DIRECTORY

ADDRESS—University
600 Forbes Avenue, Pittsburgh, Pa 15282
Telephone Call specific number (see following)
for other offices, call 396-6000

ADMISSION—Director of Domestic and
International Admissions,
Administration Building, First Floor
Telephone (412) 396-6220/6221/6222
(800) 456-0590 (Outside of 412 Area Code)

FINANCIAL AID—Loan, Scholarship,
Student Employment, Applications
Administration Building, Ground Floor
Telephone (412) 396-6607

OFFICE OF FRESHMAN EXPERIENCE—
Duquesne Union, Third Floor
Telephone (412) 396-6657

OFFICE OF GREEK LIFE—
Duquesne Union, Third Floor
Telephone (412) 396-6651

GOVERNMENTAL AFFAIRS—
Administration Building, Third Floor
Telephone (412) 396-5097

HEALTH SERVICE—
Duquesne Towers, Second Floor
Telephone (412) 396-1650

IDENTIFICATION CARDS—
Public Safety Building
Telephone (412) 396-6190

INFORMATION CENTER—For University Events,
Duquesne Union, Third Floor
Telephone (412) 396-6632/6633

ADVISORS—
College of Liberal Arts and Sciences,
College Hall, Room 111
Telephone (412) 396-6380/6370
School of Business Administration,
Rockwell Hall, Room 501
Telephone (412) 396-6277/6278

ADVISORS

ACCOUNTING—
School of Education, Carnegie Hall, Room 213
Telephone (412) 396-6118/6119

ADVISORS

ADMISSION—
Office of Admissions
Administration Building, First Floor
Telephone (412) 396-6220/6221/6222

ADDRESS—
600 Forbes Avenue, Pittsburgh, Pa 15282
Telephone Call specific number (see following)
for other offices, call 396-6000

ACADEMIC ADVISEMENT
AND REFERRAL CENTER
Administration Building, Ground Floor
Telephone (412) 396-6394/6395

ADVISORS—
College of Liberal Arts and Sciences,
College Hall, Room 111
Telephone (412) 396-6380/6370
School of Business Administration,
Rockwell Hall, Room 501
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ADVISORS
As the educational process from admission through graduation, requires continuing review and appropriate approval by University officials, the provisions of this catalog are to be considered directive by University officials, the provisions of this catalog are to be considered directive.

NOTICE OF NONDISCRIMINATION AND NONHARASSMENT POLICY

Duquesne University, motivated by its Catholic identity, values equality of opportunity, human dignity, moral, cultural and ethnic diversity, both as an educational institution and as an employer. Accordingly, the University prohibits and does not engage in discrimination or harassment on the basis of race, color, religion, national origin, sex, age (except as provided by law), disability or status as a veteran or disabled veteran. Further, Duquesne University will continue to take affirmative steps to support and advance these values consistent with the University’s mission. This policy applies to all programs and activities of the University, including, but not limited to, admission and employment practices, educational policies, scholarship and loan programs, and athletic or other University-sponsored programs. This is a commitment by the University in accordance with its religious values and applicable federal (Title VI, Title IX and Section 504), state and local laws and regulations. The person responsible for coordinating its efforts under this policy and its obligations under Title IX and Section 504 and their implementing regulations is Dr. Judith Griggs, Affirmative Action Officer, Room S-1, Assumption Hall, University Extension 6661.

SECURITY STATISTICS, POLICIES, AND PROCEDURES

In accordance with the College and University Security Information Act (Pennsylvania Act 73 of 1988) and the U.S. Student Right to Know and Security Act (PC 101-542), information regarding Duquesne University’s crime statistics, security policies and procedures is available in the Admission’s Office.

Information contained in this catalog is accurate to the date of publication.

Published annually by Duquesne University, 600 Forbes Avenue, Pittsburgh, PA 15282.
Academic Calendars
Fall 1993 — Summer 1994

FALL SEMESTER — 1993
Classes Begin 
Labor Day Holiday 
All Saints Day 
Holy Day 
Thanksgiving Holiday 
Immaculate Conception 
Holy Day 
Final Exams 
Commencement

SPRING SEMESTER — 1994
Classes Begin 
Martin Luther King 
Holiday 
Spring Break 
Easter Holiday 
Monday Class 
Schedule Followed 
Reading Day 
Final Exams 
Commencement

SUMMER SEMESTER — 1994
Summer Term Begins 
Ascension Holy Day 
Memorial Day Holiday 
Independence Day 
Holiday 
End of 12 week term 
Assumption Holy Day

Contents

CALENDAR
I GENERAL INFORMATION
II ADMISSION, FINANCIAL AID
III REGISTRATION, SCHOLASTIC POLICIES
IV TUITION AND FEES
V STUDENT LIFE
PROGRAMS, SERVICES AND ORGANIZATIONS
VI CAMPUS MINISTRY
VII PROGRAMS AND COURSES
Core Curriculum
Integrated Honors Program
Concentrated Studies
English As A Second Language Program
Liberal Arts and Sciences
Business Administration
Education
Music
Nursing
Pharmacy
Health Sciences
ROTC
Continuing Education
VIII DIRECTORIES
Directors & Officers
Faculty and Administration
INDEX

The provisions of this catalog are to be considered directive in character. The University reserves the right to make any changes that seem necessary or desirable, including fees, tuition and room and board. Faculty listings contained in this catalog are current as of Spring 1993.

Please refer to the current schedule of classes booklet for detailed academic calendar dates and deadlines.
Part I: General Information

HISTORY
Duquesne University first opened its doors as the Pittsburgh Catholic College of the Holy Ghost in October 1878 with an enrollment of 40 students and a faculty of seven. From a humble original location on Wylie Avenue in the City’s Uptown section to its present beautifully self-contained campus, Duquesne provides a hilltop vista overlooking one of the nation’s most attractive cities. Today Duquesne University is a progressive, educational facility which has more than tripled from its early 12.5 acres to its present, self-enclosed 40-acre campus “Bluff” site. Duquesne was cited by USA Today as having the safest campus in Pennsylvania and one of the safest campuses in the nation.

Several renovations have recently taken place and have added to Duquesne’s already-rich physical plant, including a state-of-the-art health sciences facility, two parking garages, a multi-purposed recreation center, a Victorian campus throughway and a theatre/classroom complex. Recently named one of the top ten Catholic universities in the United States, Duquesne’s academics are recognized both nationally and internationally. As a result of its academic excellence known worldwide, the University has signed agreements with institutions around the globe including Belgium, Germany, France, Spain, Ireland, England, China, Japan and Italy as well as the new Commonwealth of Independent States.

Duquesne’s recent growth has been tremendous with more than 8,000 students in nine schools of study, including the College of Liberal Arts and Sciences (1878), Graduate School of Liberal Arts and Sciences (1911), and the Schools of Law (1911), Business Administration (1913), Pharmacy (1925), Music (1926), Education (1929), Nursing (1937), and the School of Health Sciences (1990). Duquesne’s nine schools offer degree programs on the baccalaureate, professional, master’s and doctoral levels.

SUMMARY STATEMENT OF MISSION AND GOALS
Duquesne University of the Holy Ghost is a Catholic university, founded by members of the Spiritan Congregation, and sustained through a partnership of laity and religious. The motto of Duquesne University is Spantu est qui vivificat, “It is the Spurt that gives life.” Enriching the life of the mind and the life of the spirit of every member of its community is the mission of Duquesne.

It is Duquesne University’s special trust to seek truth and to disseminate knowledge within a moral and spiritual framework in order to prepare leaders distinguished not only by their academic and professional expertise but also by their ethics, and guided by consciences sensitive to the needs of society.

Therefore, Duquesne is a community of students, faculty, administrators, and others who are willing to make these commitments:

- To create undergraduate and graduate education of the highest quality in liberal and professional disciplines
- To examine the moral and ethical foundations of their thought and action, and to develop their personal values and ethical commitment
- To participate in an ecumenical dialogue open to all beliefs
- To extend educational opportunities to those with special financial, educational, and physical needs
- To promote world community through the development of an international and intercultural vision of the global needs and international responsibilities for peace, justice, and freedom

Duquesne serves God by serving students — through an academic community dedicated to excellence in liberal and professional education, through profound concern for moral and spiritual values, through the maintenance of an ecumenical atmosphere open to diversity, and through service to the Church, the community, the nation, and the world.

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

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

POLICY STATEMENT ON INTERNATIONAL EDUCATION
The mission of Duquesne University’s founders, (the Spiritans), has always included service to peoples outside of the United States. Duquesne University also is committed to providing an educational environment which recognizes cultural and national pluralism.

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

The University believes that the sharing of the multiple traditions and mores of societies is an invaluable element in the educational process...
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 four-time Super Bowl Champion Steelers play at Three Rivers Stadium. The Penguins (Stanley Cup Champions) perform in the nearby Civic Arena, one of the largest indoor sports arenas in the United States and one of the few retractable domes in the world. The Duquesne Dukes play their home games at the new on-campus facility, the Palumbo Center. Facilities for such participatory sports as tennis, golf, running, hiking, 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 1885. Recently renovated, it houses the Executive Offices of the University, Office of Admissions, Registrar’s Office, Campus Ministry, Business Offices, Counseling and Testing Center, Academic Advisement and Referral Center, Financial Aid Office, and the offices of University Events, Alumni, Development, and Athletic Relations. This building also serves as the University Chapel, which offers daily Mass.

A J. Palumbo Center dedicated in 1988, is the home of the Duquesne Dukes basketball team. In addition to the Duke’s home court, the center serves as a recreational facility for students, faculty and staff. The 6,200-seat arena also houses intramural activities, weight training, and squash courts, a weight room, exercise room, sauna, and locker facilities. The arena is also a convocation facility that allows the entire University to come together for major events.

Assumption Hall, the oldest residence hall on campus, was dedicated in 1956. A four-story structure with a 280-student capacity, the facility has its own recreation area, and offers both single and double occupancy rooms. The Learning Skills Center is also housed there.

Caney Hall, the original 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 and Guidance and Counseling Clinic as well as the Department of Theology.

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 the majority of their individual departments and faculties. The School of Nursing is located on the sixth floor. Special instructional facilities include a Writing/Computer Laboratory, an interactive Language Laboratory, nursing laboratories, and two lecture halls.

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

Des Places Communications Center, dedicated in 1982, houses the Department of Communication and offers production studios of WDUQ-FM, an affiliate of National Public Radio (NPR). Named in honor of the founder of the Holy Ghost Congregation, the center also features a journalism laboratory, a fully equipped computer lab, a simulation laboratory, an instructional photo laboratory, seminar rooms, and a graphics arts classroom.

The Duquesne Towers, a 17-story, air-conditioned double-tower residence for 1,200 men and women featuring separate housing wings, was dedicated in 1970. The facility features a full-size indoor swimming pool with a sundeck, offices of the Residence Life Division, an office of Campus Ministry, 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 Student Life, International Education and various student organizations and interest groups. Facilities include meeting rooms, information center, bookstore, cafeteria, art gallery, and a recreation center which features four bowling lanes, video arcade as well as other games.

The A. J. Quigley Building houses the Physical Plant Office, Parking Office, and Environmental Health and Safety Risk Management.

Health Sciences Building, dedicated in 1991, resulted from the renovation of the old Gymnasium. The three-story building is the home of the John G. Rangos, Sr. School of Health Sciences with its departments of health information sciences, occupational therapy, perfusion technology, physical therapy, physician assistant, and a program in athletic training. The building provides faculty and staff offices, teaching and research laboratories, student study rooms and a student lounge.

The Edward Hanley Hall and College Hall also worked. This configuration is designed to permit users to access the Library's data files that are available on CD-ROM disks from any one of the points.

Mccloskey Field, dedicated in the mid-1970s, and renovated in 1989, is the center for outdoor intramural activity. The field now is made up of artificial turf and is surrounded by a practice track used by the University track team. 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 Parking Garage, dedicated in the fall of 1987, is located on Forbes Avenue at Hooper Street and provides the University with 775 parking spaces. The eight-story garage is equipped with an elevator and walk-way connected to the north entrance of the Duquesne Union building, allowing easy access to Duquesne’s hilltop campus.

The Public Safety Building is headquarters for the University’s Public Safety Office and the I.D. Center.

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, Mellon Hall has been described as one of the world’s great corporate centers. Pittsburgh combines the features of urban living with many of the charms and personal characteristics of a much smaller town. One of the largest corporate headquarters in the United States, Pittsburgh was also shown, in a recent survey by Rand McNally to be America’s most livable city.

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 and the Benedum Center. The theater 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.

Seasonal events include the Three Rivers and Shadyside arts festivals, and the International Folk Festival. These prestigious events which draw national attention.

Duquesne students can visit such points of interest as The Pittsburgh Zoo, Carnegie Museum of Art and Natural History, Schenley Park, the Carnegie Art Gallery, the Carnegie Science Center and 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 part of the city are two of the major entertainment and nightlife centers.
under 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 175 each, well-equipped laboratories, and a science computer facility. The Music School, dedicated in 1967, has over 80 pianos, five organs, and over 300 orchestral and band instruments available for student use. 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 which is equipped with two Steinway concert grand pianos. The Center for Music Technology, housed in a Music Learning Resource Center, an Electronic Piano Lab, and a Synthesizer and Recording Studio, features state-of-the-art synthesizers, sequencers, samplers and audio equipment.

Rockwell Hall, dedicated in 1958, is a 10-story structure which houses the School of Business Administration and whose skywalk connects downtown Pittsburgh with Duquesne's campus. Its Business Simulation Laboratory contains 12 conference rooms equipped with television cameras and microphones for observation and recording of activity in the individual rooms. Rockwell Hall also houses a vending machine center, the Business School's student lounge, a modern computer laboratory, the Center for Communications and Information Technology, the Division of Continuing Education, Career Planning and Placement, Printing and Graphics Department, the Mailing Center, the Mills Complex, the Institute of Formative Spirituality, the University Archives, ROTC, University Press, and University Purchasing Department.

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

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

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

**ACCREDITATION AND AFFILIATION**

**University Accreditation**

Middle States Association of Colleges and Schools

State Board of Education of the Pennsylvania Department of Education

**Memberships**

- American Association of Collegiate Registrars and Admissions Officers
- American Council on Education
- Catholic College Coordinating Council
- College Entrance Examination Board
- Council for Advancement and Support of Education
- Council of Independent Colleges and Universities
- Middle States Association of College Registrars and Officers of Admission
- National Association of College Admissions Counselors
- National Association of College and University Businesses
- National Association of Student Personnel Administrators
- Pennsylvania Association of Catholic College Admissions Officers
- Pennsylvania Association of Colleges and Universities
- Pennsylvania Association of Student Financial Aid Administrators
- Pittsburgh Council of Higher Education

**College of Liberal Arts and Sciences Accreditation**

- American Chemical Society Membership
- American Association for Higher Education Membership
- American Association for State and Local History
- American Conference of Academic Deans Membership
- American Historical Association Membership
- American Society of Journalism School Administrators Membership
- Association of American Colleges Association of Departments of English
- Historical Society of Western Pennsylvania National Collegiate Honors Council Organization of American Historians

**A J Palumbo School of Business Administration Accreditation**

- American Assembly of Collegiate Schools of Business Accreditation Council Membership
- Middle Atlantic Association of Colleges of Business Administration

**School of Education Accreditation**

- Middle States Association of Colleges and Schools
- Pennsylvania Department of Education

**Schools of Music Accreditation**

- National Association of Schools of Music Membership
- Penn State University Department of Education Membership
- Pennsylvania Association for Music Therapy Membership
- Percussive Arts Society Membership
- Pennsylvania Alliance for Arts Education Membership
- Pennsylvania College Choral Association Association for Supervisory & Curriculum Development
- Pennsylvania Federation of Music Clubs Association of Pennsylvania Orchestras College Music Society Center for Black Music

**American Music Center**

- National Opera Association
- Pennsylvania Music Educators Association
- Pennsylvania Arts Coalition

**School of Nursing Accreditation**

- American Association of Colleges of Nursing Membership
- National League for Nursing Pennsylvania State Board of Nursing Membership
- Pennsylvania Association of Colleges of Nursing National League for Nursing (Council of Baccalaureate and Higher Degree Programs) Pennsylvania Higher Education Nursing Schools, Inc.

**School of Pharmacy Accreditation**

- American Council on Pharmaceutical Education Pennsylvania State Board of Pharmacy Membership
- American Association of Colleges of Pharmacy Division of Continuing Education Membership
- American Association for Paralegal Education American Council on Higher Education Continuing Education Association of Pennsylvania National Academic Advising Association
- North American Association of Summer Sessions
- American Bar Association Paralegal Institute

**EVENING STUDY**

Duquesne University offers evening classes for full and part-time students each semester and during the Summer Session. The following undergraduate degrees are able to be completed through evening study.

**College of Arts & Sciences**

- Bachelor of Science in Computer Science
- Bachelor of Arts in Corporate Communication
- Bachelor of Arts in Psychology
- Bachelor of Arts in Sociology


**School of Business Administration**

- Bachelor of Science in Business Administration

**School of Education**

- Bachelor of Science in Education Certification: Elementary Education
Division of Continuing Education
Bachelor of Science in Professional Studies

The Bachelor of Science in Professional Studies is designed for adult students who seek flexibility in a bachelor's degree program. Students are provided the opportunity to customize plans of study to meet personal and professional goals. A strong foundation in both business and the liberal arts allows students to individually design two major areas of study, designated as concentrations. Concentrations are designed in conjunction with an academic advisor and are available in a wide range of business and/or liberal arts subjects.

For additional information regarding evening study, please contact the Office of Evening & Summer Programs, 701 Rockwell Hall, at 396-6232.

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. For additional information regarding Summer Sessions, or to request a Summer Schedule of Classes, please contact the Office of Evening & Summer Programs, 701 Rockwell Hall, at 396-6222 or 1-800-293-3853.

CENTER FOR COMMUNICATIONS AND INFORMATION TECHNOLOGY

The Center for Communications and Information Technology provides facilities for and guidance in the use of computing and communications equipment for the University's instructional, research, and administrative programs. The Center reports administratively to the Provost. The present facilities include the following Digital Equipment Corporation minis and mainframe computers: a VAX 8550, a DEC 5810, and a DEC 5500. Distributed across campus via fiber optic networks are a variety of workstations including products from DEC, NeXT, and SUN. These systems provide state-of-the-art academic and administrative applications including a variety of relational database tools, language compilers, statistical packages, financial modeling packages, and graphics packages. Twenty-two computer labs distributed across campus provide access to nearly 350 IBM and Apple micro computers and DEC and NeXT workstations and over 50 terminals. In addition to this equipment, over 350 terminals and personal computers are used in the Administration for registration, admissions, financial aid and financial record keeping.

Duquesne University has a campus wide fiber optic network that connects over 90% of the academic buildings and all residence halls rooms to the national and international instructional and research computing networks including the National Supercomputing Centers. Duquesne is one of less than 5% of colleges and universities in the nation that provides in the room connections for students. The next phase of the project calls for connections for all faculty and staff offices as well as connections from public laboratories.

The Center provides a professional staff to serve Duquesne faculty, administration, students and staff. Included in these services are seminars on using the variety of computing environments and resources that are available both on and off campus. Professional staff and student user consultants are available for consultation regarding use of the facilities and services. Documentation services provide 'how-to-use' information in each public computer laboratory.

In 1986-87 the University approved a long range plan to replace the then existing computing and communications systems. The installation of the DEC 5810 and 3500 couple with the installation of over seven miles of fiber optic communications cable and over 80 miles of high speed copper serve to complete the system. The final phase of this plan calls for the implementation of the library automation projects underway in both the Law Library and the University Library which will use the campus network for both on-campus and off-campus access to these facilities.

SUMMER SESSIONS

OFFICE OF ADMISSIONS

The Office of Domestic and International Admissions is located on the first floor of the Administration Building.

Office hours: Monday through Friday from 8:30 AM to 4:30 PM

POLICY

It is the policy of Duquesne University to admit applicants who are best qualified to profit from opportunities which the University offers for intellectual, spiritual, and social growth. In general, admission is based upon past academic performance, scholastic ability, and personal characteristics. Information about religious preference, sex, racial characteristics, and ethnic origin is not taken into consideration by the Committee on Admissions.

ADMISSION REQUIREMENTS

1. A candidate should have been graduated from an approved secondary school in the upper three-fifths of the class and demonstrated exemplary personal conduct in that institution. Applicants who have not completed four years of high school must submit a High School Equivalency 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 prerequisites specified (Note: Candidates planning to enroll in pharmacy or Pre-Health programs, 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 his/her 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

Applications should be addressed to the Director of Domestic and International Admissions, Duquesne University, Pittsburgh, Pennsylvania 15282. An application may be submitted at any time during the candidates' senior year up to July 1 for the fall semester.

The application procedure is as follows:

1. Obtain, complete, and file the Application for Admission with the Office of Admissions.

2. Include the $40 non-refundable application fee with the application form. International students must pay a $30 non-refundable application fee. No application forms will be processed for consideration by the Committee on Admissions unless accompanied by the required fee.

3. Request the secondary school principal or guidance counselor to submit a transcript of the candidate's academic record. A recommendation is requested.

4. Complete the required SAT or ACT examination during the spring of junior year and/or fall of senior year. It is the personal responsibility of each candidate to have test scores forwarded to the University.

5. An interview is highly recommended for prospective students. Auditions are required for School of Music applicants.

6. Students interested in being considered for University Scholarships must submit their application by January 15 of their senior year.

7. Early Decision Deadline (for students who have Duquesne as their first College choice) is November 15. Notification will be by December 15. If accepted under the Early Decision Plan, commuting students are asked to submit a non-refundable tuition deposit of $100 within two weeks. Resident students are asked to submit a $250 non-refundable deposit.

8. Notification of decisions for regular admission begins once Early Decision applicants have been notified. If accepted, students are asked to submit a non-refundable tuition deposit of $100 for commuters or $250 for resident students by May 1 of their senior year.

9. Students applying to programs in Health Sciences please refer to the application and school handbook for application deadlines.
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 a secondary school program may apply for consideration to begin college after their junior year. The high school diploma is awarded following successful completion of 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, readmission students, transfers, 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

**ADMISSION OF UNDERGRADUATE INTERNATIONAL STUDENTS**

Application Criteria

Duquesne University welcomes applications from qualified international students interested in entry as either freshmen or transfer applicants.

Eligibility criteria for application as a first-year freshman student include:

a) Graduation from a secondary school recognized as an acceptable equivalent to a U.S. high school, and

b) A demonstrated record of acceptable academic success

Eligibility criteria for application as a transfer student include the above criteria for freshmen-level applicants plus successful completion of some post-secondary study at a recognized institution of higher education either in the applicant's home country or in another country, including the U.S. A. Duquesne University processes requests for transfer credit evaluation according to guidelines established by the academic unit to which an application is submitted.

Application Procedures

Interested applicants should submit the following items:

a) Duquesne University Undergraduate International Application Form,

b) Completed Duquesne University Affidavit of Support Form along with required accompanying financial resource certifications

(Note: Limited scholarships are available for transfer students, and financial aid is awarded on the basis of demonstrated need.)

c) Certified copies of all academic records (secondary and any post-secondary study),

d) One letter of recommendation,

e) Application fee in the amount specified on the application form

Duquesne University is authorized under federal law to enroll non-immigrant alien students. However, the tuition and fees are not the same as those charged to U.S. citizens. In addition, international students are required to have major medical coverage.

**ENGLISH LANGUAGE PROFICIENCY REQUIREMENTS**

English is the language of instruction at Duquesne University and demonstrated language proficiency is required of all international applicants.

Since Duquesne University maintains an on-campus intensive and semi-intensive English as a Second Language Program (ESLP), qualified undergraduate applicants may be accepted to academic degree programs conditionally upon completion of English language requirements at Duquesne University.

All accepted international students, whose native language is other than English, are administered an English Language Placement Test upon arrival. Placement is determined by the Office of Languages and Communicative Sciences. No additional assistance with English language proficiency development is indicated, then the student is referred for appropriate ESL coursework on either an intensive or semi-intensive basis.

Up to six units of academic credit, applicable towards elective credit requirements, may be awarded for ESL coursework successfully completed by eligible international students accepted into academic degree programs at Duquesne University. All accepted international students, whose native language is other than English, are administered an English Language Placement Test upon arrival. Additional assistance with English language proficiency development is indicated, then the student is referred for appropriate ESL coursework on either an intensive or semi-intensive basis.

To avoid delays in transferring academic credits, students should plan to arrive on campus one week before the start of the semester. All international students are required to have major medical coverage.

**ADMISSION AND FINANCIAL AID**

Applications are invited for English language study in the Duquesne University English as a Second Language Program (ESLP). The ESLP is open to qualified international students interested in studying only English on either a short- or long-term, non-degree, certificate of completion basis. A full description of the English as a Second Language Program is found on page 42.

**ADDITIONAL INFORMATION ON INTERNATIONAL STUDENT APPLICATIONS**

Please direct all inquiries and requests for additional information and application materials to:

Director
Office of International Education
Duquesne University
Pittsburgh, Pennsylvania 15282
USA
Telephone 412-396-6113 FAX 412-396-5178

**POST-GRADUATES**

Post-graduates are students who already have a Bachelor's degree, and desire to take undergraduate courses at Duquesne, but are not interested in pursuing another undergraduate degree.

A Post-graduate student must submit a Post-graduate application to the Division of Continuing Education. The Admission Board tests and attains the appropriate scores.

An interview is highly recommended for all transfer students and will be required of those students whom the Admissions Office notifies personally.

**TEMPORARY TRANSFERS**

Temporary Transfers are students who are enrolled in another college or university but who desire to enroll at Duquesne for one semester.

No Temporary Transfer Student will be granted admission without formal application and an official transcript or permission from an official at the University at which the student is enrolled. Temporary Transfer Student must re-apply 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.

**SUMMER SESSION**

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 withdrew from the University who was granted continuance at the close of the preceding Spring Semester is authorized to register in the Summer Session.

Any student who wishes to enroll for the summer session, and who was granted continuance at the close of the preceding Spring Semester is authorized to register in the Summer Session.

Summersession students shall be permitted to register for a maximum of six credits during the Summer Session.

**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
This total of 60 includes the CLEP credit, i.e., if a student has completed 57 credits, he could not receive more than 3 credits 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 Science.

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.

CREDIT HOUR BANK

The Credit Hour Bank program is designed for high school students and adults who would like to sample college courses prior to 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 student applies and fulfills all regular admission requirements. Upon regular admittance, all credits are then evaluated toward a degree program.

To apply to the Credit Hour Bank Program, submit the $40 non-refundable application fee, and a letter indicating full comprehension and acceptance of the conditions of the Credit Hour Bank Program. A form is available for this purpose and can be obtained by contacting the office of Admissions.

Generally, all first year courses in the College of Liberal Arts and Sciences are open to Credit Hour Bank students. The School of Music also participates in the Credit Hour Bank Program providing the applicant passes a music audition.

Financial Aid

Duquesne University subscribes to the philosophy that "No student should be denied the education of his/her choice for lack of sufficient financial resources." The Office of Student Financial Aid has been established to help students locate the financial support they require. Students and parents should not be overwhelmed by the variety and apparent complexities of modern student financial aid. Rather, a patient thorough examination of aid opportunities should be undertaken to locate the most advantageous forms of assistance available to the individual student.

PRINCIPLES OF AID

FINANCIAL NEED

The major criterion of most aid programs is the student’s need for funds. In general, parents and the student 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 addenda.

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 resources. Two types of self-help programs of aid are available: loans and work. Student loans involve rates, terms, and conditions superior to those offered by commercial lenders, and offer the student the opportunity to help himself/herself by accepting future repayment responsibility. Student employment programs provide opportunities to help earn a portion of the educational costs.

GIFT ASSISTANCE

Non-repayable scholarships or grants are available in accordance with one or a combination of the following criteria: 1) Financial Need, 2) Superior Academic Potential or Achievement, and 3) Special Ability, which reflects proficiency in a specialized field or activity, such as music, debate, athletics, etc. It should be noted that many sources of gift aid expect the student to accept some form of self-help assistance.

MEETING STUDENT NEED

The Financial Aid Office attempts to provide aid equal to need for all student applicants. Normally, this requires an "aid package" consisting of funds from 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 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 for specific forms of aid, 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.

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 Admissions Office publications or through the Financial Aid Office. Currently enrolled students may obtain the form only through the Financial Aid Office.) Complete this application and submit it to the Financial Aid Office, Duquesne University, Pittsburgh, Pennsylvania 15282 prior to these deadline dates for the fall semester of the academic year, no later than May 1, for the Spring...
Semester, no later than December 1. Late applicants should be anticipated as follows: Freshmen and new students: Financial Aid Office, late March (providing student has been accepted for admission). Upperclassmen: Replies should be anticipated in June or July.

5. Applications must be filed annually.

PROGRAMS

The following programs for which the foregoing application procedures apply, are administered directly by the Financial Aid Office. All awards are based on available funds.

Chancellor's Awards: The University awards scholarships annually to exceptional high school seniors. These awards are not based on a demonstrated need and are renewable yearly provided the student maintains a minimum cumulative Quality Point Average of 3.50.

Founders Awards: The University awards scholarships annually to outstanding high school seniors. These awards are not need based and may be renewed each year provided the student maintains a minimum cumulative Quality Point Average of 3.00.

President's Scholarships: These awards are given to students of outstanding ability and achievement who also demonstrate financial need. They are renewable yearly based on continued need and a minimum cumulative Quality Point Average of 3.00.

Incentive Grants: Awards are made to incoming freshmen in specific areas of studies. Awards are renewable provided the student maintains a minimum cumulative Quality Point Average of 2.75 and continues enrollment in the original school and major.

Catholic High School Graduates: A 10% discount on tuition for a maximum of 30 credits per year is extended to graduates of Catholic High Schools in the Diocese of Pittsburgh who enroll as full-time students in the fall semester immediately following their high school graduation. Available only to students receiving no other University funded awards, these loans are not need related and may be renewed. Renewal requires continuous full-time enrollment during the academic years following initial enrollment.

Supplemental Educational Opportunity Grants: Federal grant assistance is available to full- or half-time undergraduate students with exceptional financial need who are also Pell Grant recipients. It should be noted that due to limited funding, these grants are normally awarded only to full-time students.

Perkins Loan Fund: Perkins Loans are available to both full-time and half-time students who demonstrate financial need and are making acceptable progress toward a degree. It should be noted that due to limited funding, these loans are normally awarded only to full-time students. Recipients are selected in accordance with guidelines published by the Federal Government. Loan repayment does not begin until six months after the borrower terminates at least half-time study, and is scheduled over a 10-year period at an interest rate of five percent per year.

Fiscal Aid: 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 five percent per year.

OTHER SOURCES OF AID

PELL GRANT PROGRAM

Direct grant assistance through the Federal government is available to undergraduates based on an eligibility determination reviewed and adjusted each year by Congress. All undergraduates are advised to apply for this form of aid. Students receiving aid through the Federal government or the University are required to apply for a Pell Grant. Necessary forms may be obtained through the Financial Aid Office or the High School Guidance Office.

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 State Grant Application from the state Department of Education. Pennsylvania residents must complete and submit the application to the University Financial Aid Office. The Pennsylvania Higher Education Assistance Authority (PHEAA) at current levels, grants ranging from $100 to $2,300 a year are available to full-time undergraduate students, based on considerations of financial need. Filing deadline is normally May 1.

STAFFORD LOANS

This program provides long-term, low interest student loans available through the cooperative efforts of federal and state governments and participating private lending institutions. These loans are available to students enrolled in an institution of higher education on at least a half-time basis. They are provided by commercial lending institutions in every State.
state. To apply, the student should inquire at a local lending institution where the student or parents have an account. Subsidized loans are need-based and require a need analysis document. Pennsylvania provides a non-subsidized loan. However, a need document must be filed to establish eligibility for a subsidized loan. The maximum that an undergraduate student may borrow is $4,000 for each of the first two levels, $4,000 for each remaining undergraduate level. A four to six week processing period should be anticipated.

Parent Loans for Undergraduate Students/Supplemental Loans for Students Loans are available to parents of DEPENDENT undergraduate students. INDEPENDENT undergraduates may apply themselves. The maximum amount that can be borrowed for any academic level is $4,000. Repayment begins 60 days after disbursement of funds. Applications and information are available through banks and other lending institutions. While these loans are not need based, eligibility for Pell Grant and Stafford Loan must be determined for INDEPENDENT STUDENTS. This requires a need analysis document.

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) parents' employers or labor unions, 3) fraternal, social, religious or professional organizations, 4) major organizations utilizing the skills of the field for which the student is preparing, and 5) specific departments within the University.

AID FROM DEPARTMENTS AND SCHOOLS

COLLEGE OF LIBERAL ARTS AND SCIENCES
The Eleanor Polia Capone Memorial Award. The award honors, in perpetuity, the memory of Eleanor P. Capone. The scholarship consists of the total annual income from an endowed fund and is awarded to a student enrolled at the University who, at the time of receiving the award, is in the professional phase of their curriculum. The award is made annually.

Chivers Scholarship Award. The award honors Frances Jahrling Chivers. This scholarship is available to Junior or Senior English majors. Applications are available in the Office of the Dean of the School of Business Administration. Recommendations are made by the Chair of the English Department Selection by representatives of Chivers family and Financial Aid Office.

SCHOOL OF BUSINESS ADMINISTRATION
Accounting Scholarships. Twenty $1,000 scholarships are awarded annually to students whose major area of concentration is accounting. Ten are awarded to junior and ten are awarded to seniors. The award is made from an endowed fund by the "Big Six" accounting firms as well as local accounting firms. Applications are available in the Office of the Dean of the School of Business Administration. Completed applications must be received in the Dean's Office by October 1 of each academic year. Recipients are selected by the School on the basis of demonstrated need, academic achievement, and leadership. The scholarship is available to a junior or senior in the Accounting Department. The recipient must maintain a minimum of 3.0 grade point average.

Glen Beeson Memorial Scholarships. The scholarship is awarded annually to qualified sophomores, juniors, and seniors enrolled in the College of Business Administration. The scholarship is available to a junior or senior in the Accounting Department. The recipient must maintain a minimum of 3.0 grade point average.

SCHOOL OF HEALTH SCIENCES

SCHOOL OF MUSIC
Women's Advisory Board Scholarships. This fund provides a scholarship each year to outstanding performers. This scholarship is awarded based on a recommendation of the Music School faculty. The scholarship is available to a junior or senior in the Music School. This award is made annually by the Polish Arts League Scholarship. The scholarship is available to an outstanding performer in the School of Music. The scholarship is available to a junior or senior in the Music School. The recipient must maintain a minimum of 3.0 grade point average.

Robert Minardi Memorial Scholarship Fund. Awarded to needy undergraduate Music students, with academic considerations a secondary criterion.
pents are selected by the School of Music, but must also file application through the Financial Aid Office.

Anne Patton and George Locher Award is awarded on an annual basis to an outstanding performer in the Music School.

James Hunter Memorial Award was established in memory of one of the school's most distinguished faculty members. The award is based upon musical and scholarly excellence.

Other Awards Recently Established Are
- The Presler Scholar Award, Local Christian Benefit Association Award, Henrietta Vogodohich Memorial Scholarship Fund, Matty and Ed Shiner Scholarship Fund, Alfred d'Aulaire Award, Paul Stadik Memorial Fund, Marie and Richard H. Barry Scholarship Fund, Ronald LaVelle Memorial Scholarship and Paul B. Reinhold Endowment.

SCHOOL OF NURSING

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. Students may apply in the School of Nursing in early fall.

Miller Scholarship: A scholarship established in memory of Constance Miller, R.N., M.S.N. The fund provides a scholarship of varying amounts awarded annually to a needy and deserving R.N. student who is in good academic standing.

Schreiber Scholarship: The fund provides a scholarship in varying amounts awarded annually to a junior or senior undergraduate nursing student who has excelled in clinical performance.

SCHOOL OF PHARMACY

Unless stated otherwise, apply through the School of Pharmacy for the following awards.

Women of Galen: The Women's Auxiliary of the Galen Pharmaceutical Society of Pittsburgh annually provides scholarships to fund two to five scholarships to worthy and qualified students in the School of Pharmacy. The fund provides a scholarship in varying amounts awarded annually to deserving Pharmacy students who are entering the third or fourth year in the B.S. in Pharmacy curriculum. Selection is based on the academic standing of the applicant.

Fred Schiller Loan Fund: This loan fund was established by Mr. Fred Schiller, Pittsburgh pharmacist, in memory of the late Mrs. Schiller. The fund provides loans to students in the School of Pharmacy. The fund provides a scholarship in varying amounts awarded annually to a deserving Pharmacy student who is in need of financial assistance.

Joseph P. Laughlin Scholarship: In honor of Joseph P. Laughlin, a fraternity brother whose life ended early in his professional career, 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.

Peterson and Dorothy Manzone Memorial Fund: A revolving fund, donated by Rosetta and Geraldine Manzone and friends of the family, is available to all students in the School of Pharmacy.

Clinton Eddy Goodwin Memorial Scholarship: This scholarship is awarded annually to a needy and deserving Pharmacy student who has excelled in clinical performance.

Mary McPartland Back Scholarship Award: Scholarship funds are available from earnings on a fund started by a bequest to the School of Pharmacy in 1970. NARD Foundation established by the National Association of Retail Druggists. This fund provides a scholarship in varying amounts awarded annually to a needy and deserving Pharmacy student who has excelled in clinical performance.

Galen Pharmaceutical Society Loan Fund: This revolving fund was established in 1963 for the purpose of providing financial assistance to worthy students in the School of Pharmacy. The fund provides a scholarship in varying amounts awarded annually to a deserving Pharmacy student who has excelled in clinical performance.

Fred Schiller Loan Fund: This loan fund was established by Mr. Fred Schiller, Pittsburgh pharmacist, in memory of the late Mrs. Schiller. The fund provides loans to students in the School of Pharmacy. The fund provides a scholarship in varying amounts awarded annually to a deserving Pharmacy student who is in need of financial assistance.

The Chuck Connolly Scholarship is awarded annually to a Pharmacy student in the fourth year of the B.S. in Pharmacy curriculum. Selection is based on need and the academic standing of the applicant.

Don Bell Memorial Scholarship: An endowed scholarship fund was established by the Bell family in 1963. Contributions were made by the Bell family in 1989. Contributions to the fund are made through the generosity of the student's friends or family. The fund provides a scholarship in varying amounts awarded annually to a deserving Pharmacy student who is in need of financial assistance.

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The Chuck Connolly Scholarship is awarded annually to a Pharmacy student in the fourth year of the B.S. in Pharmacy curriculum. Selection is based on need and the academic standing of the applicant.
Areas of study However not all are awarded by the Awards listed below are not restricted to specific need or college/school of enrollment.

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, and are residents of Allegheny County. Emphasis will be on performance in selection of recipient. Inquiries should be directed to the Office of Financial Aid.

The Jock J. Rosenberg Memorial Scholarship Fund is an endowed scholarship fund created by Charles J. Trarar, P’51, and the Trarar family. An annual award will be granted to a Pharmacy III, IV or V student in good academic standing and demonstrating financial need.

The Duquesne University Student Scholarship Organization sponsors scholarships to help make it possible for deserving students to attend Duquesne. Applicants must be enrolled on a full-time basis, show proven academic ability, be of good moral character, and demonstrate financial need. Application materials may be obtained through the SGA office and must be filed by April 1.

The McCloskey Memorial Scholarship 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 Executive Vice President for Student Life.

The Verna L. Hensel Travel Award is designed 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. Inquiries should be directed to the Office of the Executive Vice President for Student Life.

The Nathan and Harry Daily Scholarship is an annual award that is to be made to "such deserving person or persons from Butler County, Pennsylvania attending Duquesne University". Selection is made by a committee upon the recommendation of the University’s Financial Aid Office. Candidates are considered on the basis of academic achievement and financial need. Interested students should apply through the Financial Aid Office.

The Jerry Smith, II Memorial Scholarship Award is awarded to students who have demonstrated academic achievement, and financial need. Preference is given to children of employees or residents of Sterling Township, QPA of 2.6 required for renewal. Apply through the Financial Aid Office.

The Monsignor Michael J. Conroy Endowed Scholarship is awarded to students who have demonstrated scholastic ability, good character, and the ability to relate well with others. Selection is made by the University and awards are based on financial need. Apply through the Financial Aid Office.

The Allen and Hansbury Pride in Pharmacy Scholarship is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Jerry Smith, II Memorial Scholarship Award is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Allen Reynolds Memorial Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Mary H & Peter Loftus Scholarship Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The John Joseph Mongillo Memorial Scholarship Fund is awarded to students who have demonstrated scholastic ability, good character, and financial need. Interested students should apply through the Financial Aid Office.

The Pittsburgl Centennial Scholarship is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Mary H & Peter Loftus Scholarship Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Wayne County Scholarship Awards for Wayne County Residents, with consideration given to children of employees or residents of Wayne County. Apply through the Financial Aid Office.

The Allens Foundations Scholarship Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Allan Reynolds Memorial Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Merle E Gilliland Scholarship Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.

The Theodore T. Meyers Scholarship Fund is awarded to students in good academic standing and demonstrating financial need. Interested students should apply through the Financial Aid Office.
**UNIVERSITY DISCOUNTS**

1. University fees, laboratory costs, room and board, and other non-tuition related expenses will be charged at full rate. Discount is one-half tuition only.

2. Only one Duquesne degree or part thereof may be obtained utilizing the discount and no other form of discount or remission may be received simultaneously.

**3. Discount is not extended for studies in the Institute of Formative Spirituality, Law School, Master of Liberal Studies, doctoral degree programs, or any designated special programs with differential rates.**

**CIERG/Religious Discount** Members of University-recognized Christian and Jewish Religions, who have been ordained or professed, may be eligible to receive a discount of one-half tuition for undergraduate or graduate studies.

**Catholic School Lay Teacher Discount** Current full-time teachers in Catholic schools in Pittsburgh, Greensburg, or Alloona-Johnstown Dioceses or teachers from other dioceses, who have completed a minimum of two years teaching at an approved diocesan school, may be eligible to receive a discount of one-half tuition for undergraduate or graduate studies.

**Senior Citizen Discount** Men and women who are 60 years of age or older may be eligible to receive a discount of one-half tuition for undergraduate or graduate studies.

**RESERVE OFFICER TRAINING CORPS (ROTC) SCHOLARSHIPS**

Army ROTC offers a number of four-year scholarships for qualified students through a national competition. These scholarships pay for most of the tuition, fees, required textbooks, and other purely academic expenses as well as providing a $300 per month subsistence allowance. Interested high school students may apply by writing Army ROTC, Duquesne University, Pittsburgh, Pennsylvania, 15282. The application period begins in April of the student's junior year and ends in December of the senior year. Early application is recommended.

For students already enrolled at Duquesne University, three-year and two-year scholarships are available. Students need not be participating in the ROTC program to apply. For additional information, contact the Military Science Department at 396-6684.

**REGISTRATION AND SCHOLASTIC POLICIES**

**Part III: Registration and Scholastic Policies**

**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.

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 charges, deposits, financial aid awards, and balance due is mailed to the student at his or her permanent address. Students begin, thus enabling the student or parent to make payment by mail.

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 Registrar before the first class day. Notification received on or before the opening day of classes is subject to the official withdrawal policy. Withdrawal from room and board reservation contracts is to be made in accordance with the provisions of the contract. See *Room and Board—Withdrawal and Refund*, page 30 of this catalog.

**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 Late Registration period. Change of class schedule is not permitted after the Latest Date for Change of Schedule as announced in the Academic Calendar (published in the Schedule of Classes Booklet).

All schedule changes must be approved by the academic adviser and processed with the Registrar. Change of class schedule requests processed with the Registrar during the late registration must also have the signatures of the instructors whose classes are being added or dropped.

Students who process class changes late for the refund of the course credits dropped Courses dropped after the deadline for making schedule changes are classified as course withdrawals (See 'Withdrawal from a Course', and 'Withdrawal from the University' mentioned elsewhere in this catalog.)

Except for changes requested by the dean or advisor, a fee of $50 is charged for each change form processed after the close of pre-registration.

**CROSS-REGISTRATION**

Guidelines

The purpose of cross-registration is to provide opportunities for enriched educational programs by permitting students at any of the ten Pittsburgh Council of Higher Education (PCHE) institutions to take courses at any other PCHE institution. Member institutions of PCHE are

- Carlow College
- Carnegie Mellon University
- Chatham College
- Community College of Allegheny County
- Duquesne University
- LaRoche College
- Pittsburgh Theological Seminary
- Point Park College
- Robert Morris College
- University of Pittsburgh

The opportunity to cross-register is open to each full-time student enrolled in a PCHE college or university.
Each college or university accepts registration from the other institutions, however, first priority in registration is given to students of the host college, and not departments or schools in all institutions are able to participate in this program

In each case of student cross-registration, the approval of the dean or designated individual from the home college or university must be obtained prior to registration

The student's advisor or dean is responsible for assuring the student's eligibility for the course in which s/he intends to enroll

Full credit and grade will be transferred, the academic regulations of the host institution will prevail. The academic honesty code and other rules of conduct of the institution providing the instruction apply with respect to its courses and behavior on its campus. That institution also determines whether its rules have or have not been violated. The student's own institution will impose such penalties as it considers proper when violations are reported to it

Cross registrants do not thereby acquire the status of students in the institutions in which they are receiving instruction nor do they receive the advantages of participation in student activities, insurance programs, etc. They do receive library privileges at the host institution and may purchase course texts at the host bookstore.

Each qualified student normally may enroll in no more than one course off campus in any one term or semester under this program

Duquesne University students who are participating in this program are charged tuition and university fees in accordance with the current rates of Duquesne University, however students are responsible for paying any additional course or laboratory fees to the host institution.

This cross registration program does not apply to the Summer Sessions at any of the institutions including the Spring Term at the University of Pittsburgh. However, taking courses at other institutions during those terms is facilitated by "temporary transfer student" procedures separately agreed to by the PCHE colleges and universities.

Students are encouraged to submit cross registration forms during preregistration in order to provide adequate time to receive proper notification of the approval or disapproval

**Procedures**

Pick up a cross registration form at your advisor's office or the Registrar's Office

Select the courses you wish to enroll in from the schedule of classes of the respective host college. These schedules are in the Registrar's Offices of all PCHE schools

Submit the completed cross registration form to your academic advisor for approval

**REGISTRATION AND SCHOLASTIC POLICIES**

**ACADEMIC POLICIES**

Bring all copies to the Registrar's Office

The host registrar will notify you by mail whether or not your cross registration has been approved

**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 late than the Latest Date for Registration and Change of Schedule as announced in the Academic Calendar (published in the Schedule of Classes booklet)

**RECORDS AND REPORTS**

**SEMMESTER GRADE REPORTS**

Soon after the close of each semester, a grade report is sent to the permanent address of every student who is free of financial obligation to the University

**TRANSCRIPTS**

Each student who is free of financial obligations to the University is sent a summary transcript of his or her complete academic record at the close of each academic year. Students should carefully examine their records for accuracy and immediately report errors in writing to the Registrar.

To obtain additional copies of their academic records students must write to the Registrar for transcripts for themselves or for mailing to 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"

No transcript will be issued unless all financial obligations owed by the student to the University have been fulfilled. A fee of $3.00 is charged for the issuance of each transcript and 24-hour processing time is required for the pick-up service from the Registrar's Office

**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 content of a student's record may be revealed only in accordance with the Family Educational Rights and Privacy Act of 1974 (Public Law 93-380, Section 438, as amended)

In order that parents of students may receive from University officials information concerning the college attendance academic record of their child, it is required by the Family Educational Rights and Privacy Act of 1974 (FERPA) (Public Law 93-380, as amended, section 99.31.8) that either the parents must prove financial dependence of their child upon them according to the dependency test as defined in section 152 of the Internal Revenue Code of 1954, or the child must grant a waiver of rights given by FERPA.

Students wishing to waive the requirement of FERPA relating to the release of academic information to parents must complete the waiver obtainable at the office of the academic advisor

**Academic Policies**

**POLICIES**

**ACADEMIC ADVISEMENT**

Every student attending the University is assigned an academic advisor. It is the student's responsibility to ascertain the advisor's name.

The student should consult with the academic advisor about any questions of an academic nature. No student may register without the academic advisor's approval and signature

Advising for freshman and sophomore students is handled through the Advisement and Referral Center. Juniors and seniors are advised through their respective schools

**AUDITING COURSES**

Regularly enrolled Duquesne students are permitted to audit courses. In addition, non-degree students from the general community who would like to audit courses for personal enrichment and who are not matriculated nor pursuing a degree program are also eligible to audit.

Regular students should consult their academic advisor for details on auditing.

Non-degree students should contact Duquesne's Division of Continuing Education to complete a brief application form. Admission is granted on a space available basis consulting the Office of the Registrar and the individual schools. Fees for auditing are uniform for all students.

Registration in a course as an auditor must be declared at registration and is irrevocable after the last date for change of schedule each semester, as indicated in the Academic Calendar (published in the Schedule of Classes booklet). Records will show "Audit" in the grade space on the transcript of a regularly matriculated student. A regular full-time non-degree student will be awarded by the Division of Continuing Education Audited courses are not eligible to be converted to matriculated credits. Courses audited may not be challenging later or completed via CLEP or other advanced standing tests.

Courses eligible for auditing are determined by the individual colleges and schools of the University. A partial list of school policies follows, but students are advised to consult with the Offices of the Deans for the most current listings.

1) No courses in the School of Law are available for audits.
2) No clinical courses in the School of Nursing and pharmacy can be audited.
3) The Rangos School of Health Sciences will not allow clinical courses or those courses in the professional phase of the curriculum (the last two years of all RSHS majors) to be audited by non-majors.
4) In the College of Liberal Arts and Sciences, courses in humanities and social sciences can be audited, but communications and science laboratory courses may not be audited.

Students enrolling for audit may attend lectures, complete course readings and, at the discretion of the professor in charge of the course, participate in classroom discussion and examinations.

**CANCELLATION OF COURSES**

The University makes every reasonable effort to offer courses as announced in the Schedule of Classes booklet and the summer session tabloid. 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 materials rests wholly with the student. Schools may require attendance at every class.

It is the prerogative of each school to establish a policy for attendance at classes, laboratories, tests, examinations, deadlines for reports, and specific school requirements. It is the instructor's responsibility to make the school's policy known at the first class session as it pertains to the course and school.

The student who is unable to attend class because of serious illness, hospitalization, a serious accident or other extenuating circumstance is responsible for notifying the office of the Academic Dean. The student should supply the necessary written verification as soon as possible.

The student must submit the work assigned and take the examination in the course at the specified time. If the work is not submitted or an examination is not taken at the scheduled time, the policy is that the grade be a zero for that part of the course. 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. The course must be submitted as a '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.

COURSE EXAMINATIONS

Unit examinations are given on the dates announced by the instructor at the beginning of each semester. Grades for these are obtained from the instructor.

Final examinations are given at the end of each semester and summer session. No student is excused from taking the final examination.

CREDIT BY EXAMINATION

Examinations for recognition of proficiency in a subject, or for course credit, 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 $30.00 is charged for each course credit. Application forms may be obtained from the Office of the Registrar.

Since 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.

UNDERGRADUATE GRADING SYSTEM

The following is the officially recognized method of grading course work and rating academic performance of undergraduate students at the University, effective for the 1988 Spring Semester.

