriculation deposit, the residency request is referred automatically to the Assistant Dean of Residence Life. The request is processed and necessary applications forms are forwarded to the student.

The University requires that a prepayment of $100, which is applicable to the following semester's room and board account, accompany all applications for room reservations or renewals. This pre-payment is non-refundable.

In addition, a $50 damage deposit must accompany each initial housing contract. This deposit is retained by the University throughout the period of residency. If no damage deductions are incurred and the room key and ID card returned, the full amount of the deposit will be refunded at the final termination of residency.

Reservations are made on a semester basis—August to December, January to May. Rooms may be occupied no earlier than noon of the day preceding the beginning of the orientation or registration periods.

All students occupying rooms in the University residence halls are required to take their meals at the Resident Dining Hall. Charges are for 20 meals a week, with meals served commencing with the evening meal of the day before the first day of classes.

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.
BAD CHECKS

It is the policy of the University to charge bad checks to the student who cashes them regardless of the maker. A $3.00 service charge will be assessed on checks that are returned from a bank for lack of funds.

CASHING CHECKS

A student may cash a check up to a maximum of $50 at the Cashier's Office between 9:00 A.M. and 4:00 P.M., Monday through Friday, except during registration, with a validated ID Card for the current semester.

ROOM AND BOARD—WITHDRAWAL AND REFUND

A resident student must notify the Assistant Dean 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% 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 have been otherwise 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.

STUDENT FINANCING PROGRAM

(All prior balances must be paid in full before the student is eligible for this plan.) Duquesne University students desiring payment of their tuition and other charges for the semester by installment, contact in person the Student Finance Section at Final Registration.

student financing program

(All prior balances must be paid in full before the student is eligible for this plan.) Duquesne University students desiring payment of their tuition and other charges for the semester by installment, contact in person the Student Finance Section at Final Reg-

*Those desiring residency for the Summer Session should make reservations with the Assistant Dean 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.
Part VI: Registration and Scholastic Policies

Registration

REGISTRATION

Students who attend the Fall Semester, which begins in late August, receive academic advisement and register for classes during the preceding months of April, May, June, and July. Spring Semester students register in the Fall Semester during November and early December.

Orientation programs for new students are conducted by the schools in late spring and summer in conjunction with academic advisement and registration.

A comprehensive invoice that confirms the class schedule of courses for which the student is registered and lists fees, tuition, dormitory charge, deposits, financial aid awards, and balance due is mailed to the student at his or her permanent address a month before classes begin, thus enabling the student or parent to make payment by mail.

A three-day final registration for students who have neither obtained registration for classes nor concluded financial arrangements is held just before the opening of classes.

The financial obligation for class places reserved by a registered student who does not subsequently attend cannot be canceled unless written notification of the decision not to attend is given to the dean of the student's school before the first class day. Notification received on or after the opening day of classes is subject to the official withdrawal policy.

OFFICIAL REGISTRATION

Only students who are recognized as officially registered are bona fide students of Duquesne University. Unless students are officially registered, they are not permitted to attend classes, engage in student affairs, or, generally, have access to the buildings and grounds or use of the University's facilities.

Official registration is the recognition given by the University to persons who have met these conditions:

1. Appropriate authority for admittance to study in a school or department has been given by an authorized officer of the University. The admitting authority for undergraduate students resides in the Director of Admissions.
2. Authorization to continue in the program selected has been given and registration for classes has been accomplished in compliance with all academic requirements and procedures.
3. Arrangements have been made to the satisfaction of the University for payment in full of all financial charges, including fees, tuition, and housing charges, all of which are due and payable in full before the beginning of classes.

CHANGE OF SCHEDULE

Students requiring a change of class schedule, to change class times or to add or to drop a class, are permitted to do so during the pre-registration period, the final registration period, and the first class week of the semester. Change of class schedule is not permitted after the Latest Date for Change of Schedule as announced in the semester academic calendar.

All schedule changes must be approved by the academic adviser and processed with the Registrar. Schedule change requests processed with the Registrar during the first class week must also have the signatures of the instructors whose classes are being added or dropped.

Students who tardily process change forms are not entitled to refund for the course credits dropped. Courses dropped after the deadline for making schedule changes are
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).

CROSS-REGISTRATION
Cross-college and university registration provides opportunities for enriched educational programs, approved by a student's advisor or dean, at any of the following institutions:

- Carlow College
- Carnegie-Mellon University
- Chatham College
- Community College of Allegheny County
- La Roche College
- Pittsburgh Theological Seminary
- Point Park College
- Robert Morris College
- University of Pittsburgh

The opportunity for cross-registration will be available to each full-time student enrolled in any 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 assuring 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 the penalty fee, late registration 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 grades to the permanent address on record soon after the close of each semester.

TRANSCRIPTS
Each student receives a summary transcript of his or her complete academic record at the close of each academic year. Students should carefully examine their record 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 also bear the stamped designation, Issued to Student.
Academic Policies

POLICIES

ACADEMIC ADVISOR
Every student attending the University is assigned or selects an academic advisor. It is the student's responsibility to ascertain the advisor's name which may be obtained from the office of the school in which the student is enrolled. The student should consult with the academic advisor about the program and any questions of an academic nature. No student may register without the academic advisor's approval and signature.

AUDITING COURSES
To audit courses, a student must be officially registered and pay the same charges for courses that are taken for credit. Enrollment in a course for audit is subject to approval of the student's academic advisor. Permission to audit graduate and professional courses requires consent of the dean of the school in which the desired course is offered. Registration in a course as Auditor must be declared at registration and is irrevocable after the Latest Date for Change of Schedule.

CANCELLATION OF COURSES
The University makes every reasonable effort to offer courses as announced in the Semester Schedule of Courses and the Summer Session Bulletin. It reserves the right, however, to make changes or cancel courses in the academic schedule because of insufficient enrollment or for any other equally valid reason.

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.

COURSE EXAMINATIONS
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 as soon as possible.

The student must submit the work assigned and take the examinations 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 for significant reasons missed a 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 conversion of that grade to an 'F' recorded 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.

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 by previous experience or exposure 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.

GRADING SYSTEM
The officially recognized method of grading course work and rating academic performance of students at the University is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
</tr>
<tr>
<td>D</td>
<td>Below average, passing</td>
</tr>
<tr>
<td>P</td>
<td>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)</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory (Used in pass/fail courses and is independent of the quality point system)</td>
</tr>
<tr>
<td>F</td>
<td>Failure (Course must be repeated for credit)</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory—Failure (Used in pass/fail courses and is independent of the quality point system. Course must be repeated for credit)</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete (A temporary grade automatically 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 missed examination or required assignment is made up by the date specified in the Academic Calendar, the I becomes a permanent F grade)</td>
</tr>
<tr>
<td>W</td>
<td>Official Withdrawal (Used on a student's permanent record to indicate termination of attendance in courses under conditions of official withdrawal. See pages 232 and 220, Withdrawal from a Course and Withdrawal from the University)</td>
</tr>
</tbody>
</table>

Final 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.

In the credit hour system, a full-time student is one who carries an academic schedule of at least 12 credits. A student with under 12 credits is considered a part-time student.

A person who has completed a baccalaureate degree and is seeking additional undergraduate credits is considered a post-graduate student.
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

Ordinarily, with permission of their advisor, students may repeat courses in which grades of F and D were received. All grades are retained on the permanent academic record. The result of the final attempt in a repeated course is, however, the student’s status in the course with regard to attempted credits, earned credits, and the completion of requirements.

Retrogradation, a corollary of the repeat credit rule under which a student may earn credit once only for a course, prescribes 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 a 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 towards a degree is measured by the cumulative quality point average. The scholastic records 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; however, students who in a Fall Semester fail to meet the minimum standards may continue into the next Spring Semester only with permission of the Committee on Student Standing of their school.

Students who are eligible to re-enroll on a full-time basis shall be considered eligible to participate fully in all University-sponsored or -controlled extra-curricular activities, including intercollegiate athletics. 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 full-time basis but continue participation in non-curricular and extra-curricular activities shall be without appeal if they are subsequently dismissed from the University for poor scholarship.

For students who have attempted 15-30 credits, or more than 30 credits in one year, the guidelines are

ACADEMIC WARNING

- QPA: 1.75 to 1.99 (Letter of warning may be sent by appropriate Dean)

PROBATION

- QPA: 1.50 to 1.74 (Subject to the jurisdiction of the appropriate Committee on Student Standing)

DISMISSAL

- QPA: Less than 1.50 (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 WARNING

- QPA: 1.85 to 1.99 (Letter of warning may be sent by appropriate Dean)

PROBATION

- QPA: 1.75 to 1.84 (Subject to the jurisdiction of the appropriate Committee on Student Standing)

DISMISSAL

- QPA: Less than 1.75 (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.

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, a quality 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 courses are described in the graduate school catalog.

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, the resolution of any question about fulfillment of graduation requirements.

Each school and each 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 120 semester hours of course credits in all except Radiological Health, Medical Technology, and Pharmacy which require, respectively, 123, 125, and 160 credits.

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. Not 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 school.

The candidate who has satisfied graduation requirements by a Challenge Examination (credit by examination), when taken timewise 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 unusual distinction and who have completed a minimum of 60 credits in residence. Honors are based on these standards:

- Cum Laude—Quality Point Average 3.50 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 lecture or recitation, or at least two hours 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, other than a first semester freshman, 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.
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