Grade Description
A - Superior
A - Excellent
B+ - Very Good
B - Good
B - Above Average
C+ - Satisfactory
C - Average (Minimum general average for graduation)
D - Lowest passing scale grade

Quality Points Per Credit
A - 4.0
A- - 3.7
B+ - 3.3
B - 3.0
C+ - 2.7
C - 2.3
D - 2.0
F - 1.0

Quality Point Average is the ratio expressed to the decimal thousands of the sum of A, A-, B+, B, B-, C+, C, D, and F were received to the sum of quality points earned. The Quality Point value of these grades are

COMPUTATION OF THE QUALITY POINT AVERAGE

Quality Point Average = \( \frac{A + A- + B+ + B + B- + C+ + C + D + F}{A + A- + B+ + B + B- + C+ + C + D + F} \)

REPEATING COURSES AND COURSE RETROGRADATION

Students ordinarily are permitted to repeat courses in which D, and F grades were received. The request for permission to repeat a course is to be submitted in letter form to the academic advisor. An authorized request to repeat a course form must be obtained from the advisor before registering in the repeat course. All grades are retained on the permanent academic record.

Once a course has been identified as a pass/fail course, prescribed that a student may not move backward from an advanced course to a lower level course and receive credit for both. Any doubtful situation must be decided by the department chairman 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.

The decision to elect the pass/fail option must be made no later than the close of the period provided for making schedule changes. An authorized pass/fail election declaration form must be obtained from the advisor.

STUDENT STANDING

Progress toward 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.

All students in the University are academically dismissed if they fail three courses in one semester. Students can be readmitted by the student standing committee of the college or school to which the student is returning. If a student transfers to another school within the University, the student can be admitted only by the Dean of that school.

For students who have attempted 15-30 credits, or more than 30 credits in one year, the guidelines are:

Academic Warning: 1.75 to 1.99 QPA (Letter of warning may be sent by appropriate Dean).
Probation: 1.50 to 1.74 QPA (Subject to the jurisdiction of the appropriate Committee on Student Standing and may be required to modify or restrict academic program).
Dismissal: Less than 1.50 QPA (Readmission may be permitted on recommendation of the appropriate Committee on Student Standing).

For the students who have attempted 31-60 credits or who have attempted up to 61 credits within four semesters, these guidelines prevail.

Academic Warning: 1.85 to 1.99 QPA (Letter of warning may be sent by appropriate Dean).
Probation: 1.75 to 1.84 QPA (Subject to the jurisdiction of the appropriate Committee on Student Standing and may be required to modify or restrict academic program).
Dismissal: Less than 1.75 QPA (Readmission may be permitted on recommendation of the appropriate Committee on Student Standing).

Students who have attempted 61 or more credits and who have a QPA of between 1.85 and 1.99 may continue on probation for one semester. However, students who have earned 90 credits or more are subject to dismissal unless they have a QPA of 2.0 or better. Students who accumulated three F grades in one semester are subject to dismissal. Appeals of academic dismissal must be directed to the appropriate College or School Committee on Student Standing. Students subject to the jurisdiction of the appropriate Committee on Student Standing in accordance with the established guidelines who are permitted to re-enroll on a full-time basis but continue participation in noncurricular and extra-curricular activities shall be without appeal if they are subsequently dismissed from the University for poor scholarship.
ACADEMIC ADVISEMENT FOR STUDENT ATHLETES

The policy of the Council of Academic Deans on Student Athletes vis-a-vis academic standards reads as follows:

a) "To participate in the formal athletic programs at the University, a student must be currently enrolled as a full-time student. Full-time status is defined by University catalog as enrollment of 12 credits minimum per semester. Such a program would allow a student to graduate within five years.

b) A student athlete must be making satisfactory academic progress. This means that a student must have successfully completed 24 credits during the previous academic year. This would allow a student the fall, spring, and summer semesters in which to earn these 24 credits. In addition, the student athlete must satisfy the student standing policy as outlined in the Student Handbook and University catalogs.

c) Student-athletes must maintain a 2.0 cumulative QPA at all times in order to be academically eligible to compete in inter-collegiate competition. QPAs for student athletes are calculated at the end of each semester.

ACADEMIC SUPERVISOR OF INTERCOLLEGIATE ATHLETICS

The academic progress of student athletes engaged in inter-collegiate competition is monitored by the ASIA. The ASIA office also provides academic support services for student-athletes.

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 a 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 catalogs.

GRADUATION REQUIREMENTS

The candidate for a University degree must be a person of good moral character who has satisfactorily completed all academic requirements for the degree program and in addition has the recommendation of the appropriate Academic Dean.

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 a week of lecture or recitation, or at least two hours a week of laboratory work for one semester of 15 weeks.

TRANSFER WITHIN THE UNIVERSITY

It would be to the student's advantage to discuss the proposed transfer with an academic advisor of the new school no later than two weeks prior to prereregistration. The advisor will then be responsible to effect the 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/she may do so with the approval of an 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 submits the appropriate form through the advisor.

A student who is not granted approval of the request and withdraws from the course unofficially will receive a "F" grade for the course.
# Part IV: Tuition and Fees

## Tuition and Fees

The University reserves the right to change tuition and fee charges if exigencies require such action. The figures shown apply to the 1993-94 term only, unless otherwise indicated.

### TUTION

<table>
<thead>
<tr>
<th>RATE 1 (Arts, Business, Education, Nursing)</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Full-time Undergraduate Tuition (12-18 cr)</td>
<td>$10,578.00</td>
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<tr>
<td>University Health and Services Fee</td>
<td>742.00</td>
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<td>University Health and Services Fee</td>
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| Graduate Tuition | 372.00 |
| University Health and Services Fee | 25.00 |
| Total | 397.00 |

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<tr>
<th>RATE 2 (Health Sciences, Pharmacy)</th>
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<td>Full-time Undergraduate Tuition (12-18 cr)</td>
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<td>742.00</td>
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<table>
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<tbody>
<tr>
<td>Undergraduate Tuition</td>
<td>394.00</td>
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<tr>
<td>University Health and Services Fee</td>
<td>25.00</td>
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<td>Total</td>
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| Graduate Tuition | 396.00 |
| University Health and Services Fee | 25.00 |
| Total | 421.00 |

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<th>RATE 3 (Music)</th>
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<tbody>
<tr>
<td>Full-time Undergraduate Tuition (12-18 cr)</td>
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<tr>
<td>University Health and Services Fee</td>
<td>742.00</td>
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<td>Total</td>
<td>457.00</td>
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</table>

| Graduate Tuition | 434.00 |
| University Health and Services Fee | 25.00 |
| Total | 459.00 |

### FEES

- **Application (non-refundable)**: $4,000
- **Matriculation Deposit (non-refundable)**: $1,000
- **Residence Hall Pre-Payment (non-refundable)**: $1,500
- **Change of Schedule**: $5.00 per semester hour for recognition of proficiency of course credit (See policy in Part III, page 24)
- **Orientation (New Students)**: $100.00
- **Late Registration**: $25.00
- **Removal of I Grade**: $5.00
- **Registration Correction Fee**: $100.00
- **Undergraduate Pharmacy Student Activities (for Third, Fourth, and Fifth Year Students)**: $37.50
- **University Health and Services Fee**: $25 per credit
- **Environmental Sciences**: $400.00

### LABORATORY FEES

- Some programs require a breakage charge of $15.00 a semester, this is proportionately refundable, depending upon the losses incurred

  - Laboratory fees apply to the 1993-1994 academic year
  - English Language Placement Testing (ESL): $30.00
  - English Language Placement Testing (ESL) fee is a one-time fee
  - Laboratory Breakage Fee: $15.00

### GRADUATION FEES

- Thesis Binding Fee—Doctoral Dissertation: $93.50
- Thesis Binding Fee—Master Thesis: $83.50

### SUMMER TUITION

Summer tuition is calculated on a per credit basis. See page 28 for the rate that applies to the school in which you are enrolled.

### AUDITING A COURSE

The cost for auditing a course is the same as the per credit cost of a course.
WITHDRAWAL AND TERMINATION OF ATTENDANCE

Upon officially withdrawing from the University, a student receives remission of part of the tuition charged for the semester or session in accordance with the Tuition Remission Schedule. The amount of the remission is added to payments, and a refund is made upon request where a credit balance is created on the student’s total account.

The Effective Date of Withdrawal for determining the percent of remission is that on which the appropriate Academic Dean was notified by letter of the student’s decision to terminate attendance and requested official withdrawal. It is also the recorded date of the student’s separation from the University and regarded as the last day of attendance. A student 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 Provost, and finally the Executive Vice President for Management and Business.

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.

<table>
<thead>
<tr>
<th>Within the Semester</th>
<th>Percent of Remission</th>
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<tbody>
<tr>
<td>First Week</td>
<td>80</td>
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<tr>
<td>Second Week</td>
<td>80</td>
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<tr>
<td>Third Week</td>
<td>40</td>
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<tr>
<td>Fourth Week</td>
<td>20</td>
</tr>
<tr>
<td>After Fourth Week</td>
<td>None</td>
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</table>

<table>
<thead>
<tr>
<th>Within the Summer Session—Based on a Six Week Session Standard</th>
<th>Percent of Remission</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Week</td>
<td>60</td>
</tr>
<tr>
<td>Second Week</td>
<td>20</td>
</tr>
<tr>
<td>After Second Week</td>
<td>None</td>
</tr>
</tbody>
</table>

ROOM AND BOARD—WITHDRAWAL AND REFUND

A resident student must notify the Assistant Director of Residence Life in advance of the planned withdrawal. No refund of room charges will be made where withdrawal occurs after the opening classes. In the event of withdrawal, board will be refunded at the rate of 75 per cent of the balance remaining on the student’s meal plan, up until mid-semester. After mid-semester, no refund will be made. Failure to return uniforms, keys, or other personal belongings that are paid for by the University will result in a reduction of the refund.

FINANCIAL MATTERS

All charges for tuition, fees, room, and board, less financial assistance authorized by the University Financial Aid Office, are payable at registration. For your convenience, MasterCard and VISA can be utilized to pay tuition and fees.

BILLING PROBLEMS

Take the billing statement to the office indicated for an explanation or correction concerning these billing matters:

a) Balance Forward, Credits, Payments Deposits—Accounts Receivable Office
c) Student Finance Program—Deferred Payment Plan—Accounts Receivable Office
d) Housing Reservations and Housing Charges—Office of Residence Life

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. The Student Financing program provides financing for up to 50% of the current semester charges less financial aid and authorized and other payments, to be repaid to the University in two equal installments. Interest is charged at the rate of 23% per month. A delinquency charge on each monthly installment in default for a period of ten days or more will be charged in an amount equal to 5% of such installment or $5.00, whichever is less, except that a minimum charge of $1.00 may be made.

CASHING CHECKS

A student may cash a check up to a maximum of $50 at the Cashier’s Office on the Ground Floor of the Administration Building 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.

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 bad checks that are returned from a bank for lack of funds. Payment of registration or room and board with an NSF check will result in cancellation of the registration.

PRE-REGISTRATION

Students with a balance due the University for the current semester or prior terms are not permitted to pre-register for the next semester.
PHILOSOPHY

Consistent with the educational philosophy of the University and the above stated mission, the Student Life Division provides the student with opportunities to participate in a variety of experiences with fellow students, faculty members and administra tors. The Student Life Staff encourages students to initiate new programs, implement change and participate in the essential processes of University governance on many levels.

ORGANIZATION

The Executive Vice President for Student Life coordinates the Department of Athletics, Commuter Affairs, Counseling and Testing, Duquesne Union, Freshman Experience, Greek Life, Health Service, Judicial Affairs, Programs and Activites and Residence Life. These Departments are briefly described below. Additional information may be obtained directly from each Department and through the Student Handbook and Code of Student Rights, Responsibilities and Conduct.

ATHLETICS

Duquesne University is a member of the National Collegiate Athletic Association (Division I). All rules of this organization, including those pertaining to a student's eligibility for a varsity team, are followed. Duquesne University believes in athletics as a means to promote the concept of the student-athlete. Athletic grants-in-aid are available for all varsity sports with the exception of football.

The Athletic Department fields men's varsity teams in baseball, basketball, cross-country, football, swimming, tennis, wrestling, women's varsity teams in basketball, cross-country, swimming, tennis, track and field, golf, and club teams in bowling, hockey, and crew.

Duquesne sponsors a very active intramural program in such fields as tennis, touch football, volleyball, street hockey, basketball, softball, indoor/ outdoor soccer, coed wiffle ball, and aerobics.

OFFICE OF COMMER AFFAIRS

Whether living with relatives or commuting from their own apartment, the Office of Commuter Affairs offers valuable services and programs for commuter students. If commuter students have a question, suggestion, complaint, concern or simply need information, check with the Office. Assistance is available in many areas, including:

Parking and Transportation  The Office of Commuter Affairs can assist students with University parking information and in forming carpools. Flat bus schedules are available in the Office. Bus passes are sold in the Information Center of the Union.

Off-Campus Housing  Up-to-date listings are maintained of rooms, apartments, houses and "roommate needed" situations. Area maps, apartment directories and housing search assistance are also available.

Commuter Message Center  If someone needs to get a message to a student on campus, they may call 396-6660. The message is posted outside the Office for the student to pick up.

Adult Learner Services  Services are provided for adult learners including, newsletters, family programming, assistance with adult tutoring and a monthly Brown Bag Enrichment Series. Duquesne Adult Learners Organization (DALO) is an adult organization specifically designed for adults learners. Its officers can be contacted through the Office.

Commuter Assistance Program  This program is a support network of upperclassmen students who serve as advisors and resource to new commuters. C.A.'s plan activities, provide information and supply encouragement. Students should be contacted by their C.A.' prior to entering their first semester.

Other Services include Suggestions/Complaints in Action, Commuter Update, Student Handbook distribution to commuter students and distribution of commuter I.D. cards (after validation by the I.D. center).

The Office is located in the Duquesne Union, Room 315 and is open throughout the year to serve students. Office hours are extended during the Fall and Spring semesters when the Office is open Monday through Thursday, 8:30 a.m. - 6:00 p.m. and Friday until 4:30 p.m. Additional evening and weekend hours are available by appointment. For further information call 396-6660.

OFFICE OF PROGRAMS AND ACTIVITIES

The Office of Programs and Activities coordinates the programs, services and facilities of the Duquesne Union, provides programming and administrative support for all recognized student organizations, publishes the Fall and Spring Semester Activities Calendars, and coordinates the Duquesne University Volunteers, the University's volunteer program. The staff of this office provides services and amenities required to meet the daily needs of campus life. Programming and assistance in all phases of campus programming, arranges all scheduling of events in the Duquesne Union, and produces and presents a balanced series of cultural, educational, social and recreational programs in support of the mission and goals of the University.

The Union Program Board is the student organization of the Duquesne Union which involves students in all aspects of planning and implementing various programs. The UPB offers students a chance to be creative and gain effective leadership, communications, and program planning skills.

OFFICE OF JUDICIAL AFFAIRS

The Office of Judicial Affairs plays an important role in developing responsible student conduct. Its purpose is to protect the rights and freedoms of all students while ensuring that these rights and freedoms are not misused within the context of students' responsibilities to the University. It administers the University Judicial Board comprised of students, faculty and administrators with a student chairperson. The Judicial Board monitors legal technological in dealing with student conduct problems, and instead focuses on the developmental process.

RESIDENCE LIFE

The Office of Residence Life is committed to creating an environment in each of the four (4) Living Learning Centers in which the student may grow and develop as a person. Its philosophy and programs are based on the belief that the Living Learning Center experience is an important part of the total University education. Therefore it is the purpose of the Office of Residence Life to facilitate the personal and academic growth of the resident student. To this end, the professional and resident assistance staff will provide the means to foster such development.

All freshmen students, except those residing with their parents or relatives, are required to live in one of Duquesne's Living Learning Centers. All students living on campus are also required to take a University meal plan. Housing Agreement terms are effective for the entire academic year, with room and board rates being determined on an annual basis. Additional information regarding programs, policies and regulations for the Living Learning Centers is included in the Residence Life Handbook.

OFFICE OF FRESHMAN EXPERIENCE

FRESHMEN  The Office of Freshman Experience serves to implement and direct programs which integrate and enhance the academic, cocurricular, and spiritual dimensions of the Freshman Experience at Duquesne University. To accomplish this, the office directs the Freshman Orientation Program, implements the Freshman Mentor Program, assists freshmen with finding tutors when needed by interacting with the Learning Skills Center and the other offices providing tutorial services, coordinates the New Student Seminar Program with the Counseling and Testing Center, prepares and edits both the Freshman Newsletter and the Parents Newsletter, develops freshmen leadership through the Freshman Class Advisory Committee, advises freshman honor societies, and interacts with the Offices of Commuter Affairs and Residence Life in developing programs for freshmen commuters and residents. The office is also responsible for monitoring freshmen grades by interacting with the Deans Of the Offices of the Undergraduate Schools of the University and the Academic Advisement and Referral Center.

STUDENTS WITH DISABILITIES  The Office of Freshman Experience also provides services to all University students with disabilities. Services such as classroom relocation, specialized testing accommodations (extended time testing, switch testing, and oral testing, etc.), note-taking and other accommodations can be arranged through the office on an individual basis.

Students with learning disabilities should submit a psychological evaluation that is no more than three years old, to the Office of Freshman Experience, Room 309, Duquesne Union. The student's evaluation is utilized to assist in determining the student's strengths and needs. As a review of the evaluation, is conducted by a Learning Disabilities team which includes the student and pertinent University staff. Following a meeting, the team, certain learning accommodations are recommended. The office works with students on communicating their needs to faculty members and the University community, and assists students in connecting with campus resources, such as the Learning Skills Center, the Counseling/Testing Center, and other campus resources.

Please contact the Office of Freshman Experience at 396-6657 or 396-6658 for any additional information.

OFFICE OF GREEK LIFE

The Office of Greek Life promotes the growth and development of students who choose to affiliate with Greek Letter Groups, and seeks to promote the
Music Each entering student is assigned an academic advisor in the Office of Admissions. The advisor provides academic guidance, helps students clarify their academic goals, and assists students in choosing courses and programs related to their academic, professional, and life goals.

COUNSELING AND TESTING CENTER

The Counseling and Testing Center provides academic, personal, and vocational counseling to help students achieve their academic goals. Counselors work one-on-one or in groups to help students clarify their values, interests, abilities, and goals. They also assist students in decision-making, implementing choices, and problem-solving. The center is staffed with professional counselors who provide academic counseling, test preparation, and career planning services.

Health Education

The Health Service provides numerous quality health education programs for the University community. These programs promote good health, safety, and the early detection of illness, thereby preventing consequences of disease, injury, and accidents.

Staff

The medical/nursing professional staff consists of all registered nurses and board-certified physicians affiliated with Mercy Hospital.

Immigration

Duquesne University has established a Pre-Matriculation Immunization Policy. All incoming undergraduate students (Freshmen, Transfers, Second-Degree) must provide proof of immunization. Students who do not meet the requirements may seek career planning through personal contact with the Office of Counseling and Testing.

In-Hospital Care

- University physicians are attending staff physicians at the Mercy Hospital. In emergency situations, students are transported and/or referred to the Mercy Hospital. At that time, University physicians are consulted regarding the student's treatment and disposition.

Location

The Health Service is located on the second floor, Towers Living Learning Center 396-1650.

Eligibility

All undergraduate students are prepaid. By electing to join the Health Service program, all non-resident graduate and part-time students are eligible for first aid and referral services as well as all the benefits of ongoing primary care such as physician visits and allergy injections. A nominal fee of $25 per semester is required.

Treatment or diagnostic procedures by non-University physicians, clinics or hospitals must be paid by students, their family or their medical insurance.

Health records are confidential and will not be released without the student’s permission.

INSURANCE

- It is strongly recommended that each student obtain some form of health insurance.

Inquiries about health insurance should be directed to the Risk Manager (396-6677)

NOTE: The University is not responsible for medical expenses resulting from participation in intramural sports.

EMERGENCY

- A Crisis Coordinator is available 24 hours a day to assist in any type of emergency resulting from illness, injury, or psychological problems.

- Call Campus Security (396-6002). They will provide assistance and will contact Paramedics, Health Service, and the Crisis Coordinator as needed.

RETENTION OFFICE

The Retention Office, under the direction of the Vice Provost for Academic Affairs, coordinates the efforts of the entire University community to ensure that the personal and educational experience for all students is the best possible. Policies, programs, services, and opportunities are constantly reviewed, refined, and improved in an effort to meet the legitimate needs of students consistent with the mission and goals of the University.

ARCHIVES

An archives is a treasury. Duquesne’s Archives preserves the written records, photos, and memorabilia which comprise the memory of this institution. The archives includes an accumulation of history, decisions, persons, events, and publications.

Located on the eighth floor of Rockwell Hall, the Archivist, Fr. Richard Wersing, welcomes browsing or research. Phone 396-5323

C. OTHER DEVELOPMENTAL SERVICES

OFFICE OF INTERNATIONAL EDUCATION

The Office of International Education (OIE) provides services to international students and scholars pursuing undergraduate and graduate degree programs at the University. These specialized services include pre-arrival information to accepted students, facilitating compliance with U.S. Immigration and Naturalization Service (INS) regulations, assisting in academic and cross-cultural adjustment through initial arrival and extended orientation programs, promoting and supporting events, programs, and activities which foster deeper communication, understanding, and awareness among U.S. and international students at Duquesne, and providing on-going direct service and appropriate referral services to international students and scholars on campus in a personalized and professional manner.
THE PSYCHOLOGY COUNSELING CENTER

The Psychology Counseling Center is both the clinical training facility for graduate students in psychology and a counseling center for the Duquesne campus community and the public. The Center specializes in individualized personal counseling and psychotherapy. These services are provided by advanced Ph.D. candidates in clinical psychology under the supervision of licensed faculty psychologists in the Department of Psychology. Working together with a trained counselor, the counseling interviews are meant to provide the client with the opportunity to explore and find one's own compatible 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. This counseling is free of charge to the Duquesne community and, of course, completely confidential.

D STUDENT GOVERNANCE

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association is designed to provide a forum for the expression of student views and interests, to promote academic freedom and student rights, and to provide effective representation in the policy making and operations of the University. Two major functions of the SGA are to serve as student representatives on crucial University committees and to recognize and fund 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 programs, the Council works closely with the Student Government Association, Residence Council, Union Program Board and the administration.

RESIDENCE HALL ASSOCIATION

The Residence Hall Association supports Living Learning Center activities and is involved with the Office of Residence Life in developing and implementing Living Learning Center policies and procedures. All resident students are automatically members of Residence Hall Association and are encouraged to attend meetings, functions, etc., sponsored by the group. It is the aim of the Residence Hall Association to serve as a link between the resident students and the administration. Aside from the council activities, representatives of the Residence Hall Association serve on university committees.

INTERFRATERNITY ASSOCIATION

The object of the Interfraternity Association is to develop and maintain fraternity life and interfraternity relations at a high level of accomplishment and, in so doing, to consider the goals and ideals of member groups as continually applicable to campus and personal life, promote superior scholarship as basic to intellectual achievement, cooperate with member fraternities and the University Administration in concern for and maintenance of high social and moral standards, act in accordance with National Interfraternity Conference policies, and to act in accordance with such rules established by the Interfraternity Council.

The Interfraternity Council (IFC) serves as a clearinghouse for the Interfraternity Association and as a forum for airing constructive proposals for the improvement of the fraternity system. Membership in the IFC is composed of appointed representatives from each of the eight member fraternities.

PANHELLENIC ASSOCIATION

The object of the Panhellenic Association is to develop and maintain sorority life and inter-sorority relations at a high level of accomplishment. To consider the goals and ideals of member groups as continually applicable to campus and personal life, promote superior scholarship as basic to intellectual achievement, cooperate with member sororities and the University Administration in concern for and maintenance of high social and moral standards, act in accordance with the Panhellenic Conference's agreements and policies, and to act in accordance with such rules established by the Panhellenic Council.
in Southwestern Pennsylvania and parts of Ohio, West Virginia and Maryland within a seventy mile radius of Pittsburgh. The signal is also carried by a number of cable companies beyond that area. The station depends on listener donations, solicited mainly through on-air fundraising campaigns, for almost all of its year-round operating budget. A small full-time staff oversees the daily operation of the station and supervises the activities of university students (in both volunteer and paid positions), community volunteers and high school interns working in the various departments. Programming, Engineering, Operations, Special Projects, News and Public Affairs, Administration, Production and Development, and Public Relations and Marketing.

WDUQ is located on the fourth and fifth floors of Des Plaines Communications Center on the Duquesne campus. Regular business hours are Monday through Friday, 9 AM to 5 PM. Tours are available upon request.

WDSR

WDSR (610AM) is the Duquesne Student Radio. It broadcasts approximately nineteen hours per day. It is utilized mainly through on-air fundraising campaigns, for almost all of its year-long operation.

The Duquesne Duke, the University yearbook, highlights the events of each year for students, faculty and staff. It is published in the fall of each year, and mailed to all seniors pictured in the book to remind them of their alma mater. This yearbook covers student life on campus, groups and organizations, varsity, club and intramural sports, events on campus, and the year in review. Membership on the Yearbook staff is open to all students.

The Student Handbook contains information about the University which concerns the students. Copies are available at the Duquesne Union Information Center.

L’Esprit du Duc, the University yearbook, highlights the events of each year for students, faculty and staff. It is published in the fall of each year, and mailed to all seniors pictured in the book to remind them of their alma mater. This yearbook covers student life on campus, groups and organizations, varsity, club and intramural sports, and events on campus, and the year in review. Its membership includes the Yearbook staff. The Student Handbook contains information about the University which concerns the students. Copies are available at the Duquesne Union Information Center.

Part VII: University Programs and Courses

THE UNIVERSITY CORE CURRICULUM

Core Facility
Madeline C. Archer, Ph.D., Art History
Daniel E. Barbush, M.A., Mathematics
Frank J. Baron, Ph.D., Biology
Bruce Beaver, Ph.D., Chemistry
G. Richard Benzinger, M.A., English
Bernard F. Bennek, Ph.D., English
Robert M. Bernek, Ph.D., Political Science
Perry K. Blatz, Ph.D., History
Stanley Bober, Ph.D., Economics
Richard E. Bond, Ph.D., Economics
George R. Bradley, Ph.D., Mathematics
Michael Cahill, C.Ssp., Ph.D., Theology
Anne M. Clifford, C.S.J., Ph.D., Theology
Donato A. DeFelice, M.S., Mathematics
Frederick Evans, Ph.D., Psychology
Edward L. Gelblum, M.A., Philosophy
Lee Glick, Ph.D., History
Louie Hays, Ph.D., History
John K. Hanes, M.A., English
James P. Hangen, Ph.D., Theology
Jack W. Hausser, Ph.D., Chemistry
Samuel J. Hazo, Ph.D., English
J. Clifton Hall, C.S.Sp., Ph.D., Physics
Eleanor W. Holoveck, Ph.D., Philosophy
Susan Howard, Ph.D., History
Chester A. Jurczak, Ph.D., Sociology
Thomas A. Keeny, Ph.D., Mathematics
Joseph J. Keenan, Ph.D., English
David F. Kelly, Ph.D., Theology
Charles D. Keyes, Ph.D., Philosophy
Stuart M. Kurland, Ph.D., English
Albert G. Labrona, Ph.D., English
Rosaline H. Lee, Ph.D., Mathematics
Rand Lewis, Ph.D., History
Robert E. Madden, Ph.D., Philosophy
Paul T. Mason, Ph.D., History
Holly A. Mayer, Ph.D., History
Mary M. Mazur, M.A., Mathematics
Moni McIntyre, I.H.M., Ph.D., Theology
Megah Michael, Ph.D., English
Kent Moore, Ph.D., Political Science
Frederick Newberry, Ph.D., English
Jerome L. Niedermeyer, Ph.D., English
Roderick D. Philosoph, William J. Rademacher, Ph.D., Theology
Roland Ramirez, Ph.D., Philosophy
Ian Renner, Ph.D., Political Science
Kurt Rethwisch, Ph.D., Economics
Joseph F. Rishe, Ph.D., History

STATEMENT OF PURPOSE

The core curriculum is a cluster of courses within the University’s general curriculum that focuses on values central to liberal education and to the mission of the University. The purpose of the Core is threefold: Core courses encourage students to develop a universal vision; they assist students in building a foundation for professional studies; and they encourage students to cultivate the habit of lifelong learning.

Duquesne’s Core courses emphasize critical thinking and effective communication. Making informed judgments and speaking and writing clearly and persuasively are the marks of an educated person. Students practice these skills not only in specific courses but also across the entire curriculum.

Duquesne’s Core courses integrate fundamental themes of enduring importance—the history and cultural heritage of the West, the diversity and riches of all human cultures, the structures by which societies organize themselves, the role of science in the modern world, the relation of the arts to human experience, the process of defining personal identity and personal values. The questions which are generated through the exploration of these themes are embodied by a tradition of philosophical and theological inquiry.

CORE COURSES

There are seven courses and two course-areas in the University Core, totaling 27 credits.

101 Thinking and Writing

3 cr

Practice in analysis and expression in many disciplines, as preparation for other work in the university-wide integrated Core Curriculum and for later courses throughout the university.
102 Imaginative Literature and Critical Writing 3 cr
A college-level introduction to imaginative literature and to a variety of critical techniques for interpreting imaginative literature. Thinking and Writing Across the Curriculum is a prerequisite.

121 Problem Solving with Creative Mathematics 3 cr
An exploration of mathematics as a science and an art with an emphasis on problem solving. Students may also satisfy this requirement with one of the basic calculus courses (111 or 112, General Chemistry 121 or 122, General Physics 201 or 202).

171 Biology 4 cr
Evolution, inheritance, and the interrelation of energy, life, and the physical environment provide the unifying theme of this course. Each of these is examined from multiple levels of organization—from the molecular to the biosphere—demonstrating the diversity of life within which the commonality of life is found. Issues to be considered include those central to our survival and effective citizenship in our changing world such as disease, reproduction, genetics, genetic engineering, and ecology.

172 Chemistry 3 cr
The fundamental concepts of structure, bonding, properties, and chemical reactivity are presented through lecture and classroom experimentation. A consideration of consumer chemicals and the role of the chemical industry emphasizes the importance of chemistry and related technologies in our everyday lives. The chemical dimensions of selected social issues of current importance in the areas of environmental chemistry, energy technology, and food production are examined.

173 Physics 4 cr
Through lecture and classroom demonstration, students investigate the fundamental notions of mechanics, motion, inertia, force, momentum, and energy. Emphasis is placed on the great Newtonian synthesis of the 17th century. With this foundation, students are prepared to move on to topics chosen from among the following: properties of matter, heat and thermodynamics, electricity and magnetism, light, and modern physics. The course introduces students to the analytical processes of the scientific method and also helps them recognize applications to the physics involved in everyday life.

Core Theology 3 cr
The Core Theology courses expose students to the major religious traditions of humankind. The courses examine the moral, intellectual, and cultural dimensions of these traditions. This requirement may be fulfilled by any one of the following courses: 182, 183, 184, 185, 186, 187.

182 Human Morality 3 cr
An introduction to the basic questions and approaches of Christian ethics, emphasizing the formalization and formation of moral values, the sources and context of Christian ethics, in its biblical and historical development, and including applications to some contemporary issues.

183 The Judeo-Christian Religious Tradition 3 cr
A study of the fundamental beliefs, values, and spirit of the Judeo-Christian tradition as expressed in its religious texts, worship, spirituality, moral codes, and intellectual tradition. The course includes an investigation of the Judeo-Christian faith in a personal context, the importance of the person, in the importance of the community, and in the fundamental goodness of creation and the meaning and value of human existence.

184 Introduction to the Bible 3 cr
An introduction to the methods of investigation necessary to understand the sacred books of Jews and Christians. An examination of the historical, literary, and theological aspects of a select number of key biblical texts and a discussion of their contemporary relevance.

185 Religions East and West 3 cr
A study of some of the world's great religions which are thought to be particularly representative of human's religious experience namely, archaic traditions, Hindu and Buddhist traditions, Chinese traditions, and the Islamic path.

186 Roman Catholic Heritage 3 cr
An introduction to the fundamental beliefs of Roman Catholicism and their expression in literature and the visual arts. After a brief consideration of the interrelation of religion and culture, Roman Catholicism is studied in various historical periods. Ongoing of Christianity, the Patristic Age, the Middle Ages, Scholasticism and the Renaissance, the Reformation and the Counter-Reformation, and the Modern and Contemporary Eras.

187 Christian Understanding of the Human Person 3 cr
An investigation into the question of "What does it mean to be human?" according to Judaeo-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 human role in the world in these four relationships, e.g., freedom, grace, contemplation.

Note: Approved alternate courses for Core 141 are available to students in the College and the School of Business Administration. In general, students will complete the Core requirements according to guidelines established by their respective schools and in consultation with the Advisement and Referral Center.

THE INTEGRATED HONORS PROGRAM

The Integrated Honors Program (IHP) is the honors track of the University Core Curriculum. It is intended for qualified students who wish to accept the challenge of an accelerated learning experience in the Core program. Acceptance is based on a review of credentials, including high school grades, SAT or ACT scores, high school class rank, and a letter of recommendation from the high school principal, counselor, or teacher. All students with exceptional high school records are encouraged to apply. Further information is available at the Advisement and Referral Center.

IHP COURSES

The IHP curriculum consists of the following courses:

101 Logic and Rhetoric 3 cr
Clear and composed thinking, reading, and writing.

111 and 112 Civilizations 3 cr each
An intensive study of key ideas and significant people and events of the great civilizations of West and East.

114 The American Experience 3 cr
The rise and significance of the U.S. as a democratic, industrial, affluent, and open society.

203 Societal Structures 3 cr
The subjective and objective societal framework within which the individual functions. This course will be offered by one or more faculty from Economics, Political Science, Psychology, and Sociology, content will vary.

211 Cultural Perspectives 3 cr
An inquiry into patterns of beliefs, values, ideologies, and norms of human society through studies of language, literature, religion, art, and history. This course will be offered by one or more faculty from Art History, Classics, Communication, English, History, Modern Languages and Literatures, Philosophy, and Theology, and content will vary.

In addition to the above-listed courses, all IHP students must complete the following general requirements:

natural sciences 3 cr
mathematics (Problem Solving with Creative Mathematics, Calculus, Statistics) 3 cr
social sciences 3 cr
philosophy 3 cr
technology 3 cr
humanities 3 cr

CONCENTRATED STUDIES

Concentrated Studies is a highly structured one-year curriculum designed to help students improve their base 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.

Emphasis in Concentrated Studies is on critical thinking and creativity, and the development of ability in the use of language skills. The program features an integrated and mutually reinforcing set of required and demanding courses, including
### UNIVERSITY PROGRAMS AND COURSES

#### Core 101, 102 Thinking and Writing

Across the Curriculum and Imaginative Literature and Critical Writing 4 cr ea

Practice in effective writing. Review of principles of grammar and rhetoric, introduction to literary types and forms. 101 is prerequisite to 102.

#### Classics 101, 102 Basic Latin

5 cr ea

Study of the grammar and syntax of Latin, both as a discipline, and as a basis for learning how language works. The courses maintain a constant comparative tension between Latin and English, in an effort to uncover basic language structures common to the two languages, and to understand Latin's influence on English.

#### Core 121 Problem Solving with Creative Mathematics

3 cr

An exploration of mathematics as a science and an art with an emphasis on problem solving.

#### Core or College Requirements

6 cr

The balance of the student's schedule may be drawn from the University Core Curriculum.

Students in Concentrated Studies are admitted into Duquesne University's College of Arts and Sciences. However, after completing a year in the required Concentrated Studies curriculum, achieving satisfactory academic performance, and meeting any admissions standards, qualified Concentrated Studies students may matriculate to a major in any of the schools of the university. Courses in the Concentrated Studies curriculum carry full college credit, will not normally delay graduation, and serve to meet a number of university and school requirements.

#### ENGLISH AS A SECOND LANGUAGE PROGRAM

Duquesne University offers a comprehensive English as a Second Language Program (ESLP) open to international students admitted to academic degree programs as well as students admitted to the ESLP on a non-degree, certificate of completion basis.

The ESLP offers intensive, semi-intensive, and specialized instruction on basic, intermediate, and advanced levels. Intensive levels meet for twenty hours of instruction per week. Semi-intensive and specialized levels offer instruction for between four and sixteen hours per week, depending upon students' proficiency as determined by English Language Placement Tests. The ESLP focuses primarily upon English for Academic Purposes (EAP). Qualified students at intermediate and advanced levels may combine coursework in their academic major with ESL study. Eligible international students accepted to undergraduate degree programs may be awarded academic credit for their ESL coursework.

The ESLP offers instruction throughout the academic year during three semesters: Fall (Late August to December), Spring (January to April), and Summer (May to July). ESL faculty advisors assist each student in the selection of appropriate ESL courses. All students in ESL courses take five core courses: grammar, reading, listening, comprehension, and writing. A full-time orientation program is also available to assist new international students in adjusting to academic and cultural life in the university.

#### COURSE DESCRIPTIONS

**Basic-Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>Basic ESL Grammar</td>
<td>4</td>
</tr>
<tr>
<td>121</td>
<td>Basic ESL Pronunciation/Oral Skills</td>
<td>4</td>
</tr>
<tr>
<td>122</td>
<td>Basic ESL Reading</td>
<td>4</td>
</tr>
<tr>
<td>123</td>
<td>Basic ESL Writing</td>
<td>4</td>
</tr>
<tr>
<td>124</td>
<td>Basic ESL Comprehension</td>
<td>4</td>
</tr>
</tbody>
</table>

A group of basic-level courses for students whose native language is other than English. Includes up to sixteen hours of classroom instruction and four hours of language laboratory instruction per week. Level and course assignment determined by placement testing.

**Intermediate-Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>125-126</td>
<td>Intermediate ESL Grammar</td>
<td>4</td>
</tr>
<tr>
<td>127</td>
<td>Intermediate ESL Pronunciation/Oral Skills</td>
<td>4</td>
</tr>
<tr>
<td>128-129</td>
<td>Intermediate ESL Reading</td>
<td>4</td>
</tr>
<tr>
<td>129</td>
<td>Intermediate ESL Writing</td>
<td>4</td>
</tr>
</tbody>
</table>

A group of intermediate-level courses for students whose native language is other than English. Includes up to sixteen hours of classroom instruction and four hours of language laboratory instruction per week. Prerequisite Basic-Level Courses (120 through 124) or Placement Testing.

**Advanced-Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>Advanced ESL Grammar</td>
<td>4</td>
</tr>
</tbody>
</table>

A rapid review of English grammar including advanced-level practice designed to supplement oral and written proficiency. Prerequisite Intermediate-Level Courses (125 through 129) or Placement Testing.

**Advanced ESL Conversation**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>An advanced ESL oral proficiency course including conversational practice, preparation and presentation of oral reports, and participation in discussion of seminar topics. Prerequisite Intermediate-Level Courses (125 through 129) or Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**Advanced ESL Reading**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An advanced reading skills course including intensive vocabulary development, scanning, reading comprehension, and reports on outside reading. Prerequisite Intermediate-level Courses (125 through 129) or Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**Special Purpose Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>135</td>
<td>ESL Special Topics</td>
<td>4</td>
</tr>
</tbody>
</table>

An ESL course designed to address specialized skill development in English as a Second Language. Prerequisite Placement Testing.

**ESL Special Purposes Reading**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An English for Special Purposes course focusing on intensive and extensive reading skills offered through the use of instructional materials designed around specialized fields. Prerequisite Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**ESL Special Purposes Writing**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An ESL course focusing on academic writing and research skills that require the preparation of summaries, final reports, and term papers. Prerequisite Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**ESL Guided Study**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A multi-level program of ESL language proficiency development offering supervised, continuously sequenced instruction in individually-prescribed learning modules. Prerequisite Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**ESL Research Paper**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An advanced writing course for graduate international students, offering intensive instruction in bibliographic and research methods as well as in the conventions of expository writing. Prerequisite Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**ESL Term Paper**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An advanced writing course for undergraduate international students preparing especially for CORE 101. The course offers instruction in the conventions of expository writing and in working with and documenting sources. Prerequisite Advanced ESL Writing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**ESL Academic Reading**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An advanced, content-based course of excerpts from international students. Offers practice in analytical reading. Placement Testing.</td>
<td>4</td>
</tr>
</tbody>
</table>

**New International Student Seminar**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A series of discussions and activities designed to facilitate the transition and adjustment of new international students to U.S. academic life. The city of Pittsburgh, and Duquesne University.</td>
<td>0-1 cr</td>
</tr>
</tbody>
</table>

**Extra-Departmental Courses**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Skills</td>
<td>1 cr</td>
</tr>
<tr>
<td>An examination of the academic problems most frequently encountered by college students. Practical exercises on a variety of topics, including time management, stress management, note-taking techniques, and test preparation strategies.</td>
<td>1 cr</td>
</tr>
</tbody>
</table>

**New Student Seminar**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>An exploration of the college adjustment process as it occurs. Study and discussion center on the exploration of college expectations, academic skills, self-esteem, major and career choices, values, time management, social skills, and university resources.</td>
<td>1 cr</td>
</tr>
</tbody>
</table>
College of Liberal Arts and Sciences

Administration
Dean
John J. McDonald, Ph D

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.

Duquesne University believes that education is corporate title, Duquesne University of the Holy Ghost with authority to grant degrees necessary to clear, coherent expression of one's thoughts, hopes, and ideals to God, to society, and to nature.

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 in the understanding of one's 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.

The College confers two undergraduate degrees: Bachelor of Science and Bachelor of Arts. Students who complete the major in biochemistry, chemistry, computer science, microbiology or physics receive the Bachelor of Science degree. Students who complete the major in classics, communication, economics, English, history, modern languages and literatures, philosophy, political science, psychology, sociology, and theology receive the Bachelor of Arts degree.

Students majoring in mathematics can follow a curriculum leading to either a Bachelor of Science or Bachelor of Arts degree.

GRADUATION REQUIREMENTS
To receive the Degrees of Bachelor of Arts or Bachelor of Science in the College of Liberal Arts and Sciences, a student must complete the following requirements:

- A minimum of 120 semester hours of course credits. The last 30 hours must be taken at the University.
- University Core Curriculum
- College General Requirements, as described below.

Major program (minimum of 24 credits, see departmental listings)
- Minor program (minimum of 12 credits, see departmental listings)

An overall minimum cumulative quality point average of 2.0. A cumulative quality point average of 2.0 both in the major and in the minor.

Removal of I and F grades both in the major department and in required courses

Submission of Pre-Graduation Review Form (available in College Office) to the Dean's Office, no later than two weeks before pre-registration for the final semester.

Pre-registration (on form SR1) for B A or B S degree in major field. Submission of application for the degree on form provided by the Registrar before the deadline published in the current University calendar.

No student is considered a candidate for the degree prior to submission of this form and official registration for the degree.

COLLEGE GENERAL REQUIREMENTS
Students enrolled in the College of Liberal Arts and Sciences for the Bachelor of Arts or Bachelor of Science degree are required to complete the University Core Curriculum, consisting of 27 credits, for graduation. In addition to the University Core, students in the College are required to fulfill the following area requirements for graduation:

- Modern or Classical Language proficiency at the 202 level
- Math/Science (mathematics, computer science, biology, chemistry, physics) 3 credits
- Social Sciences (Political Science, Psychology, Sociology) 6 credits (two disciplines must be represented)
- History/Literature 6 credits (must include literature)

COLLEGE OF LIBERAL ARTS AND SCIENCES

GRADUATION REQUIREMENTS
To receive the Degrees of Bachelor of Arts or Bachelor of Science in the College of Liberal Arts and Sciences, a student must complete the following requirements:

- A minimum of 120 semester hours of course credits. The last 30 hours must be taken at the University.
- University Core Curriculum
- College General Requirements, as described below.

Major program (minimum of 24 credits, see departmental listings)
- Minor program (minimum of 12 credits, see departmental listings)

An overall minimum cumulative quality point average of 2.0. A cumulative quality point average of 2.0 both in the major and in the minor.

Removal of I and F grades both in the major department and in required courses

Submission of Pre-Graduation Review Form (available in College Office) to the Dean's Office, no later than two weeks before pre-registration for the final semester.

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- Math/Science (mathematics, computer science, biology, chemistry, physics) 3 credits
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- History/Literature 6 credits (must include literature)

COLLEGE OF LIBERAL ARTS AND SCIENCES

Philosophy/Theology 6 credits
Communication 3 credits

Courses taken in major or minor programs may also be used to satisfy the College General Requirements.

COLLEGE ACADEMIC POLICIES
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 the Spring 1992. Major requirements are those stipulated in the catalog of the year in which a student declares the major.

Academic Load
While a 12-credit schedule in a regular semester is considered full-time study, students may normally carry five courses (15-17 credits) in one semester. A schedule of more than five courses or 17 credits must be approved by the Dean's Office. Students on academic probation may not take more than 15 credits. Students who wish to carry more than 12 credits of courses in the summer sessions must consult with the Dean.

Residence Requirement
The last 30 credits must be taken in residence at the University.

Limits on Inter-School Electives
A maximum of 12 credits in Duquesne University courses outside the College of Liberal Arts and Sciences may be applied to the Bachelor of Arts or Bachelor of Science degree. However, if the student chooses the Certificate in Business Program (24 credits) or an inter-school minor (Education, 15, Music, 15), the maximum credits required will be applied to the degree, but all other courses must be selected from College offerings.

Major/Minor in Same Department
A student may not major and minor in the same department or program of study. The exception is language majors, who may minor in a second language, and majors in computer science or mathematics, who may major in the companion discipline.

Sequelonal Courses
Sequential courses must be taken in proper sequence. Credit will not be given for a prerequisite course if the student has not completed the prerequisite already.

Temporary Transfers
No course taken by a student in the College as a Temporary Transfer at another institution may count toward a College degree unless approved by the Dean.

SPECIAL PROGRAMS

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

REQUIREMENTS OF THE PROGRAM
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 Literature at the 300-400 level, as approved by the department chairman.

Modern Languages
Any of the current offerings in Modern Languages, either in translation or in the original language, above the 302 level.

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

CLEP and Advanced Placement
See page 30

University-Level Courses Taken While in High School
University-level courses taken by entering freshmen students while in high school will be evaluated for credit if the following criteria have been met:

1. The courses are recorded on an official transcript from an accredited institution of higher learning.
2. The grades are C or better.
3. The student has completed one semester at Duquesne with a C+ average, or better.

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

REQUIREMENTS OF THE PROGRAM
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 Literature at the 300-400 level, as approved by the department chairman.

Modern Languages
Any of the current offerings in Modern Languages, either in translation or in the original language, above the 302 level.

PRE-LAW
Students who intend to prepare for a career in law may select any subject area for the undergraduate major. In consultation with the Pre-Law advisor, students will be expected to meet degree requirements in the major department, as well as admission requirements of the law school of their choice.
PRE-HEALTH PROFESSIONS

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. The Pre-Health Professions advisor assists the medically-oriented student.

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, and Florida Institute of Technology. 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 University in three years, then enter an engineering program at Case or Florida Institute of Technology.

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

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

CERTIFICATE IN BUSINESS

This program enables students to preserve the benefits of a liberal education while also acquiring business skills. The program consists of 4 prerequisite courses (12-14 credits) in the College of Liberal Arts and Sciences and 8 courses (24 credits) in the School of Business and Administration. Specific requirements are as follows:

Liberal Arts and Sciences

109 College Algebra (3 cr)
or
105 College Algebra and Trigonometry (4 cr)
111 Calculus for Non-science Students (3 cr) or
115 Calculus I (4 cr)
221 Principles of Economics I (3 cr)
or
222 Principles of Economics II (3 cr)

Business and Administration

182 Microcomputer Software (3 cr)
(Students may substitute 213-212 Introduction to Business Software, 281-282 Probability and Statistics (6 cr)
(281-282 Probability and Statistics (6 cr)
(281-282 Probability and Statistics (6 cr)

BUSINESS EMPHASIS

A General Business Sequence

Bus 361 Principles of Management (3 cr)
Bus 371 Principles of Marketing (3 cr)
Bus 331 Business Finance (3 cr)

B Management Information Systems Sequence

Bus 381 Intro to Decision Sciences (3 cr)
Two advanced management information courses (6 cr)

C Management Sequence

Bus 361 Principles of Management (3 cr)
Two advanced management courses, general or human resource (6 cr)

D Marketing Sequence

Bus 371 Principles of Marketing (3 cr)
Two advanced marketing courses (6 cr)

E Finance Sequence

Bus 331 Business Finance (3 cr)
Two advanced finance courses (6 cr)

F Accounting Sequence

Bus 311 Intermediate Accounting I (3 cr)
Bus 312 Intermediate Accounting II (3 cr)

G Law Sequence

Prerequisite - Substitute 251 Legal Process for 282 Probability and Statistics II) Plus 9 credits from
Bus 353 Contracts (3 cr)
Bus 354 Commercial Transactions (3 cr)
Bus 355 Law of Business Organizations (3 cr)
Bus 356 Legal Aspects of Human Resources Management (3 cr)

H International Business Sequence

Bus 341 International Business (3 cr)
Two advanced international business courses (6 cr)

I Appropriate Modern Language "for business" at 306 level (3 cr)

SUGGESTED ADDITIONAL COLLEGE ELECTIVES

383 Writing for Business and Industry (3 cr)
385 Prof and Tech Writing Workshop (3 cr)
102 Techniques of Oral Communication (3 cr)
401 Cooperative Education (3 cr)

The student must complete the business emphasis as it is set up. There are no substitutions.

The student must achieve a minimum grade of C in each course.

Students with waivers for prerequisite courses (Introduction to Computers and Statistics I and II, especially math and computer science majors, will be permitted to take an additional 9 credits in Business and Administration.)

Because in most cases it will take three years to complete the certificate, students are strongly urged to register for the program by the end of their freshman year. To register, students should file a completed application form in the College Office. This, along with a copy of the most recent transcript, will be sent to the Placement Office in the School of Business and Administration. A School of Business advisor will assist the candidate in planning the program.

OTHER CERTIFICATE PROGRAMS

Certificate programs are also available in Computer Science (Department of Mathematics and Computer Science), Corporate Communication and Professional Communication Skills (Department of Communication, and Geonology (Department of Sociology). Students are expected to consult with the Center for Continuing Education. Further information may be obtained from the appropriate department or from the Center.

INTER-SCHOOL MINORS

Inter-school minors are available in Education and Music. For complete details students should consult the advisor or the Dean of the College.

COOPERATIVE EDUCATION PROGRAM

The Cooperative Education program is a service to students seeking expanded education through work experience, and to employers seeking temporary pre-professional staff with the ultimate objective of early identification of the best available college educated talent for permanent assignment.

Under this plan, students may be employed in business, government, and other institutional settings. The program design provides for short-term work assignments, and it requires the regular rotation of students in each job and competitive referrals for each work period. Employment may be either full- or part-time for one academic term or its equivalent.

It is expected that the cooperative education student will be paid a salary commensurate with the work assigned. The actual job must be pre-professional, well-defined and fully supervised.

Sixty (60) or more earned credits and a cumulative quality point average of 2.5 or better are basic requirements for student qualification for the Program. Clearance from academic advisors is required of those students in departments with other internship or work experience requirements.

When employed, and before starting work, a cooperative student must enroll in the course, "Cooperative Education," which carries a minimum number of hours of work.

Further information is available from the Dean Office.

BACHELOR-MASTER'S PROGRAM

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 from the College of Liberal Arts and Sciences.

Further information is available from the Dean Office.

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. Further information is available from the Dean Office.

THREE-YEAR BACHELOR'S DEGREE

For further information contact the Office of Admissions or the Dean's Office.
MAJORS
Advertising
Biochemistry
Biology
Broadcast Journalism
Classics
Classical Civilization
Communication
Corporate Communication
Computer Science
Economics
English
French
German
Greek
History
Latin
Mathematics
Media Management/Operations
Media Performance
Minor in Classics
Minor in Classical Linguistics
Minor in Classical Literature
Minor in Communication
Minor in Computer Science
Minor in Criminal Justice
Minor in Economics
Minor in English Literature
Minor in French
Minor in Gerontology/Human Services

MINORS
Advertising
American Literature
Art History
Biochemistry
Biology — Professional Minor
Biology — Academic Minor
Broadcast Journalism
Chemistry
Classical Civilization
Classical Languages
Latn
Greek
Communication
Corporate Communication
Computer Science
Criminal Justice
Economics
English Literature
French
German
Gerontology/Human Services

Course Descriptions

ART HISTORY
Director: Madeline C. Archer, Ph D

Survey and period courses in the history of western art are offered by the Art History program of the History Department to introduce the concepts of art history to those who wish to extend their visual perception and to understand the role of the visual arts in Western culture. Qualified students may take 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, urban redevelopment, appraising, and consulting.

REQUIREMENTS FOR THE MAJOR
A History major with a concentration in Art History is available. Consult the History Department listing for requirements.

REQUIREMENTS FOR THE MINOR
The minor consists of 15 credits, none of which must be above the 100-level.

111 History of Art Ancient to Medieval World
History of the Western art from Antiquity to the 11th century. (3 cr)

112 History of Art Renaissance to Modern World
Continuation of 111. Surveys Renaissance, Baroque and Modern art in Western Europe. (3 cr)

206 Greek Art
Study of the evolution of Greek art from the Archaic to the Hellenistic Period. (3 cr)

207 Roman Art
An introduction to Roman art, focusing on its role in the formation of Western art. (3 cr)

300 American Art
An overview of American art, focusing on its role in the formation of American art. (3 cr)

312 Late Medieval Art
Western European art from the 11th to the 14th century. Focus is upon the development of stone voulting systems, monumental architectural sculpture, stained glass, fresco and panel painting, and illuminated manuscripts in England, France, Italy, Spain, and Germany. (Does not meet History or Core requirements.)

312 Late Medieval Art
Western European art from the 11th to the 14th century. Focus is upon the development of stone voulting systems, monumental architectural sculpture, stained glass, fresco and panel painting, and illuminated manuscripts in England, France, Italy, Spain, and Germany. (Does not meet History or Core requirements.)

311 15th Century Renaissance Art
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. (3 cr)

331 Art of the Nineteenth Century
An assessment of the major movements of the nineteenth century in Europe and America, with special emphasis upon the social, political, and economic aspects that determined Modernism in Europe from 1789 to 1900. The course also addresses the changing role of the avant-garde artist and the formation of the new patronage, the art market, museum athenaeum, and the arts as social protest. (3 cr)

332 Art of the Twentieth Century
Examination of the major movements of the twentieth century in Europe and America, with special emphasis upon the social, political, and economic aspects that determined Modernism in Europe from 1789 to 1900. (3 cr)

370 Classical Archaeology
An examination of the contribution made by archaeological investigation to our understanding of Greek and Roman Civilization. Lectures and slide presentations explore the major sites and archaeological finds in the Greco-Roman world beginning with the rediscovery of the treasures of Mycenae and ending with the expansion of Roman influence into Britain, Asia, and Africa. An introduction to the goals and technique of archaeological research is included. (Does not meet History or Core requirements.)

371 Late Medieval Art
Western European art from the 11th to the 14th century. Focus is upon the development of stone voulting systems, monumental architectural sculpture, stained glass, fresco and panel painting, and illuminated manuscripts in England, France, Italy, Spain, and Germany. (Does not meet History or Core requirements.)

372 Art of the Nineteenth Century
An assessment of the major movements of the nineteenth century in Europe and America, with special emphasis upon the social, political, and economic aspects that determined Modernism in Europe from 1789 to 1900. (3 cr)

373 Art of the Twentieth Century
Examination of the major movements of the twentieth century in Europe and America, with special emphasis upon the social, political, and economic aspects that determined Modernism in Europe from 1789 to 1900. (3 cr)

478 Internship
Practical experience in art related areas introduces the student to the many opportunities in the art field. Prerequisite: Permission of the Art History faculty and completion of 15 Art History credits.

COLLEGE OF LIBERAL ARTS AND SCIENCES

COURSE DESCRIPTIONS

250 Classical Archaeology
An examination of the contribution made by archaeological investigation to our understanding of Greek and Roman Civilization. Lectures and slide presentations explore the major sites and archaeological finds in the Greco-Roman world beginning with the rediscovery of the treasures of Mycenae and ending with the expansion of Roman influence into Britain, Asia, and Africa. An introduction to the goals and technique of archaeological research is included. (Does not meet History or Core requirements.)

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An examination of the contribution made by archaeological investigation to our understanding of Greek and Roman Civilization. Lectures and slide presentations explore the major sites and archaeological finds in the Greco-Roman world beginning with the rediscovery of the treasures of Mycenae and ending with the expansion of Roman influence into Britain, Asia, and Africa. An introduction to the goals and technique of archaeological research is included. (Does not meet History or Core requirements.)

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372 Art of the Nineteenth Century
An assessment of the major movements of the nineteenth century in Europe and America, with special emphasis upon the social, political, and economic aspects that determined Modernism in Europe from 1789 to 1900. (3 cr)

373 Art of the Twentieth Century
Examination of the major movements of the twentieth century in Europe and America, with special emphasis upon the social, political, and economic aspects that determined Modernism in Europe from 1789 to 1900. (3 cr)

374 Michelangelo: His Art and His World
From its beginning in Medici Florence to its conclusion amidst the spiritual turmoil of the Counter-Reformation, Michelangelo's career spanned several generations of Italian art and history. This course will examine the genius of Michelangelo in the context of the artistic and cultural forces which combined to create the Renaissance.

376 Contemporary Art
A study of the neo-avant-garde from 1945 to the present in the major European art centers and in America. The reception of the various modernist movements of contemporary art are examined in the context of social and cultural changes in the twentieth century. Major movements included are Abstract Expressionism, Realism, Pop Art, Minimalism, Happenings, Performance Art, Conceptual Art, and the New Art of the Eighties.

398 Art and Society
This course will explore the ways that social and political conditions and demands affect artists' aesthetic choices. Although many of the examples discussed in class will be drawn from the visual arts, other art forms such as literature, drama, music and dance will also be included as appropriate. The class will examine thematic topics through history such as art and social protest, art in the service of governments, and commercial art. We will also look at issues of controversy in contemporary art worlds as they affect artistic production.

431 Directed Readings
1-3 cr
Permission of Department

441 American Painting and Sculpture
3 cr
Selected topics in 18th, 19th and early 20th century American Art History are examined in the context of social, political, cultural and economic issues. Topics may include The Architecture of American Landscapes in the 19th Century, American Portraiture, American Impressionism, American Women Artists, The Rise of American Art Academies, Art Criticism, and Patronage, Exhibitions, and Museum Institutions.

442 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 are scheduled. (Offered in alternate years)

443 American Decorative Arts
3 cr
Decorative arts from the Pilgrims to the Bauhaus are examined in context historical, formal, technological, and cultural. Field trips to Carnegie Institute and other area collections are scheduled. (Offered in alternate years)

478 Internship
3 cr
Practical experience in art-related areas introduces students to the many opportunities in the art field. Prerequisite: Permission of the Art History faculty and completion of 15 Art History credits.
DEPARTMENT OF BIOLOGICAL SCIENCES

Chairperson  H. Bernard Hartman, Ph D
Professors  Frank Baron, Ph D
Peter Castric, Ph D
H. Bernard Hartman, Ph D
Aris Sideropoulos, Ph D
Steven Thomas, Ph D
Associate Professor  Kenneth Boyd, Ph D
Assistant Professors  Olushola Adeeye, Ph D
John Doctor, Ph D
James R. Carey, Ph D
Mark E. Rulke, Ph D
John F. Stoiz, Ph D

Adjunct Faculty  Jagdish P. Bhattacharjee, Sc D
Author K. Kato, Ph D
Spyros D. Kominos, DSc
John Kuchta, Ph D

Biology is the study of mechanisms and principles governing living systems. Based upon chemistry, physics and mathematics, knowledge of biology is an essential element in a liberal education. Through lectures, seminars, laboratories, and participation in research projects, the Department of Biological Sciences at Duquesne University provides not only insight into this vast and exciting area, but intellectual enrichment, as well as preparation for professional careers.

Students majoring in biology develop a course of study suited to their long-term goals. For example, the Health Professions Program advisor in our Department counsels students as they progress through their curriculum and apply for admission to health-related professional schools. Course selections of students wishing to pursue graduate training, or the many and diverse bio-technological research opportunities in industry, government or universities, are guided by the Microbiology Major and Biology Major advisors.

REQUIREMENTS FOR THE MINOR

The department offers two minor programs

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

2. **Academic Minor** which consists of 111, 112 and a minimum of 12 credits selected from the department's major courses numbered 200-399. Courses which are open to either majors or non-majors may be selected. Individual course prerequisites must be met.

**NON-MAJOR COURSES** (not for Biology Major credit)

- **Bio 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, and the manner in which they cause disease. Lecture

- **Bio 202 Biology of Microbes Laboratory** 1 cr
  A study of the ecological aspects of growth and metabolism of microbes. This laboratory course provides exposure to laboratory techniques in microbiology.

- **Bio 206 Environmental Biology** 3 cr
  This course deals with the biological background for understanding environmental problems and the interaction of these organisms with their environment. Prerequisites: Bio 201 (or concurrent registration) Laboratory

- **An 207 Anatomy and Physiology I** 3 cr
  Studies designed to provide students with a back ground in the areas of the human body structure and the mechanisms underlying normal body function. Prerequisites: some previous exposure to introductory biology and chemistry is desired;

- **Bio 208 Anatomy and Physiology Laboratory I** 1 cr
  This laboratory includes examination of the micro and gross anatomy of the body, physiological experiments, and exposure to certain basic clinically important measurements and techniques. Prerequisites: Bio 207 Anatomy and Physiology (or concurrent registration).

- **Bio 209 Anatomy and Physiology II** 2 cr
  Continuation of Bio 207 Lecture

- **Bio 210 Anatomy and Physiology Laboratory II** 1 cr
  Continuation of Bio 208 Laboratory

- **Bio 220 Sex and Sexuality** 3 cr
  Consideration of sex and reproduction as unusual biological functions and special emphasis on the biological and psychological basis of human sexuality. This course also aims to examine sexual functioning, sexual behavior, and sex therapy. Lecture

- **Bio 230 Stress and Adaptation** 3 cr
  A study of the effects of stress on males of various origins, and the neuro and hormonal regulations associated with the adaptation of stress. Lecture

**MAJOR COURSES**

Except for 398 and 399, all courses for majors also are open to non-majors, providing that individual course prerequisites/background expectations are satisfied.

- **Bio 111, 112 General Biology** 4 cr each
  Introduction to the scientific study of life at the cellular, molecular, and organ level. It involves consideration of relevant structure, function, development, reproduction, inheritance, evolution, and ecology. This course provides the basic information and concepts necessary to understanding living systems, their activity and interrelationships.

- **Bio 211 General Zoology** 3 cr
  A study of human biology. This course also aims to examine sexual functioning, sexual behavior, and sex therapy. Lecture

- **Bio 213 Introduction to Microbiology** 1 cr
  Introduction to microorganisms, their morphology, metabolism, ecology, and cultural characteristics, with emphasis on their interaction with other organisms, including bacteria. Lecture

- **Bio 214 Microbiological Ecology** 3 cr
  The study of the mechanisms of inheritance and their effects on individuals and populations, including the implications in the life of man. Principles and details, methods and applications are illustrated with examples drawn from a wide range of species, from microorganisms to man.

**332 Immunology and Virology** 4 cr
Introduction to viruses and immunology, with emphasis on host-parasite interactions and patterns of infectious diseases in populations. Prerequisites: Bio 111, 112, and Organic Chemistry (or concurrent registration).

**333 Medical Microbiology** 3 cr
A systematic coverage of medical microbiology and its role in clinical medicine. Emphasis is based on current concepts of infectious disease and microbial genetics and includes studies of these systems and their interactions with other organisms, including bacteria. This course also aims to examine sexual functioning, sexual behavior, and sex therapy. Lecture
DEPARTMENT OF BIOLOGICAL SCIENCES

398, 399 Undergraduate Research 1, 2 cr each Opportunity for selected students to work in the laboratory on research problems under the direction of a faculty member. 398 is not a prerequisite to 399. Maximum of four credits. Registration by permission of the instructor, Laboratory.

400 Biotechnology Laboratory Techniques 3 cr A course to familiarize the student with a variety of biological and biochemical techniques including electrophoresis and chromatography of proteins and nucleic acids, radio-isotope techniques, and enzyme purification. These techniques are useful in such areas as medical and industrial biotechnology, science education and biological research. Prerequisites: Organic Chemistry or permission of the instructor, Lecture and laboratory.

401 Research Skills 3 cr This course provides students who have an interest in research with a variety of important skills which are often inadequately covered in conventional courses. "Hands-on" experience will be provided. In addition to useful laboratory techniques, including small animal surgery, usage of various methods of physiological research equipment, and basic electronics, there will be a constant troubleshooting. The course will emphasize methods for the design, evaluation, and presentation of research, all of which are dependent on experimental design, statistical methods, computer usage, and the writing of scientific papers. Laboratory/Lecture.

403 Cell and Electron Microscopy 3 cr A basic course in cytology and electron microscopy of prokaryotic and eukaryotic cells. The structure and development of cellular systems, their organelles, activities and interrelationships at various levels of organization are studied. Laboratory stresses techniques and methodology appropriate to investigations in the area. Lecture and laboratory.

405 Molecular Genetics 3 cr A course providing the fundamentals to the rapidly growing field of molecular genetics. Emphasis is on gene structure and function in prokaryotic and eukaryotic cells. Areas to be discussed are DNA structure, template functions of DNA, mechanisms involved in DNA duplication, transcription, translation, nature of the genetic material, genetic fine structure and colinearity, genetic regulation including mutagenic aspects of pollutants, DNA repair and molecular aspects of the process of tumor induction. Restriction enzymes, plasmids, genetic engineering, gene cloning and in vitro recombination are described. Prerequisites: a course in microbiology or permission of the instructor, Lecture.

407 Recombinant DNA Techniques 3 cr Molecular cloning using Lambda phage, plasmids, and cosmids will be examined, as will subcloning using plasmids. Restriction site analysis and transposon mutagenesis of cloned DNA will be done. The student will carry out nucleic acid hybridization analysis using Southern and Northern blots. Nucleotide sequencing of cloned DNA using the Dideoxy method will be done. The student will follow by sequence analysis. Prerequisite: Biology 400/500 or permission of the instructor, Lecture and laboratory.

410 Cell Physiology 3 cr A study of cells with regard to means of obtaining energy including respiration, fermentation, and photosynthesis, work done by the cell including biosynthesis, cell movement, and cell growth and differentiation, relationships of cell structure to these processes. Prerequisite permission of the department. Not open to students with previous similar coursework. Lecture and laboratory.

424 Immunology 3 cr A course in the fundamentals of the rapidly expanding field of immunology with references to applications in basic research, medicine and public health. Topics covered include the mechanisms of induction and expression of the cellular and humoral responses, tolerance, immunoglobulins, antigen antibody reactions, complement, immunogenetics, hypersensitivity, and immunologic disease. Laboratory exercises are designed to familiarize the student with a variety of basic immunologic techniques. Lecture and laboratory.

426 Pathogenic Microbiology 3 cr Study of the infectious agents of human diseases with emphasis on host-parasite relationships, unique aspects of bacterial activities and organization, metabolism, regulation and genetics which contribute to pathogenicity, and cell movement, including identification of bacteria and principles of prevention, treatment, and laboratory diagnosis. Prerequisite: a course in microbiology or permission of the instructor, Lecture and laboratory.

427 Microbial Ecology 3 cr In this course the interaction of the microbe, primary producers and the blue-green algae, with each other and their abiotic environments at the molecular level will be explored. Topics such as photosynthesis, nutrient cycling of energy metabolism, and the role of microenvironments will be examined. Prerequisites: Organic Chemistry and a course in microbiology or permission of the instructor, Lecture and laboratory.

428 Microbial Physiology 3 cr A course examining microbial energy metabolism including organotrophic (aerobic and anaerobic respiration, fermentation), chemolithotrophs, and phototrophs. Selected topics of microbial biosynthesis, including cell envelope biosynthesis and structure, will be covered. Regulation of energy metabolism and biosynthesis at the levels of gene expression and enzyme activity will be a major topic in this course. Prerequisite: Organic Chemistry and a course in microbiology or permission of the instructor, Lecture.

431 Biology of Fungi 2 cr Comparative structure, development and ultrastructural cytogenetics of fungi, including plant host-parasite interactions resulting in disease. Lecture and laboratory.

435 Comparative Vertebrate Physiology 3 cr Different phylogenetic groups of vertebrates living in diverse environments have evolved a wide variety of physiological and biochemical mechanisms to satisfy their similar basic biological needs. This course focuses on the diversity of physiological mechanisms which different animals employ, and the high level of physiological and biochemical adaptation and specialization found in animals with exceptional abilities. Prerequisites: a course in animal physiology. Lecture.

451 Comparative Vertebrate Physiology Laboratory 1 cr Prerequisite: a previous animal physiology or neurophysiology course (or concurrent registration), or permission of the instructor.

455 Mammalian Physiology 3 cr This course is intended to provide the student with an in-depth understanding of respiratory, cardiovascular, renal, and muscle physiology. After covering the normal function of each system, consideration is given to its response to stress and diseases. Prerequisite: a course in animal physiology. Lecture.

456, Mammalian Physiology Laboratory 1 cr Prerequisite: a previous animal physiology or neurophysiology course (or concurrent registration), or permission of the instructor.

460 General Endocrinology 3 cr A survey of the endocrine system and neuroendocrine integration with particular reference to vertebrates. Lecture and laboratory.

464 Regulatory Physiology 3 cr A treatment of physiological and environmental regulations with emphasis on neuroendocrine regulation and adaptation. Prerequisite permission of the department. Not open to students with previous similar coursework. Lecture and laboratory.

488, Reproductive Physiology 3 cr A course examining reproductive processes in laboratory animals, domestic species, and man. Lecture.

472 Neurophysiology 3 cr Study of the cellular and molecular properties of neurons including excitation, conduction, transmission, integration, sensory mechanisms, and neural processing using vertebrate and invertebrate examples. Prerequisite: a course in animal physiology. Lecture.

473 Neurophysiology Laboratory Techniques 2 cr An introductory laboratory course with emphasis on techniques employed to gather data from invertebrate and vertebrate sensory cells, chemoreceptors, motor neurons, and muscle fibers. Students will learn intra- and extracellular recording methodology, neuron culture, and histochemical methods. Data acquisition is MacLab hardware and Apple Macintosh computer based. Completion of or concurrent registration in Biology 472 is required. Lecture and laboratory.

490 Experimental Embryology 3 cr Studies on the mechanisms and dynamics of animal growth, differentiation, and development. Prerequisite: a course in embryology or permission of the instructor. Lecture and laboratory.

496 Ecology 3 cr The goal is to provide an overall grasp of the principles and procedures underlying ecological thought. Interrelationships of living things with each other as well as the non-living components emphasize the need for interdisciplinary studies and quantitative data. Applicability to current human problems is discussed, such as waste disposal, pollution, food, fuel, agriculture and urbanization. Prerequisite: permission of the instructor. Lecture and laboratory.

498 Urban Ecology 3 cr To provide integrated information about population, food, resources, pollution and the impact of technology. The case history method will be used as applicable to specific industrial metropolitan areas. Analysis of ecosystems with respect to matter and energy flows will be described. Prerequisite: a course in ecology or permission of instructor, Lecture.

DEPARTMENT OF CHEMISTRY

Acting Chairperson: Jack W. Hauser, Ph.D.
Professors: Jack W. Hauser, Ph.D. H. M. Kingston, Ph.D. Omar Steward, Ph.D.
Associate Professors: Bruce Beaver, Ph.D. Shabed Khan, Ph.D. David Seybert, Ph.D. Paul Stein, Ph.D.
Assistant Professors: Frank R. Gorga, Ph.D. Richard Norman, Ph.D. Anne True, 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, organic, physical, chemical, and biochemistry.

Because of the fundamental nature of chemistry as a science, numerous opportunities for advanced study, as well as employment, are open to chemistry and biochemistry majors. A large percentage of students elect to continue their study in graduate programs in chemistry and related fields. Chemists and biochemists provide a core of personnel in pure and applied research, technical sales, technical libraries, management positions in the chemical and related industries, space industry, education, the environmental sciences and the health professions, such as a medicine, dentistry and veterinary medicine.

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, 322, and 421. Mathematics 115, 116, Physics 201, 202 or 211, 212, Biology 111, 112, proficiency in German, Russian or French at the 200 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.

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

Biochemistry Major: All students must take 401, 524. In addition, Chemistry 526 may be taken as an elective.

Students who intend to work in industry after graduation are strongly advised to take 548 Industrial Organic Chemistry.

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, 547, 548, 572, Mathematics 216 or 308, Biology 505, Pharmacy Sciences 539 and Physics 306, one of these must be a laboratory course. This laboratory requirement can also be fulfilled with 490 The Biochemistry Major must take 322, 324, and 422 for certification.

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, 221, 222 along with 401, will constitute the Biochemistry minor.

111, 112 Principles of Chemistry 4 cr each

The course is divided into three segments, general, organic, and biochemistry. In the section devoted to general 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 carbohydrate, lipids, proteins, nucleic acids, enzymes, vitamins, etc. Biochemistry is treated in terms of the digestion and metabolism of nutrients, the functions of enzymes in the metabolic process and the abnormal 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 principles 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, eight hours.

DEPARTMENT OF CLASSICS

Chairperson
Lawrence E. Gaichas, Ph D

Professors
J. F. Clark, Ph D
Lawrence E. Gaichas, Ph D
Stephen T. Newmyer, Ph D

Assistant Professor
Christine Renaud, Ph D

The study of Classics is a unique discipline. It is not the study of a language or literature alone. It is rather the investigation of one of the world’s inspired civilizations, the Graeco-Roman world. As such, it offers the student insight into the broadest aspects of human existence set in a perspective distant enough from one’s own to expand significantly the 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 (known hereafter as the Ancient Greek requirement), 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 in 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 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 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 create programs with the close advice and the approval of the Classics Department to fit their backgrounds, interests, and career objectives.

Major programs in Latin or Greek complete the study of a language or 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 one’s own to expand significantly the understanding and appreciation of humanity’s aspirations, failures, and occasional triumphs.

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ORIGINAL LANGUAGE COURSES

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

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

111, 112 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.

113, 114 Elementary Ecclesiastical
Latin 3 cr each
Study of the fundamentals of Latin grammar and syntax as represented in Scripture and Church Fathers

201, 202 Intermediate Classical
Latin 3 cr each
Selections of major Latin author(s)

203, 204 Intermediate Classical
Greek 3 cr each
Selections of major classical Greek author(s)

307 Imperial Literature 3 cr
Seneca, Petronius, Martial, Plutarch, Tacitus, Juvenal, Pliny the Younger, Suetonius, Apuleius, and Lucian

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 3 cr

CLASSES COURSES IN ENGLISH (NO GREEK OR LATIN REQUIRED)

121 General Mythology 3 cr
A presentation of the major myths of Greece and Rome with special attention to the influence of mythology on art and literature

122 History of the Roman Principate 3 cr
Examination of the development of Roman history from the accession of Augustus to the death of Hadrian

123 History of the Late Roman Empire 3 cr
Examination of Roman history from the accession of Severus to the death of Justinian

124 Ancient Civilizations 3 cr
A study of ancient civilization from the Greek Bronze Age through the Roman Empire

125 History of the Roman Empire 3 cr
Examination of Roman history from the accession of Augustus to the death of Hadrian

126 Hellenistic History 3 cr
A survey of Mediterranean history from the death of Alexander to the death of Octavian and the establishment of the Roman Principate

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

128 History of the Late Roman Empire 3 cr
Examination of Roman history from the accession of Severus to the death of Justinian

129 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 study of archaeological achievements of Egypt

130 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 (Does not count for History)

131 Ancient Epic 3 cr
A study of 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

132 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

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

134 Ancient Law 3 cr
An historical survey, including the contributions of the Babylonians and the Greeks and of the Romans to the development of law between 500 BC and AD 500

203 Curriculum in English Literature 3 cr
A study of the development of English literature from the Middle Ages to the present. Emphasis on the nature and development of the English language

204 Curriculum in American Literature 3 cr
A study of the influences of Greek-Roman civilization on American cultural life

205 Curriculum in European Literature 3 cr
A study of the influences of Greek-Roman civilization on European cultural life

206 Curriculum in Comparative Literature 3 cr
A study of the influences of Greek-Roman civilization on comparative literature

207 Curriculum in Modern English Literature 3 cr
A study of the development of modern English literature from the 19th century to the present

208 Curriculum in Contemporary American Literature 3 cr
A study of the development of contemporary American literature from the 19th century to the present

209 Curriculum in Modern European Literature 3 cr
A study of the development of modern European literature from the 19th century to the present

210 Curriculum in Comparative European Literature 3 cr
A study of the development of comparative European literature from the 19th century to the present

211 Curriculum in Comparative World Literature 3 cr
A study of the development of comparative world literature from the 19th century to the present

212 Survey of Sanskrit Literature 3 cr each
Selected readings from major Sanskrit texts including the Mahabharata, Hitopadesa, Kathasaritsagara, Manavadharniasastra, Rigveda, and Meghaduta

213, 214 Intermediate Ecclesiastical
Latin 3 cr each
Selections from biblical and Christian Latin literature

215 Survey of Biblical Literature 3 cr each
Selections from biblical and Christian Greek literature

216 Survey of Greek Literature 3 cr each
Selections from Greek literature

217, 218 Survey of Latin Literature 3 cr each
Selections from Latin literature

219 Survey of Classical Literature 3 cr each
Selections from classical literature

220 Survey of Modern Literature 3 cr each
Selections from modern literature

221 Survey of American Literature 3 cr each
Selections from American literature

222 Survey of Comparative Literature 3 cr each
Selections from comparative literature

223 Survey of World Literature 3 cr each
Selections from world literature

224 Survey of Latin-American Literature 3 cr each
Selections from Latin-American literature

225 Survey of Comparative World Literature 3 cr each
Selections from comparative world literature

226 Survey of Comparative Latin-American Literature 3 cr each
Selections from comparative Latin-American literature

227 Survey of Comparative European Literature 3 cr each
Selections from comparative European literature

228 Survey of Comparative World Literature 3 cr each
Selections from comparative world literature

229 Survey of Comparative Latin-American Literature 3 cr each
Selections from comparative Latin-American literature

230 Survey of Comparative European Literature 3 cr each
Selections from comparative European literature

231 Survey of Comparative World Literature 3 cr each
Selections from comparative world literature

232 Ancient Novel and Romance 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

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

234 Ancient Law 3 cr
An historical survey, including the contributions of the Babylonians and the Greeks and of the Romans to the development of law between 500 BC and AD 500

235 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

236 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

237 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

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

239 History of the Late Roman Empire 3 cr
Examination of Roman history from the accession of Severus to the death of Justinian

240 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 study of architectural and religious achievements of Egypt

241 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

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

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Examination of Roman history from the accession of Severus to the death of Justinian

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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 study of architectural and religious achievements of Egypt

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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

251 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

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

253 Ancient Law 3 cr
An historical survey, including the contributions of the Babylonians and the Greeks and of the Romans to the development of law between 500 BC and AD 500

254 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

255 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

256 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

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

258 History of the Late Roman Empire 3 cr
Examination of Roman history from the accession of Severus to the death of Justinian

259 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 study of architectural and religious achievements of Egypt

260 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

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

300 Seminar 3 cr
Topics variable
DEFINITION OF THE DISCIPLINE

Communication is an ancient discipline. The traditional focus has been on the study of how people come to know, to believe, and to act. Talking and writing as a way of knowing, as a way of establishing and clarifying belief, and as a way of acting upon the environment in order to bring about change or to reinforce stability, in other words, language-use ("pragmatics"), has been the unit of study. The discipline traces its roots to Socrates through his students, Plato, and Plato's student, Aristotle Aristotle's Rhetoric, written in the 4th century BC, established the rationale for the study of communication.

To a certain extent all people attempt to discuss situations and to examine them. Ordinary people do this either at random or through practice and education. Both ways being possible, the subject can plainly be handled systematically, for it is possible to inquire the reason why some succeed through practice and others spontaneously, and every one will at once agree that such an inquiry is the function of a science (or "art") (1345a 3-11).

Twentieth-century study of communication continues to pursue the generic questions set forth in ancient Greek scholarship. The modes of communication have increased in number and context. People today attend to different perspectives, levels, and types of interpersonal situations. For example, in interpersonal situations people converse with each other or with a computer. The same individual may talk to himself or herself, to a friend, or to a large audience. Written communication, for example, is a different mode of communication from oral communication. Written communication is more likely to convey ideas to people after the original speaker has died or moved away. Whatever the mode, people communicate with each other, and they do so for a variety of reasons.

In addition, the number and kinds of careers pursued by professional communicators and studied in departments of communication have increased from politics and law to areas such as television production and performance, organizational development, corporate media, and of course advertising, public relations, news reporting and writing.

DEPARTMENT OBJECTIVES

One objective of the Communication Department, like all the liberal arts and sciences, is to enhance students' personal and social lives by contributing to their general education. The Department does so by openly examining the specific questions — How do we come to know? to believe? and to act? — through study of communication as it occurs within society. The Department also works to help students prepare for careers as professional communicators.

REQUIREMENTS FOR THE MAJOR

A minimum of 30 credits in communication is required. To encourage a broad liberal education, the maximum allowable credits in the department is 45. Students design, in consultation with their advisors, a Plan of Study that is coherent and balanced. A Plan of Study form is available from faculty advisors.

"Coherence" is provided by following the requirements of one of the degree programs listed below, or creating a personalized major tailored to the student's interests, abilities, and post-graduate career aspirations.

"Balance" is achieved by taking a range of courses representing different perspectives, levels, and types of communication. In order to facilitate this goal, the courses in the department have been organized into four basic groups: Theory/Media, Theory/Nonmedia, Applied/Media, and Applied/Nonmedia. Students are required to take at least one course from each of these four areas. Courses are also categorized as either "Advanced" (number 300 - 499) or "Introductory" (numbered 100 - 299). Students must take at least two introductory and two advanced courses. Courses may be double-counted, e.g., a single course may count both as Theory/Media and as advanced.

In addition to the above requirements, students are normally expected to take at least two introductory and two advanced courses. 101 Process of Communication and 171 Dynamics of Mass Communication are required for the degrees in media, in broadcasting, advertising, and public relations. Students are also encouraged to take a few seminars and an internship.

SPECIFIC REQUIREMENTS BY DEGREE

Advertising 111, 271, 333, 433, 436, 475
Broadcast Journalism 111, 271, 367, 467, 475, 494
Communication — Academic Preparation 457, 475, 478, 494
For "Preprofessional" and "Other" see advisement
Corporate Communication 281 or 432, 304, 306, 330, 456, 475
Media Management/Operations 111, 368, 369, 370, 475
Media Performance 111, 251, 271, 351, 355
Media Production 111, 145 and 146 or 182 and 266
Organizational Communication 454, 455, 456, 495
Print Journalism 271, 371, 375, 476, 494
Public Relations 111, 271, 333, 430, 436, 475

REQUIREMENTS FOR THE MINOR

A minimum of 38 credits, including at least one course from each of the four course groups (see MAJOR above), and at least one introductory and one advanced course. A minor in a particular degree program (e.g., advertising) must include three of the four or five required courses in that major.

101 Process of Communication 3 cr
Examines how human beings communicate beliefs and values in interpersonal situations. The course asks three basic questions: How do we come to believe what we believe? How do we maintain our beliefs? How can we be persuaded to change them?

Answers vary depending upon the perspective taken. The course will investigate the psychological, the physiological, the sociological, the historical, and the religious perspectives for their insights into interpersonal and organizational persuasion, brainwashing, hypnotism, advertising, propaganda, mass movements, revolutions, and cults. Lecture supplemented by films and text. Required of all communication majors.

102 Public Speaking 3 cr
Develops those communicative skills necessary to critically analyze verbal discourse and to perform effectively in public speaking situations. It is required for all communication majors.

103 Workshop Relational & Organizational Communication 3 cr
Develops verbal communication skills and abilities in face-to-face relationships. The emphasis is on establishing (1) a positive attitude toward yourself, (2) a positive attitude toward others, and (3) a positive attitude toward communication situations (266).

111 Introduction to Media Arts 3 cr
Familiarizes students with equipment applications and technology, and provides basic hands-on experience in media production (audio, photography, video). Theory and applications of portfolio/pak video, studio video, radio-audio, and photography are explored. Course is prerequisite for all upper level media production courses. Required for communication majors in all media-related areas of concentration.

120 Acquisition of Communicative Behavior 3 cr
Focuses on the acquisition of verbal and nonverbal communication from infancy through childhood. The course is designed for psychology students.

145 Audio Production I (same as Music 145) 3 cr
Investigates the types of recording equipment, microphones, and sound systems needed for production plus the skills of recording, mixing, and editing.

146 Audio Production II (same as Music 146) 3 cr
Investigates advanced aspects of audio production. Taught off-campus in a professional multi-track studio. Prerequisite 146.

151 Voice and Diction 3 cr
Trains students in the voice and diction skills required of professionals in the media and elsewhere. Some phonetics, Breathing control, Volume control, Pitch control, Vocal stress — melody — expressive gesture.

171 Dynamics of Mass Communication 3 cr
Provides an introduction to the history, economics, politics, regulation, and social impact of the mass media — with special emphasis on television. Required for all Communication Majors.

182 Basic Photography 3 cr
Introduces students to the use of photography as a medium of communication. Teaches the fundamentals of equipment and work, light, filters, film developing, and printing. Students must supply their own 35 mm adjustable camera, film and printing paper. Lecture/Laboratory. Prerequisite 146.

203 Workshop Group & Organizational Communication 3 cr
Develops verbal and nonverbal skills and abilities in group and organizational relationships. The emphasis is on leadership and membership in problem-solving and decision-making groups and organizations through social and task behaviors.

207 Journalistic Writing 3 cr
Teaches the fundamentals of news reporting and writing for the print and broadcast media. The course will include instruction in objective news coverage and feature writing, interviewing and research techniques, beat coverage, and story organization. Open to Continuing Education Certificate student only, does not count toward the 30 credits required for a major in communication.

208 Workshop Nonverbal Communication 3 cr
Develops nonverbal communication skills and abilities in human relationships. The emphasis is on learning "another language" in order to become a more effective communicator by establishing a positive relationship between our verbal language and nonverbal language.

210 Media and Society 3 cr
This course surveys the literature examining the relationship between the mass media and selected audiences. Students will be introduced to the major theories characterizing this relationship. Topics will...
include media portrayals of violence, pro-social values, consumer socialization, politics, agenda setting, and the new private life. Includes practice in persuasion as the keynote of public decision-making in drama, sports, children's programming, game programs, promotion, research and finance will be covered. Current regulatory policies as they impact on day-to-day operations will be included. Recommended before student takes 368, 396, 370, 437, or 475.

368 Broadcast and Cable Management 3 cr.
This course introduces students to the basic management operations of a contemporary broadcast station or cable facility. Credit includes: (a) acquiring knowledge of sales, programming, promotion, research and finance; (b) becoming familiar with current regulatory policies as they impact on day-to-day operations; (c) preparing a comprehensive plan for a broadcast cause, including media portrayals of violence, pro-social values, consumer socialization, politics, agenda setting, and the new private life. Includes practice in persuasion as the keynote of public decision-making in drama, sports, children's programming, game programs, promotion, research and finance will be covered. Current regulatory policies as they impact on day-to-day operations will be included. Recommended before student takes 368, 396, 370, 437, or 475.

369 Broadcast and Cable Programming 3 cr.
This course introduces students to the various programming strategies, in which electronic media. Topics include: social learning theory and mass communication, prosocial television, cultivation theory, news, politics, and agenda setting. Functions and effects of pornography, mass media depictions of women and minorities.

419/519 Mass Communication & Everyday Life 3 cr.
Course examines theories and research in the field of mass media (television) and society. Topics include social learning theory and mass communication, prosocial television, cultivation theory, news, politics, and agenda setting. Functions and effects of pornography, mass media depictions of women and minorities.

421/521 Sex Roles and Communication 3 cr.
Examines research on differences in male and female communication in a variety of contexts, focusing on personal to social to work relationships. Special emphasis is given to formal and informal relationships in complex organizations.

427/527 Communication Management 3 cr.
Introduces the communication professional to the principles of management. Planning, budgeting, financing, organizing, acting, and controlling are covered. The course contributes to the formulation of executive communication policy for all types of institutions.

429 Advertising Production 3 cr.
Focuses on applying theories of sales and marketing to print media. Students learn to design and create advertising pages that are used to attract potential clients and tailors ads for specific clients. Students learn to use desktop publishing software to design and produce ads. A substantial number of assignments will be coordinated with students in 427 Media Sales and the advertising editor of the Student Newspapers. The intent that students develop ads that are used in publications of not-for-profit organizations and by the student newspaper.

430 Public Relations Practices 3 cr.
Provides students with the opportunity to develop writing skills for various public relations audiences, including the media. The objective is to teach students how to use various writing techniques to persuade people to respond to a specific message.
They will learn how to analyze the audience and then create the right message, using the proper language. **Prerequisite 333**

431/531 Computer Graphic Design 3 cr
Visual Communication has been a common human practice since people first marked upon cave walls. We also know that pictures and words convey meaning on several psychological levels. The study of visual communications is a relatively new scientific and aesthetic enterprise. This course uses computer-based desktop-publishing software to create various forms of visual communication while weaving into the overall class understanding the theories of page design, color, and iconic symbolism. This course focuses on the theoretical framework of visual communication and provides practical applications.

432/532 Print Production and Graphic Design 3 cr
Examines the print communication of business, industry, professional, and non-profit organizations. Students practice the writing, designing, and editing of brochures, newsletters, annual reports, magazines, and other internal and external publications. **Prerequisite 271 or graduate standing**

433 Advertising Practices 3 cr
Teaches copy writing and design of a marketing plan for the visual advertising. Major emphasis is placed on the design requirements for advertising. **Prerequisite 333**

436/536 Marketing Communication 3 cr
Covers the principles and practices of marketing communication. Emphasizes promotion area of the marketing mix including advertising, sales promotion, public relations and personal selling.

437 Media Sales 3 cr
This course explains the multi-faceted dimension of sales within contemporary business environments — with special emphasis on the tools for broadcast sales. Topics include researching and prospecting clients, phases in the selling process, developing and maintaining rapport with clients, closing the deal, etc. Focus is on radio specifically, but content is generalized to television, media advertising, and marketing.

441 Interactive Video 3 cr
Investigates interactive video as a medium that goes beyond linear media. Examines its applicability in industrial and educational environments. Both computer authoring systems and authoring language are used. **Prerequisites 215 and 241**

454/554 Theory & Practice of Interpersonal Communication 3 cr
Studies communication between individuals in the context of relationships such as friendship, marriage, work, etc. Topics include phases of relationship development, disclosure, symmetry, and asymmetry in relationships, etc.

455/555 Theory and Practice of Group Communication 3 cr
Studies communication processes in small groups. Topics include group formation, structure, decision-making, norms and roles, status structures, group think, interaction models, conflict, bargaining and negotiation, and research methods.

456 Theory & Practice of Organizational Communication 3 cr
Investigates the scope and function of communication processes within organizations. Topics include organizational theory, Japanese management, communication patterns, managerial styles, informal communication, network analysis, organizational climate and culture, motivation and satisfaction, and communication audits.

457/557 Communication, Science, and Revolution 3 cr
Examines how beliefs built upon assumptions common to science and revolt, and influenced the "modern" world's understanding of communication. Develops more completely and philosophically the rhetorical perspective introduced in "Process of Communication" by applying that particular perspective to contemporary systems of belief. Covers the psychoanalytic, structuralist, functional, and post-modern communication theories of the Sophists, Plato, Aristotle, and others.

458/558 Communication and Imagination 3 cr
Examines how the triumph of beliefs dominated by "imagination" over beliefs dominated by "science" has changed our understanding of communication. Rhetorically analyzes science-fiction/fantasy (the literature and the art) to communicate the "modern" and the "post-modern" worldviews. Covers the rhetorical-communication theories of the Sophists, Plato, Aristotle, Bacon, Kames, and others.

467 Advanced Writing for Radio and Television 3 cr
Teaches writing for radio and television in a lecture-laboratory course. Covers scripting for special types of programs, such as documentaries, editorials, and panel shows. **Public Service Announcements, traffic commentary, commercials, and promotion publicity are also covered.**

471 Advanced Public Affairs Reporting 3 cr
Teaches interpretive reporting of urban affairs in a lecture-laboratory course. **Prerequisite 271 or graduate standing**

472 Writing Editorials, Critiques, and Reviews 3 cr
Studies the basic principles of reviewing art forms (literature, movies, theatre, etc.) and writing thoughtful, informative editorials on local, national and world affairs. This course is designed for the professional or electronic communicator who wishes to develop a specialization, but it is intended for generalists as well. **Prerequisite 271**

473/573 Feature Writing 3 cr
Teaches features, profiles, and writing for the general and specialized print publication in a lecture-workshop course. Includes writing for internal and external corporate publications, as well as query writing and marketing for the free-lance writer and feature writing for the news reporter. **Prerequisite 271 or graduate standing**

475 International Mass Communication 3 cr
Covers world news systems and analyzes their role as instruments of world understanding. Compares U.S.-foreign systems, including newspapers, broadcasting, magazines, and wire services.

476 Communication Law 3 cr
Examines the legal rights, privileges, ethics and responsibilities of the mass media — electronic and print. Covered topics include the historical foundations of media law, First Amendment, transportation/communications "tradeoff," distinctions between law, regulation, and policy, obscenity/ indecency, libel, access, copyright, and the impact of evolving media technology.

478 History of Communication 3 cr
Analyzes major social influences affecting communication theory and practice from classical to contemporary times. Theorists emphasized include Plato, Aristotle, Descartes, Hobbes, Auguste, John of Salisbury, Bacon, Campbell, Whately, Kames, Warton, and others. Theories are applied to interpersonal, organizational, and group communication and to print and broadcast journalism.

480 Pracicum in Journalism 1-3 cr
Designed for all persons working for a college newspaper, this course provides training in audience and marketing. Students will conduct a survey complete with data entry and analysis.

482 Practicum in College Radio 1 cr
Designed for all persons working for a college radio station. Conducts formal critiques of WDSR and related college media. Topics range from management to technical to regulatory issues. **Prerequisite permission of instructor**. May be repeated for up to 6 credits, maximum of 1 credit per semester and maximum of 3 credits toward the degree in communication. Up to 3 additional credits may count as electives. **Prerequisite 475 + 480 + 481 + 496 + 497 + 498 cannot exceed 9 credits toward the minimum 30 credits required for the major. Students may take more than a total of 9 credits, but the extra credits will count as electives.**

496 Directed Readings 1-6 cr
Designed for those who have received permission of the instructor. The objective of the course is to provide professional-level production environment to students majoring in communication. May be repeated for up to 6 credits, maximum of 1 credit per semester and maximum of 3 credits toward the degree in communication, up to 3 additional credits may count as electives. **Prerequisite 480 + 481 + 496 + 497 + 498 cannot exceed 9 credits toward the minimum 30 credits required for the major. Students may take more than a total of 9 credits, but the extra credits will count as electives.**

497 Seminar Current Issues in Communication 3 cr
Discusses professional problems and advancements in communication. **Specific topics vary.** Open to majors only.

498 Seminar Multi-Media Production 3 cr
Provide practicum based experience to advanced production students. Topics and assignments vary. **Prerequisite: 488.**

499 Seminar Communication Ethics 3 cr
Analyzes ethical issues in print and broadcast news reporting, public relations, advertising, organizational, and interpersonal communication. Issues will be examined in light of historic and current practices, as well as traditional and modern ethical and rhetorical theory. **Strongly recommended for all communication majors.**

500 Directed Readings 1-6 cr
Offers the opportunity for students and faculty to conduct in-depth study of a topic not covered, or covered only briefly, in other departmental courses.
In order to enroll in Directed Readings, students must first secure approval from the faculty member who is qualified to guide their study. Approval requires (1) discussing with the faculty member his or her availability and level of interest, (2) submitting to the faculty member a written proposal for the project, including justification for pursuing the topic outside of scheduled courses, a statement of goals and proposal for evaluation procedures (e.g., papers, projects), and a preliminary bibliography on the topic, (3) obtaining the faculty member's signature on the approval form, (4) submitting the signed proposal to the Department Chair for her signature approving the arrangements proposed. May be repeated for up to 6 credits. NOTE: Total credits for 480 + 481 + 496 + 497 + 498 cannot exceed 9 credits toward the minimum 30 credits required for the major. Students may take more than a total of 9 credits, but the extra credits will count as electives.

497 Special Projects 3-6 cr

Students in this course prepare print or electronic products (e.g., brochures, slide shows, video programs, etc.) commissioned by University or community organizations. In order to be admitted to the course you must (1) find a client—preferably a University organization or not-for-profit agency—who will pay production costs, (2) gather a group of students who have the skills necessary to do the production, (3) audition or present a portfolio to the instructor, and (4) be recommended by one or more faculty members in the area of your expertise (e.g., writing, graphics, video, etc.). Class activities will focus on the projects, beginning with analysis of the client's goals, continuing through audience analysis, message design, production, and evaluation. NOTE: Total credits for 480 + 496 + 497 + 498 cannot exceed 9 credits toward the minimum 30 credits required for the major. Students may take more than a total of 9 credits, but the extra credits will count as electives.

498 Internship 3-6 cr

Provides a supervised observation/experience program for study (assignment and performance) in areas such as media, marketing, editorial, human resources, and public relations. Most placements are in the Pittsburgh/Western Pennsylvania area. Requirements: 60 credits with a minimum of 9 credits in the internship area, and an overall Q.P.A. of 2.5 or better. Written recommendation from relevant faculty member(s) open to majors only. May be taken for 3 or 6 credits. No more than 6 credits of internship may be taken to count toward the minimum 30 credits required for the major. Prerequisite department approval. NOTE: Total credits for 480 + 496 + 497 + 498 cannot exceed 9 credits toward the minimum 30 credits required for the major. Students may take more than 9 credits, but the extra credits will count as electives.

REQUIREMENTS FOR THE MAJOR

Twenty-four credit hours are required for a major in Economics. These credits must include Principles of Economics 221 and 222, National Income Analysis 323, and Price and Production 322. The Extraregional mental requirement is Math 125. Additional course work that may usefully supplement a major in Economics depends heavily on the objectives and vocational interest of the student. Students who choose Economics as a major should consult with the chairperson of the Economics Department for advisement.

REQUIREMENTS FOR THE MINOR

Eighteen credit hours are required for a minor in Economics. These credits must include Principles 221 and 222. It is strongly recommended that students having Economics as a minor consult with the chairperson of the Economics Department for advisement. Course Descriptions and faculty listing are provided in the School of Business Administrative Section of this Catalog on Pages 106-108.

498 Internship 3-6 cr

Provides a supervised observation/experience program for study (assignment and performance) in areas such as media, marketing, editorial, human resources, and public relations. Most placements are in the Pittsburgh/Western Pennsylvania area. Requirements: 60 credits with a minimum of 9 credits in the internship area, and an overall Q.P.A. of 2.5 or better. Written recommendation from relevant faculty member(s) open to majors only. May be taken for 3 or 6 credits. No more than 6 credits of internship may be taken to count toward the minimum 30 credits required for the major. Prerequisite department approval. NOTE: Total credits for 480 + 496 + 497 + 498 cannot exceed 9 credits toward the minimum 30 credits required for the major. Students may take more than 9 credits, but the extra credits will count as electives.

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/her background, interest, and career objectives.

REQUIREMENTS FOR THE MINOR

A minimum of 12 credit hours beyond the freshman level of which no more than six hours may be taken at the 200 level. There are five separate emphases from which the student must choose one:

1. English Literature 201, 202, and six hours in upper division English Literature
2. American Literature 205, 206, and six hours in upper division American Literature
3. Literature and Film “Introduction to Film” (3 hours) and 12 hours in courses in literature and film. Examples are “Shakespeare on Film” and “American Short Story into Film”
4. Writing 203 and nine hours in 300 level Writing Workshops
5. English Honors Students who, by invitation of the Department Honors Committee, complete English 212, 213, and two 300 Honors Seminars, may count that program as an English Minor

HONORS PROGRAM

Students who give evidence of outstanding ability in English through their performance in Thinking and Writing Across the Curriculum 201 or by virtue of superior national test scores will be invited to participate in the English Honors Program. 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.

103 Freshmen Honors English 3 cr

This is an Honors counterpart to Core 101, developing writing skills and introducing literary types and forms. Participation by invitation only. This course fulfills the Core 102 requirement.

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 Core 101 and 102 centered chiefly on development of style and accuracy

205 American Literature Survey I—Beginning to Civil War 3 cr

Representative selections from major American authors treated in both their literary and their historical contexts.
The remainder of the English courses are divided into areas of emphasis. During a four-semester period, each course from each area will be offered at least once.

**Medieval Studies**

402 Chaucer
A study of *The Canterbury Tales* and minor poems.

410 Medieval Special Topics
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.

**Renaissance Studies**

413 Sixteenth Century English Literature
Survey including non-Shakespearian drama, Sidney, Spenser, Shakespeare, Marlowe and minor figures.

415 Milton
A survey of Milton and his times.

416 Seventeenth Century English Literature
Survey of drama, prose, and poetry to 1660.

**Eighteenth Century Studies**

422 Restoration Literature, 1660-1700
Dryden and his contemporaries. Particular emphasis on satire, drama, and criticism.

424 English Classicism
Developments of neo-classical literature from the Restoration to the death of Pope. Primary attention given to Swift and Pope.

428 Latin Eighteenth Century English Literature
Johnson and his circle, the development of the novel, the aesthetic movement.

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

**Nineteenth Century Studies**

435 English Romantic Literature
A study of the aesthetic, moral, political, and literary aspects of English romanticism approached through the writings of Wordsworth, Coleridge, Byron, Shelley, Keats.

436 Victorian Literature
A study of the poetry of Tennyson, Browning, Arnold and the prose of Arnold, Carlyle and Ruskin. Attention also given to the poetry of Morns, Rossetti and Fitzgerald.

439 Nineteenth Century Special Topics
Studies in Nineteenth Century thought and aesthetic in the works of one or more writers or through the ideas and attitudes conveyed in one of the dominant genres.

**American Studies**

441 Colonial American Literature
A cultural/historical approach to the theological, political, and aesthetic developments in 17th- and 18th-century America.

442 American Literature of the National Period
Post-revolutionary literature of the emerging nation, including Irving, Brown, Cooper, Simms, Rowson, Melville, and Sedgwick.

445 American Romanticism
The Romantic/transcendental movement emphasizing Emerson, Thoreau, Poe, Hawthorne, Melville, and Whitman.

446 American Realism and Naturalism
Post-Civil War fiction of Twain, Howells, James, Chopin, Wharton, Crane, and Norris.

449 American Literature—Special Topics
Studies designed to reflect current interests of faculty and students alike. Topics can be drawn from such areas as historical background, women's and ethnic studies, regional literature, special themes, major authors, and literary genres.
The Art History minor in History consists of fifteen credits of Art History courses, with at least nine credits in the 200, 300, and 400 level.

**Introductory Surveys**

103 History of the United States to 1877 3 cr
- The historical development of American institutions, ideas, and society from earliest times to 1877

104 History of the United States since 1877 3 cr
- The historical development of American institutions, ideas, and society since 1877

**Area Courses**

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

213, 214 Western Civilization 3 cr
- An introductory survey of the origins and characteristics of European Civilization, emphasizing the personalities and events and institutions that have shaped the West

244 History of Ancient Medicine 3 cr
- Examination of the most significant medical theories and practices in the period from the Egyptian to 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 accession of 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

254 The History of the Modern Middle East 3 cr
- A study of the modern Near East with concentration upon the conflict between imperialism and nationalism, traditionalism and Western influences in the area

322 Contemporary Latin America 3 cr
- An examination of the causes of revolution, as well as the major social, economic, and political crises confronting the Latin American region

340 History of Western Law 3 cr
- Primary emphasis will be placed on the rise of customary law, especially its development in England and America

345 American Church History 3 cr
- Emphasizes the historical development of major religious traditions in America, both Catholic and Protestant. Special attention will be given to the life of the church 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

346 War in Modern Society 3 cr
- A study and analysis of the phenomenon of war in the Western World from the Age of Napoleon to the present, with special emphasis upon the interrelationship between international conflict and social, political, and technological change

348 Family and Society in History 3 cr
- Interaction 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

357 History of the American Presidency 3 cr
- Primarily an investigation and evaluation—personal, political, contemporary, and historical—of each president with some attention to the growth of the office

360 Constitutional History of the United States 3 cr
- An analysis of the Supreme Court and constitutional development, stressing the major controversies in the field

362 History of the United States' Political Parties Since 1868 3 cr
- A detailed examination and analysis of the origins, leadership, and operation of the major political parties since 1868

364 The American Mind 3 cr
- The origins, development, and contemporary modes of American thought, including major "cultures of opinion," diverse movements, and selected scientific, political, religious, social, and artistic topics
The study of the progressive reform movements in the United States since the Civil War

centuries with particular attention to the relationship between technological and social change and its impact on politics and culture

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.

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

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

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

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

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

The study of the progressive reform movements in the United States since the Civil War

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

Examination of the major political and social revolutions since 1789, the nature of the revolutionary phenomenon, and the inevitable counter-revolutionary trend

An intensive study of the major fascist movements and regimes of the twentieth century in light of the political, economic, social, intellectual, and psycho logical tensions which produced them

An historical view of man's attempts to create new societies, concentrating upon ecological issues, frontier experiences, and utopian ventures

A discussion of selected contemporary issues, for eg an and domestic, which illustrate the identity crisis in the U.S.

A selection of recent articles, lectures, and exhibitions in order to give students a flavor of what is being done in the field today.

The development of science and technology in America from colonial times to the twentieth century

The study of the progressive reform movements in the United States since the Civil War

Eisenhower, Harry S. (1890-1969)

The Modern Historian

The development of modern historical thinking and scholarship as it is related to the major intellectual and social currents of modern times

The major objectives of the mathematics program are to provide knowledge of the theoretical basis of the field, appreciation for the intrinsic beauty of the discipline, skill in interpreting the concepts underlying quantitative procedures, and ability to apply modern mathematical techniques and tools to practical problems. Courses in the curriculum give students an opportunity to develop the basis for critical and logical analysis of problems and to design and implement creative solutions. In addition to comprehensive programs leading to a major or minor in mathematics, offerings are designed to serve the liberal educated person in support of other disciplines

The student may choose to pursue a major in mathematics with a program leading to a Bachelor of Arts (B.A.) or a Bachelor of Science (B.S.) degree. The B.A. program, which requires a minimum of 33 semester hours of mathematics, allows a great deal of flexibility for persons interested in combining the major program with a strong minor or double major in a non-science discipline. The B.S. program, which requires a minimum of 39 semester hours of mathematics, is recommended for students interested in scientific applications or further study in mathematics on the graduate level. Requirements are as follows:


A grade of C or better must be achieved in all mathematics core courses. Remaining courses must be taken at the 200 level or above.

Extra-disciplinary Requirements (B.A. and B.S.) Computer Science 105 or 111

Additional B.S. Mathematics Requirements

Applications component. At least one course chosen from 301 and 308

Theoretical component at least two courses chosen from 403, 420, and 416

Extra-Disciplinary Requirements (B.A. and B.S.)

General Analytical Physics 211-212

If an appropriate program of support work is planned, the mathematics major may choose a career from fields including actuarial science,
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE


REQUIREMENTS FOR A MINOR
The minimum requirements for a minor in mathematics are 115-116 and 9 additional hours in courses numbered 200 or above including at least one course numbered 300 or above. Suggested concentrations include Computer applications 235, 300, 301, 306, and 308. Logic and foundations 300, 311, and 330. Statistical applications 215, 216, 306, 308, and 425. Statistics 301-302, 325, and 425.

102 Trigonometry
1 cr
Trigonometric functions and their inverses, identities, graphs, and other properties. Credit is not allowed for both 102 and 105.

105 College Algebra and Trigonometry
4 cr
Algebraic expressions, solution of equations and inequalities, algebraic functions and graphs, trigonometric functions, solutions of simultaneous equations and inequalities. Credit is not allowed for both 102 and 105 or for both 105 and 109.

109 College Algebra
3 cr
Factoring, polynomials, equations, inequalities, functions and their graphs, exponential and logarithmic functions, systems of equations and inequalities. Credit is not allowed for both 105 and 109.

111 Calculus for Non-Science Students
3 cr
Limits, continuity, differentiation, implicit differentiation, applications of the derivative, exponential and logarithmic functions and their derivatives, integration, and applications of integration. Credit is not allowed for both 111 and 115. Prerequisite 109 or equivalent.

115 Calculus I
4 cr
Functions and their graphs, limits and rates of change, derivatives, the mean value theorem and its applications, integrals, and logarithmic and exponential functions. Credit is not allowed for both 111 and 115. Prerequisite 105 or equivalent.

116 Calculus II
4 cr
Transcendental functions, techniques of integration, indeterminate forms, improper integrals, Taylor's formula, analytic geometry, plane curves, and polar coordinates. Prerequisite 115 or equivalent.

125 Fundamentals of Statistics
3 cr
An introduction to descriptive and inferential statistics including random variables, probability and sampling distributions, and hypotheses testing.

215 Calculus III
4 cr
Vectors and surfaces, vector valued functions, partial differentiation, multiple integrals, vector calculus, sequences, and series. Prerequisite 115.

216 Ordinary Differential Equations
3 cr
Solutions of first order equations, linear equations, differential operators, Laplace transforms, power series techniques, and elementary applications. Prerequisite 215.

235 Discrete Mathematics
3 cr
Mathematical logic, sets, relations, functions, graphs, trees, Boolean algebra, algebraic structures, algorithm development, and languages. Prerequisite 111 or 115.

300 Foundations of Higher Mathematics
3 cr
Mathematical logic, mathematical induction and other proof techniques, sets, relations, function, number systems, countability, and history of mathematics. Prerequisite 116.

311 Introduction to Probability and Statistics I
3 cr
An introduction to probability theory and mathematical statistics including probability distributions, discrete and continuous random variables, and their mathematical expectation and bivariate and multivariate probability distributions. Prerequisite 116.

301 Introduction to Probability and Statistics II
3 cr
A continuation of 311 including probability and sampling distributions of random variables and hypotheses testing. Prerequisite 301.

306 Linear Algebra
3 cr

308 Numerical Analysis
3 cr
Numerical techniques for solving problems involving linear systems, interpolation, function approximation, numerical differentiation and integration, solutions to non-linear equations. Identical to Computer Science 308. Prerequisite 300. May be counted as either mathematics or computer science, but not both 116 and either 308 or Computer Programming I (105).

311 Number Theory
3 cr
Divisibility, congruences, quadratic residues, diophantine equations, and arithmetic functions. Prerequisite 300.

325 Applications of Statistics
3 cr
Applications and techniques of procedures in inferential statistics, analysis of variance and covariance, comparisons, random and fixed effects models, multiple regression, and correlation. Prerequisite 301 or permission of instructor.

330 Fundamentals of Geometry
3 cr
Euclidean and non-Euclidean geometry from both the synthetic and metric axiomatic approach. Prerequisite 300.

402 Abstract Algebra
3 cr
Cyclic, abelian, and factor groups. Isomorphisms, direct products, integral domains, rings, and fields. Prerequisites 215, 300, and 306.

403 Topology
3 cr
Topological spaces, homeomorphisms, connectedness, compactness, regular and normal spaces, metric spaces, convergence, and separation axioms. Prerequisite 300. Credit is not allowed for both 403 and 415.

415 Advanced Calculus I
3 cr
Functions, convergence of sequences and series, limits, continuity and uniform continuity, derivatives, the mean value theorem, and Taylor's formula. Prerequisite 215, 300, and 306.

416 Advanced Calculus II
3 cr
A continuation of 415 including integration theory and advanced topics in analysis. Prerequisite 415.

420 Introduction to Complex Variables
3 cr
The complex number plane, analytic functions, integration of complex functions, sequences and series, conformal mappings. Prerequisite 215, 300, and 306.

425 Experimental Design
3 cr
Analysis of variance, multivariate analysis of variance problems, Latin square designs, factorial designs, crossover designs, split plot designs, analysis of unbalanced data. Prerequisite 325.

COMPUTER SCIENCE PROGRAM
The major objectives of the computer science program are to provide the student with a knowledge of the theoretical basis of computing, an appreciation for the relationship between the various components of the field, skills in applying the subject to practical problems, and an ability to adapt to new technologies and advancements. Courses in the curriculum give the student appropriate tools to identify problems best solved by means of a computer and to design and implement effective, economical, and creative solutions for them. Typically students gain practical exposure to a number of programming languages including Ada, Assembly, C, Fortran, LISP, Modula-2, Prolog, and operating systems, including Unix, VMS, and DOS. Offerings provide opportunities for students seeking courses supporting other disciplines as well as comprehensive programs leading to a major or a minor in computer science.

REQUIREMENTS FOR THE MAJOR
A minimum of 31 semester hours in computer science is required for the major. In addition, support courses in mathematics and English are required for all majors. At least one course in physics is strongly recommended. All majors must choose either a business or a scientific track as outlined in the subsections below. Requirements for all majors are as follows:

Computer Science Core: 105, 106, 200, 211, 300, 325, 335, or 336 (each with a grade of "C" or better). Additional Computer Science Requirements: At least 12 additional upper level hours (at least 9 of which must be taken at the 400 level).

Mathematics Support Courses: 115-116 (Calculus I & II), 235 (Discrete Mathematics), and 301 (Introduction to Probability and Statistics), or 306 (Linear Algebra).

English Support Course: 385 (Professional and Technical Writing).

COMMERCIAL APPLICATIONS
Majors who choose an emphasis in commercial applications complete a certificate program in business or complete a minor in another field related to business or commercial applications. Possible professional positions include business applications programmer, systems analyst, database administrator, and information systems analyst. Suggested electives include 401, 410, 425, 435, and 445.

SCIENTIFIC APPLICATIONS
Majors who choose an emphasis in scientific applications should minor in one of the laboratory sciences, mathematics, or another field related to scientific applications. Possible professional positions include scientific applications programmer, engineering analyst, and software engineer. Suggested electives include 308, 310, 418, 419, and 425.

REQUIREMENTS FOR THE MINOR
A minimum of 15 hours in computer science and 3 hours of discrete mathematics are required for a minor. All programs must include Math 235 and Computer Science 105, 106, 200, 300, and three additional hours numbered 300 and above. Suggested computer science courses related to commercial applications include 325, 401, 410, 425, 435, and 445. Suggested computer science courses related to scientific applications include 308, 325, 410, 418, 419, and 425.
100 Elements of Computer Science 3 cr
An introductory course for students in other disciplines. Includes a survey of computer organization, computer languages, the history of computers, and the role of the computer in the modern world. Some programming is required. Credit not given to computer science majors or minors.

101 Introduction to Programming 3 cr
A first programming course. Microcomputer programming in Basic, algorithms, data representation. Credit not given to computer science majors or minors.

105 Computer Programming I 3 cr
Structured programming in Pascal. Data types and representations, arithmetic and logical operators, simple I/O, control structures, subprograms, arrays, records, and an introduction to file processing. Programming style, documentation, and testing.

106 Computer Programming II 3 cr
Continuation of 105. Structured programming in Pascal. C. Recursion, dynamic allocation, stacks, queues, and linked lists. String processing, searching, sorting. Prerequisite 105.

111 FORTRAN 3 cr
Concepts of the FORTRAN programming language, including formatted I/O, arrays, looping techniques, and subprograms with an emphasis on scientific applications.

200 Computer Organization and Assembly Language 3 cr
The organization and operation of a conventional computer including principal instruction types, data representation, addressing modes, program control, and I/O. Assembly language programming. Prerequisite 105.

211 System Programming and Design 3 cr
An introduction to the interaction between software and hardware components in an integrated system. Deals with program translation issues including assemblers, linkers, loaders, and internal processing in compilers. Prerequisite 200.

300 Data Structures 3 cr
Methods for organizing data and an introduction to the connection between the design of algorithms and the efficient implementation and manipulation of data structures. Abstract data types, trees, and graphs. Prerequisites Discrete Mathematics (235) and 106.

308 Numerical Analysis 3 cr
Numerical techniques for solving problems involving linear systems, interpolation, functional approximation, numerical differentiation and integration, and solutions to non-linear equations. Identical course to Math 308. May be counted as either mathematics or computer science, but not both. Prerequisite 105 or 111, and Calculus II.

325 Operating Systems and Computer Architecture 3 cr
An introduction to the organization of various types of operating systems and to basic computer architecture. Areas of concentration include multiprogramming, memory management, communication with input/output devices, concurrency, synchronization, file systems and scheduling. Prerequisites 200 and Discrete Mathematics.

350 Computers and Humanity 3 cr
An exploration of the impact of computing on the present and future society — including freedom, the position of humans in the world of technology, the status of women, and ethical issues of privacy, secrecy, and honesty. Philosophical issues in computer science, especially in artificial intelligence, such as the difference between man and nature, the special position of man in the universe, and the problem of thinking, creativity, intelligence, and emotions in machines. Prerequisite: At least one course in computer science.

401 Data Base Management Systems 3 cr
The study of the use, design, and implementation of data base management systems. Topics include data models, current DBMS implementations, and database description, manipulation, and inquiry languages. Prerequisite 300.

410 Artificial Intelligence 3 cr
Knowledge representation and natural language processing, search strategies, design and applications of heuristics, and applications to practical problems in areas such as psychology, medicine, science and architecture. Expert systems. Prerequisite 200.

418 Formal Languages and Automata 3 cr

419 Introduction to Microcomputers 3 cr
Microcomputers as components of systems. VLSI processors and co-processor architectures, addressing and instruction sets, I/O interfaces and supervisory control, VLSI architectures for signal processing, integrating special purpose processors into a system. Prerequisite 325.

425 Computer Graphics 3 cr
Introduction to theory and methodology of computer graphics. The course will develop the mathematical basis of the representation of objects and surfaces with computers. Topics include geometric transformation, fractals, windowing, clipping, animation, and two-dimensional graphics. Prerequisite 200 and Linear Algebra.

435 Theory of Programming Languages 3 cr
Syntactic and semantic problems in defining program languages. Problems of language implementation. Global properties of algorithmic languages, including scope of declaration, storage allocation, grouping of statements, binding time. Subroutines, co-routines, and tasks. Comparison of several languages. Prerequisites 300 and Discrete Mathematics.

445 Systems Analysis and Software Design 3 cr
Introduction to the analysis, design, and implementation of large software systems. Topics include methods and tools for the structuring and modular design of large systems, organization and techniques of team programming, design evaluation and validation. Prerequisite 300.

480 Senior Project 1-3 cr
An individual or group project involving a significant program component, documentation, and written report on a topic of current interest in computer science. Prerequisites: Senior status, 300, and Professional and Technical Writing.

491-499 Selected Topics in Computer Science 1-3 cr
Topics selected in consultation with the advisor. Prerequisite Consent of the department chairperson.

DEPARTMENT OF MODERN LANGUAGES AND LITERATURES

Chairperson: Gregory C. Martin, Ph.D.
Professors: Francesca Colecchia, Ph.D., Carla E. Lucente, Ph.D., Gregorio C. Martin, Ph. D.
Associate Professors: Mark Frisch, Ph.D., Margaret R. Hicks, Ph.D., Eugenia Skwarecki.
Assistant Professor: Donald H. Kellner, M.A.

Assistant: Jean-Michel Lanskin, Ph.D., Anne Maier, M.A., Brent Peterson, Ph.D.

Instructor: Marie Ceccone Sakmar, M.A.
Professor Emeritus: Primitivo Colombo, Ph.D.

The Department of Modern Languages and Literatures offers courses in French, German, Italian, Russian, Spanish, and Swahili. The language skills (reading, writing, speaking, and oral comprehension), are emphasized at all levels beginning with the elementary courses. Fluency in the active use of the language is emphasized. Courses beyond conversation and composition stress primarily literary studies in which the student is systematically introduced to the literature and is given a working acquaintance with the culture of the groups whose language he/she is studying. Choice of courses dealing with specific works, authors, and auxiliary subjects is also presented. Courses are also offered in Linguistics, Language for Business, and Language for Musicians. All courses at the 300- and 400-levels are conducted in the target language. Incoming students with previous language background are required to take the language placement test. Student participation is required in the language laboratory at the elementary and intermediate language levels and strongly encouraged at the advanced levels. It is recommended that students who must fulfill language requirements begin these courses in their freshman year.

Majors and minors are advised to spend a summer, a semester, or a year abroad in the university programs or those approved in advance by the department. Further information may be obtained in the department office. It is also recommended that majors in the department include a course in the art of the country of the language in which 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 towards the major.

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

REQUIREMENTS FOR THE MAJOR

The requirements for the major programs in Modern Languages and Literatures consist of a minimum of 27 semester hours at the 300 level and above. Required courses are:

French: 301, 302, 462, 463
German: 301, 302, 460, 461
Spanish: 301, 302, 401, 402, 453, 460

Majors will discuss their courses with their advisors.

German: 301, 302, 460, 461
Spanish: 301, 302, 401, 402, 453, 460

Majors will discuss their courses with their advisors.
Elementary and intermediate courses must be taken in sequence. Credit toward the major or minor will not be given for 101, 102, 201, 202, or 239, 240, 302 or 303 (306) is the prerequisite to all courses numbered 312 and above.

REQUIREMENTS FOR THE MINOR

The minor program consists of a minimum of 12 semester hours at the 100 level and above.

490 Independent Field Study (All Languages) 3 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.

495 Professional Language Internship 3 cr

An unpaid internship consisting of 100-120 hours of supervised work for which the student will receive three credits. See Department for particulars.

French

101 Elementary French I 3 cr

Fundamentals of oral and written French. Three hours of class and one-hour laboratory per week.

102 Elementary French II 3 cr

Fundamentals of oral and written French. Three hours of class and one-hour laboratory per week. Prerequisite: French 101.

115 French for Musicians 2 cr

Specially designed for majors in music to provide them with those skills in French to meet their professional requirements. Registration limited to students in the School of Music.

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 Intermediate French I 3 cr

An intensified review of grammar and a major emphasis on oral skills. Prerequisite: French 102.

202 Intermediate French II 3 cr

Emphasis on the written and oral aspects of the language. Prerequisite: French 201.

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: French 120 or equivalent.

239, 240 Readings in Modern French Authors 3 cr each

Selections from modern works of literature. Does not carry credit toward a major or minor. Prerequisite: 202 or equivalent.

301 French Conversation and Composition I 3 cr

Prerequisite: 202.

302 French Conversation and Composition II 3 cr

Prerequisite: 301.

303 is the prerequisite for all courses above this level.

320 Stylistics 3 cr

Comparative study of English/French styles in spoken and written French.

321 Phonetics 3 cr

Mechanics of phonation with comparative English/French application to phonemic analysis of French.

322 Theatre de L'Avant-Garde 3 cr

The "avant-garde" theatre since 1950 such as Ionesco, Beckett, Genet, Schelude, Vian, Pinge.

325 Realism and Naturalism 3 cr

Theaters of the two movements in the latter part of the 19th Century.

326 The Literature of the Existentialist Movement 3 cr

Analysis and discussion of selected works of A. Camus, J. P. Sartre, and G. Marcel.

327 The Symbolist Movement in French Poetry 3 cr

A basic introduction to the Symbolist movement with emphasis on hermetic poetry of Mallarme and Rimbaud.

328 French Poetry Middle Ages to 20th Century 3 cr

Study of mechanics of prosody, various genres, periods, movements in French poetry.

329 17th Century French Literature 3 cr

Emphasis on 17th Century French prose and poetry. Will also include a play of Corneille, Racine, and Moliere.

330 French Prose of the 19th Century 3 cr

Examination of French prose of the 19th Century.

331 18th Century French Literature 3 cr

An overview of the Siecle des lumieres, with emphasis on the literary works of the four major "philosophers" Montesquieu, Voltaire, Diderot, and Rousseau.

332 Voltaire and His Age 3 cr

In-depth work on Voltaire, plus one other writer of the period, such as Prevost, Beaumarchais, Benjamin de Saint-Pierre, etc.

360 French for Business 3 cr

Spoken and written language of business French Conventions of letter writing, import, export, and commercial transactions.

460 French Culture and Civilization 3 cr

A study of the major cultural and socio-political movements of France through its literary works.

462 Chanson de Roland through 18th Century 3 cr

Literary Survey II. Major authors and movements of the Middle Ages, 16th, 17th, and 18th Centuries.

463 19th Century to Modern Period 3 cr

Literary Survey II. Major authors and movements of the 19th and 20th Centuries.

464 17th Century French Theatre 3 cr

An overview of the theatre of grand siecle. Emphasis on Corneille, Moliere, and Racine.

465 18th Century French Theatre 3 cr

An overview of the major dramatists of the century, including Marivaux, Voltaire, and Beaumarchais.

466 19th Century French Poetry 3 cr

The major poetic movements of the 19th Century. Romanticism, Parnassianism, Symbolism, with a special emphasis on Baudelaire.

467 19th Century French Novel 3 cr

Selected novels from the 19th Century, from Romanticism to Naturalism.

468 19th Century French Theatre 3 cr

Beginning with the influence of the Revolution on French literature, through the literary movements of the century. Emphasizes works written for the stage and currents in criticism and directing.

469 20th Century French Poetry 3 cr

Ambivalence of modern French poetry after Baudelaire. Will consider Apollinaire, Valery, Breton, Aragon, Eluard, Cocteau, Supervielle, Saint-Jean Perse.

470 20th Century French Novel 3 cr

A study of the major works, authors, and movements of the 20th Century.

471 20th Century French Theatre 3 cr

From Jules Romains to Ionesco and the Theatre of the Absurd.

472 Sartre and Camus. Theories of the two movements in the latter part of the 20th Century. Will discuss Sartre, Camus, P. Sartre, and J. Hesse. Modernism and totalitarian socio-political movements of the 20th Century.

480 Directed Readings 3 cr

Readings of literary texts under close faculty supervision, for majors only and only with written permission of the Department Variable credit.

German

101 Elementary German I 3 cr

Fundamentals of oral and written German. Three hours of class and one-hour laboratory per week.

102 Elementary German II 3 cr

Fundamentals of oral and written German. Three hours of class and one-hour laboratory per week. Prerequisite: German 101.

115 German for Musicians 3 cr

Specially designed for majors in music to provide them with those skills in German to meet their professional requirements. Registration limited to students in the School of Music.

130 Modern German Prose 3 cr

Individual's search for identity in the prose works of Thomas Mann, F. Kafka, H. Hesse, and H. Boll.

331 Modern German Theatre 3 cr

From the introduction of naturalism into German drama in the late 19th Century to the most recent movements. Will discuss Hauptmann, Brecht, Zuckmayer, Durrenmatt and Frisch.

360 German for Business 3 cr

Spoken and written language of business German Conventions of letter writing, import, export, and commercial transactions.

460 German Literature from the Middle Ages to the Baroque 3 cr

A survey of German literature from the Middle Ages through the 17th Century.

461 German Literature from the 18th Century to the 20th Century 3 cr

A survey of German literature from Lessing to the present.

462 Advanced German Stylistics 3 cr

Comparative study of style.

464 German Romantic Literature 3 cr

The German Romantic movement following the Napoleon era. The role of the individual in the works of Novalis, Tieck, etc.

465 Modern German Prose 3 cr

The process of alienation in modern German narrative. Includes novels by H. Hesse and T. Mann.
467 Age of Goethe 3 cr
Study of important works of Goethe and other major writers of this period.

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

470 Literature of the Enlightenment 3 cr
A study of literary works of major writers of this era such as Klopstock, Lessing, and Kant.

471 Storm und Drang 3 cr
“Storm and Stress” as Germany’s literary revolution against the despotic tyrants of the 18th Century, including Goethe’s The Sorrows of Young Werther and Schiller’s The Robbers.

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

Italian

101 Elementary Italian I 3 cr
Fundamentals of oral and written Italian. Three hours of class and one hour laboratory per week.

102 Elementary Italian II 3 cr
Fundamentals of oral and written Italian. Three hours of class and one hour laboratory per week. Prerequisite Italian 101.

115 Italian for Musicians 2 cr
Specially designed for majors in music to provide them with those skills in Italian to meet their professional requirements. Registration limited to students in the School of Music.

201 Intermediate Italian I 3 cr
An intensified review of grammar and major emphasis on oral skills. Prerequisite Italian 102.

202 Intermediate Italian II 3 cr
Emphasis on the oral and written aspects of the language. Prerequisite Italian 201.

306 Advanced Italian Conversation and Composition 3 cr
Prerequisite 202. or equivalent. Prerequisite for all courses above 306.

314, 315 Individual Study  Var cr
With written permission of the department. Prerequisite 202.

321 Modern Italian Novel 3 cr.
A study of the works of significant representatives of neorealism, analyzed within the framework of the social and political atmosphere of pre- and post-World War II Italy.

322 Commercial Italian 3 cr
Spoken and written language of business Italian, conventions of letter writing, import, export, and commercial transactions.

323 Pirandello, Svevo, Pavese 3 cr
Analysis and stylistic comparison of these writers representative of the literary evolution of that period in the psychological novel and drama, and to neorealism.

324 Introduction to Italian Poetry 3 cr
A study of the works of the most important modern Italian poets.

326 Italian Culture and Civilization 3 cr
A study of the major cultural and socio-political movements of Italy through its literary works.

Japanese

101 Elementary Japanese I 3 cr
Fundamentals of oral and written Japanese. Three hours of class and one hour laboratory per week.

102 Elementary Japanese II 3 cr
Fundamentals of oral and written Japanese. Three hours of class and one hour laboratory per week. Prerequisite Japanese 101 or equivalent.

201 Intermediate Japanese I 3 cr
An intensified continuation of oral and written Japanese. Prerequisite Japanese 102 or equivalent.

202 Intermediate Japanese II 3 cr
An intensified continuation of oral and written Japanese. Prerequisite Japanese 201 or equivalent.

Russian

101 Elementary Russian I 3 cr
Fundamentals of oral and written Russian. Three hours of class and one hour laboratory per week.

102 Elementary Russian II 3 cr
Fundamentals of oral and written Russian. Three hours of class and one hour laboratory per week. Prerequisite Russian 101.

201 Intermediate Russian I 3 cr
An intensified review of grammar and major emphasis on oral skills. Prerequisite Russian 102.

202 Intermediate Russian II 3 cr
An intensified review of grammar and major emphasis on oral skills. Prerequisite Russian 201.

323 Commercial Russian 3 cr
Spoken and written language of business Russian, conventions of letter writing, import, export, and commercial transactions.

324 Contemporary Russian Literature 3 cr
Study of short stories of Soviet writers. Representing ideological, social, and historical trends.

Spanish

101 Elementary Spanish I 3 cr
Fundamentals of oral and written Spanish. Three hours of class and one hour laboratory per week.

102 Elementary Spanish II 3 cr
Fundamentals of oral and written Spanish. Three hours of class and one hour laboratory per week. Prerequisite Spanish 101.

201 Intermediate Spanish I 3 cr
An intensified review of grammar and major emphasis on oral skills. Prerequisite Spanish 102.

202 Intermediate Spanish II 3 cr
Emphasis on the oral and written aspects of the language. Prerequisite Spanish 201.

326 Spanish American Authors 3 cr
Selection from modern works of literature. Does not carry credit toward major or minor. Prerequisite 202 or equivalent.

326 Spanish Culture and Civilization 3 cr
A study of the major cultural and socio-political movements of Spain through its literary works.

328 Modern Spanish Theatre 3 cr
From Buelo Vallejo to the present, including “The Underground Theatre.”

329 Revolt and Change 3 cr
The Spanish American Novel.

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

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

401 Spanish Literature from the Cid through the Siglo de Oro 3 cr
Survey of the works of major Spanish dramatists of the period selected plays by Lope de Vega, Calderon and Tirso de Molina.

402 Spanish Literature from the 18th Century to the Present 3 cr
Survey of the works of major Spanish dramatists of the period selected plays by Lope de Vega, Calderon and Tirso de Molina.

453 Trends in Latin American Literature 3 cr
Major movements and representative works from the 18th, 19th, and 20th Century.

460 The Quixote 3 cr
An in-depth study of Cervantes’ masterpiece and of the symbolic meaning of the two main characters.

461 Spanish Literature since the Civil War 3 cr
The Civil War as mirrored in this literature. Its relationship to contemporaneous literary expression in...
DEPARTMENT OF PHILOSOPHY

Associate Professors
Tom Rockmore, Ph D
J 464 The Literature of the Siglo de Oro
brought Spanish poetry to the new “Siglo de Oro”
An introduction to the avant-garde theatre in Span-
462 Avant-Garde
Spain's most glorious era through the poetry, prose, and drama of its major authors
463 Lorca and the Generation of 1927
Major poets of the “Lorca-Guillen generation” who brought Spanish poetry to the new “Siglo de Oro”
464 The Literature of the Siglo de Oro
Spain's most glorious era through the poetry, prose, and drama of its major authors
465 Literature of Spanish Romanticism
Study of the major poets, plays and historical novels of the period. Authors include Duque de Rivas, Espronceda, Larra, Becquer, Rosalba de Castro and Zorrilla
466 The Age of Enlightenment
The study of literary works of major 18th century Spanish writers
467 Readings in Medieval Literature
The development of Spanish literature from its oral tradition as well as the evolution of the Spanish language, beginning with the “jarchas” through La Celestina
480 Directed Readings
Readings of literary texts under close faculty supervision for majors only and only with written permission of the Department. Variable credit

DEPARTMENT OF PHILOSOPHY

Core Courses
132 Basic Philosophical Questions 3 cr

Other Courses
100 Introductory Logic 3 cr
Analysis of the requirements for valid reasoning, logical fallacies, types of definitions, and important informal arguments of everyday discourse will be studied. In addition to the formal logic of inferences involving simple and compound statements, this course is taught at least once a year
104 Philosophy of Sex 3 cr
Ethical questions that arise in medical care and research will be examined. Topics might include the doctor/patient relation, informed consent, euthanasia, the definitions of health, person, and death

Basic Courses
Basic Courses are intended as electives for general undergraduates, as well as for majors and minors. Some of these courses are offered every year. Prerequisite as least one 100-level course in philosophy

PROFESSORS
Frederick Evans, Ph D
Edward Gelblum, M A
Abraham Kasher, Ph D
Michael Strasser, Ph D

468 Contemporary Moral Problems
This course includes a discussion of several moral theories, which are then applied to concrete case studies from various fields

requirements for the major
A total of 30 credits
24 credits above the 100 level,
9 credits chosen from courses 300-305,
6 credits at the 400 level

requirements for the minor
A total of 18 credits
No more than 6 credits at the 100 level,
6 credits at the 300-400 level

101, 102 Elementary Swahili 3 cr each
Fundamentals of oral and written Swahili. Three lecture hours and one hour laboratory each week
201, 202 Intermediate Swahili 3 cr each
An intensified continuation of 101 and 102. Prerequisite: 102 or equivalent

105 Ethics
This course provides an introduction to some important ethical theories of past and present times. This course is taught at least once a year

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

220 Philosophy of Death and Living 3 cr
This course provides an introduction to some of the basic themes and texts, both traditional and contemporary, related to the philosophical study of life and death, and to the formal logic of inferences involving simple and compound statements. This course is taught at least once a year

225 Elements of Thomistic Thought 3 cr
This course provides an introduction to the basic concepts and principal ideas of Christian philosophy with an emphasis on the system of Saint Thomas Aquinas

255 Philosophy of Technology 3 cr
This course consists of a philosophical examination of how our lives are shaped by technology and the relation of technology to science and metaphysics

260 Philosophy of the Human Sciences 3 cr
The relations of the human sciences with other sciences, with philosophy, and with practical life are considered. The use of mathematics and other issues will be discussed in relation to past and contemporary philosophical and scientific thought

270 American Philosophy 3 cr
This course will cover significant movements in American philosophy, e.g., puritanism, transcendentalism, and pragmatism, with an emphasis on key figures such as Pierce, Dewey, James, and Royce

280 Oriental Philosophy 3 cr
This course provides an introduction to Oriental thought through the study of traditions such as Confucianism, Taoism, Buddhism, and Hinduism

290 Concentrated Philosophical Readings 3 cr
This is a private tutorial arranged with an individual professor. It is intended for a student who needs to concentrate on a philosophical topic which is not offered in a regular course

Historical Courses
Prerequisite: at least one 100-level or 200-level course

300 Ancient Philosophy 3 cr
This course studies the beginning of philosophy in Greece, from the PreSocratics to Plato, with
This course will emphasize Aquinas' psychology. This course emphasizes an analysis of Aristotle's philosophy of action. This course concentrates on Plato's text, with a content emphasis on human suffering.

301 Medieval Philosophy
This course studies 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. This course is usually taught every spring in the spring semester.

302 Early Modern Philosophy
This course discusses some major issues in modern thought beginning with Descartes. It includes the analysis of texts chosen from such important figures as Montaigne, Pascal, Hobbes, Spinoza, Leibniz, Locke, Hume, and Kant. This course is usually taught every year in the fall semester.

304 Later Modern Philosophy
This course examines the period of modern philosophy initiated by Kant. It deals primarily with the crucial thinkers of the nineteenth century including Hegel, Feuerbach, Kierkegaard, Marx, Mill, and Nietzsche. This course is taught at least once every two years. Prerequisite 302 or permission of the instructor.

305 Contemporary Philosophy
This course concentrates on philosophy from 1900 to the present and covers the methods of selected twentieth-century movements. This course is taught at least once every two years. Prerequisite 302 or permission of the instructor.

Advanced Courses
These courses are designed for majors, minors, and other serious students of philosophy. Prerequisites at least one 200-level and two 300-level courses or special permission of the instructor.

401 Plato's Republic
This course concentrates on Plato's text, with a consideration of various interpretations.

408 Aristotle Philosophy of Action
This course emphasizes an analysis of Aristotle's various discussions of Praxis in both his theoretical and practical writings.

420 The Philosophy of Saint Augustine
The early dialogues and the Confessions will be highlighted. Topics include Augustine's views on skepticism, truth, free will, the existence of God, the distinction between faith and reason, the soul, memory, and time.

422 Saint Thomas Aquinas: Treatise on Man
This course will emphasize Aquinas' psychology, epistemology, and theory of appetite, i.e., love, will, affectivity, and emotion. Original texts will be the main focus throughout.

443 Hegel's Logic and Kierkegaard's Postscript
This textually-based lecture course criticizes the claims that (1) Hegel's philosophy is irrelevant to human existential concerns and (2) Kierkegaard's position is "irrationalist." This course shows that some elements of Kierkegaard's critique of Hegel's logic are based on logic itself.

445 Nietzsche and Deconstruction
While testing Hegderger's assertion that Nietzsche's thought marks the complete end of metaphysics, this course explores the sites of thinking's other beginnings within and after deconstruction.

450 Introduction to Phenomenology
The basic approach to philosophical issues developed by Husserl, the founder of phenomenology, will be explored. Topics include intentionalities, signs, and meaning.

452 Freud and Philosophy
This course considers the impact of Freud and his followers on contemporary philosophical issues.

492 Simone de Beauvoir
This course examines the period of modern philosophy initiated by Kant. It deals primarily with the crucial thinkers of the nineteenth century including Hegel, Feuerbach, Kierkegaard, Marx, Mill, and Nietzsche. This course is taught at least once every two years. Prerequisite 302 or permission of the instructor.

497 Aesthetics
This course examines the period of modern philosophy initiated by Kant. It deals primarily with the crucial thinkers of the nineteenth century including Hegel, Feuerbach, Kierkegaard, Marx, Mill, and Nietzsche. This course is taught at least once every two years. Prerequisite 302 or permission of the instructor.

DEPARTMENT OF PHYSICS

DEPARTMENT OF PHYSICS
Charperperson
Reginald A. Ney, M. Sc.

Professor
Shih-Chi Chang, Ph D

Rev. J. Clifton Hill, Ph D

Assistant Professor
Mark J. Comella, Ph D
Barbara M. Manner, Ph D
Reginald A. Ney, M. Sc.

Instructor
Anna D'Etano, B. Sc.

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

REQUIREMENTS FOR THE MAJOR
A minimum of 34 semester hours is required for the major. These credits must include 211, 212, 301, 329, 330, 361, 372, 402, 403, 430, 473, 483, 474, 484, or 485 may be substituted for 483 with departmental approval.


If a student takes both 201, 202 and 211, 212, credit will not be given for both.

REQUIREMENTS FOR THE 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 BINARY ENGINEERING STUDENTS
In addition to those courses needed to fulfill the University and College of Arts and Sciences Core requirements, each Binary Engineering student is required to complete the following: Physics 211, 212, and 473, Chemistry 121 and 122, Mathematics 115, 116, 215, 216, 308 and Computer Science 105 or 111. Mathematics 306 is recommended, but not required. Depending upon the field of engineering that a student elects to pursue, the Binary Engineering Student may select additional courses from the following list in order to enhance his/her background and understanding: Chemistry 221, 222, 321, and 322, Physics 301, 306, 329, 330, 361, 372, and 483. Selections must be discussed with and approved by the Binary Engineering Liaison Officer who serves as academic advisor to all Binary Engineering Students.

Physics Courses

170 Acoustics
This course presents the physical principles underlying the production, propagation, and perception of sound. Examples of the principles are drawn mostly from the world of musical sound. No mathematical preparation beyond high school algebra is necessary.

200 Physics for Pharmacists
A laboratory course designed especially for Pharmacy students to provide a basic knowledge of Physics and its relationship to pharmaceutical science. Topics normally covered include mechanics, properties of matter, heat and thermodynamics, basic electricity, wave motion and light, and selected topics in modern physics. In addition to being introduced to the physical concepts, the student will also be introduced to the analytical approach to problem solving that is essential to both the physical and pharmaceutical sciences. Prerequisite: Mathematics 115. Lecture four hours, Laboratory/Recitation, two hours. (Note: Students preparing for a medical degree program must take Physics 201, 202 or Physics 211, 212. Pharmacy students concentrating in Nuclear Pharmacy are encouraged to complete Physics 201 and 202.)

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. 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:
This course seeks to combine a treatment of the principles and concepts of elementary astronomy and astronomical observation. Topics covered may include the scale of the cosmos, the celestial sphere, the solar system—past, present, and beyond, astronomical tools, properties of stars and starlight, the life cycle of stars, black holes and neutron stars, and the origin, evolution, and properties of galaxies. The question of life on other worlds may also be examined. This course presumes no scientific background, and is open to all students within the University. It is also suitable for completion of non-core science requirements for students in the College of Liberal Arts and Sciences, and as a physical science course for School of Education students.

329 Advanced Laboratory I 3 cr
This course is designed to acquaint the student with the basics of modern electronics to the extent that the student will have a sufficient background to design and use simple electronic circuits in future research. A set of experiments is performed and analyzed by the students. Subjects covered include: Discrete Component Electronic Circuits and Measurements; Binary numbering systems, Gate circuits, Boolean Algebra; digital encoding, multiplexing and sequencing, flip-flops, counters, digital wave generation and shaping, elapsed time measurement and shift registers. Prerequisite 212 or 202 and consent of instructor.

330 Advanced Laboratory II 3 cr
A continuation of Advanced Laboratory I which includes the following: Random Access Memory; Analog to Digital and Digital to Analog Conversion; Operational Amplifiers; Active Filters; Function Generators and practical applications of digital circuits including some computer interfacing. Prerequisite 329 or consent of instructor.

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

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

402 Optics 3 cr
This course introduces the student to the principles of geometrical and physical optics. Topics may include reflection, refraction, diffraction, polarization, matrix techniques in lens system design, basic quantum optics and the laser. Prerequisites 212, Mathematics 215.

403 Applied Laser Optics 2 cr
This course is primarily an experimental course with an emphasis on student work in a laboratory setting. It is open to all interested science students and it is mandatory for all physics majors. Some experiments to be performed are: Laser assembly, the characteristics, polarization, shapes, and the transverse nature of a laser beam, the reflection, diffraction, interference and spectra of lasers and holography. More advanced experiments could be assigned as special projects. Prerequisite 402 or consent of the instructor.

419 Introduction to Micro and Mini Computers 3 cr
An introduction to the electronic design of micro and minicomputers and the methods of interfacing microprocessors and PCs to the outside world. Some aspects of assembler and specialized languages for small computers are examined and applied to microprocessor data acquisition from and control of real world sensors and other electronic devices. Prerequisites: Computer Science 301, Computer Organization and Assembly Language, and Computer Science 325, Operating Systems and Computer Architecture. Some electronic background is useful and completion of Physics 202 or 212 is encouraged.

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

426 Problems in Microcomputers 1-4 cr
Special topics and problems in microprocessors, microcomputer interfacing circuitry and related subjects suitable for independent work. Prerequisites Physics 419, or consent of the instructor.

430 Advanced Research 2 cr
This is a one-year course in which the student selects a research project, develops it, and prepares a report on the results. The student is also required to present results of his work at a departmental seminar or an appropriate scientific meeting if deemed advisable. A research topic is selected from topics 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, Mathematics 215.

483 Nuclear Physics 3 cr
This course is an introductory course in the study of the nuclear nucleus. The topics presented may include two-nucleon systems, radioactivity and modes of decay, radiometric dating, interaction of radiation with matter, nuclear structures and reactions, nuclear fission, and an introduction to elementary particles. Prerequisites 212 or 202 and consent of the instructor.

474, 484, 485, 486 Special Topic Courses 1-3 cr each
These courses are designed to allow the Physics Major flexibility in designing his/her program. These courses are offered irregularly and at times when there is an urgent student demand to justify the offering of the course.

The courses offered include: 474 Quantum Mechanics (please note that the department will accept Graduate Chemistry 353, Quantum Chemistry, in lieu of the Quantum Mechanics course); 484 Introductory Solid State Physics, 485 Relativistic Mechanics and 486 Shop Techniques. Descriptions of these courses follow.

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

484 Introductory Solid State Physics 3 cr
Bulk properties of materials are discussed with both the phenomenological and microscopic approaches. Typical topics are the geometric structure of solids, waves and diffractions, thermal properties, the free electron model, band theory, superconductivity, magnetic properties and magnetic resonance. Prerequisites 212, Mathematics 215.

485 Relativistic Mechanics 3 cr
This course is an introduction to the Special and General Theories of Relativity. A list of topics which may be discussed are absolute space, Einsteinian Kinematics, Einsteinian Optics, 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.

488 Advanced Problems in Physics 1-4 cr
- Problems of a more sophisticated nature.

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

495 Field Studies 1 1-4 cr

Earth Science Courses

NOTE: These courses have Physics Department course numbers.

PHYS 100 Physical Geology 3 cr
- Comprehensive survey of minerals, rocks, structures, and geologic processes of the solid earth. Topics covered may include earthquakes, plate tectonics, volcanism, surface and groundwater, glaciers, and mountain formation. This course presumes little or no geologic or scientific background, etc.

PHYS 102 Historical Geology 3 cr
- A course which examines the essentials of the Earth's evolutionary development through time. Topics covered in this course may include the physical composition and structure of Earth, plate tectonics, and mountain building processes, the concept of geologic time and its measurement, and the history of the development of life on Earth. Evolution of local features may also be discussed along with their relationships to plate tectonics. This course presumes no geologic or scientific background, and is open to all students within the University. It is also suitable for completion of non core science requirements for students in the College of Liberal Arts and Sciences, and as an earth science course for School of Education students.

PHYS 232 Geology of the National Parks 3 cr
- The national parks provide accessible and protected examples of important geologic processes. Volcanism, mountain building tectonic activity, glaciation, groundwater, and geothermal activity, and river erosion are represented. Geologic history and features of each of the parks will be presented using slides, supplementary reading materials, and maps. This course presumes little or no geologic or scientific background, etc.

PHYS 304 Environmental Earth Science 3 cr
- Analysis of geologic aspects of man's environment with emphasis on geologic hazards and environmental impact of society's demand for water, minerals, and energy. Topics covered may include coastal processes, earthquakes, volcanic eruptions, river alternative energy sources, and environmental law. This course presumes little or no geologic or scientific background, etc.

DEPARTMENT OF POLITICAL SCIENCE

201 American National Government 3 cr
- The institutional structure and policy-making processes of the national government are examined as reflections of 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.

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

208 Comparative Political Systems 3 cr
- A comparative analysis of political systems currently existing in Western Europe, the Commonwealth of Independent States (formerly the USSR), Japan, China, and selected countries in the Third World. This course will emphasize the political history, political institutions, political parties, and major policy issues of each of these countries.

245 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.

290 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.

314 Public Policy 3 cr
- An examination of the programmatic results of government action, with emphasis on how and why particular policy options are pursued.

317, 318 Western Political Thought 3 cr each
- A study of political ideas as distinct from and yet related to political institutions which constitute our present-day political heritage. 317 considers theorists from the classical period to the early 18th Century, and 318 considers theorists from the late 16th Century to the late 19th Century.

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 major political developments in Eastern Europe since 1945, with emphasis on the dramatic events of 1989-1990 that resulted in the creation of post-communist governments in Poland, Hungary, Czechoslovakia, Romania, and Bulgaria. The unification of Germany, secessionist movements in Yugoslavia, and recent events in Albania are also examined.

322 Government and Politics of the Commonwealth of Independent States 3 cr
- The first half of this course involves a study of the origin, evolution and demise of the Soviet political system from Lenin through Gorbachev. This is followed by an analysis of the post-Soviet reality in the Commonwealth of Independent States and an examination of the major political, economic, ethnic, and ideological problems confronting this region.

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

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

325 Constitutional Law Criminal Law 3 cr
- This course will consider the application of the Bill of Rights and major federal law as criminal procedure. As with the Constitutional Law courses, it is a case approach. Students will read court decisions and develop familiarity with briefing cases.

335 The Mass Media and Politics 3 cr
- A study of the mass media and its nature, role and impact on U.S. politics. The mass media will be on the mass media as instruments of political communication and opinion leadership.

340 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.

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

400 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.

401 The American Congress 3 cr
- An investigation of the operation of the Congress of the United States within the American system of government.
DEPARTMENT OF PSYCHOLOGY

Chairperson
Richard T Knowles, Ph D

Professors
Anthony Barton, Ph D
Constance Fischer, Ph D
William Fischer, Ph D
Richard T Knowles, Ph D
Rev Edward Murray, C S Sp , Ph D
Rolf von Eckartsberg, Ph D

Associate Professor
Paul Richer, Ph D

Assistant Professors
Charles Brice, Ph D
Michael Sipors, Ph D
Eva Simms, Ph D
J Scott Staples, Ph D
Sidney White, Ph D

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, natural science, and within a historical perspective. Further study in graduate school prepares student, for the life of the student. Open to juniors and seniors. Permission of department required

Requirements for the Minor
Requirements for a minor are 103 and 223 and any three of the following 225, 226, 228, 230, 234, 232, 235, 236, 390, 400 level courses may be taken for the minor with permission of the department head. A minimum of nine credits in psychology must be taken at Duquesne University for the minor.

COUNSELING SERVICES

Personal counseling services are available to all students at the Psychology Counseling Center located at the Chapel end of Centennial Walk

103 Introduction to Psychology
(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
For majors only. Traditional approaches (behaviouristic, physiological, psychoanalytic) to sensation, perception, learning, and motivation. Required for majors.

223. Introduction to Existential Phenomenological Psychology

Introduction to a human-science alternative to psychology as a natural science: Prerequisite for 356 and 490. Required for majors and minors.

225 Developmental Psychology I
(Prereq 220 and 356)

Infancy and childhood. Growth and development of the child, with emphasis on personality development.

226. Developmental Psychology II
(Prereq 225)

Adolescence and Maturity. Development from adolescence, through adult stages, to coping with death.

230 Psychology of Community Experience

A study of community phenomena, e.g., individual versus group, intimacy vs privacy, prejudice and discrimination.

231 History of Psychology I

Overview of figures and issues in the history of psychology, from precursors to present.

238 Psychology of Personality

Critical examination of major theories of personality.

239 Social Psychology

Foundations of social processes, attitudes, values and roles, public opinion, propaganda and communication, personal participation in society.

241 Abnormal Psychology

Examination of theories and data on disordered human existence.

246 Research Psychology Theory and Practice

Review of theory and practice of traditional and human-science research. Includes student projects. Prerequisite 220, 223, permission of department head for non-majors.

251 Psychology of Identity and Fulfillment

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.

260 Psychology of Aesthetic Experience

Theoretical and empirical explorations of aesthetic experience.

290 History of Psychology II

Intensive study of selected historical figures, in dialogue with contemporary themes. Reading of primary sources. Prerequisite 230.

391 Applied Psychology Practicum

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.

392 The Individual and His/Her World

Examination of individual's relation to society, from a developmental and cross-cultural perspective.

393 Principles of Psychoanalytic Thought

Examination of the times and contributions of Freud and selected other major psychoanalytic theorists. Permission of department head for non-majors.

394 Psychology of Language and Expression

Communication as a life embodied relation of person to world and others. Emphasis is on phenomenological theories. Permission of department head for non-majors.
DEPARTMENT OF SOCIOLOGY

Chairperson
Charles F. Hanna, Ph D

Professor
Norma Feinberg, Ph D

Associate Professors
Charles F. Hanna, Ph D
Joseph D. Yenerall, Ph D

Assistant Professors
Mary Frances Antolino, M A
Timothy F. O’Donohue, Ph D
Lynne L. Snowden, Ph D
Gail Flint Stevens, Ph D

Lecturers
Kathleen Fletcher, M PH
Lee Frank, M A
Ronald Freeman, M A
Enc Joy, M A
Linda Nelson, M A
Raymond A. Novak, J D
Mark Palumbo, M SW
Kevin Stoehr, M A
Ursula Heyl, M A

Professor Emeritus
Eleanor V. Fays, Ph D
Chester A. Jurczak, Ph D

Undergraduate instruction in sociology has as primary commitment the intellectual development and professional training of sociology majors. At the same time, we focus on the contribution of the discipline to the liberal education of the student regardless of his/her major. The pursuit of excellence in value-building and service orientation articulates in the mission and goals statement of the University and has been continued to be the foundation on which our curriculum is built.

DEPARTMENT OF SOCIOLOGY

COLLEGE OF LIBERAL ARTS AND SCIENCES

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

432 Gestalt Psychology 3 cr
Contributions of Gestalt psychology (especially the works of Kurti, Kohler, and Goldstein) to traditional and humanistic psychology. Permission of department head for non-majors.

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

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

490 Special Topic 3 cr
A visiting professor presents his/her specialty, or a regular faculty member presents highly specialized studies or an experimental course. Repeatable. Permission of department head for non-majors.

Requirements for the Major
A minimum of 30 semester hours will be required for the major. These must include 200-201 and 300-301 in addition to required courses within the selected concentration. The remaining credits may be scheduled in consultation with the student's advisor. A self-designed program combining concentrations may also be developed with the approval of the student’s advisor. A minimum of six credits earned in 450, 451, 454, 455 will count toward the 30 required.

Concentrations
Before taking 300- or 400-level courses, all students are strongly advised to complete the introductory course in their concentration. (101, 102, 103)

564 Sociology: This concentration is designed for the “generalist,” the student preparing for an advanced study in sociology and certain “double majors”. Required courses: 101, 200, 201, 300, 301. Of the remaining 15 credits must be taken within the Sociology sequence.

585 Criminal Justice: This program provides the student with the opportunity to develop knowledge and skills in preparation for career pursuits in major areas of criminal justice, including police, probation, parole, investigation, corrections, and research. Required courses: 102, 200, 201, 300, 301. Of the remaining 15 credits must be taken within the Criminal Justice sequence.

586 Human Services/Gerontology: This concentration provides the preprofessional training and skill development in the general area of human services and in the study of the elderly. Required courses: 103, 200, 201, 300, 301. Of the remaining 15 credits must be taken within the Human Services/Gerontology sequence.

Requirements for the Minor
A minimum of 15 semester hours is required for the minor. The minor program is self-designed, and a faculty advisor should be consulted to assist in the design.

The Gerontology Certificate
The Department offers an 18-credit program leading to a certificate in Gerontology available to all majors and minors as well as students and para-professionals outside the Department and the University. Students from outside the University who register for the Certificate do so through the Division of Continuing Education.

To earn the Certificate the student must complete 6 of the following courses: Sociology 315, Human Services/Gerontology 203, 210, 212, 312, 324, 403.

Course Descriptions

Required Courses

200 Sociological Theories I 3 cr
This course introduces the major or minor to an intensive review of basic sociological principles and the process of theory-building.

201 Sociological Theories II 3 cr
A study of selected classical and contemporary theories and schools of thought. Prerequisite: 200.

300 Sociological Methods I 3 cr
A discussion and application of the techniques and research procedures used in sociological research.

301 Sociological Methods II 3 cr
A study of the construction and application of statistics in social research. Specific attention is given to an introduction to computer uses in the social sciences. Prerequisite: 300.

Additional requirement for Sociology Concentration

101 Survey of Sociology 3 cr
An introduction to the basic concepts, processes, and institutions which are the subject matter of sociology as an academic discipline.

Additional requirement for Criminal Justice Concentration

102 Introduction to Criminal Justice 3 cr
An introduction to the criminal justice system, including police, courts, correctional facilities, and community-based connections. Open to non-majors.

Additional requirement for Human Services/Gerontology Concentration

103 Introduction to Human Services 3 cr
A survey of the history and areas of social and community services and programs. Open to non-majors.

Sociology

202 Sociology of Social Problems 3 cr
A study of the person-structure-change framework applicable to contemporary social issues.

205 Person and Society 3 cr
A study of the person's interaction with societal groups, organizations, and institutions.

214 Sociology of Child and Adolescent 3 cr
A discussion of the child and adolescent in American society.

225 Family Systems 3 cr
A study of the family institution and its interaction with other community institutions.

202 Evaluative Research and Planning 3 cr
An analysis and development of techniques for the investigation and evaluation of human services and criminal justice programs. Prerequisite: 300.

307 Leisure and Popular Culture 3 cr
A study of the relationship between work, leisure and popular culture, leisure as a social problem will be considered.

308 Racial and Ethnic Groups 3 cr
A comprehensive survey of roles performed and problems faced by racial and ethnic groups.

315 Social Development and Socialization 3 cr
A study of the socialization process from the infant state to the dying state.

316 Social Change 3 cr
A discussion of the theories and techniques of initiatory social change.

317 Social Stratification 3 cr
A study of status differentiation within various cultures.

318 Sociology of the City 3 cr
An analysis of urban life and its impact on social relations.

Criminal Justice

211 Social Deviance 3 cr
A study of the forms and consequences of social deviance and law. Prerequisite: 102.

213 Delinquency and Society 3 cr
A study of the phenomena, theories, and causation of juvenile delinquency. Prerequisite: 102.

216 Criminology 3 cr
A study of sociological explanations of criminality, correlates, causation, and crimeogenic conditions. Prerequisite: 102.

250 Criminalistics I 3 cr
A study of case preparation, questioning of witnesses, collection and preservation of evidence and processing of criminal evidence. Prerequisite: 102.

251 Criminalistics II 3 cr
A study of the techniques of collecting evidence, fingerprints and the microscopic and laboratory study of firearms, hair, fibers, blood, paints, poisons, and other clues. 250 Criminalistics I is not a prerequisite to 251 Criminalistics II. Prerequisite: 250.

264 Police and Society 3 cr
An analysis of the role of police in the community, and some of the critical issues in law enforcement. Prerequisite: 102.

266 Crime Prevention 3 cr
A study of contemporary crime prevention programs involving criminal justice agencies, citizens, and community politics. Prerequisite: 102.
DEPARTMENT OF THEOLOGY
Chairperson
George S. Worgul, Jr., S.T.D., Ph.D.

Professors
James P. Harigan, Ph.D.
David Kelly, Ph.D.
Marilyn Schaub, Ph.D.
William Thompson, Ph.D.
George S. Worgul, Jr., Ph.D., S.T.D.

Associate Professors
Michael Cahill, C.S.Sp., Ph.D.
Charles Fenner, C.S.Sp., Ph.D.
Francis X. Malinowski, C.S.Sp., Ph.D.
William Rademacher, Ph.D.
Michael Slusser, D.Phil.

Assistant Professors
Anne M. Clifford, C.S.J., Ph.D.
Mont McIntyre, I.H.M., Ph.D.

Adjunct Professor
Paracleta Amrich, S.S.C.M., M.A.

Adjunct Associate Professor
John W. Hoyt, M.D.
Christopher J. Daly, M.D.
Mark Schmidhofer, M.D.
Stacey A. Henderson, M.D.
Elmer J. Holzinger, M.D.
Charles E. Hollerman, M.D.
Dann M. Westrick, M.D.
Daniel R. Thompson, M.D.
Rev. Charles S. Bober, S.T.D.
Rev. Frank Sokol, Ph.D.

Adjunct Assistant Professor
Luisa Coraluppi, Ph.D.

Duquesne’s Department of Theology offers a program which undertakes an academic study of religion and theology. The Department emphasizes Catholic Theology, in dialogue with other Christian traditions, non-Christian traditions and Judaism. It acknowledges the fact of the universal search for religious meaning and experience, and seeks not only to offer the possibility of a study of the varying approaches to religious witness in history, but also to place Catholic Theology in communion with that quest. It aspires to a fruitful encounter with other university disciplines, and the Department is convinced that theology’s concerns are related to all vital human issues. In this way, the Department of Theology seeks to realize Duquesne University’s mission with special attention to moral and spiritual values.

REQUIREMENTS FOR THE MAJOR
The major program consists of a minimum of 18 credits taken at the 200 level or above. These credits will include 205, 213, 214, 220, 250, 230 or 331, 498.

the remaining credits will be electives chosen in consultation with the undergraduate advisor of the theology department.

REQUIREMENTS FOR THE MINOR
A minor consists of 12 credits taken at the 200 level or above. Students should consult the undergraduate advisor of the theology department for the design of the minor.

COURSE INFORMATION
The Department has organized its courses into three divisions: Biblical Studies, Religious and Theological Studies, Ethical Studies

100 These are courses in the University core curriculum

200 - These are courses introducing students to particular areas or questions in theology

300 - These courses explore subject matter in greater depth and specificity than do courses at the 200 level

400 - In these courses selected topics are dealt with at a more advanced level, independent research is required.

BIBLICAL STUDIES
213 The Old Testament
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

214 The New Testament
An introduction to the books of the New Testament, including their literary, historical, and theological content, practical approaches in interpreting key passages of the New Testament.

313 Archaeology and the Bible
An illumination through archaeological excavation 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

315 Prophetic Literature of the Old Testament
A study of the major prophetic traditions which were characterized by sharp contrasts against social abuses, power politics, and religious hypocrisy, and by an urgent call to return to the roots of the Israelite faith.

316 The Pauline Literature
An exploration of the letters traditionally attributed to Paul (including Hebrews). The material will be situated historically and theologically in the light of contemporary scholarship.

317 The Wisdom Literature of the Old Testament
A study of Proverbs, Ecclesiastes, Job, and other wisdom writings which treat both the practical search for happiness through living in accord with the natural and social orders and the more speculative quest for answers to such basic questions as ‘Why do the innocent suffer?’ and ‘If we all die, what is the meaning of life?’

321 The Gospel Literature
A critical study of the four Gospels. The material will be situated historically and theologically in the light of contemporary scholarship.

490 Field Experience in Biblical Archaeology
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.

493 Directed Readings in Biblical Studies
The topics will change regularly and will be published within the department.

RELIGIOUS AND THEOLOGICAL STUDIES
205 The Mystery of God
An exploration of basic questions concerning God and the world, and how theology tries to clarify and respond to them in the context of faith and other aspects of human experience.

220 Jesus the Christ
An introduction to the study of Jesus as Christ and Savior, concentrating on the principle mysteries of his existence. The insights of the New Testament and the early church councils will receive special attention, as well as representative interpretations among the theologians.

225 The Theology and Practice of Prayer
An intensive examination into the experiential basis, theoretical understanding, and variety of forms of prayer in the Christian tradition. The course will include both theoretical analysis and personal reflection on prayers and the experience of praying.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>235</td>
<td>Christian Worship</td>
<td>3 cr</td>
<td>The meaning of ritual and worship in Christianity with special emphasis given to the history of worship and the developments in both Roman Catholic and Protestant worship since the Vatican Council.</td>
</tr>
<tr>
<td>242</td>
<td>Love in Theological Thought</td>
<td>3 cr</td>
<td>An examination of the theology of love in contemporary thought, focusing on family love, friendship love, romantic love, and Christian agape and their relationships. The &quot;failures&quot; and healing of love will also be treated.</td>
</tr>
<tr>
<td>258</td>
<td>Catholicism</td>
<td>3 cr</td>
<td>An explanation of the spirit, beliefs, and practices of Roman Catholicism including its understanding of sacramentality, mediation and communion, a study of the Roman Catholic classics and issues confronting Roman Catholicism.</td>
</tr>
<tr>
<td>260</td>
<td>Protestantism</td>
<td>3 cr</td>
<td>An introduction to the thought of the principal reformers Luther, Calvin, Zwingli, Wesley, a study of speculative and practical forces operative in the fifteenth-sixteenth centuries which gave rise to the reforming movement, the formulation of Protestant Orthodoxy.</td>
</tr>
<tr>
<td>271</td>
<td>Eastern Christianity</td>
<td>3 cr</td>
<td>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.</td>
</tr>
<tr>
<td>278</td>
<td>Church History I</td>
<td>3 cr</td>
<td>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.</td>
</tr>
<tr>
<td>275</td>
<td>Church History II</td>
<td>3 cr</td>
<td>Selected topics in Catholic and Protestant development from 5000 to the present day, special emphasis on the crises, revolutions, and reforms that were central to this development.</td>
</tr>
<tr>
<td>280</td>
<td>Religious Experience</td>
<td>3 cr</td>
<td>An examination of the dimensions of mankind's religious experience, e.g., mystical, ritual, mythical, ethical, and scriptural, an analysis of the likenesses and differences of how the Divine is sensed and responded to in varied geographical, cultural, and chronological contexts.</td>
</tr>
<tr>
<td>283, 284</td>
<td>Judaism, People and Faith</td>
<td>3 cr</td>
<td>A survey of modern Jewish history to discover roots and traditions of the Jewish people in America, Israel, and the Soviet Union with an eye to the Holocaust and its effects on world Jewry. The faith, beliefs and practices of Jewish life today (This course is sponsored by the Chautauqua Society)</td>
</tr>
<tr>
<td>301</td>
<td>Marriage</td>
<td>3 cr</td>
<td>A personally-oriented and practical treatment of marriage 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.</td>
</tr>
<tr>
<td>331</td>
<td>The Church in the Modern World</td>
<td>3 cr</td>
<td>An analysis of the Church's role in human development today and in offering solutions to present problems of humanity in light of Vatican II's &quot;Pastoral Constitution on the Church in the Modern World&quot; and other related documents.</td>
</tr>
<tr>
<td>335</td>
<td>Theology of the Sacraments</td>
<td>3 cr</td>
<td>A practical treatment of the seven sacraments in relation to their significance for the Christian's daily spiritual growth and fulfillment, consideration of human needs for ritual and symbol, discussion of recent revisions and developments in sacramental theology.</td>
</tr>
<tr>
<td>340</td>
<td>Studies in Black Theology</td>
<td>3 cr</td>
<td>An examination of the dimensions of the religious experience of Black Americans, e.g., its history, relationship to African organs, to slavery, to racism, to Christian denominations, an analysis of special elements in that experience, e.g., Black Churches, preaching, music and the &quot;American Way of Life.&quot;</td>
</tr>
<tr>
<td>345</td>
<td>Women and Christianity</td>
<td>3 cr</td>
<td>A 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.</td>
</tr>
<tr>
<td>348</td>
<td>Religion in America</td>
<td>3 cr</td>
<td>A study of Judaism and Christianity in the USA with a focus on their historical developments and contemporary trends, an exploration of the role religion plays in American society and culture.</td>
</tr>
<tr>
<td>352</td>
<td>Religious Themes in Literature and Film</td>
<td>3 cr</td>
<td>An exploration of religious experience and religious concepts as expressed in significant worlds in film and literature, including themes concerning human person's relationship to self, others, and to God.</td>
</tr>
<tr>
<td>470</td>
<td>Christian Mysticism</td>
<td>3 cr</td>
<td>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, Teresa of Avila, John of the Cross, Venerable Liberman.</td>
</tr>
<tr>
<td>475</td>
<td>Theology and Catechesis</td>
<td>3 cr</td>
<td>An examination of the principal theological and pedagogical themes of modern religious education, and of the place of catechesis in the ministry of the Church, a presentation of the historical background of the contemporary catechetical renewal.</td>
</tr>
<tr>
<td>491</td>
<td>Experience in the Teaching of Religion</td>
<td>6 cr</td>
<td>One semester of supervised experience in teaching religion in a high school environment in conjunction with a cooperating high school teacher and University Department coordinator. This course is open only to majors in Theology upon approval of the Chairperson of the Department.</td>
</tr>
<tr>
<td>494</td>
<td>Directed Readings in Religious and Theological Topics</td>
<td>1-3 cr</td>
<td>The topics will change regularly and will be published within the department.</td>
</tr>
<tr>
<td>498</td>
<td>Seminar in Theology</td>
<td>3 cr</td>
<td>A critical analysis of selected topics in theology or of selected works by outstanding theologians, open only to juniors and seniors with a major or minor in theology.</td>
</tr>
<tr>
<td>451</td>
<td>War and Peace in Christian Perspective</td>
<td>3 cr</td>
<td>An analysis of Christian teaching of the moral permissibility of using violence and participation in war from biblical times to the present, including an evaluation of the varieties of pacifism, of nonviolent resistance, and of just war theories.</td>
</tr>
<tr>
<td>495</td>
<td>Directed Readings in Christian Ethics</td>
<td>1-3 cr</td>
<td>The topics will change regularly and will be published within the department.</td>
</tr>
</tbody>
</table>
A. J. Palumbo School Of Business Administration

Administration
Dean
Thomas J Murray, B S, D M S
Associate Dean and Director of Undergraduate Studies
Thomas A Pollyack, Ph D
Associate Dean and Director of Graduate Studies
William D Presutti, Ph D
Assistant to the Dean
Emily Conrad, M B A
Laura Gunninni, M Ed
Cynthia Stadtfeld, B S B A
Communications Coordinator
Barbara K Gregory, M B A
Chairpersons
Lance B Kurke, Ph D
Kenneth L Paige, Ph D
Accounting and Finance Division
David W Pentico, Ph D
Economic and Quantative Division

HISTORY
The A J Palumbo School of Business 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 to encompass all business subjects of fundamental importance.

In 1931, the name was changed to the School of Business Administration to reflect the expansion of its course offerings and its growing professional stature in the education community. During the next four decades, new degree programs were added to enhance the scope of the curriculum and help prepare students for careers in all types of organizations. In 1971, the School became known as the School of Business and Administration.

Following a generous endowment in October of 1991, by Antonio J Palumbo, an accomplished business professional, the School adopted its current name, the A J Palumbo School of Business Administration.

PHILOSOPHY AND OBJECTIVES
The mission of the A J Palumbo School of Business Administration is to be the premier teaching institution in our market, helping our students to acquire the knowledge, skills and values necessary for participation and leadership in the evolving global marketplace. In carrying out that mission, the School provides an environment of excellence in teaching and learning. The faculty pursues a balance of theoretical and practical experience through instructional excellence, research and intellectual inquiry and a commitment to professional and community service.

As a consequence of its mission, the School of Business Administration sets itself the following key objectives:

- Strive to be a Business School which understands clearly the critically important changes and challenges occurring in the business world and responds effectively by providing a world-class training to help prepare students and others to contribute to the survival, competitiveness and long-term success of their organizations.
- Continuously monitor and analyze relevant business, economic, political and other developments, domestically and overseas, to promote that understanding. Utilize not only our University's considerable resources, but also personel and resources from elsewhere in academia, business, government and labor.
- Become leading practitioners of continuous world-class quality and productivity improvement by organizing outstanding conferences and expert lecturers, resource and effective processes throughout the School, and innovative conceptual improvements in the classroom utilizing the most state-of-the-art resources available.
- Provide insightful training in international business, incorporating challenges from such countries as Japan and Germany and outstanding opportunities in such areas as Central and Eastern Europe. Introduce leading-edge knowhow by developing programs on such relevant topics as the Management of Technology and addressing the need for lifelong learning experiences.
- Espouse ethics as a winning characteristic of organizations that are successful over the long-term and promote a commitment to high standards and values among the Duquesne community.
- Continuously evolve a Mission Statement for our School which optimally guides our commitments to our various customer groups — students, parents, employers, benefactors, alumni and the community.
- Concurrently develop the School substantially to the overall Duquesne goal of becoming the Outstanding Catholic University in America.
- Fully benefit from the resources of existing Advisory Boards, the Dean's Advisory Student Council and the Executive Advisory Board to assist in the continuing development of the School and to improve the timeliness and effectiveness of our business education.

ADMISSION
Students who wish to enroll in the A J Palumbo School of Business Administration should apply through the Office of Admissions. In addition to the regular University admission requirements (see p. 7), students who wish to enroll in the School of Business should present a good background in communications and mathematics.

Acceptance of all international students will be contingent upon the successful completion of the Duquesne University Placement and English Language course work. This may involve at least one semester or more of course work until such time as the student's English language sufficiently improves to take undergraduate classes.

Students transferring from a school of business that is accredited by the American Assembly of Colleges of Business of Business must present an overall quality point average of 2.0 (on a 4.0 scale) or better. For other students including those transferring from another school within the University, a quality point average of 2.5 or better overall and a grade of C or better in all mathematics and business courses is necessary.

Up to 60 credits of course work taken outside of the School of Business will be accepted for transfer credit. More than 27 of these credits may consist of business courses. Exceptions will be made if the student is enrolled in an established articulation agreement with Duquesne University. If extenuating circumstances exist, the student may petition the Student Affairs Committee for further information. Should the student consult an academic advisor.

If the student wishes to transfer credit for course work earned in business at Duquesne University, a quality point average of 2.5 or better overall and a grade of C or better in all mathematics and business courses is necessary.

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

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

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

EARLY ADMISSION TO MBA PROGRAM — BSBA/MBA
The School of Business Administration provides an opportunity for students in the School who achieve the Dean's List to apply for early admission to the Master of Business Administration (MBA) program. Provided they receive a satisfactory score on the Graduate Management Admission test, these students may apply to take certain MBA courses during the senior year. Students interested in this program should consult their advisors early in the junior year.

EARLY ADMISSION TO MBA PROGRAM — BS PHARMACY/MBA
The School of Business Administration and the School of Pharmacy have a cooperative program that enables qualified pharmacy students to apply for early admission to the MBA program. Pharmacy students interested in this program should consult their advisors.

BUSINESS CERTIFICATE PROGRAM WITH COLLEGE OF LIBERAL ARTS AND SCIENCES AND SCHOOL OF EDUCATION
The School of Business Administration and the College of Liberal Arts and Sciences and School of Education have developed a certificate program in business for liberal arts and education students. Students in the College of Liberal Arts and School of Education who are interested in the program should consult the advisors in the School of Business Administration.

SCHOOL CENTERS
Activities complementing direct instruction take place in the School's ancillary units. 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.

Center for Economic Education
The Center for Economic Education 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 Eastern Pennsylvania and Tri-State area primarily to upgrade economic literacy and teaching competency in the school system. The Center also conducts economic education programs for clergy, media professionals, and other opinion leaders.
Center for Labor-Management Cooperation
The mission of the Center for Labor-Management Cooperation is twofold. The first is to serve as a communications vehicle for the Pittsburgh region, reporting on what firms are doing to promote labor-management cooperation as a fundamental philosophy of how they do business. The second is to serve as a promotional tool to help overcome the perception of the region as one with a poor labor-management relations climate. The Center regularly publishes a newsletter that highlights the positive, innovative labor-management cooperation activities with which Pittsburgh area companies are involved.

Eugene P. Beard Center for Leadership in Ethics
The mission of the Center for Leadership in Ethics is to accentuate issues of ethical concern by promoting public discussion in an attempt to develop an overall awareness of ethical conduct and an increase in leadership standards for the organization. An important initiative in this mission is the Distinguished Speaker Series on Ethics. At these programs, prominent executives from the business community share their experiences and philosophy on ethical conduct. The Center also sponsors regular roundtable discussions during which business leaders, faculty and students express their views and answer questions.

Center for International Management
The objective of the Center for International Management is to develop a better understanding of the American involvement in international affairs and business 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

Center for Quality and Competitiveness
The mission of the Center for Quality and Competitiveness is to help organizations in the Pittsburgh region, especially those that lack the required in-house resources and expertise, implement total quality management as a business philosophy. The Center does this by offering programs that heighten awareness about the total quality philosophy and provide knowledge and skills in using the tools of analysis necessary to improve organization performance. The Center strives to serve as a resource that organizations may use to boost their competitive positions.

Center for Real Estate Studies
The objective of the Center for Real Estate Studies is to serve as a regional education center and to provide students with the necessary background so that they may obtain various professional designations in the field of real estate.

Center for Technology Management
The mission of the Center for Technology Management is to help organizations cope more effectively with rapid, ongoing changes in technology and to use it as a key factor in building long term advantage. The Center conducts research in technology adoption, organization, management procedures, oversight, technology diffusion and technology transfer. The Center is also responsible for developing curricula and teaching programs for students as well as continuing education programs, forums and seminars for managers and executives.

The John E. Connelly Center for Entrepreneurship and Emerging Enterprise
The John E. Connelly Center for Entrepreneurship and Emerging Enterprise was designed to nurture and support the entrepreneurial spirit and emerging new enterprises in the Pittsburgh region. The Center is committed to providing world-class training to help prepare entrepreneurs and others to contribute to the survival, competitiveness and long-term success of their organizations. Through seminars conducted by the faculty of the School of Business, client organizations receive training in such areas as leadership, communications, program planning, feasibility studies, marketing strategies, financial planning, total quality management, international strategy and the management of technology.

SCHOOL OF BUSINESS ADMINISTRATION

The A. J. Palumbo School of Business Administration operates three large computer laboratories in Rockwell Hall. One laboratory is dedicated to personal computers and their applications across the business curriculum. Another laboratory consists of terminals which provide on-line access to software and applications associated with the University’s mainframe computer. The third laboratory is a teaching laboratory dedicated to multi media applications. These laboratories provide state-of-the-art hardware and software support to students in the School of Business Administration.

STUDENT ORGANIZATIONS
These student organizations in the A. J. Palumbo School of Business Administration exist for the promotion of the scholarly and professional interests of members.

The American Marketing Association members at Duquesne University interact with the Pittsburgh professional chapter on a regular basis to organize seminars featuring successful marketing executives, workshops, career forums, and networking events. The AMA is dedicated to furthering the profession and developing students’ careers.

Beta Alpha Psi is the honorary scholarship society of the school. Its membership is limited to juniors and seniors in the School who have attained a GPA of 3.25 or better.

The Zeta Chapter of Beta Gamma Sigma, a 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 ten percent of their class.

The Dean’s Student Advisory Council consists of student leaders in the School who meet on a regular basis with the Dean to discuss School matters.

Delta Sigma Pi, a national professional business fraternity, is represented by Theta Rho chapter. The fraternity makes substantial contributions to the University community through its many service activities.

The Financial Management Association is a student organization for those interested in careers in finance.

The International Business Association is a student organization for those with interest in careers in the area of international business.

Pi Chi Theta, a national professional business fraternity, organized to promote the cause of higher education and training for all individuals, is represented by the Gamma Upsilon Collegiate Chapter.

Rho Sigma Epsilon - Delta Chi Chapter is the national, professional, coeducational fraternity in marketing, sales and communications affiliated with the Sales and Marketing Executives International and the Pittsburgh SME chapter.

The Society for Human Resource Management is a student chapter of the national organization SHRM and is also affiliated with the Pittsburgh Personnel Association. The chapter is for students interested in careers in personnel/human resources or line management.

The Women’s Accounting Organization is a student organization whose activities promote the involvement of students interested in public and private accounting.

ADVISORY BOARDS

Advisory Board for Accounting
John W. Bittner, CPA, Ernst & Young
John G. Borman, CPA, Echelley Holdings, Inc.
Joseph Canny, CPA, KPMG Peat Marwick
Mark M. Chen, CPA, Deloitte & Touche
Anthony J. Ciafa, CPA, Cinema World Inc.

Charles R. Curran Jr, CPA, Westinghouse Financial Services, Inc.
John Emmbogen, CPA, Crawford & Ellenbogen
Robert E. Faust, Westinghouse Electric Corp.
Melvin G. Hennaguru, CPA, Bayer USA, Inc.
David E. Kolan, CPA, Schneider Downs & Co., Inc
Frances J. Larson, CPA, KPMG Peat Marwick
Joseph R. McCall, CPA, Coopers & Lybrand
Willian Lyons, CPA, Consol, Inc.
John R. McMurtney, CPA, Ferraro, Krebs & McMurtney
Richard E. Paine, CPA, Hosack, Spech, Muetzel
Brown Wood
Stephen F. Paskuch, CPA, Equitable Resource Inc.
Gary Quatro, CPA, Assistant Deputy Controller for Auditing, Allegheny County
John Radacky, CPA, Cigna Individual Financial Services
Robert J. Schuler, Blue Cross of Western Pennsylvania
Joe D. Seltz, CPA, Arthur Anderson & Co.
Timothy G. Sheedy, CPA, NVR Mortgage
Dmanir D. Shury, CPA, Price Waterhouse & Co.
Robert Sladack, CPA, Internal Revenue Service
Deborah Wells, CPA, Alperv Rosenthal & Company

Advisory Board for Finance
Anthony V. Barta, John Connolly Associates, Inc.
Michael J. Bowning, Rezor, Inc.
Michael A. Blyson, Mellon Bank, N.A.
Anthony J. Butting, The Hillman Company
Deborah A. Cunningham, Federated Investors
Dinna Curran, Equibank
Francis W. Daily, H. J. Heinz Company
Henry L. Dykema, Kennametal Inc.
Conni Domula, KER & G Holdings
Cthsten R. Haggerty, USX Corporation
Charles A. Kennedy, PNC Bank Corporation
Randall King, PNC Bank Corporation
Thomas V. Kondrit, PNC Bank Corporation
Michael F. Nemes, CONSOL Inc.
William G. Nicholas, Alcoa
Frederick S. Potter, DQE
Keri P. Pritt, PNC Lease, Inc.
Richard A. Rua, Mellon Bank, N.A.
Charles E. Yago, Westinghouse Electric Corporation

Advisory Board for Human Resources
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Carol A. Churen, Community Savings
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Phyllis Hartman, Society of Automotive Engineers
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Douglas J. Kasser, PPG Industries
Josephine Ketcham, Drake Beam Momin, Inc.
Donald Lodge, Mercy Hospital of Pittsburgh
Rhonda Mangen, Acton Industries, Inc.
Ronald Matlock, Westinghouse Electric Corp.
Patrica Nigro, Lumbach Holdings, Inc.
Dainel W. O’Malley, TPF&C
J. R. Philp, The Hillman Company
David Reese, Dollar Bank
Sue Riggs, North Hills Passamont Hospital
David Smadlade, Price Waterhouse
William Thomas, Cooper & Lybrand
### Advisory Board for International Business
- Fred Angelone, Mitsubishi International Corporation
- Jay Shock, Miles Inc
- Advisory Board for Marketing
- James Bezda, Consolidated Natural Gas Co
- Michael J Campbell, Pittsburgh High Technology Council
- Marion Hook, Pittsburgh Council for International Visitors
- K Haronto Itani, Carnegie Group, Inc
- Mary McKinney, Duquesne University
- Pamela Olofson, Consumer Credit Corporation
- James W Riley, Peri's Southwest Association
- Jane Tibbott, Consolidated Natural Gas Co

### Advisory Board for Management Information Systems
- David Ball, USX Corporation
- Richard E Brown, O'Connor, O'Connor, Lon., Ltd
- Linda Dickerson, Riverview Publications
- Raymond P Dimunick, CPA, Deloitte & Touche
- Dick Edgington, ALCOA
- William Hulley, Fostin Capital Corporation
- Lester Johnson, Consolidated Natural Gas Co
- Phil Kerr, Central National Bank
- Philip W Keys, Intel-RRX, Inc
- Martin W Leeper, ALCOA
- William Lowry, Blue Cross of Western PA
- Heinz Machatzke, Duquesne University
- John Mawhinney, Westinghouse Electric Corp
- Dan Zebarsky, AEG Westinghouse Transportation Systems, Inc

### Advisory Board for Management Information Systems
- Steve Adams, Mercy Pittsburgh Health Systems
- John Armstrong, Consolidated Natural Gas Co
- William Buckley, ALCOA
- Jerry Havemann, Herrn, N.A
- Wesley H Hutchison, Allegheny Health, Education and Research Foundation
- James Martin, Ernst & Young
- Wayne Maue, Blue Cross of Western PA
- Bob McFee, USX Corporation
- Donald McMahon, Allegheny Ludlum
- Charles Southward, Coopers & Lybrand
- Ed Res, Westinghouse Electric Corp
- Les Shudelman, Cleveland Consulting Associates
- Jay Shock, Miles Inc
- Charles Southee, Ketchum Communications Inc
- Dennis Upton, Mine Safety Appliance Co
- Russ Zemba, Consol Inc

### Executive Advisory Board
- Frank Bakos, Westinghouse Electric Corporation
- John P Donahue, Federated Investors, Inc
- Robert E Faust, Westinghouse Electric Corporation
- Carl G Grefenstette, The Hillman Company
- John H Henry, Sinclair & Rush, Inc
- Michael R Rompala, PPG Industries, Inc
- Frank J Schneider, SSI Services, Inc
- Wesley W von der Heyde, Westinghouse Electric Light Company
- James W Wirth, Retired, ALCOA

### Divisional and Academic Programs
- The A. J. Palumbo School of Business Administration is comprised of three divisions: Accounting and Finance, Behavioral, and Economic and Quantitative.

### Pre-Business Experience
- This orientation program is designed to introduce business students to the broad concept of a business education. The program serves as an "advance organizer" and exposes students to the concept of total quality management, the importance of ethical decision making, and the realities of the global marketplace within a cooperative learning environment.

**Student Programs**

**Juniors/Senior Lecture Series**

The purpose of this series of colloquia is to offer students the opportunity to meet and interact with prominent business leaders and corporate representatives. During the completion of the students' upper level courses, students are exposed to current themes and critical topics in business. This series is coordinated with the Reading Program.

**Reading Program**

In order to broaden the students' knowledge of the business world, a comprehensive bibliography has been compiled by the faculty. Students are expected to complete outside readings in a variety of areas to complement their in-class studies. Completion of this program is required for graduation.

**Foreign Language Requirement**

Business organizations are becoming more global in scope, yet business students graduating from many American educational institutions still maintain a parochial perspective.

**Four Year Sample Plan**

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core</td>
<td>University Core</td>
</tr>
<tr>
<td>101 Thinking and Writing Across the Curriculum</td>
<td>102 Imaginative Literature and Creative Writing</td>
</tr>
<tr>
<td>102 Imaginative Literature and Creative Writing</td>
<td>109 College Algebra/Trigonometry</td>
</tr>
<tr>
<td>111 Calculus</td>
<td>112 Calculus</td>
</tr>
<tr>
<td>161 Social and Political Systems</td>
<td>161 Social and Political Systems</td>
</tr>
<tr>
<td>171 The Shaping of the Modern World</td>
<td>172 The Shaping of the Modern World</td>
</tr>
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<td>181 The Arts and the Human Experience</td>
<td>182 The Arts and the Human Experience</td>
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<td>183 Environmental and Social Issues</td>
<td>183 Environmental and Social Issues</td>
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<td>201 Business Core</td>
<td>201 Business Core</td>
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<td>215 Information Systems I</td>
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<td>216 Business Core</td>
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<td>220 Pre Business Experience</td>
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**Total Credits**: 30CR

**TOTAL Credits**: 30CR
ACCOUNTING AND FINANCE DIVISION

Junior Year

Business Core

331 Business Finance
361 Introduction to Management
371 Introduction to Marketing
376 Total Quality and Operations Management
386 Business Ethics/Communications

Major Area of Concentration

302 Outside Reading Program
313 Senior Seminar Series

Electives

Non-business Elective

TOTAL Credits

MCR

TOTAL Credits

MCR

ACCOUNTING AND FINANCE DIVISION

ACADEMIC REGULATIONS

ACADEMIC LOAD

Students may normally carry fifteen credits in one semester. A schedule of more than 15 credits must be approved by the Advising Office. 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 12 credits.

EFFECTIVE CATALOG

Degree requirements are those stipulated in the catalog of the year in which a student matriculates. The student is responsible for knowing the requirements for the degree. Requirements may be changed without notice or obligation. This catalog has been prepared on the best information available as of February 1993.

CLASS ATTENDANCE

Regular class attendance in the School of Business Administration is normally required for maximum educational advantage. The responsibility for all course material rests wholly with the student. It is the prerogative of each instructor to establish specific policies for attendance at examinations, class lectures, deadlines for reports, and other specific school or course requirements.

A student who is unable to attend class because of serious illness, hospitalization, a serious accident or other extenuating circumstances is responsible for notifying the student’s advisor. The student should supply a written verification as soon as possible. A student who is absent for cause is expected to complete all the work in all courses. It is the student’s responsibility to make up all assignments in all courses and to be familiar with any instructions which may have been given during the absence.

HANDICAPPED STUDENTS

Handicapped students requiring special assistance are urged to notify the class instructor or the student’s advisor before the first class.

Enrollment in Business Courses by Students in Other Schools of the University

Students enrolled in other schools in the University are welcome to take business courses provided they meet all prerequisites. Under no circumstances, however, may a student in another school take more than 27 credit hours in business. Students in the College of Arts and Sciences and the School of Education who wish to take business courses should consult their academic advisor before the first class.

ACADEMIC REGULATIONS

Students registering for 300-400 level business courses must have successfully completed 60 credits and have a cumulative grade point average of 2.0 or better. Students are responsible for knowing the prerequisites for those courses in which they are registered.

The above sample plan has a degree of flexibility. The University Core, Non-Business Electives, and the Foreign Language requirement may be taken at any time during the student’s four years. Students are urged to consult their academic advisor for further information.

ACCOUNTING AND FINANCE DIVISION

ACCOUNTING CURRICULUM

The accounting faculty requires that students concentrating in accounting take Accounting 214, 215, 311, 312, 314, 411, 412, 413, and 414, as well as at least one of the following: Accounting 413 or 485 and/or Law 353, 354, 355, or 454. It is required that the student achieve a 2.5 average in Accounting 214, 215 before attempting Accounting 311 and a minimum grade of C in both 311 and 312 before attempting the remaining 300 and 400 level courses.

Management Information systems courses recommended for accounting students are 481, 485.

For further information, the student should consult an academic advisor.

CPA Requirements

Students who desire to become certified public accountants in Pennsylvania and those who are preparing for the CPA examination are urged to complete the business certificate program established by the State Board of Education. Students should consult their academic advisor before the first class.

COURSE PREREQUISITES — see p. 102

212 Introductory Accounting 3 cr

This course is a continuation of Accounting 211, which introduces accounting concepts and accounting information processing. It emphasizes the principle of cost assignment and understanding of financial statements for management decision making purposes. In-depth analysis and interpretation of financial statements are covered. Accounting for partnerships and corporate entities is covered, followed by an overview of cost accounting. This course will not be offered after the fall 1993 semester.

214 Financial Accounting 3 cr

The purpose of this course is to provide an introduction to the language of accounting, the principles of external financial reporting, and the use of generally accepted accounting principles (GAAP) and the principles of generally accepted accounting principles (GAAP) and the significance and implications of alternative GAAP in the measurement and reporting of assets and liabilities. Offered every semester.

213/313 Managerial Accounting 3 cr

The purpose of this course is to provide an introduction to cost concepts, product costing systems, budgeting systems, and the development of accounting data for managerial decision making. The student will develop a basic understanding of the relationships between accounting data and management information needs. The student will also be exposed to the cost measurement differences required for different types of managerial decisions, and understand the significance and implications of alternative cost products and budgeting systems. Prerequisite: Accounting 214 Offered every semester.

216 Accounting Practice and Systems 3 cr

The purpose of this course is to develop a sound understanding of the principles and procedures used to process accounting information. Emphasis is placed on both manual and automatic data processing systems. The accounting cycle is reinforced along with the processing of specialized accounting transactions. Prerequisite: Accounting 214.

311, 312 Intermediate Accounting 3 cr

The course is primarily concerned with an investigation and analysis of the accounting problems and principles of the corporation, with detailed study of the component elements of the balance sheet and income statement. Basic topics include generally accepted accounting principles as they apply in a corporate environment, financial statements, their form, content, use, and the presentation of financial statements. Prerequisite: Accounting 214, 215. Offered every semester.

314 Advanced Accounting 3 cr

This course applies fundamental accounting theory to a number of important activities in business. Activities studied include partnerships, consolidated financial statements, their form, content, and use, detailed analysis of the balance sheet, income determination and presentation. Prerequisites: Accounting 214, 215. Offered every semester.

315 Cost Accounting 3 cr

This course addresses the use of accounting information for purposes of cost determination, cost control and cost analysis. Topics include: cost concept, cost behavior, job order costing, process costing, joint and by-product costing, standard costing, inventory management and managerial control systems are also stressed along with the use of cost information for non-routine decision making. Prerequisites: Accounting 214, 215. Offered every semester.

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 the theory and philosophy of auditing. Case problems are used to demonstrate the application of the principles studied. Prerequisite: Accounting 312. Offered every semester.

103
FINANCE CURRICULUM

Students who look forward to careers in finance may select a program of courses in any one of these areas: securities and investments, insurance, corporate finance, and financial analysis.

The professional designation of Chartered Financial Analyst (CFA) is used by those in the securities industry. Suggested courses for students interested in working toward this designation are Finance 336, 337, 338, 339, and 433.

In the insurance area, the designation for professional personnel in life insurance is CPCU (Chartered Life Underwriter). In property and liability insurance it is CLU (Chartered Life Underwriter). In property and liability insurance it is CLU (Chartered Life Underwriter). In property and liability insurance it is CLU (Chartered Life Underwriter). In property and liability insurance it is CLU (Chartered Life Underwriter).

THE A.J. PALOMBO SCHOOL OF BUSINESS ADMINISTRATION

ACCOUNTING AND FINANCE DIVISION

412 Introductory Income Tax Accounting 3 cr

This course is a study of basic tax regulations and procedures affecting individuals, and to a lesser extent, business units. Principle topics include returns, rate computations, income deductions, sales and exchanges of assets, and credits. Emphasis is placed on problems to demonstrate the application of the principles studied. A.C. is official forms are used for demonstration purposes. Prerequisites Accounting 214 and 215. Offered every semester.

413 Accounting Information Systems 3 cr

This course presents materials relevant to an understanding of the basic applications of accounting information systems and the technical and organizational resources that operate information systems. Topics include system flowcharting, hardware concepts, file design, batch and online data processing, database design, and management, EDP auditing, and system development life cycle. Prerequisites Accounting 214 and 215. Offered every semester.

414 Corporate and Partnership Taxation 3 cr

This course will acquaint the student with the principles of taxation as applied to corporations, shareholders, partners and partners. Emphasis is placed on preparing students to make reasoned and sound decisions regarding the tax consequences of business transactions. Prerequisite: Accounting 412. Offered every spring.

419 Seminar in Accounting 3 cr

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

COURSE PREREQUISITES - see p 102

Finance 331, 334, 335, 336, 432, 434, and 437 are recommended for all Finance Students. Accounting 311, 312, or 315.

COURSE PREREQUISITES - see p 102

331 Business Finance 3 cr

This course is concerned with maximizing the value of the firm in reference to the risk-return relationship. To achieve this objective, the concepts introduced to financial statement analysis and the value of money concepts are discussed with an emphasis on capital budgeting issues. Attention is given to working capital management, cost of capital, and the impact of leverage on the value of the firm. Emphasis is given to the security markets and organizational form. Prerequisites: Accounting 214 and 215, and QSMIS 283. Offered every semester.

332 Money and Financial Institutions 3 cr

This course examines the influence of monetary policy on variables such as the nominal interest rate, the real level of income, the inflation rate, the foreign exchange rate, etc. Special topics include bank portfolio management, interest rate risk, the yield curve, and the relationship to interest rate, the Savings and Loan crisis, financial intermediation, etc. Offered every year.

333 Financial Management 3 cr

The course is devoted to presentation of a conceptual or a theoretical framework to a financial manager. Emphasis is placed on the role of the student in making financial decisions and compromises of the financial manager. Principles and objectives of investment are the basic principles of investment. Emphasis is given not only to the traditional forms of investment but to the implications of these techniques. Prerequisite: Finance 331. Offered every year.

334 Risk Management 3 cr

A study of the broad spectrum of risk exposures of business enterprises, with special attention to the need for identifying these in terms of nature and magnitude. Emphasis is placed on techniques available to aid the decision maker in making decisions under conditions of uncertainty. Emphasis is placed on the role of the student in making financial decisions and compromises of the financial manager. Principles and objectives of investment are the basic principles of investment. Emphasis is given not only to the traditional forms of investment but to the implications of these techniques. Prerequisite: Finance 331. Offered every year.

335 Business Financial Problems 3 cr

The aim of this course is to provide a vehicle in which the student can take material from previous courses and utilize it to solve problems. Prerequisite: Finance 331. Offered every year.

336 Security Analysis 3 cr

An intensive study of the financial techniques applicable to the selection of the various securities of private and public entities. Emphasis is given to the market in which these securities are traded and the types of information necessary to the decision-making process of the investor. The emphasis is placed on the value of a particular security. Several models are examined in selecting appropriate instruments in establishing the relative worth of a security. Prerequisite: Finance 331. Offered every semester.

337 Investment Analysis 3 cr

This course is designed to develop an understanding of these techniques as applied to the selection of the various securities of a portfolio. Prerequisite: Finance 331. Offered every semester.

338 Futures and Options 3 cr

This course is designed to develop a conceptual understanding of the role of option and other derivative financial instruments. Prerequisite: Finance 331 and 336. Offered every year.

339 Seminar in Finance 3 cr

Concentration upon selected contemporary topics presented by distinguished visiting professors. Offered every year.

432 Credit Management 3 cr

This course gives the student an understanding of the role of credit management. Emphasis is placed on the role of the student in making financial decisions and compromises of the financial manager. Principles and objectives of investment are the basic principles of investment. Emphasis is given not only to the traditional forms of investment but to the implications of these techniques. Prerequisite: Finance 331. Offered every third semester.

433 Financial Markets 3 cr

An extensive and intensive study of the market 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. A research project provides the opportunity to concentrate upon an individual topic. Prerequisite: Finance 331. Offered every third semester.

434 Life Insurance 3 cr

A study is made of the risks of death and longevity and their effect upon personal and business situations. Analyses are made of various forms of life insurance and annuity contracts, with emphasis upon their functions as instruments of estate creation and administration. Prerequisite: Accounting 214. Offered every year.

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 workers' compensation, landlords' and tenants' liabilities, burglary, robbery and theft, automobile, credit and title insurance, fire and related lines, fidelity and surety bonding, and relevant aspects of inland and ocean marine. Prerequisite: Finance 331. Offered every third semester.

437 International Financial Management 3 cr

This course provides a conceptual framework within which the key financial decisions of the multinational firm can be analyzed. Emphasis is placed on decision elements that are unique to multinational firms. All the traditional areas of corporate and financial management are explored, including working capital management, capital budgeting, cost of capital and financial structure, and evaluation and control of operations. Prerequisite: Accounting 214. Offered every year.

438 Futures and Options 3 cr

A study of the role of option and other derivative financial instruments. Prerequisite: Finance 331. Offered every year.

439 Seminar in Finance 3 cr

Concentration upon selected contemporary topics presented by distinguished visiting professors. Offered every year.

COURSE PREREQUISITES - see p 102.
ECONOMIC AND QUANTITATIVE DIVISION

ECONOMIC AND QUANTITATIVE DIVISION

ECONOMIC SCIENCE CURRICULUM

The Economic Science Program is designed to give a broad understanding of the United States and international economies and to develop in students a capacity to think systematically about a wide range of social and economic problems. An ability to think analytically and to write concisely are stressed in courses in Economics.

A concentration in Economics serves as a solid preparation for Law School or graduate work in business or economics. It is not a narrowly defined vocational major. The general background which the student acquires prepares him or her for careers in strategic planning, government, banking, and similar fields.

COURSE PREREQUISITES - see p. 102.

121 Elements of Economics 3 cr
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 constantly before a complex dynamic economy. Not counted toward a degree in Business Administration. Offered every year.

221 Principles of Economics I 3 cr
This is 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 of economic reasoning. Emphasis is placed on understanding the behavior of households and firms under competitive and imperfectly competitive conditions in both output and resource markets. Offered every semester.

222 Principles of Economics II 3 cr
Macroeconomics is concerned with aggregate economic relationships. These include theories of national income determination and the interaction among domestic and foreign economies. Monetary and fiscal policies and their implications for inflation, unemployment, economic growth, and foreign exchange are analyzed. Offered every semester.

223 Global Economic Perspectives 3 cr
The purpose of this course is to provide students with an understanding of how geographic factors influence the location and history of trade and economic activity generally. The course covers contemporary global geographic features, basic geographic concepts and analytical techniques, and examines in detail selected current or historical business cycles. The course utilizes a geographical perspective. Prerequisite Sophomore standing.

321 National Income Analysis 3 cr
A conceptual analysis of national income theory, its tools, its basic principles and its social and economic significance. The course explores macroeconomic methods of economic analysis and the determination of aggregate economic income. Specific topics include unemployment, inflation, and the U.S. economy in a global setting. Prerequisites Economics 221 and 222. Offered every year.

322 Price and Production Economics 3 cr
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 Economics 221 and 222. Offered every year.

323 Public Finance 3 cr
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. And an analysis of the implications for program and capital budgeting receive heavy consideration. The economic consequences of various tax structures and alternative social choice mechanisms are studied. Prerequisites Economics 221 and 222.

324 Comparative Economic Systems 3 cr
A comparative study of capitalism, socialism, and communism. The impact of economic systems with emphasis on analysis rather than mere description of the economics of various countries.

328 Urban Economics 3 cr
A study of the economic forces that influence the location of business and residential location in a metropolitan area. Specific areas of study include transportation, housing, property, and the urban public sector. Prerequisites Economics 221 or 222.

420 Labor Economics 3 cr
Analysis of the principles of wage and employment determination in the U.S. economy under union conditions as well as under collective bargaining arrangements. The factors underlying labor demand and supply are studied with an emphasis on the human capital approach to relative earnings differentials. Issues of labor market discriminations are also analyzed. Prerequisites Economics 221 or 222.

421 History of Economic Thought 3 cr
This course shows the development of economic thought from the Age of Mercantilism to the present. Major emphasis is placed upon the writings of Adam Smith, Quesnay, Smith, Ricardo, Marx, and Keynes and recent contributors to economic thought.

It offers a study of the fundamental concepts of the writers and the influence of institutional conditions upon their philosophy. Prerequisites Economics 221 and 222.

423 Business Cycles and Forecasting 3 cr
This course is designed to study the process of economic change. Analysis of seasonal, cyclical, and secular movements will be undertaken. Theoretical and empirical aspects will be covered. Forecasting techniques will also be studied. Prerequisites Economics 221 and 222.

424 Business and Public Policy 3 cr
A study of the regulatory techniques used by government to influence and modify business behavior. This course also includes an analysis of the structure of market, conduct and performance considerations pertaining to the firm and the industry. Emphasis is given the anti-trust laws and special regulatory problems. Prerequisites Economics 221.

425 Current Economic Issues 3 cr
The purpose of this course is to provide a forum for the non-economic majors to learn about specific current economic issues. The course and its content will vary depending on the issue or issues being addressed. Specific topics may include the federal budget, deficits, economics, and politics, or the economic changes in central Europe and the Soviet Union. Prerequisites Economics 121, 221, 222 or Core 141.

426 Monetary Theory and Policy 3 cr
This course deals with the theoretical contributions in monetary theory along with their policy implications. Specific topics include the modern theory of money, monetarism versus Keynesian models, the stability of the demand for money, rules versus discretion, rational expectations, monetary policy in an open economy, foreign exchange markets, and international capital flows. Prerequisites Economics 221 and 222.

427 Theory of Economic Development 3 cr
A 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. An approach to this course encompasses detailed study as well as strong emphasis on theoretical and historical analysis. Prerequisites Economics 221 or 222.

429 Seminar in Economics 3 cr
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 seminar procedure will stress written and oral reports. Prerequisites Economics 321, 322 and permission of the instructor.
442 International Economics 3 cr
The course covers international trade theory and international monetary economics. Topics discussed include the classical and neoclassical theory of comparative advantage, balance of trade, balance of payments, and the theory of foreign exchange markets. History of international monetary system, fixed versus flexible exchange rates. Prerequisites: Economics 221 and 222 Offered every year.

MANAGEMENT INFORMATION SYSTEMS CURRICULUM
A concentration in Management Information Systems prepares students for career opportunities in business application programming, systems analysis and design, and information processing management. The course work is designed to prepare students to apply computers, software, and systems techniques to the solution of information systems problems within organizations. For the area of concentration, completion of QSMIS 281, 283, 285, and 286 is a prerequisite. In addition, three elective courses must be taken from the following offerings. QSMIS 281, 282, 283, 284, and 285.

COURSE PREREQUISITES - see p 102

182 Information Systems I 3 cr
After an introduction to the productivity potential of spreadsheets, graphing and word processing applications, students will use the power of today's graphical user interface tools to integrate the results of each individual's work. Advantages of multimedia technology and integrated computer systems are developed. Prerequisite: QSMIS 182 Offered every semester.

183 Information Systems II 3 cr
This course provides the student with an overview of the theory and implementation of today's information systems. The student will develop an understanding of information system theory and study the flow of information through the organization to learn how managers at different levels use information as a strategic resource. Utilizing end-user, graphically-based, relational development tools, students will apply the systems approach to implementing an actual information system. Prerequisite: QSMIS 182 Offered every semester.

382 Information Processing with COBOL 3 cr
Presents structured programming techniques and COBOL applications. The score of the course ranges from an introduction to COBOL concepts, data comparison, multiple level control break reports, sorting, and table handling methods to the introduction of file creation and file processing techniques. Prerequisite: QSMIS 183

383 File Processing with COBOL 3 cr
Presents file maintenance techniques as they relate to sequential, indexed sequential and relative file organization. Methods for creating, accessing, and updating files are discussed. Theoretical foundation of structured programming is stressed throughout. Additional emphasis is given to an in-depth coverage of table processing, the COBOL SORT feature, ISAM, VSAM, subprograms, utility programs, and the COBOL report writer. Prerequisite: QSMIS 382

384 Expert Systems in Business 3 cr
The potential role of expert systems to support management decision-making is analyzed. Expert systems are defined, their development is discussed, and areas of business applications are surveyed. Artificial intelligence software environments are explored and evaluated. The student will apply concepts relating to expert systems development through a commercial expert system software tool. Problems in installing and maintaining an expert system are also discussed. Prerequisite: QSMIS 183 Offered in the spring semester.

385 Computer Systems 3 cr
Provides detailed coverage of computer hardware and operating systems. Topics such as number theory, internal coding schemes, central processing unit functions and technologies, memory management, internal buses and operating systems provide a broad foundation in computing technology. Detailed coverage of disk, tape, printing devices, data entry and data communications equipment provide a base for subsequent MIS courses. Prerequisite: QSMIS 183 Offered every semester.

386 Computer Simulation 3 cr
Provides an orientation to the design and implementation of simulation models as a means of studying the behavior of a system. The student is required to validate models and their results for the purpose of management decision making. Popular simulation languages are used to construct general purpose simulation models and to analyze designed models. Other topics such as computer graphics applications using personal computers are also presented. Prerequisite: QSMIS 183 Offered in the fall semester.

481 Systems Analysis and Design 3 cr
A detailed study of all phases of the system life cycle with emphasis on structured analysis and design techniques. Case studies are used to generate detailed data flow diagrams. The student is required to analyze needs and organize and design files with corresponding inputs and outputs. The issue of implementing the system, training, documenting, maintaining, and managing a system are also addressed. Prerequisite: QSMIS 183

482 Database Management 3 cr
Focuses on the design, implementation, and management of organizational databases using database management systems. Students will design a concept, logical, and physical database. Then, using a commercial database and a commercial database package, students will develop reports interactively and by embedding database calls into COBOL programs. Emphasis will be placed on the relational model and its statistical properties. Structured Query Language (SQL) is covered. Prerequisite QSMIS 383 Offered in the fall semester.

483 MIS Project 3 cr
Students are expected to use tools and techniques learned in prior MIS courses to develop an information system. Using Computer-Aided Software Engineering (CASE) tools and fourth generation languages, students design and implement a project chosen from the local business or university community. Emphasis will be placed on the design process and specific tools. Problem solving and oral and written presentation skills are emphasized. Prerequisites: QSMIS 481, 482 Offered in the spring semester.

484 Networks and Telecommunications 3 cr
Develops an understanding of the importance of an open systems approach, such as OSI, and contrasts it with several proprietary ones, like IBM's SNA and TCP/IP. Using the OSI model as a base, students learn fundamentals of physical components, error detection and correction, line disciplines and network addressing. Special emphasis is placed on local area networks and connecting them to the organizational networks. An actual network operating system will be used. Prerequisite: QSMIS 385 Offered in the fall semester.

485 EDP Audit and Control 3 cr
Prescribes a simulated audit environment. Prerequisite: QSMIS 385 Offered in the fall semester.

486 Total Quality and Operations Management 3 cr
The course covers the application of quantitative models to solving organizational decision problems.

487 Systems Analysis and Design 3 cr
A detailed study of all phases of the system life cycle with emphasis on structured analysis and design techniques. Case studies are used to generate detailed data flow diagrams. The student is required to analyze needs and organize and design files with corresponding inputs and outputs. The issue of implementing the system, training, documenting, maintaining, and managing a system are also addressed. Prerequisite: QSMIS 183

488 Database Management 3 cr
Focuses on the design, implementation, and management of organizational databases using database management systems. Students will design a concept, logical, and physical database. Then, using a commercial database and a commercial database package, students will develop reports interactively and by embedding database calls into COBOL programs. Emphasis will be placed on the relational model and its statistical properties. Structured Query Language (SQL) is covered. Prerequisite QSMIS 383 Offered in the fall semester.

489 MIS Project 3 cr
Students are expected to use tools and techniques learned in prior MIS courses to develop an information system. Using Computer-Aided Software Engineering (CASE) tools and fourth generation languages, students design and implement a project chosen from the local business or university community. Emphasis will be placed on the design process and specific tools. Problem solving and oral and written presentation skills are emphasized. Prerequisites: QSMIS 481, 482 Offered in the spring semester.

490 Networks and Telecommunications 3 cr
Develops an understanding of the importance of an open systems approach, such as OSI, and contrasts it with several proprietary ones, like IBM's SNA and TCP/IP. Using the OSI model as a base, students learn fundamentals of physical components, error detection and correction, line disciplines and network addressing. Special emphasis is placed on local area networks and connecting them to the organizational networks. An actual network operating system will be used. Prerequisite: QSMIS 385 Offered in the fall semester.

491 EDP Audit and Control 3 cr
Prescribes a simulated audit environment. Prerequisite: QSMIS 385 Offered in the fall semester.

492 Total Quality and Operations Management 3 cr
The course covers the application of quantitative models to solving organizational decision problems.
The models covered include linear programming, computer programs will be emphasized and decision analysis. The use of library resources will be emphasized. The course will not be offered after the 1994-95 academic year.

BEHAVIORAL DIVISION

PROGRAM GUIDE

Programs of study offered through the Behavioral Division include, but are not limited to, the following concentrations:

General Business Administration
Human Resource Management
International Business
Logistics
Management
Marketing
Pre-Law

COURSE PREREQUISITES - see p. 102

GENERAL BUSINESS ADMINISTRATION CURRICULUM

This concentration is intended for those students who desire a broad overall background in business rather than specialization in any one specific field. Course work beyond the required core may be selected from junior or senior level elective courses in the various fields of study in business. In tailoring a program of study to satisfy the General Business Administration curriculum, students in this concentration are expected to work closely with their academic advisor. Students who fail to fulfill all requirements of a given concentration are designated as General Business Administration graduates.

The following courses, with the exception of BUADM 401 - Business Administration Internship, are required for all students enrolled in the School of Business Administration.

202 Sophomore Outside Reading Program - Not for credit

This is a sophomore level professional development program designed to augment the students' knowledge of contemporary business issues and enhance their interpersonal relations. Selected readings on general business topics will be assigned throughout the academic year. Students will be responsible for reporting on the content of the readings through examination and/or short papers. Prerequisite: Sophomore standing. Required for graduation.

203 Pre-Business Experience - Not for credit

This orientation program for Sophomores is designed to introduce business students to the broad context of a business education. Students are exposed to the concept of total quality management, the importance of ethical decision making, and the realities of the global marketplace in a cooperative learning environment. Students meet with the Division of Business faculty and administrative staff to develop interpersonal relationships and become acquainted with the resources available. Prerequisite: Sophomore standing. Required for graduation.

HUMAN RESOURCE MANAGEMENT CURRICULUM

The objective of the Human Resource Management curriculum is to provide students with the opportunity to acquire specialized knowledge and applicable skills necessary to function as professionals in Human Resources, Personnel, Labor/Employer Relations, Training, and/or Compensation and Benefits. For a concentration in human resource management, students will take HRM 364, 365, 461, 466 or 463, 466, 467, 468, Management 366, 367, 445, 446, 462, Internship 461, Field Study 494, and/or Economics 420. Non-business electives recommended for this concentration are: English 383 or 385, History 472, Communications 301, 102, 103, 203, 283, 306, 304, 404, or 421, Psychology 103, 223, 230, 328, 361, 367, 366, 369, 423, 432, Sociology 101, 205, 212, 217, 308, Philosophy 106, 107, or 108, Theology 333.

301 Junior Outside Reading Program - Not for credit

The Junior Outside Reading Program attempts to broaden the students' knowledge of specific business topics. Students are expected to complete outside readings in a variety of areas to complement their in-class studies and to expand their understanding of topics covered in the lecture series. Prerequisite: BUADM 202 and Junior standing. Required for graduation.

302 Junior Outside Reading Program - Not for credit

The lecture series is designed to familiarize students with current themes and critical concerns in business. Speakers from specific disciplines discuss corporate policies and business issues in a regular, scheduled lecture series. Students are required to submit written reports on lecture topics and corresponding outside readings. Prerequisite: Junior standing. Required for graduation.

401 Business Administration Internship - 3 cr.

This internship provides the student with a professional work experience in an organizational environment. It is an extension of the curriculum and provides meaningful experience related to the student area of concentration. Internship responsibilities must be approved in advance by a faculty sponsor. The student is supervised within the work setting and also by a faculty member from the School of Business Administration. Internships are available to students in all business concentrations. Grading is Pass-Fail. Prerequisites: Junior standing and an overall GPA of 2.5 or better. Completion of at least 15 credits at Duquesne University Offered every semester.

402 Senior Outside Reading Program - Not for credit

This is a comprehensive bibliography compiled by the Business Administration faculty. Students are assigned outside readings to complement the Senior Lecture Series and expand their awareness of contemporary business issues. Students are expected to participate in group discussions and writing exercises on topics included in the program. Prerequisites: BUADM 303 and Senior standing. Required for graduation.

403 Senior Lecture Series - Not for credit

The Senior Lecture Series focuses on controversial and thought provoking issues that impact the business community. The series features corporate leaders from top administration posts and distinguished professionals from government and academia. Students are expected to be familiar with written assignments. Prerequisites: BUADM 303 and Senior standing. Required for graduation.

454 Human Resource Management - 3 cr.

This course provides the opportunity for students to develop fundamental knowledge about the growing corporation's problems and policies of human resource management in the global environment. In addition, students develop the special skills of human resource management as they apply to the particular situations created by the cross-national operations of the global corporation. Finally, students develop knowledge in an area or topic of multinational human resource management and skill in conducting cross-national research in the field of human resource management. Prerequisites: Management 361, Senior standing.

456 Legal Aspects of Human Resource Management - 3 cr.

See Pre-Law Curriculum.

461 Human Relations - 3 cr.

This is an advanced level course designed to aid the student in developing practical skills in managing interpersonal relationships in the workplace. The course is experiential in nature and requires active student participation in various group exercises including role playing, business games, and discussion groups in addition to more traditional instructional methods such as lecture and case analysis. Topics covered include organizational socialization, employee motivation, group dynamics, interviewing, interpersonal perception and communications, supervision, and the management of change. Prerequisite: Management 361. Offered every year.

463 Collective Bargaining - 3 cr.

Study of the relation of federal and state legislation issues and administrative aspects of collective agreements, specific provisions including adjustment of collective bargaining, and public policy. Prerequisite: Management 361. Offered every second year.

466 Compensation Management - 3 cr.

This is an advanced course for Human Resources or Management majors, focusing on pay and benefits systems. Course coverage includes relationship compensation to strategy, internal equity, job analysis, job evaluation, externally competitive compensation, market pay surveys, developing a pay structure, performance-based (variable) pay, incentive systems, gain sharing, executive compensation, paying expatriates, employee benefits including social security, workers' and unemployment compensation, medical, retirement, costing out benefits, flexible benefits, managed care, and cost containment. Prerequisites: Management 361 and 364. Offered every year.

467 Human Resource Planning - 3 cr.

This course provides the linkage between human resources and the strategic direction of an organization. Topics covered include the environment and implementation of human resource planning, needs assessment, human resource planning, and development, and the management of human resource planning and development, as well as the human resource audit. Prerequisite: Management 364.

468 Training in Business and Industry - 3 cr.

This course explores the training and development function in human resource management. There is coverage of the assessment of training needs, designing and conducting training programs, and evaluations of training effectiveness. Prerequisite: Management 364. Offered every year.
INTERNATIONAL BUSINESS CURRICULUM

The objectives of the International Business Curriculum are as follows:
1. To provide students with the opportunity to develop an understanding of the internationalization of business.
2. To provide students with the basic skills in dealing with the international dimension of basic business functions.
3. To instruct students in foreign language competence and understanding of other cultures as they relate to business operations.

For a concentration in international business, students will take International Business 341, Finance 437, Economics 442, Marketing 443, and Law 454 plus three of the following:
- International Business 344
- International Business 446
- Management 445

Students must also take 12 hours of credit in a language. Students can request a waiver of the language requirement if:
1. They successfully pass the level tests as given by the Modern Language Department.
2. They pay for an independent service to test for language proficiency.
3. They are native language speakers of a language other than English.
4. Students have taken language courses at another University and are able to pass the language proficiency test.

COURSE PREREQUISITES - see p. 102.

341 International Business 3 cr
An introductory study of the environment and management of cross-national business activities. Topics include sociocultural, legal and political environment, international monetary and financial systems, international trade, foreign direct and portfolio investments, and the management of international marketing, financial, production, and personnel functions. Prerequisite: Management 361. Offered every year.

342 International Business Study Abroad 2 cr vari
Study abroad opportunities with a number of universities are available. Students should check with their advisor in the School of Business Administration regarding both opportunities and the possibility of transfer of credits. Offered every semester.

343 International Financial Management 3 cr
See Finance Curriculum.

347 International Financial Management 3 cr
See Finance Curriculum.

349 International Economics 3 cr
See Economics Curriculum.

353 International Marketing 3 cr
See Marketing Curriculum.

444 Business and Society in Europe 3 cr
Survey of the major cultural, social, and political factors influencing the conduct of business in Europe. The course includes an overview of the major European economies, a description of the institutions, politics, and cultures of the European Community, and a detailed examination of business and society in Germany and at least two other European countries. Prerequisite: Management 361.

445 Multinational Human Resource Management 3 cr

446 Japanese Business and Management 3 cr
This course focuses on the history of Japanese business, the essential elements of Japanese management practices, and the strategies used by successful Japanese companies. Topics include approaches to marketing, human resource management, and finance. Prerequisite: Management 361. Offered every year.

447 Regional Development Processes 3 cr
This course focuses on business, models, and techniques that allow an analysis of the rapid changes that occur in the processes in which these organizations operate. Prerequisite: Management 361. Offered every year.

448 Strategic Logistics Management 3 cr
Strategic Logistics Management is the capstone course in the Logistics area of concentration. Students must require students to apply concepts learned in previous courses. The course will deal with issues of inbound logistics including purchasing and materials management, internal logistics including inventory management, and outbound logistics including distribution resources. Prerequisite: Management 361. Offered every year.

452 Transportation 3 cr
See Marketing Curriculum.

453 Purchasing Management 3 cr
See Marketing Curriculum.

454 Business and Society in Europe 3 cr
Survey of the major cultural, social, and political factors influencing the conduct of business in Europe. The course includes an overview of the major European economies, a description of the institutions, politics, and cultures of the European Community, and a detailed examination of business and society in Germany and at least two other European countries. Prerequisite: Management 361.

455 The Law of International Commercial Transactions 3 cr
See Pre-Law Curriculum.

LOGISTICS MANAGEMENT CURRICULUM

The Logistics Management concentration prepares students to assume roles as Logistics professionals in both profit making and not-for-profit organizations. The focus will be on providing students with the necessary theoretical, analytical, and practical skills required to manage the flow of materials and products from original source to the final consumer. The program of study emphasizes the management, operations, management, and physical distribution management dimensions of the field. Logistics.

For a concentration in logistics, students will take
- Strategic Logistics Management, Management 445

COURSE PREREQUISITES - see p. 102.

315 Cost Accounting 3 cr
See Accounting Curriculum.

367 Total Quality and Operations Management 3 cr
See Management Curriculum.

375 Physical Distribution Management 3 cr
See Marketing Curriculum.

449 Strategic Logistics Management 3 cr
Strategic Logistics Management is the capstone course in the Logistics area of concentration. The course will require students to apply concepts learned in previous courses. The course is designed to deal with issues of inbound logistics including purchasing and materials management, internal logistics including inventory management, and outbound logistics including distribution resources and technologies. The impact of effective logistics management on the organization's productivity and competitiveness will be stressed. The course will rely heavily on the case study method. Prerequisite: Accounting 315, Management 367, and Marketing 375, 472, and 474. Offered every year.

472 Transportation 3 cr
See Marketing Curriculum.

474 Purchasing Management 3 cr
See Marketing Curriculum.

MANAGEMENT CURRICULUM

In accord with the objectives of the University and of the School, the Management Curriculum aims at:
1. To introduce students to fundamental concepts of management in organizations, private and public, profit and non-profit.
2. To provide students with knowledge of the major organizational functions.
3. To develop communication skills necessary for effective management performance, and
4. To instill awareness and understanding of the issues facing managers and leaders.

For a concentration in management, students will take Management 366, 367, Marketing 474, and QSMIS 481, plus four of the following: Management 446, 465, 493, and 494. International Business 341, Human Resource Management 364, 365, 461, 463 and 466.

COURSE PREREQUISITES - see p. 102.

361 Introduction to Management 3 cr
This course introduces the essentials of management. It is an overview of the numerous facets of managing decision making, strategic and tactical planning, organization/environmental relations, structure, human resource management, organizational change, motivation, leadership, conflict, communication, control, operations management, management information systems, international management, and ethics. Offered every semester.

366 Behavior in Organizations 3 cr
This course is an introductory treatment of organizational behavior. Students learn a number of theories, concepts, and applications regarding people-oriented managerial skills. Topics covered include motivation, personality, perception, group dynamics, performance appraisal, leadership and decision making, cooperation and conflict, organizational politics and organizations, managing change, and organizational development. Prerequisite: Management 361. Offered every year.

367 Total Quality and Operations Management 3 cr
This course is an introduction to the principles and techniques in production and operations management with a focus on Total Quality Management. Both manufacturing and service operations are addressed. The focus is on the basic ideas and issues, with consideration of how the operations management function supports the company's ability to be competitive. Operational issues are raised as appropriate. Computer packages are used to support modeling and decision making in specific areas. Prerequisites: QSMIS 285 and Management 361. Offered every semester.

368 Business Ethics/Communications 3 cr
This course examines the relevance of social needs in developing a sense of ethics, the need for personal ethics in making business decisions, and the importance of a shared sense of values in developing productive work communities. The emphasis throughout is on practical issues facing people in business. The discussions of ethical issues are used as a forum for developing basic communication skills. Offered every semester.

462 Public Administration 3 cr
This course introduces the student to the content of public management and 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: Management 361. Offered every year.

465 Introduction to Entrepreneur Small Business Management 3 cr
This course deals with the overall management of the small business enterprise. Coverage includes the small business environment, organizing and financing a business, operation of the small firm, growth planning, and problems associated with being small. Prerequisite: Management 361.
MARKETING CURRICULUM

In accord with the objectives of the University and of the School, the Marketing Curriculum aims to:

1. Provide an understanding of the role of marketing in organizations, private and public, profit and non-profit.

2. Develop skills in dealing with and applying fundamental marketing concepts.

3. Develop communication skills necessary for effective performance in the field of marketing.

For a concentration in Marketing, students must take the following courses: Marketing 373, 374, 476, 477, 473 and three of the following: Marketing 472, 474, 475, 478.

**COURSE PREREQUISITES - see p 102**

**371 Introduction to Marketing**

This course will provide an understanding of the dynamic role marketing plays in the economy. This course will also provide student with skills necessary to diagnose strategic organizational problems. Prerequisites: Senior standing.

**373 Sales Administration**

This course introduces the fundamentals of sales management and the problems confronted by the sales manager. Emphasis will be placed on the role of the sales manager in the organization. Prerequisites: Senior standing.

**374 Research Applications in Marketing**

This course examines the methods of research used by business managers to make informed decisions. Prerequisites: Marketing 371 and Management 361.

**375 Physical Distribution Management**

This course analyzes the physical distribution concept in its relationship to producing a product from the conception of the final product. Prerequisites: Marketing 371 and 478.

**472 Transportation**

This course is a detailed and comprehensive examination of the historical evolution, operation, and development of the transportation components of the transportation industry in the United States. Prerequisites: Marketing 371.

**477 Purchasing Management**

This course is designed to enable the student to understand purchasing decisions and their impact on an organization. Prerequisites: Accounting 215 and Management 361.

**478 Consumer Behavior**

This course encourages the student to develop an understanding of the consumer from the perspective of the consumer. Prerequisites: Management 371.

**Physical Distribution Management**

This course analyzes the physical distribution concept in its relationship to producing a product from the conception of the final product. Prerequisites: Marketing 371 and 478.

**Transportation**

This course is designed to enable the student to understand purchasing decisions and their impact on an organization. Prerequisites: Accounting 215 and Management 361.

**Consumer Behavior**

This course encourages the student to develop an understanding of the consumer from the perspective of the consumer. Prerequisites: Management 371.

**Purchasing Management**

This course is designed to enable the student to understand purchasing decisions and their impact on an organization. Prerequisites: Accounting 215 and Management 361.

**Consumer Behavior**

This course encourages the student to develop an understanding of the consumer from the perspective of the consumer. Prerequisites: Management 371.
The objectives of this curriculum are:

1. To provide students with the opportunity to develop an understanding of the fundamental legal aspects that operate within the legal environment of business. This sequence is focused on the application of substantive legal rights and duties to the analysis of business and economic problems.

2. To provide solid preparation for the professional study of law. See three year Bachelor's D. P. 97

The curriculum of the A.J. Palumbo School of Business Administration meets the requirements for registration and general purposes of the State Board of Law Examiners in Pennsylvania and the State Education Department of New York.

For a concentration in Pre-Law Studies, the students will take Law 353, 354, and 355 as well as electives offered in this concentration.

**PRE-LAW CURRICULUM**

**BUSINESS ADMINISTRATION**

Meets the requirements for electives offered in this concentration as well as the process of business. The course focuses on the traditional business law topics - property, contracts, torts, agency, business organizations, and government regulation - as well as the process by which the law is made, the factors that influence it, and the international legal environment. Offered every semester.

**353 Contracts**

The fundamental concepts of the law of contracts are examined to provide the student with an understanding of the common law system regarding formation, performance, third party rights, ethics, discharge, and remedies. The student will become literate in using the personal computer to generate search string issues to solve problems assigned in class. Prerequisite Law 251. Offered every semester.

**354 Commercial Transactions**

Study of the provisions of the Uniform Commercial Code (UCC) with reference to the nature and legality of the sale of goods, the formation of sale contracts, transfer of title of goods, warranties, nature and kinds of commercial paper, requisites and meaning of negotiability, methods of transfer and secured transactions. Prerequisite Law 251. Offered every year.

**355 Law of Business Organizations**

A course which focuses on various laws pertaining to the creation and termination of corporations, franchises, partnerships, agency and other business entities. Emphasis on the legal and ethical duties of managers and presented to address investors rights and liabilities, anti-trust, international business and bankruptcy laws. Prerequisite Law 251. Offered every semester.

**357 Real Estate Law**

The principles of real property law and their application to the transfer of property rights. Topics include: real estate applications of contract and agency law, and the legal relationships among buyers and sellers, landlords and tenants and lenders. Familiarity with the appropriate documents (sales agreements, deeds, mortgages, leases) and elements of real estate brokerage, housing statutes and environmental regulations. Prerequisite Law 251. Offered every year.

**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. Administering problems in the legal system. Prerequisite Law 251.

**454 The Law of International Commercial Transactions**

This course provides the student with an overview of the basic legal principles involved in doing business with organizations in and other countries. Topics covered include an introduction to foreign legal systems, study of various forms of business organization, business organization and government regulation - as well as the process by which the law is made, the factors that influence it, and the international legal environment. Offered every semester.

**455 Legal Aspects of Human Resource Management**

A survey course of states and federal laws that have a major impact on the legal environment in the field of personnel and human resource management. Study of the Civil Rights Act, Immigration Reform Law, Privacy Laws involving Drug, Alcohol and AIDS testing in the workplace, Equal Pay Act, Pregnancy Disability Act, Polygraph Testing Laws, Age Discrimination, Sexual Harassment, and other laws and guidelines to provide the administrator with an understanding of legal developments to assist him or her in managing a diversified workplace. This course is available every year.

The following courses in the arts and sciences are an integral part of each certification program:

1. The Instructional I (Provisional) Certificate in Pennsylvania.
2. Admission to graduate programs in education.

The last 30 credits for the degree must be earned at Duquesne University. The minimum number of credits for graduation is 120.

**DEGREE**

The School of Education offers the Bachelor of Science in Education degree.

**CURRICULUM**

General Education: The School of Education requires completion of general education which includes courses in the humanities, social sciences, natural and behavioral sciences, and, for Catholic students, theology. The University Core Curriculum requirements are fulfilled within the General Education Program.

Professional Education: The basic professional education program introduces the student to the teaching profession through study of the principles and practices of education and the learning process. Specialized courses provide preparation in 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 broad and diversified professional laboratory experiences designed to provide opportunities for observing and working with children and youth, these include:

1. Planned observations in public and private schools, agencies, institutions and educational settings.
2. Teacher aide and tutorial experiences.
3. Student teaching in an approved setting for an entire semester.

All of these experiences are completed under professional supervision from the University and from the public or private school or off-campus agency.

**PROGRAMS**

The School of Education has program approval from the Pennsylvania Department of Education for the preparation of Elementary, Secondary, and Special (teaching the mentally and or physically handicapped) Education teachers. Also, in consortium with Carlow College, students can become certified in Early Childhood Education.

The programs, in accord with the philosophy and objectives of the School of Education, offer students the opportunity to qualify for certifications.
In Early Childhood Education, 327, 328, 390 and 391 are not required

**STUDENT TEACHING**

The undergraduate experience in the School of Education culminates in student teaching. Student teaching allows the undergraduate to apply the principles and techniques in an actual classroom or other instructional setting for a full semester in the senior year. In order to register for student teaching, all of the following requirements must be met:

- Biographical Data Sheet on file
- Placement Preference Sheet on file
- Two faculty recommendations
- Tuberculosis test on file
- Act 34 Clearance on file
- Removal of all I and F grades
- Completion of all methods courses
- Completion of all Undergraduate Teacher Education Core courses
- Minimum QPA of 2.5 for major concentration
- Minimum QPA of 2.5 in General Education course work
- Minimum QPA of 2.5 in Undergraduate Teacher Education Core
- Minimum QPA of 2.5 in Professional Preparation courses
- Minimum overall QPA of 2.5
- Successful completion of the General Knowledge and Communication tests of the National Teacher Examinations
- Completion of all General Education requirements

**EARLY CHILDHOOD EDUCATION**

This is a cooperative program, approved by the Pennsylvania Department of Education, with Carlow College. Some of the professional courses are offered only on the Carlow campus. These 43 credits (semester hours), in addition to 42 specified under General Education, 23 credits in the Teacher Education Core Curriculum, and 12 credits in electives, are required for the degree.

**PROFESSIONAL PREPARATION**

**Required Courses**

- Carlow College
  - 201 Orientation to Early Childhood Education 3
  - 203 Child Development 3
  - 307 Curriculum & Methods for Early Childhood Education with Practicum 4
  - 309 Special Needs Practicum 1
  - 311 Infant and Toddler Programming 3
  - 404 EC Nursery School Student Teaching & Seminar 5
  - 406 EC Primary Student Teaching & Seminar 5

**Electives**

- 485 Problems in Teaching Reading 3

**MUSIC EDUCATION**

General and professional course work and professional education courses required for this program are outlined in the School of Music Catalogue.

**SECONDARY EDUCATION**

In addition to the 42 credits (semester hours) in General Education and 27 in the Teacher Education Core, a student must complete the following 50 credits 17-19 in Professional Preparation, 2-4 in electives, and a minimum of 30 in an Arts or Sciences area to satisfy requirements for the degree and certification.

**Professional Preparation**

- 407 Reading in the Secondary School 3
- Specific Methods Course 3
- 341 Teaching Secondary Mathematics 3
- 342 Teaching Secondary Science 3
- 343 Teaching Secondary English 3
- 345 Teaching Secondary Foreign Languages 3
- 346 Teaching Secondary Social Studies 3

*No student may register for additional course work during the student teaching semester without permission*

**SPECIAL EDUCATION (MENTALLY AND/OR PHYSICALLY HANDICAPPED)**

This program is designed to prepare students for teaching students with mental and/or physical disabilities, including brain injured, emotionally and socially disturbed, learning disabled, mentally retarded and physically disabled.

The 49 credits listed below in Professional Preparation and three in Electives, in addition to 42 credits in General Education and the 27 in the Teacher Education Core Curriculum are required for the degree.

**Professional Preparation**

- 231 Teaching Physical Education in Elementary Classroom 1
- 233 Teaching Health in Elementary Classroom 1
- 237 Teaching Art in Elementary Classroom 1
- 238 Teaching Music in Elementary Classroom 1
- 216 Educational Assessment of Exceptional Students 3
- 325 Teaching Elementary Science 3
- 335 Teaching Mathematics — Grades K-4 3

**Electives**

- 406 EC Primary Student Teaching & Seminar 5
- 485 Problems in Teaching Reading 3
SCHOOL OF EDUCATION

333 Teaching Elementary Science 3
335 Teaching Mathematics in Grades K-4 3
336 Teaching Mathematics in Grades 5-8 3
386 Teaching the Mildly Handicapped 3
387 Teaching the Severely Handicapped 3
388 Vocational Education for the Handicapped 3
477 Management of Behavior and Instruction in Special Education 3
478 Advanced Seminar in Special Education 3
*491 Student Teaching 12

*No student may register for additional course work during the student teaching semester without permission.

TEACHER CERTIFICATION

The School of Education has been approved by the Pennsylvania Department of Education to offer course work leading to the Pennsylvania Instructional I Certificate. This certificate is valid for six years, beginning the first year the individual is actually employed as a teacher. In order for a student to be eligible for certification, the following requirements must be met:

1. Completion of General Education course work with a minimum grade point average of 2.5
2. Completion of the Teacher Education Core with a 2.5 grade point average. Note that students with a concentration in a secondary school area must have a 2.5 grade point average in course work in the area of concentration.
3. Completion of all Professional Preparation courses with a cumulative grade point average of 2.5
4. Completion of all course work with a cumulative grade point average of 2.5
5. Successful completion of student teaching as evidenced by recommendations of cooperating teachers and university supervisors. Note that students may not register for student teaching unless they have satisfied the grade point requirements in all areas.
6. Completion of all requirements for the Bachelor of Science in Education degree
7. Successful completion of the appropriate sections of the National Teacher Examinations
8. Completion of the application for certification
9. Recommendation of the Dean of the School of Education

DUAL CERTIFICATION

Through advisement, a student may complete requirements in two certification areas, such as elementary/early childhood, elementary/secondary, elementary/special education. Such programs require additional course work beyond the 33 semester hours for a degree. Student teaching in both areas is offered during the student's final semester.

CLASS ATTENDANCE

The School of Education faculty has determined that the following policy will be in effect for the School of Education and will be adhered to by the professors who teach undergraduate courses. It is presumed that each student in a professional course will normally attend every session. The maximum number of absences permitted is equivalent in hours, not in periods, to the class meetings. In other words, a student may miss three hours of class time in a 3-credit course.

STUDENT ORGANIZATIONS

The School of Education provides opportunities for participation in student organizations related to professional education preparation. Students are encouraged to take an active part in these professional organizations. The organizations are:

- Duquesne University Chapter of the Council for Exceptional Children, state and national student organizations in Special Education
- Duquesne University Student Education Association
- Student Chapter of the National Education Association

Kappa Delta Epsilon, national education sorority

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 Elementary Education
- Faculty Award for General Excellence in Secondary Education
- Faculty Award for General Excellence in Special Education

Kappa Delta Epsilon National Professional Education Sorority Pre-Juniors Award for Outstanding member of Alpha Kappa Chapter

Kappa Delta Epsilon National Professional Education Sorority Presidents 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

COURSE DESCRIPTIONS

TEACHER EDUCATION CORE

121, 102 Introduction to Education I - II, 1 cr. Introduces students to the profession of teaching for the purposes of self-assessment and career exploration. Orients the student to teacher certification issues. Includes field experiences.

121, 202 Educational Psychology I - II, 3 cr. Surveys theory and research which demonstrate how psychological principles contribute to the classroom practice of teachers. The principles are derived from the perspectives of human development, learning, motivation, instructional planning, classroom management, and evaluation.

211 Instructional Planning and Assessment, 3 cr. Examines the selection of materials and delivery system, and the evaluation of learning experiences. Focuses on the planning, delivery, and evaluation functions required of all teachers.

290, 291 Professional Development Seminar I - II, 1 cr. Provides an opportunity for students to reflect critically on their developing knowledge base and their practical experiences. The seminar is designed to foster personal as well as professional growth.

322 Instructional Media, 2 cr. Examines the use of computers and other electronic technologies as tools for planning, delivering, and evaluating instruction. The goal of the course is to enhance the integration of technology into classroom practice.

324 Cultural Diversity, 2 cr. Examines how the cultural differences among students influence the nature and extent of their progress in school. Understanding of the cultural background of students is sought in order to determine effective teaching practice.

326 Teaching Exceptional Students, 3 cr. Examines the range of exceptionalities contributing to diversity in classrooms. Focuses on how such diversity influences instructional practice.

327 Developmental Issues in the Management of Elementary Classrooms, 2 cr. Investigates closely the psychological characteristics of children from preschool-junior high grades and the developmental issues they face. The course focuses on how to manage learning environments in developmentally appropriate ways.

328 Developmental Issues in the Management of Secondary Classrooms, 2 cr. Investigates closely the psychological characteristics of students from junior high-high school grades and the developmental issues they face. The course focuses on how to manage learning environments in developmentally appropriate ways.

329 Society, Politics, and the Teaching Profession, 3 cr. Focuses on the history of schooling as a function of society, the political interests of the state in the educating of its citizens, and the legal dimensions of education. The intent is for aspiring teachers to understand the organizational culture of their chosen profession.

390, 391 Professional Development Seminar III, IV, 1 cr. Continues the opportunities for students to reflect critically on their developing knowledge base and their practical experiences. The seminar is designed to foster personal as well as professional growth in anticipation of student teaching and entry into the profession.

340 Self-Development for the Classroom, 3 cr. Focuses on a philosophical-psychological approach to self-development, using classroom activities to promote personal awareness in the teacher and student. (Summer only)

351 Adolescent Development, 3 cr. Examines the developmental processes, psychological, physical, and social, which affect student and student-teacher behavior and relationships in the classroom (Alternate Spring and Summer).

410 Interpersonal Management Techniques for Educational and Organizational Leaders, 3 cr. Focuses on four major concerns for maximizing learning and minimizing conflict, they are the teacher's personal awareness of feelings and emotions, interpersonal, societal, and educational values, understanding of group dynamics, and knowledge of managing classroom situations (Alternate Spring and Summer).

480, 481 Independent Study, 1-3 cr. With permission of an instructor and approval of the Dean, seniors may pursue in-depth study of a subject area or engage in individual projects related to their professional goals.

EARLY CHILDHOOD EDUCATION

210 Orientation to Early Childhood Education, 3 cr. Examination of the history of child development and practices of early education, culminating in an overview of theoretical issues influencing practice in the field today. Development of the student's observational skills, completion of on-site observations in early educational settings, delining the role of the Early Childhood Educator, and developing a personal philosophy (Fall semester only).
203 Child Development 3 cr
In-depth examination of the development of the child from birth to age 8 years in physical, intellectual, social and emotional areas of growth. Methods of recording and assessing growth of young children will be examined and utilized and a term project based on readings and observations will be required (Spring semester only)

307 Curriculum and Methods for Early Childhood Education with Practicum 4 cr
Study of curriculum methodology and implementation in nursery, kindergarten and primary settings. Students will design environments and enact activities for language development and reading, art, music, play, social studies, science and math for children 3-8 years. Weekly practicum in an early education classroom is an integral part of this course. Prerequisite EC 201 and 203 (Fall semester only)

311 Infant/Toddler Programming 3 cr
Examination of social needs, program designs and curriculum implementation of day care services for children birth-8 years. Topics covered include research on working families, program design, environmental design and assessment, comprehensive curriculum planning, staffing strategies, parent communication, and research on impact of day care on young children and their families. Weekly practicum required in a child care classroom. Prerequisite EC 201 and 203 (Spring semester only)

309 Special Needs Practicum 1 cr
Classroom or other school experience as an aide or observer, with special needs populations

404 Nursery School Student Teaching and Seminar 6 cr
The student teaching experience involves the prospective teacher in a Nursery School setting and in a primary classroom for eight weeks each. The student assumes teaching responsibilities, applies theory/practice and develops a personal teaching style under the direct supervision of the cooperating teacher and college supervisor. Verification of student competency will be determined jointly by both the cooperating teacher and the college supervisor. Student teachers return to campus one afternoon a week for seminar with the college instructor. This seminar provides classroom discussion of various student teaching experiences as well as analysis of the goals, program designs and curricula of the various early childhood programs in which students teaching is completed. Pertinent topics related to ongoing professional development will be included. No other credits may be taken while the student is involved in 404 and 406 without special permission of the Director of Early Childhood Education

 ELEMENTARY EDUCATION

231 Teaching Physical Education in Elementary Classroom 1 q
233 Teaching Health in Elementary Classroom 1 q
237 Teaching Art in Elementary Classroom 1 q
238 Teaching Music in Elementary Classroom 1 q
239 Teaching Language in Elementary Classroom 1 q
255 Teaching Science in Elementary Classroom 1 q
An introduction to the basic principles and concepts of teaching physical education, visual arts, health, and music to children of elementary school age, including exceptional children

325 Teaching Reading in the Primary School 3 q
Major emphasis is on the pre-school, emergent, primary and intermediate grades. Content deals with general language, developmental, 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 individual instruction, evaluation and reporting pupil progress will be presented.

326 Teaching Reading in Intermediate and Middle Schools 3 q
Focuses on the transitional period in a developmental reading program in which reading becomes a tool to be used in all content areas. 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 reading readiness of materials, individualized instruction, evaluating and reporting pupil progress are also studied

330 Teaching Elementary Language Arts and Reading 3 cr
Presents psychological principles and historical perspectives in the language arts, the foundation of which a good language arts program should be. 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

331 Teaching Elementary Social Studies 3 cr
Emphasizes the design, delivery and evaluation of effective social studies plans and units. Higher level thinking processes, values and moral development and classroom management are explored in small group simulations

333 Teaching Elementary Science 3 cr
Study of theories, techniques, practices, and content of the science areas. Emphasis is on discovery and inquiry instructional styles, organizing for learning activities in science, and laboratory safety

355 Teaching Mathematics in Grades K-4 3 cr
Examines mathematical concepts and skills taught in grades K-4, teaching strategies and methods that are developmentally appropriate for young grades

366 Teaching Mathematics in Grades 5-8 3 cr
Examines mathematical concepts and skills taught in grades 5-8, teaching strategies and methods that foster reasoning and mathematical thinking

484 Children's Literature 3 cr
A general survey of books and other printed materials for children, criteria for the evaluation and analyses of the children's books, types of books available, considered in terms of interest, needs, and abilities of children

490, 491 Student Teaching — Elementary 9,12 cr
Student teaching in an approved elementary school under the direct supervision of a cooperating teacher. Prerequisites: Senior status, good academic standing, completion of required professional courses, and recommendation of faculty

493 Student Teaching — Secondary 6 cr
Student teaching in secondary education for students who wish to complete requirements in two certification areas. Registration is concurrent with Ed 490-Elementary or Ed 490-Special Education

497 Reading in Secondary Schools 3 cr
A survey course in the teaching of reading. Appropriate for secondary education majors. Major emphasis is on a variety of teaching reading, testing, the materials for evaluating pupil growth in reading and reading in the content subjects (Fall)

485 Problems in Teaching Reading 3 cr
Reading difficulties in elementary and secondary school levels, discussion of classroom and clinical procedures in solving reading problems, diagnostic and corrective techniques, and materials for the classroom teacher, reading improvement programs, special unit on reading problems of the special needs students (Spring and Summer)

SECONDARY EDUCATION

341 Teaching Secondary Mathematics 3 cr
Explores methods, strategies, and content of secondary mathematics with emphasis on problem solving and technology

342 Teaching Secondary Science 3 cr
Explores methods, strategies, and content of secondary science, with emphasis on discovery, inquiry, and technology

343 Teaching Secondary English 3 cr
Develops various ways to teach grammar, language, and composition, provides opportunity for students to review the basics of grammar and composition and to develop lessons for teaching at the secondary level and in special education

365 Teaching Secondary Foreign Languages 3 cr
Explores a variety of approaches for teaching foreign languages (K-12), grammar, structure, verbal exercises, and literature germane to the specific language to be taught will be discussed

346 Teaching Secondary Social Studies 3 cr
This is a competency-based course for social studies/history majors that develops evaluation skills, knowledge of curricula, media and technological experiences, and methods, expands planning and questioning skills

490, 491 Student Teaching — Secondary 9,12 cr
Student teaching in an approved secondary school under the direct supervision of a cooperating teacher. Prerequisites: Senior status, good academic standing, completion of required professional courses, and recommendation of faculty

493 Student Teaching — Secondary 6 cr
Student teaching in secondary education for students who wish to complete requirements in two certification areas. Registration is concurrent with Ed 490-Elementary or Ed 490-Special Education

497 Reading in Secondary Schools 3 cr
A survey course in the teaching of reading, appropriate for secondary education majors. Major emphasis is on a variety of teaching reading, the materials for evaluating pupil growth in reading and reading in the content subjects (Fall)

485 Problems in Teaching Reading 3 cr
Reading difficulties in elementary and secondary school levels, discussion of classroom and clinical procedures in solving reading problems, diagnostic and corrective techniques, and materials for the classroom teacher, reading improvement programs, special unit on reading problems of the special needs students (Spring and Summer)

SPECIAL EDUCATION

These courses are designed to prepare students for teaching pupils with mental and/or physical disabilities, including brain injured, emotionally and socially disturbed, learning disabled, mentally retarded, and physically disabled

211, 212, 213, 214 Field Experience 2 cr each
Classroom and other experiences in educational, social welfare, and vocational settings as an observer and participant. Enrollment with consent of Director of Student Teaching. Prerequisite: Teacher Education faculty advisor. Student may choose 211 (Elementary) or 212 (Secondary) which involve the mildly handicapped, 213 which is with severely handicapped, or 214 which is with pre-vocational/vocational pupils

231 Teaching Physical Education in Elementary Classroom 1 cr
233 Teaching Health in Elementary Classroom 1 cr
235 Teaching Social Studies in Elementary Classroom 1 cr
237 Teaching Art in Elementary Classroom 1 q
238 Teaching Music in Elementary Classroom 1 q
239 Teaching Language in Elementary Classroom 1 q
255 Teaching Science in Elementary Classroom 1 q
An introduction to the basic principles and concepts of teaching physical education, visual arts, health, and music to children of elementary school age, including exceptional children

325 Teaching Reading in the Primary School 3 q
Major emphasis is on the pre-school, emergent, primary and intermediate grades. Content deals with general language, developmental, 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 individual instruction, evaluation and reporting pupil progress will be presented.

326 Teaching Reading in Intermediate and Middle Schools 3 q
Focuses on the transitional period in a developmental reading program in which reading becomes a tool to be used in all content areas. 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 reading readiness of materials, individualized instruction, evaluating and reporting pupil progress are also studied

330 Teaching Elementary Language Arts and Reading 3 cr
Presents psychological principles and historical perspectives in the language arts, the foundation of which a good language arts program should be. 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

331 Teaching Elementary Social Studies 3 cr
Emphasizes the design, delivery and evaluation of effective social studies plans and units. Higher level thinking processes, values and moral development and classroom management are explored in small group simulations

333 Teaching Elementary Science 3 cr
Study of theories, techniques, practices, and content of the science areas. Emphasis is on discovery and inquiry instructional styles, organizing for learning activities in science, and laboratory safety

355 Teaching Mathematics in Grades K-4 3 cr
Examines mathematical concepts and skills taught in grades K-4, teaching strategies and methods that are developmentally appropriate for young grades

366 Teaching Mathematics in Grades 5-8 3 cr
Examines mathematical concepts and skills taught in grades 5-8, teaching strategies and methods that foster reasoning and mathematical thinking

484 Children's Literature 3 cr
A general survey of books and other printed materials for children, criteria for the evaluation and analyses of the children's books, types of books available, considered in terms of interest, needs, and abilities of children

490, 491 Student Teaching — Elementary 9,12 cr
Student teaching in an approved elementary school under the direct supervision of a cooperating teacher. Prerequisites: Senior status, good academic standing, completion of required professional courses, and recommendation of faculty

493 Student Teaching — Secondary 6 cr
Student teaching in secondary education for students who wish to complete requirements in two certification areas. Registration is concurrent with Ed 490-Elementary or Ed 490-Special Education

497 Reading in Secondary Schools 3 cr
A survey course in the teaching of reading, appropriate for secondary education majors. Major emphasis is on a variety of teaching reading, the materials for evaluating pupil growth in reading and reading in the content subjects (Fall)

485 Problems in Teaching Reading 3 cr
Reading difficulties in elementary and secondary school levels, discussion of classroom and clinical procedures in solving reading problems, diagnostic and corrective techniques, and materials for the classroom teacher, reading improvement programs, special unit on reading problems of the special needs students (Spring and Summer)
237 Teaching Art in Elementary Classroom 1 cr

238 Teaching Music in Elementary Classroom 1 cr

An introduction to the basic principles and concepts of teaching physical education, visual arts, health, and music to children of elementary school age, including exceptional children.

276 Educational Assessment of Exceptional Students 3 cr

An introduction to management techniques utilized in programs for exceptional persons, information concerning educational assessment procedures, design and implementation of individual educational programs, and methods for individualizing instruction, examination of legal and legal aspects. Prerequisite 209 or equivalent (Spring)

386 Teaching the Mildly Handicapped 3 cr

Evaluation, integration, and implementation of the theoretically based methodologies, curriculum, instructional techniques, and evaluation procedures for students who have been labeled brain injured, learning disabled, mentally retarded, physically handicapped, socially and emotionally disturbed. Prerequisite 209, 276 (Fall)

387 Teaching the Severely Handicapped 3 cr

Evaluation and integration of the various theories, methodologies, curricula, instructional techniques, and evaluation procedures for severely handicapped persons labeled brain injured, learning disabled, mentally retarded, physically handicapped, socially and emotionally disturbed. Prerequisite 209, 276 (Spring)

388 Vocational Education for the Handicapped 3 q

Overview of pre-vocational, career, and occupational education programs 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 209, 276 (Fall)

477 Management of Behavior and Instruction in Special Education 3 q

Studies and experiences in the management of problem behaviors and instructional programs. Topics include behavioral and affective interventions, emergency procedures, multidisciplinary group process and parent involvement, community resources, and technological applications in the special needs curriculum. Students will develop and implement Student Teaching Readiness Assessment and Plan (Fall)

478 Advanced Seminar in Special Education 3 q

An opportunity for students to integrate the knowledge base and to begin developing professionally as educators with mentally and/or physically handicapped students.

490, 491 Student Teaching—Special Education 9,12 cr

A full semester of supervised classroom experience in a carefully selected school for mentally and/or physically handicapped pupils. Prerequisite senior status, good academic standing, completion of required professional courses, and recommendation of faculty.

493 Student Teaching—Special Education 6 cr

Student teaching in special education for students who wish to complete requirements in two certification areas. Registration is concurrent with Ed 490—Elementary or Ed 490—Secondary Education.

SCHOOL OF MUSIC

ADMISSION

Students who wish to major in music should apply through the Office of Admissions. Following an interview and audition should be scheduled through the Administrator of Music Enrollment. Specific audition requirements are mailed to auditionees. The audition consists of solo performance before a committee, a written theory exam, and an individual aural test. Students requesting scholarship assistance should apply through Financial Aid, and complete the music talent award application at the time of the audition. Taped performances can be evaluated, but the audition process is not completed entirely until the testing has been done. Students receive written confirmation of their status from the Office of Admissions.

It would be helpful for prospective music majors to have a background in theory, piano and certain areas of music. If deficiencies exist in any of these areas, prerequisite courses may be required at the discretion of the audition committee. Visits to classes and personal interviews with the applied music staff are encouraged and may be arranged by calling (412) 396-5064.

DEGREES

Undergraduate music students enroll in one of three degree programs: the Bachelor of Music degree, the Bachelor of Science in Music Education degree, or the Bachelor of Science in Music Therapy degree. Students planning performance careers, whether in concert, symphony orchestra, opera, media arts or studio recording enroll in the Bachelor of Music program. Students interested in teaching in a private studio situation or at the college level, as well as preparing for a career in music ministry, also enroll in this program. Students anticipating a career in school music teaching enroll in the Bachelor of Science in Music Education program, prospective music therapists enroll in the Bachelor of Science in Music Therapy program. Students enrolled in other schools and colleges in the University also study in the School of Music in recognition of the importance of arts education to the full development of each individual. Music courses designed for general students are available.

Students in the Bachelor of Music program major in piano, organ, voice, orchestral instruments, guitar, or sound recording technology, they elect a concentration in classical music, jazz, sacred music, or music technology. Students in the Bachelor of Science in Music Education program elect a concentration in choral music or instrumental music.

The curriculum is enhanced by the vital cultural life in the City of Pittsburgh, which was a factor in its recent ranking as America’s “most livable city.” The proximity of the School of Music to the city frequently brings these cultural events to the campus: Workshops, masterclasses, and special performances are often presented by visiting artists who have included Birgit Nilsson, Wynton Marsalis, John McIver, Rebecca Penney, and Barry Green. The Pittsburgh Opera Center at Duquesne, under the general direction of Tito Capobianco, creates an environment that encourages the development of young artists in all facets of opera production. Visiting faculty have included Beverly Sils, Sherill Milnes, Renata Scotto, Maureen Forrester, Carlo Bergonzi, Regine Crespin, and Isabel Pinagos. Applied faculty in the School of Music include members of the Pittsburgh Symphony Orchestra as well as distinguished concert artists. Ensembles in residence include the Children’s Festival Chorus, the Junior Mendelssohn Choir, and the Pittsburgh New Music Ensemble. Other faculty are recognized in the
academic and cultural communities for their activities as performers, conductors, composers, church musicians, clinicians, and music scholars. Interaction with these outstanding professional musicians is invaluable in the education of the developing professional musician.

Duquesne students also take advantage of the many performance opportunities afforded them by local music organizations. Students perform in the Pittsburgh Youth Symphony, the Pittsburgh Civic Orchestra, the Westmoreland Symphony, the McKeesport Symphony, and others.

FACILITIES

The School of Music has well over 80 pianos. The Recital Hall is equipped with two Steinway concert grands. Piano majors practice in specially designated rooms that contain grand pianos, other practice rooms are supplied with studio upright pianos. Organ students have access to two Moeller organs and a Fischer practice organ, an electronic organ, a three manual Moeller organ, and a Furrer tracker organ. Two pipe organs by Kilgen and Tellers and a Rodgers electronic theatre organ on campus are also available for recitals and for practice. Many orchestral and band instruments are available for instrumental classes.

The Center for Music Technology houses a Music Learning Resource Center, an Electronic Piano Lab, and a Synthesizer and Recording Studio. Located in the Music Learning Resource Center is an Apple II lab used for aural skills training. A large collection of Music Education resource materials, a record library, and several Macintosh/MIDI workstations. The Electronic Piano Lab, equipped with MIDI capable Kawai pianos, is used for individual practice as well as for scheduled piano classes. The Macintosh-based Synthesizer Lab is equipped with a Kurzweil 250 sampler, Yamaha DX7II/FD, Roland MT-32, Korg M-1, Yamaha RX5 Drum Computer, Ensoniq Mirage sampler, Proteus sampler and other MIDI synthesizers and controllers. Recording studio equipment includes a Tascam 8-8 Multitrack Recorder with MIDI/SMpte auto locator, a Tascam 4 Track Cassette Decks, Otari Half Track, Rama and Allan Heath consoles, and other audio equipment. Courses in this area emphasize the synergy between traditional musicianship and new technological skills.

All students are introduced to state-of-the-art MIDI and synthesis equipment and its use in performance, composition, and commercial applications. Students in composition and in audio techniques courses make extensive use of these resources, which are contained in the Music Technology Lab.

Students in piano class receive individual attention and evaluation through connections to the instructor provided by a Kawai electronic piano system. Electronic pianos are available to students for practice outside of piano class.

STUDENT ORGANIZATIONS

A Chapter of the national music organization Mu Phi Epsilon contributes substantially to the student 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 chapters of the American Guild of Organists, the National Association for Music Therapy, and the American Choral Directors Association. A chapter of Pi Kappa Lambda, the national music honor society, was installed in March, 1988.

HONOR AWARDS

The Seiberl Medal is presented to a senior for excellence in violin or piano upon recommendation of department committee.

Andre Marchal Award is presented to the graduating organ student with the highest academic standing in performance.

Jean Langlais Award is presented to the graduating organ student with the highest academic standing in Sacred Music.

J. Cometti Tucci Piano Performance Award is presented annually to outstanding piano student.

Mu Phi Epsilon Sterling Achievement Award is presented by Mu Phi Epsilon to an outstanding senior music student.

Robert Egan Award for Academic Excellence, Rachel Gray Award for Outstanding Service are presented by the Music Therapy department to graduating seniors.

CERTIFICATION

MUSIC EDUCATION/MUSIC THERAPY

Students completing the course work in music education receive the B.S. in Music Education. Upon successful completion of the National Teacher Exam (NTE), graduates may receive the Instructional Level I -- Music, K-12 certificate.

Selection of students for this program depends upon completion of auditions and an interview with a department member. Candidates are expected to demonstrate leadership qualities, excellent communication skills, critical thinking and analysis ability and a genuine interest in a service oriented profession.

Post-graduate certification course work in music education is available to those with B.M. degree or B.S. in Education degrees. Audition and/or coursework requirements are available upon request.

The Bachelor of Science in Music Therapy degree leads to certification as a registered music therapist.

MAJOR IN BASS GUITAR/GUITAR (Acoustic and/or Electric)

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**Total Credits** 132
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**Total Credits:** 132

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### MAJOR IN ORCHESTRAL INSTRUMENTS

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### BACHELOR OF SCIENCE IN MUSIC EDUCATION-INSTRUMENTAL TRACK

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### BACHELOR OF MUSIC IN SOUND RECORDING TECHNOLOGY

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<td>Solfege</td>
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<td>History &amp; Literature of Music</td>
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<td>Audio I</td>
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<td>Electronics for Audio</td>
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### Senior Year

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<td>Post Production &amp; Mastering</td>
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**Total Credits:**

- BACHELOR OF SCIENCE IN MUSIC THERAPY: 133 Credits
- BACHELOR OF MUSIC IN SOUND RECORDING TECHNOLOGY: 132 Credits
COURSE DESCRIPTIONS

PERFORMANCE

Applied Music 1-3 cr
Private study of voice, piano, harpsichord, organ, guitar or orchestral instruments

105 Piano Accompanying 1 cr
This course is designed for the undergraduate with the purpose of affording the student instruction in the art of piano accompanying

115 Vocal Coaching 1-3 cr
Individual work with pianist as a supplement to Opera Workshop and/or Applied Music

French, Italian, German for Singers 1 cr
Rudiments of each foreign language offered on a rotating basis in the fall semester in preparation for the appropriate Diction and Repertory course offered in the following spring

116, 117, 118, 119 Diction and Repertory 2 cr each
Italian, German, French and English offered on a rotating basis each Spring Semester. All except English preceded by an introductory course in the fall, in the appropriate language

221 Harpsichord Class 1-3 cr
An introduction to the harpsichord, including history, design, and mechanics. Techniques and performance practice included, with an equal emphasis on solo repertoire and continuo playing

314 Piano Pedagogy I 2 cr
Students will become acquainted with the techniques and materials for teaching piano at the elementary level. For piano majors, junior standing is required

314 Piano Pedagogy II 2 cr
A continuation of 313 concentrating on the techniques and materials for teaching piano at the intermediate and advanced levels

398 Junior Recital 0 cr
The candidate for the Bachelor of Music degree must give a recital during the junior year

400 Recital 1 cr
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

MUSICIANSHIP

121, 122 Dalcroze Eurhythmics I & II 2 cr each
Experiencing, analyzing, and creatively manipulating the metric/structural and the expressive/interpretable components of music through rhythm, movement, ear-training and improvisation

131, 132 Theory I and II 2 cr each
These sequential courses are designed to acquaint the student with the harmonic materials of art music of the Western Civilization. For basic knowledge of Baroque-Classical idioms is explored. Harmony is examined in full, formal and textural aspects are also discussed. Class content includes part writing, keyboard work, dictation, harmonic and intervallic ear training, and drills with computers

131, 132, 134, 135 Theory I, II, III & IV 2 cr each
A continuation of 134, these sequential courses are designed to develop students' competencies in the areas of intervallic relationships, melodic and rhythmic dictation as well as sight singing in traditional meters and tonalities. Prerequisites for Solfege 234 is successful completion of Solfege 134

206 20th Century Techniques 2 cr
A survey of the melodic, harmonic, and contrapuntal resources employed by composers in the twentieth century. Readings, analysis and short creative projects will be assigned

251, 252 History and Literature of Music 3 cr each
The survey courses examine two centuries which are arranged chronologically. These courses seek to provide a broad historical frame of reference within which the relationship of music to the development of man's thought can be clearly seen, along with a survey and analysis of representative literature

233, 234 Solfege III & IV 2 cr each
A continuation of Solfege I & II, these courses are designed to develop students' competencies in the areas of intervallic relationships, melodic and rhythmic dictation as well as sight singing in nontraditional tonalities and meters. Prerequisites for Solfege 235 is successful completion of Solfege 134

235 20th Century Techniques 2 cr
A survey of the melodic, harmonic, and contrapuntal resources employed by composers in the twentieth century. Readings, analysis and short creative projects will be assigned

251, 252 History and Literature of Music 3 cr each
The survey courses examine two centuries which are arranged chronologically. These courses seek to provide a broad historical frame of reference within which the relationship of music to the development of man's thought can be clearly seen, along with a survey and analysis of representative literature

MUSIC EDUCATION

101, 102 Piano for Music Education 2 cr each
This course introduces students to basic piano skills including scales, triads, cadences sight-reading and improvisation. The course is intended for students preparing for Piano for Music Education but is also open to non-music majors

111, 112 Piano I & II 2 cr each
The course is designed to acquaint the student with the formal structure of tonal music, from the smallest components to the most complex full compositions through analysis, performing and listening

131, 132 Theory I and II 2 cr each
A continuation of Theory I. The course is concerned with the contrapuntal technique of the period of J S Bach. Contents include lectures, written assignments, analysis and reading

133, 134, 135 Theory I, II, III & IV 2 cr each
A continuation of Theory II. The course is concerned with the contrapuntal technique of the period of J S Bach. Contents include lectures, written assignments, analysis and reading

135 Composition 2-3 cr
A course in original creative writing. Open to all students with the approval of the teacher

CONDUCTING

373 Instrumental Conducting I 2 cr
An introduction to baton technique with emphasis on basic patterns, cueing, and expression using the left hand. Students enrolled will form a laboratory ensemble allowing for conducting experience

374 Instrumental Conducting II 2 cr
A continuation of Instrumental Conducting I with emphasis on score analysis and the development of a refined and expressive technique

375 Choral Conducting I 2 cr
An introduction to basic conducting techniques with emphasis on the development of postural awareness, the preparatory gesture, the release, basic baton patterns and styles, use of the baton, and development of the left hand. Course also will include instruction in score reading, analysis and preparation with emphasis on the standard choral literature. Class time will be divided equally between lecture-demonstrations and practical conducting experience in a laboratory setting

376 Choral Conducting II 2 cr
Instruction and application of intermediate and advanced conducting techniques with emphasis on: subdivision, accent and syncopation, subito dynamic change, tempo alteration, and form. The course is intended for students preparing for Piano for Music Education but is also open to non-music majors

Advanced Piano Class
For students who wish to focus on vocal or instrumental accompanying and open score reading. Required of all non-piano majors in the vocal track in music ed. Prerequisite completion of Piano for Mus Ed. II. Also open to piano majors

105 Voice for Music Education 2 cr
For all vocal and instrumental track majors. Fundamental techniques of singing, including posture, breath support, tone, diction, interpretation. All students will participate in a vocal lab emphasizing clinical experience
488 Music Education Seminar 1 cr
For the advanced music education student. Introduction to Music Education Research, stressing on the statement of the question. A seminar project is required.

491 Student Teaching 2 cr
For the senior music education student who has completed all required music and professional education classes satisfactorily and has been recommended by the student teaching sponsor. Prerequisite: approved participation in the student teaching program. Students attend on-campus seminars during this period. Additional course work may not be scheduled concurrent with student teaching.

JAZZ STUDIES
411 Chamber Music-Jazz 2 cr
The purpose of this course is to develop the skills and techniques necessary for small jazz ensemble performance. Emphasis is on rhythm section techniques, interaction among the members of the group, and development of repertoire.

151 Evolution of Jazz Styles 2 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.

226 Jazz Improvisation 2 cr
Study and practice of melodic improvisation, conventional forms and chord progressions, emphasizing swing and bebop idioms, and modal scales and chords. Extended forms, practical applications to standard and jazz literature.

333 Ear Training for Jazz Musicians 2 cr
The course is designed to train the student to recognize aurally the melodic, rhythmic, and harmonic elements of contemporary jazz. Devices used are sight-singing, keyboard work, and extensive dictation. Emphasis is placed on four, five, and six-note chords, chromatically altered chords, and polyrhythms.

341, 342 Jazz Composition 2-3 cr
A course in original creative writing in the jazz idiom. Open to all students with the approval of the instructor.

340 Jazz Arranging 2 cr
A study of the basic techniques of scoring for individual instruments and small ensembles of various sizes, from small groups to studio orchestras. Analysis of scores by contemporary big band arrangements.

386 CCHD 2 cr
A course of study and experience to train the student to use music and movement as a tool to promote therapeutic and educational growth. Focus on developmental needs correlated with appropriate materials and methods.

374 Music and Movement for the Exceptional Person 2 cr
A course of study and experience to train the student to use music and movement as a tool to promote therapeutic and educational growth. Focus on developmental needs correlated with appropriate materials and methods.

SACRED MUSIC
432 Sacred Choral and Solo Literature 3 cr
A survey of choral and solo literature for church choirs, solos, and congregations.

403 Service Playing 2 cr
The objectives of this course is to develop the service playing skills necessary to play for church services of all denominations through a study of repertoire, and other specially trained staff who work within the settings assist in the development and growth of the prospective music therapist.

309 Church Music Practicum 3 cr
Seminar in practical aspects of church music, including study of church music literature and organ building, with special emphasis on the theological framework for each major development in the history of music.

421 Gregorian Chant 2 cr
The history, notation and modal system of Gregorian chant. Study of chant as prayer and current liturgical application.

410 Church Music Practicum 3 cr
Seminar in practical aspects of church music. Establishing the music program in a church, graded choirs, instrumental ensembles, and other specially trained staff who work within the church settings assist in the development and growth of the prospective music therapist.

411 Chamber Music-Jazz 2 cr
The purpose of this course is to develop the skills and techniques necessary for small jazz ensemble performance. Emphasis is on rhythm section techniques, interaction among the members of the group, and development of repertoire.

431, 432 Organ Improvisation 2 cr each
A practical application of the basic tools of improvisation including harmonization of melodies at the organ, and other special techniques and techniques with emphasis on the liturgical application.

415 Organ Literature 2 cr each
A survey of organ music and organ buildings as they relate 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.

476 Organ Design and Maintenance 2 cr
A study of the basic concepts or 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.
MUSIC TECHNOLOGY/ SOUND TECHNOLOGY

141 Music and Technology 2 cr
An introduction to music technology utilizing the resources of the Synthesizer and Recording Studio

145 Audio I 3 cr
Foundations of the recording process. Covered are all aspects of the recording chain and basic production procedures. Lab required

146 Audio II 3 cr
An intensive study of the commercial multi-track recording process. Advanced production projects. Lab required. Prerequisite Audio I

149-151 Audio III 1-3 cr
Advanced studio, small group projects

Introduction to Electronics 2 cr
A study of the fundamentals of electronics dealing specifically with theory and terminology. Prerequisites: Music and Technology, Audio I and Acoustics.

Electronics for Audio 2 cr
An introduction to fundamental modern electronic theory specifically dealing with DC and audio circuit design and construction. Prerequisite: Introduction to Electronics.

Maintenance I 2 cr
A study of fundamental equipment maintenance in the modern recording/synthesis studio. Prerequisite: Electronics for Audio.

Maintenance II 2 cr
Advanced maintenance, troubleshooting, grounding, and interconnection of modern recording studios. Prerequisite: Maintenance I.

Mixing and Mastering 2 cr
An in-depth study of the elements of audio mixing and their implications for the different mastering processes. Various practices of mixing along with the mixing for mastering are studied and practiced. All current forms of mastering including LPCD, and Cassette will be covered. Also included is exposure to the process of subcontracting mastering houses. Prerequisite: Audio II

Recording Studio Arranging 2 cr
Musical skills needed for recording studio arranging, conducting and composition. Focus on the various idiomatic styles (Jazz, Pop, Electronic, and Classical) for musical flexibility. Prerequisites: Music and Technology, Audio I and Acoustics.

Studio Design 2 cr
A study of the approaches to environmental acoustic design when dealing specifically with recording studios. Design and construction techniques are examined along with resources available to implement them. Prerequisite: Acoustics.

GENERAL

105 Seminar 0 cr
Registration for Seminar is required of all undergraduate Music majors during most semesters of full-time enrollment. Course matriculation guarantees availability for master classes, student club meetings, and guest lectures held during the Tuesday and Thursday "common hour" periods.

170 Enjoyment of Music 3 cr
An introduction to music appreciation especially designed for (but not limited to) non-music majors.

School Of Nursing

Administration

Dear

Ruth C. Maszkiewicz, RN, Ph.D
Associate Dean, Undergraduate Program

Joanne E. White, RN, Ph.D
Associate Dean, Graduate Program

Theresa L. Carroll, RN, Ph.D

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. The program leading to the degree of Bachelor of Science in Nursing Education was designed to meet the specific needs of the registered nurse while the basic program leading to the degree of Bachelor of Science in Nursing, the first in Pennsylvania, was designed for the high school graduate. The School of Nursing continued to offer two separate degrees until 1964. In September of that year, a single revised professional nursing program was implemented for admission of both basic and registered nurse students leading to the degree of Bachelor of Science in Nursing.

In the Fall of 1982, a new bachelor’s nursing program, also leading to the degree of Bachelor of Science in Nursing, was instituted and was specifically designed to meet the educational and professional needs of the registered nurse. More recently, a second degree option has been initiated.

To date, more than 3000 students have graduated from Duquesne’s School of Nursing.

SCHOOL OF NURSING PHILOSOPHY AND DEFINITION OF NURSING

The School of Nursing’s philosophy evolves from that of Duquesne University and its mission, goals, and objectives. This School’s philosophy provides a framework for the development of a personal and professional philosophy of life based on the moral and spiritual values espoused by the University and supports a commitment to the values and dignity of Man which give meaning to life. Further, this philosophy fosters a spirit of inquiry that promotes continuing intellectual growth.

The School of Nursing faculty believe that nursing is a profession and an academic discipline. Therefore, a professional nursing education should occur in institutions of higher education (Senior College or University). The faculty is committed to curricula that view nursing as a human science in which the primary concern is the health care of Man from conception through death. A creative, flexible, and dynamic environment supports curricula in which students can pursue scholarly excellence. The faculty believes that the learning process involves both the teacher and learner who plan experiences, share knowledge, and evaluate results. Within this context, the teacher supports and encourages the student to synthesize knowledge and theories from the discipline of nursing, the humanities, and the natural and behavioral sciences. The curricula and environment are strengthened by the faculty’s commitment to excellent teaching, scholarship, and research, and professional and community service.

In making explicit the philosophy that underpins the curricula, the concepts of Man, environment, and health are implicit in the meaning of the concept of nursing as a human science.

Man is a unique creation of God. Man’s defining characteristics are rationality (the capacity to think), sentence (the ability to perceive and feel), and volition (the freedom to choose). Man is a complex, unitary being of multiple dimensions which dynamically interrelate creating a unified whole. Man is inclusive of individual, family, and group Man’s movement through life is unidirectional, always moving forward with his history increasing in complexity. Man is wholistic and shares a mutually open existence with his environment.

Environment is all that is external to Man. Environment and Man are in continuous, simultaneous, and mutual interaction.

Health is dynamic, contextual, and a personal process experienced by Man in all aspects of living. Man chooses his way of living his health and thereby creates the potential for a productive and meaningful life. Man expresses his health through patterns.

Health promotion is the term used by this faculty to encompass all health care, which includes all activities directed toward increasing the well-being of individuals, families, and groups. Health promotion occurs through the utilization of the nursing process as the nurse exercises leadership in caregiving and health education.

Nursing is a human science concerned with the promotion of Man’s health through the diagnosis and treatment of human responses to actual or potential health problems throughout the life continuum. Nursing focuses on helping Man to enhance the quality of living through the promotion of health.

The nurse initiates interrelationships with individuals, families, and groups to assist them in...
describing their health, evaluating alternatives, and mobilizing their resources for planning change. Central to the practice of nursing is the nursing process—a deliberate, systematic method of inquiry that assists the nurse with problem-solving and decision-making in the interest of promoting the health of Man. The nursing process involves shared decision-making which is focused on Man's freedom of choice within the context of the situation.

The professional nurse is an independent and interdependent practitioner who collaborates with other health professionals to assist Man in achieving maximum health potential. The purpose of the Duquesne University School of Nursing Baccalaureate Program is to prepare generalists who are accountable for their nursing practice, accept responsibility for the management of nursing care, and serve as advocates in a variety of health care settings. The Baccalaureate Program provides a foundation for graduate study.

The faculty believes that specialization in nursing occurs at the graduate level and that special preparation is needed to carry out the work and responsibilities of the nurse in advanced nursing practice. Within graduate education there is a core of knowledge which pertains to specialty areas. Each nursing specialty area is viewed as evolving. This evolution is a synthesis of the fields of advanced clinical nursing and of other related disciplines. The purpose of the Duquesne University Master of Science Nursing Program is to prepare a specialist in nursing administration or education and provide a foundation for doctoral study.

Nurse administrators are prepared to lead and manage providers of care in organizations within an increasingly complex social, political, and economic environment. Nurse educators are prepared to teach specific target populations in a variety of health care settings. In both specialty areas, concepts are those which enable students to fulfill specific role expectations in their area of specialization. Other content emphasizes concepts related to the values, attitudes, and behaviors necessary for role socialization within the area of specialization. Scholarly inquiry and research are a major component of the educational process in the graduate program. As nursing leaders, both administrators and educators assess, plan, initiate, effect and evaluate change in the health care delivery system to ensure quality health care, and to enhance the profession of nursing, and to meet the future health care needs of society.

**PURPOSES OF THE SCHOOL**

The purposes of the School of Nursing are to meet the needs of the Public and the Health Care Community by:

1. Providing an undergraduate educational program to prepare students to be professional nurses
2. Providing a program of graduate studies to prepare advanced practitioners
3. Providing continuing education programs for professional nurses that prepares graduates for roles in advanced nursing practice

**PROGRAM PURPOSES AND GOALS**

The purposes of the program are:

1. To prepare generalists who are accountable for their nursing practice, accept responsibility for the management of nursing care, and serve as advocates in a variety of health care settings.
2. To provide a foundation for graduate study.

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 goal of the program statement that upon completion of the program, the graduate:

- Promotes the rights, responsibilities, and dignity of man in health care
- Synthesizes knowledge from the related sciences, the humanities and nursing theories in applying the nursing process
- Utilizes political, cultural, and social processes in promoting the health of individuals within their environment
- Utilizes the nursing process in the promotion of health of the individual/family/group along the life continuum in a variety of settings
- Initiates health care from the perspective of the individual/family/group
- Utilizes knowledge of ethical and legal dimensions in making nursing practice decisions
- Uses the process of inquiry and research in planning nursing care with individual/family/group
- Accepts responsibility and accountability for nursing practice
- Assesses the role of advocate in participating with other health care providers and consumers in the promotion of health
- Utilizes leadership skills for the improvement of health care to meet the emerging needs of consumers in a changing society
- Strives to enhance the profession of nursing
- Enhances own effectiveness in professional nursing roles through on-going evaluation and continuous self-growth
- Synthesizes principles of the teaching and learning process to promote the health of individuals/families/groups

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

The curriculum is designed to provide a strong liberal arts and science base. The course offerings in the natural, biological and behavioral sciences, and the University core courses support the philosophy that provides the basis for the organized framework of the professional nursing program professional nursing courses, which constitute the nursing major. The student will practice and theory in the nursing care of individuals and families. Learning opportunities are provided in hospitals, in homes, and in the community.

The faculty of the School of Nursing conducts all professional nursing courses and also guides and directs the practical learning experiences. A variety of hospitals and agencies cooperate with the School of Nursing to provide a wide selection of excellent practice settings.

Upon the successful completion of their program of studies, graduates are eligible to write the NCLEX-RN examination for licensure in the state in which they wish to practice.

The faculty reserves the right to make changes in the curriculum and program requirements which are believed to be in keeping with the changing health needs of society and/or the best interest of the student and the School to maintain quality professional nursing education. The undergraduate program of studies is approved by the State Board of Nursing.

**ADMISSION REQUIREMENTS**

**ADMISSION OF HIGH SCHOOL GRADUATES**

Students who are interested in applying for admission to the School of Nursing should request an application from the Office of Admissions, Duquesne University, Pittsburgh, PA 15282. The specific entrance requirements for admission are:

1. The applicant's high school curriculum must include a minimum of 16 units distributed as follows (1 unit = 1 year):
   - English
   - Social Studies
   - Language
   - Math & Science
   - 3-4 years recommended
   - 4 years recommended
   - 2 years recommended

2. A candidate must have been graduated from an accredited secondary school in the upper two-thirds of the class, and must have demonstrated exemplary personal conduct in the institution.

3. The primary consideration for admission 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 Admissions Committee to admit those candidates who possess qualities of character and intellect and who show promise of development into useful and contributing citizens.

   As of January 1986, felons acts prohibit licensure in Pennsylvania. A person convicted of any felonious act may be prohibited from licensure by the State Board of Nursing. At the time of application to the School of Nursing an individual who is currently under charge or who has incurred a felony conviction must notify the Dean of Nursing in writing of the fact and nature of the felony charge/conviction.

4. A candidate must present satisfactory scores on the required College Entrance Examination Board Scholastic Aptitude Test in accordance with the standards to which the University adheres.

5. A personal interview with a representative of the School of Nursing is necessary prior to admission.

6. Letters of reference are occasionally requested if necessary.

Other additional School of Nursing requirements include evidence of physical and emotional health adequate to meet the demands of the program and compliance with the standards of personal conduct as outlined in the School of Nursing Standards of Personal Conduct policy. Following notification of acceptance to the University by the Office of Admissions, the School of Nursing candidate must:

1. Submit the School of Nursing's required health form to the School of Nursing.
TRANSFER STUDENT ADMISSION

See the section on Admissions for further University requirements.

Admission criteria for transfer students

1. A cumulative QPA of 2.5 from the transferring institution.
2. 1 unit of chemistry and 1 unit of algebra, which can be from either a secondary school or postsecondary institution.
3. Personal interview with a representative of the School of Nursing, and two letters of reference.
4. Evidence of physical and emotional health adequate to meet the demands of the program as indicated above.

Provisions affecting Placement

1. No transfer student can be accepted into nursing prerequisite 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. This time limit may be waived in specific instances.

REGISTERED NURSE STUDENTS

Duquesne University School of Nursing also offers the registered nurse an opportunity to obtain the baccalaureate in nursing degree. Part-time or full-time enrollment is available to allow the registered nurse to continue to be employed while undertaking the course of study. Through the acceptance of transfer credits, CLEP testing, and challenge examinations, the School of Nursing strives to apply the registered nurse’s previous learning experience towards the requirements of the BSN degree.

Specific information concerning the acceptance of transfer credits, eligibility for CLEP testing, and challenge examinations can be obtained by contacting the R N / B S N Program Chairman within the School of Nursing.

Admission Requirements — R N / B S N Program

Students who are interested in applying for admission to the R N / B S N Program should request an application from the Division of Continuing Education, Duquesne University, Pittsburgh, Pa 15282.

- High school diploma or equivalent
- Graduation from an accredited associate degree or diploma nursing program (2.5 QPA minimum)
- Fulfillment of science and math prerequisites
- Evidence of active malpractice insurance

- Personal interview with the School of Nursing Chairman.
- Personal interview with the School of Nursing Admissions Committee.

SECOND DEGREE STUDENTS

This option is available to those who already have an earned baccalaureate degree in another discipline and who wish to earn a bachelor’s degree in nursing at Duquesne University. A possible 62 credits may be transferred into the program. Other possible opportunities include challenge examinations, and CLEP testing for University credit affirming the prerequisites in the institution in which they are earned.

Specific information about this option can be obtained by contacting the Second Degree student advisor within the School of Nursing.

Admission Requirements — Second Degree in Nursing Option

Students who are interested in applying for admission to the Second Degree in Nursing Option should request an application from the Division of Continuing Education, Duquesne University, Pittsburgh, Pa 15282.

- Graduation from a baccalaureate program in another discipline.
- Personal interview with the Second Degree student advisor within the School of Nursing.
- Personal interview with the School of Nursing Admissions Committee.
- Personal interview with the School of Nursing Academic Dean.

- Evidence of physical and emotional health adequate to meet the demands of the program as indicated above.

TEMPORARY TRANSFER

With prior written approval, a nursing student may take courses during the summer at an accredited college or university other than Duquesne University. Credit can only be given once for courses that are repeated.

ADDITIONAL EXPENSES* AND REQUIREMENTS

Student Liability Insurance (Professional) (annually) $2500
Uniforms, nurse’s cap, nurse’s shoes, identification pin $12000
Transportation to and from clinical agencies (weekly) $1000
School of Nursing pin, upon graduation (if desired) cost varies
Physical examinations, diagnostic procedures, and immunizations
1st year $15000
2nd–4th year $5000
Physical Assessment Kit $400
Sensor Assessment Examination $300
All expenses are approximate.

Certification in Cardio-Pulmonary Resuscitation (CPR) is a prerequisite to all nursing clinical courses. Students must show evidence of current CPR certification prior to entering the clinical area.

An annual physical examination and certain immunizations and health tests are required for all students in the School of Nursing. Proactive students must complete specific health requirements by August 1 before proceeding to the clinical practice. The School of Nursing provides information on required school uniforms to students prior to entrance into the clinical area. Nursing students enrolled in clinical courses must purchase liability insurance in the amounts of $1,000,000/3,000,000 professional and $1,000,000 personal coverage.

All students enrolled in the School of Nursing must show evidence of health insurance coverage, including accident/injury coverage annually throughout enrollment. Each student is responsible for transportation and hospital and other clinical agencies. Each student will be expected to have access to an automobile to permit experience with home care of clients and their families.

STUDENT ORGANIZATIONS

Each nursing student is a member of the general student body and may select and participate in any of the campus organizations. There are numerous social sororities and organizations as well as professional organizations. These organizations exist for the promotion of the scholarly and professional interests of members.

Alpha Tau Delta (meaning “through force of character”) is a national professional fraternity for persons in nursing. Theta Chapter was chartered on the Duquesne University campus on April 21, 1938. Eligibility is limited to full-time students who have completed a minimum of one semester. The Student Nurses Association of Pennsylvania (SNAP) is a constituent of the National Student Nurses Association, Inc (NSNA). The purpose of SNAP is to assume responsibility for contributing to nursing education, to provide programs representative of fundamental and current preprofessional interest and concerns, and to aid in the development of the whole person. Active membership is open to undergraduate students enrolled in state-authorized programs leading to licensure as a registered nurse and to graduate students enrolled in graduate programs in nursing.

Class Organizations Each class is an officially recognized organization in the School of Nursing. As such, each class elects its own officers and conducts such programs and affairs as its members deem desirable toward achieving its goals.

Sigma Theta Tau International, Inc. is the international honor society of nursing. The Duquesne University Nursing Honor Society was officially chartered as Epsilon Pi Chapter in March 1982. Membership is open to senior students and community leaders who meet the criteria for election.
GRADUATION REQUIREMENTS

General University requirements for graduation in the Academic policies section of this catalog. In addition, specific School of Nursing requirements are:

1. Completion of 125 credits
2. A minimum cumulative over-all quality point average of 2.0
3. Successful completion of all clinical practice courses
4. Completion of the required curriculum plan
5. Removal of I and F grades in all required courses
6. A candidate for the Bachelor's degree must complete the last 30 credits toward the degree at Duquesne University Challenge credits are not included in this 30 credit requirement
7. Submission of an application for the degree. No student is considered a degree candidate until he/she files an application for the degree on a form provided by the Registrar
8. 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

Freshman Fall Course Credits
101 Thinking/Writ Across/Curr* 3
102 Thtng/Writ Across/Curr* 3
103 Basic Philosophical Quest* 3
104 Basic Philosophical Quest* 3
111 Principles of Chemistry 3
N100 Orientation to Prof Nurs 5

Sophomore Fall Course Credits
N101 Anatomy & Physiology I 4
N221 Human Dev/Life Continuum 4
N272 Basic Comm in Nursing 2

Junior Fall Course Credits
N310 Pathology 4
N320 Nsg Care Adult Client I 7
N325 Psychopathological Alterations in Health 2
N350 Physical Assessment of Adult 2

Senior Fall Course Credits
N410 Nursing Care of the Childbearing Family 5
N420 Nursing Care of the Child and Family 5
N430 The Research Process in Nsg 3

Spring Course Credits
N405 Nsg Leadership/Mgmt of Client Care 4
N460 Promotion of Health with Individuals Families/Groups in the Community 4
N465 Trends & Issues in Nsg 3
N495 Advanced Concepts in Clinical Nursing 3

TOTAL = 125 Credits

University Core Courses

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 the student government office located in the student union.

School of Nursing Grievance Procedure

Grievance procedures must be initiated within 30 calendar 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 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 Department Chairman should be consulted. If the problem persists, the Associate Dean of the Undergraduate Program should then be contacted.

If the problem is not satisfactorily resolved, a consultation with the Dean of the School of Nursing should be arranged, and the appeals committee in the School should be convened. Should the problem still remain unresolved, a “Request of Hearing” form should be filed with the Provost within 30 days of the appeals’ committee decision.

If the Provost finds 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 Provost finds that a legitimate grievance does not exist, he/she will inform the student within (30) days of his/her determination.

REGULATIONS

Students in the School of Nursing are preparing themselves for entry into a respected health profession where the highest degree of character and sense of responsibility are basic requirements. As such, they 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 Nursing insists on strict adherence to the following regulations.

1. Class Attendance—Attendance is expected for every class session of each course within the School of Nursing. Students are expected to attend the entire class session. Specific class attendance requirements (in relation to grading) will be stated in each course syllabus. Acceptable reasons for absence will be in accordance with the current Undergraduate Catalog, statement of scholastic policies. Consideration of any other request for an excused absence will be at the instructor’s discretion.
The relationship of nursing research and theories is examined with a concentration on the nursing theories of Rogers, King, Orem and Watson. Students begin to recognize how nursing theories serve as a basis for the practice of nursing. Prerequisite: None

215 Basic Pharmacology 3 cr
This course covers the basic principles of pharmacology needed in daily practice. This includes drug effectiveness, mechanism and interaction. In most cases, the emphasis will be on the pharmacological action of drugs on specific organ systems. In some instances, drugs will be discussed in relation to their clinical use in the treatment of disease conditions. Prerequisites: Anatomy and Physiology I

222 Human Development Throughout the Life Continuum 4 cr
This course builds upon the major concepts of man, environment, health and nursing. The student studies human development from conception through death. Emphasis is placed on an individual's psychological, intellectual and personal development within the context of the family, society and culture. Health promotion practices are explored relative to each age group throughout the life continuum. This course provides the basis for students to assess the developmental stages in the clinical environment. Prerequisite: Introduction to psychology.

230 Foundations of Gerontic Nursing 2 cr
This course is designed to explore the aging process from a health promotion perspective. Learners examine normal changes of aging, health assessment, and common health care problems of the older adult. Selected economic, legal, ethical, societal, cultural, and/or political issues are discussed and analyzed. Emphasis throughout the course is placed on wellness and positive attitudes toward the older adult.

Prerequisites: Orientation to Professional Nursing, Anatomy and Physiology II (concurrent), Basic Communications in Nursing (concurrent), Foundations of Gerontic Nursing.

310 Pathology 4 cr
This course is a theory course designed to acquaint students with the structural and functional changes that occur as the result of illness, as well as the mechanisms that disrupt these changes. It includes a study of the body's responses to illness, and the similar mechanisms that support normal health. Prerequisites: Biology of Microbes, Anatomy and Physiology I and II, Nutrition for Health Promotion.

312 Nutrition for Health Promotion 4 cr
This course is designed to introduce students to the application of concepts and skills relevant to the practice of professional nursing. The course explores man's individual health patterns and includes an introduction to alterations in health patterns. Students study the nursing process as the vehicle for providing nursing care to clients. The concepts of health education, rehabilitation and loss and grief are incorporated. Students identify the interrelationship of these theoretical components in man's experience of health. The professional role is explored relating this coursework to the nursing process. Prerequisites: CPR Certification, Orientation to Professional Nursing, Anatomy and Physiology I, Anatomy and Physiology II (concurrent). Human Development Throughout the Life Continuum (concurrent), Basic Communications in Nursing (concurrent). Foundations of Gerontic Nursing.

320 Nursing Care of the Adult Client I 7 cr
This course builds upon the major concepts of man, environment, health and nursing. The student studies human development from conception through death. Emphasis is placed on an individual's psychological, intellectual and personal development within the context of the family, society and culture. Health promotion practices are explored relative to each age group throughout the life continuum. This course provides the basis for students to assess the developmental stages in the clinical environment. Prerequisite: Introduction to psychology.

325 Psychopathological Alterations in Health 2 cr
Physical Assessment of the Adult 2 cr
Nursing Care of the Adult Client I 7 cr
Nutritional Health Nursing Care of the Adult 3 cr
Nursing Care of the Childbearing Family 5 cr
Nursing Care of the Child and Family 5 cr
Research Process in Nursing 3 cr
Nursing Leadership and Management of Client Care 4 cr
Promotion of Health with Individuals/Family/Groups in the Community 3 cr
Trends and Issues in Nursing 3 cr
Advanced Concepts in Clinical Nursing 3 cr
Orientation to Professional Nursing 3 cr
The course introduces students to the discipline of nursing as a human science, and provides the framework for explaining the practice of professional nursing according to the philosophy of Duquesne University School of Nursing. Students explore the assumptions about man and environment beginning with the valuing process and self-esteem as a means of valuing self. In addition, students examine beliefs about man, environment, and health and how they make a difference in the practice of nursing. Professional nursing is explored from the historical aspect as it relates to present and emerging role

345 Foundations of Gerontic Nursing 2 cr
This course is designed to explore the aging process from a health promotion perspective. Learners examine normal changes of aging, health assessment, and common health care problems of the older adult. Selected economic, legal, ethical, societal, cultural, and/or political issues are discussed and analyzed. Emphasis throughout the course is placed on wellness and positive attitudes toward the older adult.

Prerequisites: Orientation to Professional Nursing, Anatomy and Physiology II (concurrent), Basic Communications in Nursing (concurrent), Foundations of Gerontic Nursing.

385 Introduction to Research in Nursing 1 cr
This basic course is designed to introduce the student to the nature of inquiry, the historic and current role of the researcher as a consumer of research, and the utilization of the library as a means of fostering the consumer role. Prerequisite: Orientation to Professional Nursing

390 Nutrition for Health Promotion 4 cr
This course focuses on nutrition and the nursing role in health promotion for individuals and groups throughout the life cycle. Emphasis is placed on nutrition assessment and intervention. Food needs for energy and the major nutrients are considered for the promotion of health. Prerequisites: Prerequisites: Orientation to Professional Nursing, Anatomy and Physiology I and II.
tunity to apply the nursing process in caring for the adult in a variety of medical-surgical settings. Basic concepts related to the integrity of body systems for the purpose of planning a holistic approach to nursing care. Prerequisites: Anatomy and Physiology II, Pathology (concurrent).

360 Nursing Care of the Adult Client II 7 cr
This clinical nursing course is conducted at the junior level and builds upon the clinical experiences of the student in the previous Paediatric-Mental Health Nursing Care of the Adult (Child-Family). The student will focus on the practice of maternal mental health nursing based on selected nursing theories, knowledge of normal and altered patterns relative to the developmental processes of the pregnant client, newborn and family. Concepts of illness, grief, maternal and paternal role identity, body image and self-esteem are explored relative to the childbearing family. Nursing care of the Adult Client I, and concepts from selected nursing theorists. The student is provided with the opportunity to apply the nursing process in caring for the adult in a variety of medical-surgical settings. The family is viewed as a support system to the client. Psychopathological complex concepts related to the integrity of biological, psycho-social, spiritual and environmental health patterns are presented. Concepts of grief and loss, loss, grief, and rehabilitation continue to be integrated throughout the course. Students explore the ways in which adult clients respond to long and short-term alterations in health and environmental patterns of health, well-being, and life-style is integrated to provide holistic and individualized nursing care. Students examine how different sociocultural values influence health patterns. Adult teaching/learning principles are utilized to meet the client's health education needs. Prerequisites: Health Promotion Through the Nursing Process, Basic Communications in Nursing, Basic Pharmacology, Nutrition for Health Promotion, Physical Assessment of the Adult (concurrent), and Pathology (concurrent).

325 Psychopathological Alterations in Health 2 cr
This course is designed to address the major theories of psychopathology and diagnostic categories. Emphasis will be placed on the students' understanding of the multifaceted nature of psychopathology. Attention will be directed to the developmental, biological, psychological, and sociocultural aspects of pathogenic functioning. The theoretical and practical basis for current treatment modalities will also be addressed. Prerequisites: Introduction to Psychology, Basic Communications in Nursing, Anatomy and Physiology I and II, Health Promotion Through the Nursing Process.

350 Physical Assessment of the Adult 2 cr
This course builds upon previously learned knowledge of natural and human sciences. A systems approach is utilized to teach students to perform a physical assessment. Students learn to differentiate between normal findings and alterations indicative of actual or potential health problems. Students are provided with the opportunity to perform physical assessments in the laboratory setting and to utilize these skills in the clinical setting in Nursing Care of the Adult Client I, which is taken concurrently. This course enhances the student's ability to utilize knowledge of body systems for the purpose of planning a holistic approach to nursing care. Prerequisites: Anatomy and Physiology II, Pathology (concurrent).

410 Nursing Care of the Childbearing Family 5 cr
The focus of this clinical nursing course is on health promotion with the family as it relates to childbearing and neonatal care. Utilizing the nursing process, the student will focus on the practice of maternal mental health patterns, based on selected nursing process, knowledge of normal and selected altered patterns relative to the developmental processes of the pregnant client, newborn and family. Concepts of illness, grief, maternal and paternal role identity, body image and self-esteem are explored relative to childbearing family. Nursing care of the Adult Client I, and concepts from selected nursing theorists. The student is provided with the opportunity to apply the nursing process in caring for the adult in a variety of medical-surgical settings. The family is viewed as a support system to the client. Psychopathological complex concepts related to the integrity of biological, psycho-social, spiritual and environmental health patterns are presented. Concepts of grief and loss, loss, grief, and rehabilitation continue to be integrated throughout the course. Students explore the ways in which adult clients respond to long and short-term alterations in health and environmental patterns of health, well-being, and life-style is integrated to provide holistic and individualized nursing care. Students examine how different sociocultural values influence health patterns. Adult teaching/learning principles are utilized to meet the client's health education needs. Prerequisites: Health Promotion Through the Nursing Process, Basic Communications in Nursing, Basic Pharmacology, Nutrition for Health Promotion, Physical Assessment of the Adult (concurrent), and Pathology (concurrent).

420 Psychiatric-Mental Health Nursing Care of the Child and Family 5 cr
This clinical course, the student learns the role of the nurse caring for the child and family. Using the nursing process as a framework, the student will assess the client with alterations in health and advanced health patterns, including emotional, and psychosocial patterns of the child and family. Norms and alterations in health patterns will provide the basis for discussion as they relate to the developmental level of the child. Content for the physical assessment of the child is presented. The nurse's role in the promotion of health is identified as a major focus of the course. Concepts of altered patterns in health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How

430 The Research Process in Nursing 3 cr
This senior-level undergraduate research course focuses on the role of the professional nurse as a consumer of research. Each step of the research process is examined. Application exercises reinforce didactic material. The critiquing process is utilized with current research studies. The advantages and disadvantages of quantitative and qualitative research are explored. Prerequisites: Fundamentals of Statistics, Introduction to Research in Nursing, Nursing Care of The Adult Client II.

455 Nursing Leadership and Management of Client Care 4 cr
This clinical course provides the opportunity to synthesize previous learning and develop additional knowledge and skills. Concepts of altered patterns in health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How health and the experience of hospitalization How

NURSING ELECTIVES

104 Dosage and Solutions 1 cr
204 Computer Literacy 2 cr
260 Ways of Healing 3 cr
299 Nursing and Spirituality 3 cr
353 Health Care Ethics 3 cr
360 Critical Care Nursing 3 cr
397 Health Care of Women 3 cr
399 Health Education 2-3 cr
433 Introduction to Nursing Informatics 2 cr
459 Transcultural Nursing 3 cr
466 Choosing the Living in Dying 3 cr
499 Directed Study in Nursing 1-3 cr

NOTE: Not all nursing electives are offered each semester.

104 Dosages and Solutions 1 cr
This directed study course provides the student with an opportunity for a self-paced review of the basic mathematical functions preparatory to problem-solving and instruction in the calculation of dosages and solutions necessary for the administration of attention to the highly complex care and rehabilitative needs of individuals and families in the home are examined. Further, health needs of the community are explored and evaluated for possible changes that enhance the promotion of health. Various roles of the community health nurse are investigated with an emphasis on the role of the nurse in the health education. Prerequisites: Nursing Care of the Childbearing Family, Nursing Care of the Adult Client.

455 Trends and Issues in Nursing 3 cr
This course builds upon all previous learning experiences. It considers current issues in nursing, trends in health care delivery, ethical accountability and decision-making. Trends and issues and their interrelationship are explored in order to assist the student to assume professional responsibility for involvement in issues affecting nursing and delivery of health care. Prerequisites: Nursing Care of the Adult Client, Psychiatric-Mental Health Nursing Care of the Adult.

459 Advanced Concepts in Clinical Nursing 3 cr
This course builds upon all previous learning experiences. It considers current issues in nursing, trends in health care delivery, ethical accountability and decision-making. Trends and issues and their interrelationship are explored in order to assist the student to assume professional responsibility for involvement in issues affecting nursing and delivery of health care. Prerequisites: Nursing Care of the Adult Client, Psychiatric-Mental Health Nursing Care of the Adult.

455 Trends and Issues in Nursing 3 cr
This course builds upon all previous learning experiences. It considers current issues in nursing, trends in health care delivery, ethical accountability and decision-making. Trends and issues and their interrelationship are explored in order to assist the student to assume professional responsibility for involvement in issues affecting nursing and delivery of health care. Prerequisites: Nursing Care of the Adult Client, Psychiatric-Mental Health Nursing Care of the Adult.
medications in clinical practice. The course is designed around student use of a computer-assisted instructional program with teacher supervision. Special permission is required to register for this course.

204 Computer Literacy 2 cr
This course introduces the student to fundamental concepts of computers and their use for personal or work-related tasks. Microcomputer hardware and software systems are presented in the context of personal usage. Software systems that support computer uses such as spreadsheets (including graphics), word processing, database construction, and some programming are included as laboratory exercises to expose the student to all facets of computers for personal use. This content will also form the knowledge base for the computer applications to nursing as presented in the undergraduate and graduate computer applications course. Prerequisites: none.

260 Ways of Healing 3 cr
This course is a non-clinical nursing elective. Ways of Healing explores many of the ways in which clients and families are involved in the process of healing which are not thought to be medically traditional. Belief systems are looked at and how they affect life with emphasis on the healing process. Students explore the mystery around unconventional or unexpected healing and look at this in relationship to man's belief systems which are a reflection of how man participates with his own health. Students study, in depth, two ways of healing, biofeedback and visualization techniques. The application of these techniques to the nursing process is explored. Seven other ways of healing are explored through group presentations: psychic surgery, hypnosis, spiritual healing, acupuncture, and acupressure, hex/ voodoo, and laying on of hands. Prerequisite: Orientation to Professional Nursing.

299 Nursing and Spirituality 3 cr
Nursing and Spirituality is a non-clinical nursing elective. Students explore the universal and timeless truth of the spiritual dimension of human nature. Case histories in nursing are investigated which focus on spiritual needs encountered in the nurse/client/family relationship. Students are encouraged to develop an awareness of their own spiritual dimension and its growth through nursing experiences. In addition, students discover the gift they bring to the nursing situation when spiritual needs are recognized and shared (entered into) with the client.

333 Health Care Ethics 3 cr
This course is designed to help students consider the purpose of ethics and the role of ethics in their own lives and in the health care setting. The students are helped to gain a more developed sense of their own beliefs and how they deal with ethical issues and ethical decision-making. In addition they are guided in the process of articulating and defending their reasons for various stances. Various ethical systems, professional codes of ethics, and a model for ethical decision-making will be discussed. Through case study analyses, the students resolve ethical dilemmas and justify their decisions made.

Further, various issues of an ethical nature, that presently exist in the health care context, are discussed. Prerequisite: none.

380 Critical Care Nursing 3 cr
This course builds on medical-surgical concepts learned in Nursing Care of the Adult Client I and II and concepts from selected nursing theorists. The student is provided with the opportunity to care for clients/families in the critical care setting. Students examine the ways in which life-threatening alterations in patterns of health affect critically ill clients/families. Students integrate independent knowledge of anatomy and physiology and pathophysiology to provide holistic nursing care of clients/families in the critical care setting. The student continues to utilize adult teaching-learning principles to identify health education needs and develop plans to meet these needs (Summer only) and with special permission) Prerequisite: Nursing Care of the Adult Client II.

397 Health Care of Women 3 cr
Health Care of Women is a nursing elective that provides students with an opportunity to explore many of the prevalent health experiences of women in contemporary society in the United States. This course investigates aspects of women's health and choices relative to the quality of their lives. It provides students with an opportunity to analyze health promotion for women from a historical and nursing perspective and provides them with the knowledge of health resources available to meet the specific needs of women. Prerequisite: Nursing Care of the Adult Client I.

399 Health Education 3 cr
Today's health care professional is required to be more than an expert clinician. The client as a consumer of health care expects to be taught the intricacies of illness and selective treatments. The client requires extensive knowledge of health promotion and self-care. It becomes the responsibility of the health care professional to meet these needs through the process of health education. This course, utilizing an interdisciplinary approach, introduces the student to the role of the educator through identification, analysis, synthesis, and application of the teaching-learning process. Students from various disciplines have an opportunity to share their perspectives on health and health promotion as related to client education.
School of Pharmacy

CURRICULAR CHANGES

The current B.S. in Pharmacy program will no longer be offered with the graduation of the class of 1998 (entering in Fall 1993). As of Fall 1994, the School of Pharmacy will initiate a six-year entry-level Doctor of Pharmacy program of study. The new Pharm D will be configured in a two-year pre-professional and four-year professional curricular format.

Facility of the School of Pharmacy are developing a competency-based, outcomes-oriented curriculum that will prepare future generalist pharmacy practitioners to provide quality pharmaceutical care to patients. The new professional curriculum will emphasize critical thinking, problem solving, active learning and enhanced communication skills, integrated studies in the biological, chemical, pharmaceutical, administrative, behavioral and clinical sciences taught using traditional and innovative instructional techniques, and a multi-year, introductory-to-advanced level experiential component. Opportunities will be provided for additional preparation in community pharmacy practice, institutional practice, nuclear pharmacy, industrial practice, and for graduate study.

ADMISSIONS

Traditionally, Duquesne University's excellence in pharmacy education has resulted in a large number of applicants for enrollment. Admission to the first entry-level Doctor of Pharmacy Class in Fall 1996 will be on a competitive basis for well-qualified Duquesne University students and a select group of transfer students from outside Duquesne University.

The minimum requirements for admission to the Duquesne University School of Pharmacy entry-level Pharm D program are: 1) Completion of the Pre-Pharmacy course requirements listed in the University catalog, 2) A minimum overall and science/math grade point average of 2.5 and no grade lower than a "C" in a required course, 3) Completion of the Pharmacy College Admissions Test (PCAT) with a minimum composite scaled score of 180, and 4) Completion of an application form that includes a written essay and three letters of recommendation.

An interview is required of candidates for final selection.

Evidence of participation in community service is strongly encouraged and will be a favorable asset in consideration for admission to the program.

PRE-PHARMACY COURSE REQUIREMENTS

Duquesne Pre-Pharmacy

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>General Biology I and II</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I and II (121 and 122)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I and II (205 and 206)</td>
<td>8</td>
</tr>
<tr>
<td>Calculus I (115)</td>
<td>4</td>
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<tr>
<td>Physics for Pharmacy (200)</td>
<td>4</td>
</tr>
<tr>
<td>Thinking and Writing Across the Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>Imaginative Literature and Critical Writing</td>
<td>3</td>
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General Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>General Chemistry with Laboratory</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry with Laboratory</td>
<td>8</td>
</tr>
<tr>
<td>Calculus (for science or math majors)</td>
<td>3</td>
</tr>
<tr>
<td>General Physics with Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>English Composition and Literature</td>
<td>3</td>
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<tr>
<td>English Literature</td>
<td>3</td>
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<tr>
<td>Religious Studies</td>
<td>3</td>
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<tr>
<td>Philosophy</td>
<td>3</td>
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<tr>
<td>Modern U.S., European or World History</td>
<td>3</td>
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<tr>
<td>Music or Art Appreciation</td>
<td>3</td>
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<tr>
<td>Economics</td>
<td>3</td>
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<tr>
<td>Computer Literacy (Applications)</td>
<td>3</td>
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<tr>
<td>Speech (Interpersonal Communication)</td>
<td>3</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>General Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

PHILosophy and Objectives

The School of Pharmacy, as an integral part of the University, embodies as its own, the mission and goals set forth by the University. The School of Pharmacy has many important missions, but the primary mission of the School is to prepare practitioners for life-long careers in pharmacy and allied health sciences. Academic training must build sufficient knowledge and skill to allow graduates to practice in the present environment and to grow and adapt as the practice environment changes.

The outcome competency-based curriculum in pharmacy represents a composite of educational experiences that result in a well-educated and well-trained professional. An important part of the School's curriculum is to provide undergraduate students with a well-rounded and broad education which will inspire a permanent interest in learning and stimulate qualified undergraduate students to continue their education at the graduate level.

In order to be a competent pharmacist, the student must become a therapeutic specialist who has knowledge of drugs and their actions and can apply this knowledge to improve patient therapy outcome and understanding. Further, the pharmacist must possess skills and knowledge to manage a professional practice. The comprehensive and specialized nature of the curriculum offers the pharmacy graduate a choice of occupations within the profession and its closely allied fields, as well as an adequate foundation for the continuation of studies on a graduate level in many areas.

Within the profession of pharmacy, a graduate may become a community pharmacist, hospital pharmacist, industrial pharmacy practitioner, consultant pharmacist, or a pharmacist in government service. Many pharmacists find employment with pharmaceutical companies as medical service representatives or in research, development, manufacturing, quality assurance, or marketing positions. Others become involved with the wholesale sector of the drug distribution system. Graduates in pharmacy are well-qualified to become officers of drug law enforcement agencies. In recent years, pharmacists have entered the fields of nuclear pharmacy and drug information and/or poison control. 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 study in other health professions leading to a second professional degree or an advanced degree in the basic pharmaceutical and medical sciences.

The School of Pharmacy directs the professional program leading to the degree of Doctor of Pharmacy. It is specifically designed to prepare graduates to assume the duties and responsibilities dictated by the clinical, educational and administrative facets of their respective positions. Upon program completion, the graduate practitioner will merge into the profession capable of promoting and enhancing rational drug therapy. In addition, the individual will be capable of functioning proficiently as both an administrator of pharmacy services and as a pharmacy educator. Utilizing personal experience and an established data base, the graduate will be capable of participating in, and promoting, pharmacy research in the hospital and university setting.

The Graduate School of Pharmaceutical Sciences of the School of Pharmacy offers programs leading to the Doctor of Philosophy degree in pharmaceutical chemistry, pharmacodynamics, and pharmaco-toxicology and the Master of Science degree in the fields of pharmaceutical chemistry, medicinal chemistry, and pharmacology-toxicology. The Master of Science degree also offers a joint degree program leading to a Master in Business Administration/Master of Science in Industrial Pharmacy.
SCHOOL OF PHARMACY

DEGREES
The School of Pharmacy offers a program leading to the undergraduate degree, Bachelor of Science in Pharmacy. Descriptions of advanced degrees offered by the faculty of the School of Pharmacy and the Graduate School of Pharmaceutical Sciences are found in other publications available from the School of Pharmacy office.

PROGRAMS
PHARMACY
The School of Pharmacy offers a Bachelor of Science in Pharmacy degree 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 and seat availability, in the first, second or third year of the five-year sequence. Legal requirements of all states are met with regard to graduation from an accredited college of pharmacy. 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. This residency requirement for the final years of the professional curriculum is in accordance with faculty of the School of Pharmacy, approved by the American Association of Colleges of Pharmacy, and followed by all colleges of pharmacy in establishing minimum residency requirements, as well as guidelines for professional education. The residency requirement is applicable to all students regardless of advanced standing status.

Curriculum
A minimum of 30 credits in the combined general education areas of humanities and social sciences, in accordance with ACPE accreditation requirements, is required for graduation from the School of Pharmacy. Effective for the Class of 1992 (entering in Fall, 1987) and thereafter, Pharmacy students must meet the requirements of the University Core Curriculum. For Pharmacy students, seven required University Core courses satisfy 21 credits of the 30-credit ACPE General Education requirement for the B.S. in Pharmacy degree. The University Core courses and, where appropriate, the Social Sciences, and Humanities designations, as determined by the faculty of the School of Pharmacy, follow.

101 Thinking and Writing
Across the Curriculum
3 crs

102 Imaginative Literature
and Critical Writing
3 crs

132 Basic Philosophical
Questions
3 crs (Humanities)

141 Social, Political, and
Economic Systems
3 crs (Social Sciences)

151 The Shaping of the
Modern World
3 crs (Social Sciences)

161 The Arts and the
Human Experience
3 crs (Humanities)

182, 183, 184, 185, 186, 187 Theology
(choose one course) 3 crs (Humanities)

Pharmacy students must take an additional 4 credits of General Electives, chosen in consultation with their academic advisor, to meet the 30-credit ACPE General Education requirement. Course work offered by the following departments in the College of Arts and Sciences and Schools of the University is approved for meeting the additional credit requirements:

Theology
Political Science

Philosophy
Computer Science

English
Communication

Modern Languages
ROTC Courses

Classics
School of Music Courses

Sociology
School of Business

Psychology
Administration courses

History/Art History

In adherence to ACPE accreditation requirements on general education, the School of Pharmacy faculty has ruled that general electives must be science, non-math, non-professional course work.

PHARMACY CURRICULUM
For the Class of 1995 (entering Fall, 1990) and thereafter
First Year
Fall Semester
111 General Biology I
3 4
121 General Chemistry I
3 4
101 Thinking & Writing
Across the Curriculum (University Core)
3 -
115 Calculus I
4 -
101 Pharmacy Orientation
1 -

14 8

Spring Semester
112 General Biology II
3 4
122 General Chemistry II
3 8
102 Imaginative Literature and
Critical Writing (University Core)
3 -
Theology (University Core)
3 -

12 12

Second Year
Fall Semester
105 Organic Chemistry I
3 4 4
200 Physics for Pharmacy
4 2 4
132 Basic Philosophical
Questions (University Core)
3 - 3
151 Shaping of Modern World
(University Core)
General Elective
3 - 3
16 17

Spring Semester
105 Organic Chemistry II
3 4 4
141 Social, Political, Economic
Systems (University Core)
3 - 3
161 Arts and the Human Experience
(University Core)
General Elective
3 - 3
202 Human Anatomy & Physiology I
4 - 4
16 17

Third Year
Fall Semester
117 Human Anatomy & Physiology II
3 4 4
101 Basic Pharmaceutics-
Pharmacy Math I
3 3 4
109 Biochemistry-Nutrition
3 3 4
120 Pharmacy Law
3 - 3
141 Social, Political, Economic
Systems (University Core)
3 - 3
16 17

Spring Semester
138 Pathophysiology
3 - 3
162 Basic Pharmaceutics II
3 4 4
119 Medical Microbiology-
Immunology
3 - 4
130 Analysis of Drug Substances
3 - 3
206 Pharmacy Administration
16 17

Fourth Year
Fall Semester
121 Pharmacology-Drug
Mechanisms I
4 - 4
105 Pharmaceutics-
Biopharmaceutics III
3 - 3
133 Medicinal Chemistry-
Natural Products I
4 - 4
125 Pharmacy Management
General or Professional
Elective
3 - 3
18 - 18

Spring Semester
132 Pharmacology-Drug
Mechanisms II
4 - 4
306 Pharmaceutics-
Pharmacokinetics IV
3 - 3
314 Medicinal Chemistry-
Natural Products II
4 - 4
431 Behavioral Aspects of Illness
2 - 2
General or Professional
Elective
3 - 3
16 17

Fifth Year
Fall Semester
440 Therapeutics
6 - 6
325 OTC Drugs
2 - 2
430 Patient Counseling &
Education
1 2 3
333 Drug Literature Resources
1 1 1
324 Public Health-
Emergencies
1 1 3

Spring Semester
D* L* C*
157

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D*—Didactic hours, L*—Laboratory hours, C*—Credit hours

Courses are to be completed in the designated sequence. Minimum credit for B.S. in Pharmacy Degree—156. Sufficient elective courses must be taken to satisfy the minimum credit requirements.

Changes may be made in some parts of the curriculum indicated as a result of continuing faculty evaluation of the Pharmacy curriculum.

AREAS OF CONCENTRATION
Six credits in Professional Pharmacy Electives is the minimum requirement for graduation. 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 Pharmacy, Nuclear Pharmacy, or Pre-Graduate Study.

Independent Study in the School of Pharmacy is considered professional elective course work and may be used in any of the areas of concentration. 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
2. Pharmacy and Therapeutics
3. Clinical Practice
4. Pharmacology
5. Preparatory Practice

2. Institutional Practice
3. Industrial Practice

School of Pharmacy

The School of Pharmacy primarily meets to investigate Advanced Placement, CLEP, and Challenge Examination opportunities, faculty research projects in which they may participate, and independent study and graduate-level course offerings.

SPECIAL FEES

Pharmacy Activities Fee

The School of Pharmacy Fee

All students enrolled in the undergraduate program of the School of Pharmacy are required to pay a fee designated by the University. This fee is assessed to those students in the last three years of the pharmacy program.

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, 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
2. Regular class attendance
3. The responsibility for all course material rests wholly with the student.
4. Under no circumstances will class attendance be used as the sole basis for altering a grade in a course.
5. This principle shall not modify the prerogative of the faculty on behalf of the student.

Scholars are recognized annually and encouraged to investigate Advanced Placement, CLEP, and Challenge Examination opportunities, faculty research projects in which they may participate, and independent study and graduate-level course offerings.

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 per course. This is a prorated charge derived from the total costs of all laboratory operations throughout the professional years.

Pharmacy Activities Fee

Instituted by student request, this fee of $37.50 a semester for a minimum of six semesters, covers local and national Academy of Students of Pharmacy dues and journal subscription, laboratory coats, towels and name pin fees, class dues, and partial travel expenses for one required field trip to a pharmaceutical manufacturing firm. Payment is made at registration each semester. The prorated fee is assessed only to those students in the last three years of the pharmacy program.

School of Pharmacy Fee

All students enrolled in the undergraduate program of the School of Pharmacy are required to pay a fee designated by the University. This fee, which is assessed for each semester that a student is enrolled in the School of Pharmacy, assists with the special operating expenses of the School of Pharmacy.

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Scholars are recognized annually and encouraged to investigate Advanced Placement, CLEP, and Challenge Examination opportunities, faculty research projects in which they may participate, and independent study and graduate-level course offerings.
A student who is unable to attend class because of serious illness, hospitalization, a serious accident or other extenuating circumstances is responsible for notifying the Office of Student Services 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 meeting.

2 Academic Standards All students in the School of Pharmacy are required to remain in good standing, academically, throughout the five-year B.S. in Pharmacy program and to maintain "normal progress" toward completing the degree requirements within the minimum five-year period. Promotion to each succeeding year in the B.S. in Pharmacy curriculum and the guarantee of a seat in each subsequent class (Pharmacy II, III, IV and V) is contingent upon

- the successful completion of all required course work (pre-professional sciences and mathematics) in the approved curricular sequence, and
- the attainment and maintenance of the required cumulative, science/mathematics and professional quality point averages of 2.0.

(The cumulative QPA is the average of all courses taken at Duquesne University.

The science/mathematics QPA is the average of all science and mathematics courses of the first two years of the five-year pharmacy curriculum.

The professional QPA is the average of all required and elective professional pharmacy courses in the curriculum.)

Any student who fails to maintain "normal progress" toward graduation as defined in the preceding paragraph, is subject to forfet of the guaranteed seat in the class of his/her matriculation. Subsequent accommodation of that student's continuation in the Pharmacy program in a lower class must be on a space available basis, with no guarantee of availability due to capacity enrollment at all levels of the curriculum. In the event that a student failing to maintain "normal progress" cannot be accommodated in the next lower class, he/she will be required to withdraw from the School of Pharmacy into any other program in the University for which he/she is eligible, or withdraw from the University.

3 Required Programs Pharmacy students in the fourth year of the curriculum are required to participate in one industrial visit arranged by the School.

The faculty of the School of Pharmacy may require Pharmacy student attendance at other seminars and special programs.

4 Health Requirements Any School of Pharmacy student entering studies in a hospital or other clinical setting may be required to conform to the health requirements of that institution.

STUDENT ORGANIZATIONS

The Academy of Students of Pharmacy whose membership includes all pharmacy students registered at the last three years of the School of Pharmacy aims to promote their interests, academic, social, and professional. All worthwhile events are arranged during the year by the Student Advisory Committee which consists of the officers of ASP and of other approved Pharmacy student organizations, meets regularly with the Dean and the faculty moderator to act as liaison between students and faculty. The annual membership includes one year's student membership to the American Pharmaceutical Association and a subscription to its Journal. Interested pharmacy students enrolled in their first and second years at the University are also eligible for membership and are encouraged to become actively involved in ASP.

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 years of work at the University level and have achieved a B average are eligible for membership. A maximum of 20 percent of the class enrolls as active members. The organization of pharmacists and affairs of the chapter are under the direction of the faculty, graduate students in the pharmaceutical sciences, and Doctor of Pharmacy students may also be invited to join.

Eta Chapter of Phi Lambda Sigma, a national professional pharmaceutical society, was chartered at Duquesne University in 1960. The society recognizes and encourages leadership in the profession of pharmacy. The society accepts as 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 students in pharmacy. Its purpose is 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 pharmacy 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 scholarship 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.

NARD Student Chapter A student chapter of the National Association of Retail Druggists, chartered in 1989, is open to all students enrolled in the School of Pharmacy. The purpose of the organization is to promote pharmacy as a profession and the role of the independent retail pharmacist in the American health care system by informing students of the ideals and issues pertinent to retail pharmacy practice and the opportunities and personal satisfactions to be derived from independent ownership.

Student Chapter of Western Pennsylvania Society of Hospital Pharmacists A student chapter of the Western Pennsylvania Society of Hospital Pharmacists, chartered in 1992, and open to all students enrolled in the School of Pharmacy. The organization will foster student awareness and provide information on pharmacy careers in organized health care settings and encourage participation in the activities of the state society and the American Society of Hospital Pharmacists.

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

HONOR AWARDS

American Institute of the History of Pharmacy Award A recognition certificate and gift publication are awarded annually by the American Institute of the History of Pharmacy for superior achievement in pharmacohistorical study or activity.

McKesson American Pharmaceutical Association Award A plaque provided by the McKesson Company is presented annually to the graduate who has made the most significant contribution to the Academy of Students of Pharmacy at Duquesne University.

Sara A. Corey Award An award presented annually to a graduating pharmacy student who has demonstrated considerable involvement in community professional programs.

Faculty Award The faculty of the School of Pharmacy may present an appropriate award to an outstanding member of the graduating class who has displayed exceptional qualities of academic excellence and a QPA of over 3.75.

Maurice H. Finkelpearl Award A monetary award is presented annually to a student who intends to practice Community Pharmacy.

Galen Pharmaceutical Society of Pittsburgh Award The Galen Pharmaceutical Society of Pittsburgh annually offers two monetary 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 An award is presented to the graduate who has shown outstanding ability and interest in the field of pharmaceutical study.

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 members of the graduating class who have obtained the highest averages in medicinal chemistry.

Rho Chi Award Alpha Chapter of Rho Chi awards annually a suitable key to the student who earns the highest general average in all subjects during the first two years of the pharmacy program.

Roche Pharmacy Communications Award A personalized plaque is awarded annually to the graduating student who has shown exceptional ability in patient communication through course work and application.

SmithKline Beecham Pharmaceuticals Award A personalized plaque is presented annually by the SmithKline Beecham Pharmaceuticals, Philadelphia, Pennsylvania, for superior achievement in patient care by a graduating student.

Academy of Students of Pharmacy Award Annually a certificate of recognition 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.

Western Pennsylvania Society of Hospital Pharmacists Award Annually a monetary award is presented to the graduating senior who demonstrates outstanding ability and interest in the area of Hospital Pharmacy.
RESEARCH FOUNDATION

The Hugh C. Muldoon and Pharmacy Alumni Foundation of Duquesne University, established in 1980 to celebrate the twenty-fifth anniversary of the founding of the School of Pharmacy in an increasingly valuable aid in helping to achieve the aims of the University and of the School of Pharmacy. The foundation provides funds for improving the instructional and research facilities of the School, it assists in the advancement of pharmacy by providing scholarship assistance to Pharmacy students and by supporting the training of undergraduate and graduate students in industrial and research procedures, it helps to extend the knowledge from research being conducted under the auspices of the School. Contributions are solicited from graduates and others interested in the work of the Foundation. They may be addressed in care of the School of Pharmacy.

COURSE DESCRIPTIONS

The courses of instruction are numbered in accordance with a plan uniform throughout the University. University courses numbered 100 are freshman courses; 200 Sophomore; 300 Junior; 400 Senior Courses described in this section are required courses in the professional curriculum and those courses offered by the School of Pharmacy faculty as a University service. Courses numbered 500 are graduate level courses in which qualified undergraduate students may be enrolled with the permission of the instructor of the course. Credit for these courses cannot be used to satisfy requirements for a second degree. Most courses in the 800 series are generally restricted to Doctor of Pharmacy candidates. Descriptions of Pharm D courses (800-level) may be found in the Doctor of Pharmacy Catalog.

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY AND PHARMACEUTICS

Chairman Lawrence H Block, Ph D

Faculty Professors Block, Galinsky, Gange, Key, Assistant Professors Adevy, Boni, Collins, Drennen, Harrold, Li

101 Pharmacy Orientation 1 cr
Introduction to the profession of pharmacy. Discussion of various aspects of pharmacy education and professional practice. Pharmaceutical organizations are discussed and evaluated. The pharmaceutical literature is reviewed and a brief history of pharmacy is presented. Lecture, one hour.

101 Basic Pharmaceutics—Pharmacy Math I 4 cr
A study of the basic psychochemical principles applicable to an understanding of drugs and the pharmaceutical systems in which they are contained. Subject areas include solubility and solutions, pH, dispersion, stability, drug stability, packaging, storage and administration, physicochemical evaluation of pharmaceutical products, and principles of the design and manufacture of drug delivery systems. The clinical applications of pharmacology are discussed. Mathematicians and pharmaceutical principles relevant to modern pharmaceutical practice are integrated into both the didactic and laboratory portions of the course. Laboratory emphasizes the practical and clinical applications. Prerequisites: Calculus 115, Physics for Pharmacy, Organic Chemistry I, II. Lecture, three hours, Recitation, conference, and laboratory, four hours.

302 Basic Pharmaceutics II 4 cr
A continuation of Pharmaceutics I. Prerequisite: Pharmaceutics I. Lecture, three hours, Recitation, conference, and laboratory, four hours.

305 Pharmacodynamics—Biopharmaceutics III 3 cr
A study of the physio-chemical, biological, and pharmacological factors which affect absorption, distribution, metabolism, and excretion of drugs in man. Emphasis is placed on the utilization of bio-chemical and biopharmaceutical knowledge and principles in evaluating problems of bioavailability and bioequivalence of drug products and in the determination of appropriate drug dosage regimens. Prerequisite: Basic Pharmaceutics I, II. Lecture, three hours.

308 Pharmacodynamics—Pharmacokinetics IV 4 cr
Mathematical examination of the processes examined in Pharmacodynamics III. Emphasis is placed on the determination of pharmacokinetic parameters, using several types of models, from biological and clinical data, and their use in predicting patient doses, dosage adjustments, and responses and the development of drug delivery systems to optimize drug delivery to the patient. The laboratory utilizes a computerized laboratory to illustrate pharmacokinetic algorithms. Understanding the origin of the pharmacokinetic models and test the application as a predictor in a variety of "patients". Prerequisite: Pharmacodynamics III. Lecture, three hours, Recitation, one hour, Laboratory, two hours.

309 Biochemistry—Nutrition 4 cr
A course designed to integrate basic biochemistry with the application to selected clinical cases. Emphasis is placed on studies of amino acids and proteins, structure and function, metabolism, carbohydrates, lipids and proteins as the source of energy derived from foods, certain aspects of nutrition. The function of enzymes, vitamins and hormones is presented in relation to their role in metabolism. Studies on DNA structure, replication, transcription and protein synthesis and its regulation are discussed. Prerequisite: Organic Chemistry I, II. Lecture, three hours, Laboratory, three hours.

STATE LICENSING PENNSYLVANIA

A candidate for licensure as a Registered Pharmacist in the Commonwealth of Pennsylvania must meet the following requirements before he/she may be admitted to the licensing examinations which are conducted by the Pennsylvania State Board of Pharmacy.

1. Character—a being of moral character and not have any criminal offense in connection with the practice of pharmacy or the abuse of any chemical substance.

2. Professional Training—have a degree in Pharmacy granted by a School of Pharmacy which is accredited by the American Council on Pharmaceutical Education.

3. Practical Experience and Internship—any person enrolled as a student of pharmacy in an accredited college may at the end of the second year of college file with the Pennsylvania State Board of Pharmacy an application for registration as a pharmacy intern.

To ensure proficiency in the practical aspects of pharmacy, the State Board shall by regulation prescribe internship requirements which must be satisfied prior to sitting for the licensing exam and 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 Building, 6th Floor, Harrisburg, Pennsylvania 17120.

STATES OTHER THAN PENNSYLVANIA

According to law, the licensure of an applicant seeking to become registered as a pharmacist is under the sole jurisdiction of the state in which he/she seeks to practice. Although the requirements for licensure in the Commonwealth of Pennsylvania are similar to those of other states, differences do exist. Space limitations preclude a complete listing of the requirements of other states and the Distirct of Columbia. The candidate for licensure in another state is advised to consult the Board of Pharmacy in that particular state for complete and current information. Also, internships requirements in other states differ from those in PA.

CAREER GUIDANCE CENTER

The Office of Student Services of the School of Pharmacy keeps students informed about the latest career opportunities available to those possessing a pharmacy education and recruits high school students to the profession. School of Pharmacy faculty members and alumni pharmacy practitioners are available, upon request, to speak at career development programs and provide information to high school counselors on all matters relating to a pharmacy education and career.

Pamphlets containing career information on Pharmacy are also available through the Office of Student Services. Inquiries should be directed to the Office of Student Services, School of Pharmacy, Duquesne University, Pittsburgh, Pennsylvania 15282.

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2. Professional Training—have a degree in Pharmacy granted by a School of Pharmacy which is accredited by the American Council on Pharmaceutical Education.

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Pamphlets containing career information on Pharmacy are also available through the Office of Student Services. Inquiries should be directed to the Office of Student Services, School of Pharmacy, Duquesne University, Pittsburgh, Pennsylvania 15282.
310 Analysis of Drug Substances 4 cr
A survey course covering the basic principles of analytical chemistry, statistics as applied to measurement, the analytical process, problem solving and data interpretation. Examples used come from pharmaceutical manufacturing, clinical and biochemical analysis, pharmacokinetics, pharmacology and drug therapeutics. Prerequisites: General Chemistry, Organic Chemistry, and Biochemistry Lecture-demonstration laboratory, four hours.

313 Medical Chemistry—Natural Products I 4 cr
Relationship between chemical structure and the biological action of natural and synthetic drug molecules. Emphasis is on understanding principles as well as on specific therapeutic agents. Organization is by pharmacological classification, with chemical properties relating to mechanism of action, drug disposition (absorption, distribution, metabolism, and excretion) and chemical incompatibilities considered for each class. Prerequisites: Organic Chemistry I, II and Biochemistry Lecture, four hours.

299 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 of Student Services for restrictions on total credits allowed and on eligibility for registration.

DEPARTMENT OF PHARMACOLOGY-TOXICOLOGY

Chairman J. Douglas Bricker, Ph.D.
Faculty Professors Giannetti, Associate Professors Harris, Kristofik, Assistant Professors Newton, Wu

230. Pharmacy 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 antitrust laws, trade regulations, and court decisions of importance to the pharmacist is included. The course emphasizes the legal responsibilities of the pharmacist and the ethical issues in pharmacy practice and health care are discussed. Lecture, three hours.

262 International Health Issues 3 cr
The course will explore factors that influence health care in diverse countries. Topics covered include a comparison of health services, the use of regional planning by groups of small countries, prevention and control of specific diseases, oral hygiene emphasis on communicable diseases, primary health care, and the role of international agencies from the perspective of developed and developing countries. The course will emphasize the functional, administrative, and financial influences on health care, health priorities in the context of general needs. Lecture, three hours.

232 Pharmacy Management 4 cr
A course designed to familiarize students with the fundamentals of personnel, marketing, inventory, and financial management decisions with the overall objective of improving pharmacy practice efficiency. Lecture, four hours.

236 Pharmacy Administration 3 cr
A course designed to familiarize the student with the diverse 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 pharmacist. Lecture, three hours.

430 Patient Counseling and Education 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 interpersonal and communication techniques. Seminar—laboratory, two hours.

431 Behavioral Aspects of Illness 2 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...
DEPARTMENT OF CLINICAL PHARMACY

CHAIRMAN: Bruce H. Livelygood, PharmD
FACULTY: Associate Professors Eder, Freedy, Grudzi, Keys, Leech, Livelygood, Matter, Poiner, Rihn, Assitant Professors Avila, Schatz, Schlicht, Instructor Karnaick

333 Drug Literature Resources 1 cr
This course is intended to acquaint the student with various drug information resources and how to appropriately utilize these resources in responding to information requests. The course will review the primary and secondary literature, indexing and abstracting systems, the systematic search process, principles of literature evaluation, and the approach for answering common drug information questions.

440 Therapeutics 6 cr
A course designed to provide the student with the information necessary to demonstrate competency related to the therapeutic principles of selected disease states. Prerequisites: Pharmacology, Drug Mechanisms I, II and Medicinal Chemistry: Natural Products I, II, Lecture, six hours.

441 Practical Pharmacy I - Clinical Clerkship 3 cr
An educational process designed to provide the student with clinical experiences necessary to demonstrate competency in the areas of providing patient education, ascertaining drug histories, participating in the selection and monitoring of therapeutic modalities, and other pharmacist-related functions. The fifth-year Pharmacy student will be assigned to a member of the clinical faculty and a given practice site. Note: Calendar change for fifth-year Pharmacy students may be required.

491 Hospital Pharmacy Management 3 cr
A course designed to introduce the student to hospital pharmacy resource management and to serve frequently associated with hospital pharmacy practice. Lecture, three hours.

SCHOOL OF HEALTH SCIENCES

John G. Rangos, Sr.
School of Health Sciences

342 Practical Pharmacy II - Community 3 cr
Required of all final-year Pharmacy students and involving placement in an operating community pharmacy with a pharmacist-preceptor. Off-campus placement is necessary. Note: Calendar change for fifth-year Pharmacy students may be required.

343 Practical Pharmacy III - Hospital 3 cr
Required of all final-year Pharmacy students and involving placement in an operating hospital pharmacy with a pharmacist-preceptor. Off-campus placement is necessary. Note: Calendar change for fifth-year Pharmacy students may be required.

344 Practical Pharmacy IV - Optional 3 cr
Required of all final-year Pharmacy students and involving placement in an operating pharmacy or related practice setting with a pharmacist-preceptor. Off-campus placement is necessary. Note: Calendar change for fifth-year Pharmacy students may be required.

481 Pharmacy Sales & Marketing 2 cr
An introduction to the pharmaceutical manufacturer’s role in marketing drug products. The concepts, elements, and functions involved in the distributive chain between the manufacturer of the drug and the ultimate user are considered. Lecture, two hours, Practicum, one hour.

482 Community Pharmacy Practice 3 cr
This course explores selected topics in the organization and operation of a pharmacy. Topics include organizing and financing a pharmacy, examining the economic and political environment, evaluating a third party program, marketing pharmacy services, assessing computerization and automating a pharmacy, and other current issues. The goal is to provide knowledge and managerial skills necessary to succeed in a competitive marketplace. Lecture, three hours.

483 Aging and Health Care 3 cr
A course designed to introduce the student to the field of gerontology. Emphasis will be on the aging process and the special health care needs of the elderly from a multidisciplinary perspective, including the behavioral sciences, physiology, and pharmacology, and clinical pharmacy. Lecture, three hours.

The philosophy and mission of the RSHS is consistent with the mission of the University and addresses the four major objectives

- To create undergraduate and graduate education of the highest quality in liberal and professional disciplines
- To examine the moral and ethical foundations of their thought and action, and to develop their personal values and ethical commitment
- To participate in an ecumenical dialogue open to all beliefs
- To extend educational opportunities to those with special financial, educational, and physical needs

The philosophy of the RSHS is in accord with the educational philosophy and objectives of the University. Students in the RSHS will be exposed to a broad liberal education with emphasis on understanding the scientific/theoretical/theologic constructs in the world. The academic programs will focus on the scientific theories of the various professions coupled with a strong appreciation and understanding of human values.
ADMISSION OF FRESHMEN

The admissions deadlines for freshmen applications are:

1. All applications to the Occupational Therapy and Physical Therapy programs must be completed and received by December 1. Information regarding the required materials needed for a complete application follows.
2. All applications to the Athletic Training, Health Information Sciences, and Physician Assistant programs must be completed and received by July 1. Information regarding the required materials needed for a complete application follows.

In order for applications to be considered “complete,” all transfer and second degree applicants are required to:

1) Complete the standard undergraduate application (excluding the essay on the back of the application and the initial letter of reference). This application is only available online.
2) Complete a supplemental application, the addendum, which will be mailed by the Office of Admissions upon receipt of the undergraduate application. This addendum includes:

A) A self-evaluation essay
B) An experience summary form for documentation of all volunteer experience in health care and in the field to which the student is applying. The RSHS is referring to any volunteer, paid, shadowing or overseas experience in any environment where students can work with a professional in their chosen field. Please note that all students in the RSHS are required to complete volunteer experiences prior to entering the professional phase of their respective program.

ADMISSION OF TRANSFER AND SECOND DEGREE CANDIDATES

The admissions deadlines for completed transfer and second degree applications are:

1. All applications to the Occupational Therapy, Physical Therapy and Physician Assistant programs must be completed and received by December 1. Information regarding the required materials needed for a complete application follows.
2. All applications to the Athletic Training, Health Information Sciences, and Physician Assistant programs must be completed and received by July 1. Information regarding the required materials needed for a complete application follows.

In order for applications to be considered “complete,” all transfer and second degree applicants are required to:

1) Complete the standard undergraduate application (excluding the essay on the back of the application and the initial letter of reference). This application is only available online.
2) Complete a supplemental application, the addendum, which will be mailed by the Office of Admissions upon receipt of the undergraduate application. This addendum includes:

A) A self-evaluation essay
B) An experience summary form for documentation of all volunteer experience in health care and in the field to which the student is applying. The RSHS is referring to any volunteer, paid, shadowing or overseas experience in any environment where students can work with a professional in their chosen field. Please note that all students in the RSHS are required to complete volunteer experiences prior to entering the professional phase of their respective program.

ADMISSIONS INFORMATION

All new incoming freshmen, transfers, and second degree candidates must apply through the Office of Admissions.

Students will only be considered for admission into a specific program. Students are not able to apply to the RSHS as undecided. Students may apply to all RSHS programs for the full semester only, with the exception of those students who will be entering directly into the professional phase of the Physician Assistant program, which begins in the summer term.

All students interested in applying to the RSHS should request information and an application by writing to the Office of Admissions, Duquesne University, Pittsburgh, PA 15262 or by calling 412-396-5000.

Interviews and appointments for the evaluation of transfer credits, may be arranged through the Office of Admissions, but are not required for most programs. Prospective Athletic Training, Physician Assistant, and Physician Assistant students who will be applying for entry directly into the professional phase, will be contacted by the RSHS staff for an interview.

Please note that admissions policies are subject to change at the discretion of the RSHS and the Office of Admissions.

PROGRAMS AND DEGREES AWARDED

The Rangos School of Health Sciences offers five-year-level master's degree programs in Health Information Sciences (M HIS), Occupational Therapy (M OT), Physical Therapy (M PT), and Physician Assistant (M PA). The academic model for these programs is three years of liberal arts and science requirements followed by two years of professional education. This three-year model is unique.
Students may transfer into any program at any level, based upon their credentials, courses completed at other institution(s), courses yet to be completed prior to entry into the professional phase, and space availability in the desired program.

If spaces are available, students who meet the admissions requirements and have fulfilled, or will fulfill prior to entry, all the required pre-professional course work, may be considered for admission directly into the professional phase itself.

Transfer and second degree candidates will be considered for admission on a selective and competitive basis as long as space permits in each program. The RSHS does not expect to review any applications received after July 1. Prospective transfer and second degree candidates who do not meet the above criteria may still be considered for admission, based upon the quality of their overall application.

DEPARTMENT OF ATHLETIC TRAINING (AT)

Chapman  
Paula G. Sarnamore, M.A., A.T.C.

Americans are becoming increasingly aware of the importance of proper nutrition and physical activity in living a longer, healthier life. More and more people are becoming physically active and maintaining this activity throughout their lives. At the same time, increased participation in organized sports and advances in medical technology have made knowledgeable, capable and caring health care personnel more essential to the health care team than ever before to care for the scholar athlete and professional athletes at all levels of competition.

In 1991, the profession of athletic training was recognized by the American Medical Association (AMA), however, athletic trainers have been providing care for athletes at all levels for more than 40 years. High schools, colleges, professional teams and independent sports clubs all require the on-site services of an athletic trainer to decrease the incidence of an injury as well as provide care for athletes injured which may occur. The responsibilities of the athletic trainer are to provide first aid for on-field injuries, evaluate injuries, design treatment and rehabilitation programs in collaboration with a physician, and prepare athletes to return to competition using flexibility, strength and cardiovascular programs designed specifically for the individual athlete.

Athletic trainers are responsible for designing and managing the training rooms, maintaining medical records and ensuring that safety precautions are taken during practice and game situations. They work closely with other members of the health care team to provide prevention, first aid, evaluation, rehabilitation, treatment and education to those athletes with whom they work.

The Athletic Training program at Duquesne University is a four-year bachelor's degree program. Students in this program also have the opportunity to complement this degree with a Master of Science degree in Education. With this joint degree opportunity, students may be eligible for permanent teaching certification in the areas of Mental and Physical Handicapped, Secondary General Science or Secondary Biology Education. Also, on a very limited basis, students may enroll in the joint degree program with the Department of Physical Therapy, leading to a Bachelor of Science in Athletic Training and a Master of Physical Therapy.

Second degree candidates should carefully investigate the financial implications of the entry-level master's degree programs and be aware that the matriculation into the program as a graduate student. All transfer and second degree candidates should realize that financial aid may be limited because of their previously earned credits and/or degree(s).

School of Health Sciences

ATHLETIC TRAINING CURRICULUM

Pre-Professional Phase — 63 Credits

RSHS Core — 4 Credits

Health Sciences Orientation  1

Essential Concepts and Techniques in AT  1

University Core — 21 Credits

Thinking and Writing Across the Curriculum  3

Imaginative Literature and Critical Writing  3

Basic Philosophical Questions  3

Social, Political and Economic Systems  3

Shaping of the Modern World  3

The Arts and the Human Experience  3

Christian Understanding of the Human Person  3

Science, Math and Humanities — 30 Credits

General Biology I  5

General Chemistry I  5

General Physics I  5

Principles of Computer Science  3

Fundamentals of Statistics  3

Introduction to Psychology  3

Developmental Psychology II  3

Public Speaking  1

Epidemiology of Scientific Terms  3

Medical Sciences — 4 Credits

Anatomy and Physiology I  5

Anatomy and Physiology Laboratory I  3

Anatomy and Physiology II  5

Anatomy and Physiology Laboratory II  3

Professional Phase — 65 Credits*

Fall Semester

Anatomy  5

Therapeutic Modalities  4

Personal and Community Health  3

Art and Science of AT I  3

Clinical Practicum in AT I  2

Spring Semester

Anatomy and Physiology I  5

Therapeutic Exercise and Reconditioning in AT  4

Research in AT  4

Music and Science of AT  3

Functional Kinesiology/Biomechanics  3

Clinical Practicum in AT II  3

Credits  17

Fourth Year

Fall Semester

Physiology of Exercise  3

Psychology of Sport  3

Organization and Administration in AT  3

Current Issues in AT or Education Elective  3

Clinical Practicum in AT III  4

Credits  16

Spring Semester

Nutrition and Weight Management in Sport  3

Medical Perspectives in AT  3

Death in Pharmacology  3

Development of Fitness/Performance or Education Elective  3

Advanced Clinical Practicum in AT  4

Credits  16

*Students will be given sport assignments and responsibilities as directed by the Athletic Training Faculty and the Head Athletic Trainer. Students will be expected to participate in all clinical activities for that assignment. Further explanations are available in the RSHS and Department Student Athletic Trainer Handbook.

COURSE DESCRIPTIONS FOR THE PROFESSIONAL PHASE

201 Essential Concepts & Techniques in Athletic Training  3

An introduction to the basic and essential elements of Athletic Training including emergency management, recognition, evaluation and follow-up care for injury and illness. Environmental effects on the body, treatment protocols, taping techniques, and other fundamental concepts relating to athletic injury care are discussed as they relate to prevention and management. Prerequisites: 2017038 Anatomy and Physiology I and 2017020 Anatomy and Physiology II.

302 Art & Science of Athletic Training  1

This course provides students with opportunities to learn evaluation techniques, recognize special problems and injuries of the lower extremity. Also included is a review of initial management of sports injuries of the lower extremity and the appropriate selection of special equipment and devices. Prerequisites: ATHTR 201.

303 Art & Science of Athletic Training II  3

This course provides opportunities to learn evaluation techniques, recognize special problems and injuries of the lower extremity. Prerequisites: ATHTR 302.

305 Personal & Community Health  3

Health is a process of continuous change or adaptation throughout the human life cycle. This course presents a stimulating and realistic approach to understanding the contemporary health problems in the areas of personal and community health. Also stressed are the practical applications of health principles to relevant personal and community situations.
306 Therapeutic Exercise & Reconditioning in Athletic Training 4 crs
In this course, students are instructed in the basic components needed to develop a comprehensive rehabilitation program. Students also learn to distinguish between the rehabilitation and reconditioning needs of a physically active individual and develop appropriate programs. Topics include use of functional testing equipment, manual muscle testing, contemporary immobilization techniques, ambulatory aids, exercise progression and protocols. Prerequisites: BIOL 207/208, 209/210, HLTSC 407, ATHTR 302.

307 Anatomy 5 crs
This course is designed to present an in-depth consideration of the musculoskeletal and peripheral nervous systems of the human body, with limited considerations of pertinent aspects of the cardiovascular and other body systems as well. An introduction to pertinent developmental aspects also will be presented. This material will be presented formally in lecture format, and supplemented by directed laboratory experience, examining human skeletal and muscular systems, dissecting human cadaver specimens, and completing charts on selected medical questions. Films and slides Prerequisites: BIOL 207/208 Anatomy and Physiology I/Lab and 209/210 Anatomy and Physiology II/Lab.

307 Physiology of Exercise 3 crs
This course includes lectures, assigned readings, and lab exercises to aid in scientific evaluation of effects of muscular, cardiovascular, and respiratory activity upon the human mechanisms as a whole. Applications are made specifically for problems encountered by the Athletic Trainer. Prerequisites: BIOL 111, 207/208, 209/210, CHEM 121.

311 Current Issues in Athletic Training 3 crs
This seminar course includes a review of topical literature, political issues, and other contemporary concerns in the Athletic Training community. Students discuss and debate issues germane to physically active special populations. Special populations include geriatric, adolescent, pediatric, and mentally and physically handicapped individuals. Prerequisite: ATHTR 303.

315 Clinical Practicum in Athletic Training I 2 crs
This practicum incorporates “hands-on” basic athletic training with team assignments. Student responsibilities include coverage for practice and games, as well as experiences found only in the training room. Taping techniques, record keeping, as well as recognition and management of injuries, are intricate components of this clinical practicum. Prerequisite: All Pre-Professional requirements. Prerequisite: ATHTR 201.

316 Clinical Practicum in Athletic Training II 3 crs
This is a continuation of the previous practicum, however, students now are able to apply knowledge gained from previous courses to develop rehabilitation and reconditioning programs for their athletes. Students also are responsible for writing case-studies on injured athletes. Prerequisite: ATHTR 302, 315.

402 Nutrition & Weight Management in Sport 3 crs
This course covers the essential nutrients, their physiological effects on the body, and the role these nutrients can play in a physically active individual's performance. Information on eating disorders, weight management, special dietary considerations, and ergogenic aids also is discussed. Prerequisite: CHEM 121, ATHTR 307.

404 Psychology of Sport 3 crs
This course incorporates basic psychological principles and relates them to areas of concern found in sport. Topics include mental imagery, psychology of injury, self-esteem and self-efficacy, stress management and burnout, pain tolerance, gender roles, performance enhancement, and the interactions between coaches, athletes, parents, and the medical community. Prerequisite: PSYCH 103.

406 Research in Athletic Training 3 crs
Students are exposed to the basic components of scientific research and become familiar with the current trends in research in Athletic Training and Sports Medicine. As part of this course, students conduct individual or small group semester-long projects on topics of their choice in the area of Sports Medicine. Prerequisites: MATH 125, ATHTR 302.

410 Clinical Practicum in Athletic Training III 4 crs
Buildup/peak experiences, students are deemed as the Head Student Trainers for the assigned sports teams. Students are responsible for the total care of the assigned sports teams, including the implementation of rehabilitation and reconditioning programs. Preparations for the National Athletic Trainers' Association Board of Certification examination are made during this semester. Prerequisites: ATHTR 303, 306, 316, HLTSC 305.

411 Advanced Clinical Practicum in Athletic Training 4 crs
During this practicum, students may choose to work in either a sports medicine clinic or with an assigned athletic team. Preparations for the National Athletic Trainers' Association examination are made during this semester. This practicum may be interchanged in rotation with the clinical practicum III, only if prerequisites: ATHTR 303, 306, 316, HLTSC 305.

412 Organization & Administration in Athletic Training 3 crs
This course is designed to provide the student with information that will enhance his/her ability to function effectively as a professional Athletic Trainer and to enhance his/her awareness of current administrative, professional, organizational, and legal issues pertaining to Athletic Training. Topics include: budget management, facility design, record keeping, professional organizations, and liability. Additional topics may include educational requirements, personnel management, public relations, and preparation for the future of Athletic Training. Prerequisite: ATHTR 316.

414 Medical Perspectives in Athletic Training 3 crs
This course is designed to expose students to medical topics in areas such as orthopedics, OB/GYN, dental, family practice, podiatry, physical therapy, dermatology, health records and radiology. Practitioners from each of the respective areas provide information to enhance the interdisciplinary approach to the responsibilities of an athletic trainer. Prerequisite: ATHTR 303.

420 Development of Fitness/Performance 3 crs
Expanding upon the basic principles learned in Physiological Exercise and Therapeutic Exercise and Conditioning in Athletic Training, students are presented with the basic concepts of year-round conditioning and strength training and are asked to apply those concepts to develop programs which encompass the unique physical requirements of a variety of sports. Prerequisites: ATHTR 306, 317.

421 Topics in Pharmacology 3 crs
This course is designed to provide students with information and insight into the commonly used OTC and prescription medications utilized in sports medicine. The indications for their use and their physiological effects on the body, and the role the, are covered. Prerequisites: CHEM 121, ATHTR 307.

422 Therapeutic Modalities 4 crs
This course provides the students with information on the process of tissue healing, as well as the types of equipment and techniques which may be used to assist in the recovery from an injury. Topics include cryotherapy, radiant energy, intermittent compression, traction, massage, ultrasound, electrotherapy, paraffin baths, and hydrotherapy. Prerequisites: PHYS 201, ATHTR 201.

437/438 Functional Kinesiology/Biomechanics/Lab 3 crs
This course is designed to study, in detail, the elements of normal human motion. Specifically, the course will focus on integrating the “Laws of Nature” which influence movement with anatomical concepts and the concepts of osteokinesiology and arthro-kinematics of joints. Corequisite: ATHTR 303. Anatomy and Physiological Exercise.
University Core — 21 Credits
Thinking and Writing Across the Curriculum
Imaginative Literature and Critical Writing
Basic Philosophical Questions
Social, Political and Economic Systems
Shaping of the Modern World
The Arts and the Human Experience
Christian Understanding of the Human Person
Science, Math and Humanities — 45 Credits
General Biology I
General Biology II
General Chemistry I
College Algebra
Fundamentals of Statistics
Elements of Computer Science
Introduction to Computer Science/Basic
Computer Programming I
Introduction to Psychology
Developmental Psychology I
Developmental Psychology II
Public Speaking
Etymology of Scientific Terms
Health Care Ethics
Medical Sciences — 11 Credits
Anatomy and Physiology I
Anatomy and Physiology Laboratory I
Anatomy and Physiology II
Anatomy and Physiology Laboratory II
Biology of Microbes
General Electives — 12 Credits

Professional Phase — 74 Credits*

Fourth Year

Fall Semester
Clinical Medicine I 3
Computer Science for HIS 3
Health Care Data, Coding and Information Systems I 4
Health Care Delivery Systems and Reimbursement I 3
Introduction to HIS 2
Research Seminar in HIS I 1
Credits 16

Spring Semester
Clinical Medicine II 3
Health Care Data, Coding and Information Systems II 4
Health Care Delivery Systems and Reimbursement II 3
Research Methodology and Statistical Reasoning 3
Research Seminar in HIS II 1
Field Experience I 2
Credits 16

Summer Term
Health Care Administration I 3
Management and Supervision 3
Information Technology in Health Care 3
Legal Aspects of Health Care 3
Research Seminar in HIS III 1
Research Statistics and Analysis 3
Field Experience II 1
Credits 13

Fall Semester
Information Technology in Health Care II 3
Health Care Administration II 3
Financial Planning and Budgeting 3
Health Care Symposium 3
Research Project I 1
Field Experience III 2
Research Seminar in HIS IV 1
Credits 15

Spring Semester
Health Care Administration III 3
Planning, Budgeting and Evaluation 3
Patient and Consumer Health 3
Education and Consultation 3
Research Seminar in HIS V 1
Research Project II 1
Field Experience IV 1
Credits 15

*Above indicates the proposed professional phase curriculum for 1993-94

Department of Occupational Therapy

Chairman
Patricia A. Crist, Ph.D., OTR

Occupations are the essence of productive living. Occupational therapists focus on the occupations used by people to live full, independent, quality lives. Occupations or activities of daily living include work or education, self-care, play/leisure and their effect rest has on these activities. The goal of this profession is to maximize a person's ability to perform culturally-appropriate daily occupations, which is an important value in today's health care system.

Occupational therapists treat and consult with persons to promote an individualized, self-determined balance of the three occupations from womb to tomb. Occupational competencies are developed by treating the "whole person" including physical, psychological, emotional, social and cultural competencies as influenced by the occupational environment. Occupational therapists promote self-determination by involving persons in the activities which receive attention during service delivery. The enhancement of person-environment interaction through the various occupations is the primary focus of occupational therapy. This involves not only the individual performance components but also, removal of architectural barriers that hinder performance, and provision of reasonable accommodations, such as rehabilitation technology or assistive living devices.

The variety of health care issues addressed by occupational therapists is exceedingly diverse and includes acute care, industrial rehabilitation, physical rehabilitation, mental health, long-term care, home care, community services, education, disease prevention and health promotion. Importantly, cognitive, such as quality of life, productive functioning, independent living, full access, social integration, cultural identification and balanced life styles are central to the practice of occupational therapy. New legislation promoting function and providing the civil rights for persons with disabilities regarding employment, transportation, communication and environmental access to public areas, the resources and knowledge provided by occupational therapists will intensify and diversify. As a result, graduates of this program must be able to evaluate knowledge, guide professional decisions, cooperate effectively with a variety of groups and serve as a professional leader and community advocate. These competencies are the essence of occupational therapy in the future and consequently, the principles guiding this curriculum.

The employment prospect for Duquesne University's graduates is excellent. The 1990 Occupational Outlook Quarterly projects 48,000 openings in occupational therapy, including 16,000 new positions in the year 2000. Recent U.S. Bureau of Labor Statistics estimate a 55 percent increase in demand for occupational therapists by 2005. The Occupational Therapy program at Duquesne University is a five-year entry-level master's degree program. Upon successful completion of the fourth year, students who have not already earned a bachelor's degree will be awarded a Bachelor of Science in Health Sciences. Upon successful completion of the fifth year, students will be awarded a Master of Occupational Therapy. After formal presentation of the program is received, graduates will be eligible to sit for the national certification examination administered by the American Occupational Therapy Certification Board for licensure, if required. The initial accreditation review is in progress.

Occupational Therapy Curriculum

2-Year Professional Phase — 93 Credits

PHS Courses — 16 Credits
Path Sciences Orientation
Occupational Therapy Foundations

Summer Term

Fall Semester

Summer Term
### COURSE DESCRIPTIONS FOR THE PROFESSIONAL PHASE

**305 Physiology**  
4 crs  
This course in human physiology is designed with four purposes to provide more than just a basic appreciation of the sciences of physiology that are of particular importance to the human body, to reinforce and expand the functional knowledge that you have already acquired, to serve as a sound foundation for your subsequent, more clinically-oriented training, and, to provide direct correlations of these basic sciences with pertinent clinical applications. Prerequisites 207/208 Anatomy and Physiology I/Lab and 209/210 Anatomy and Physiology II/Lab.

**307 Anatomy**  
5 crs  
This course is designed to present an in-depth consideration of the musculoskeletal and peripheral nervous system of the human body, with limited consideration of pertinent aspects of the cardiovascular and other body systems as well. An introduction to pertinent developmental aspects will be presented. This material will be presented for mainly in lecture format, and supplemented by direct experiences in examining human skeletal models, dissecting human cadaver specimens, anatomical models, audiovisual tapes, films, and slides. Prerequisites 207/208 Anatomy and Physiology I/Lab and 209/210 Anatomy and Physiology II/Lab.

**410 Life Span Occupational Performance**  
3 crs  
The performance components or functional abilities that determine occupational performance in activities of self-care, socialization, work/education, and play/leisure will be presented. The interaction between person, environment, and performance will be explored within a life span developmental context. Personal performance components will include psychologic, physiological, sensory, motor, and cognitive and pharmacologic dimensions. Environmental components will include cultural, physical, social, and public policy aspects. Prerequisite 305 Occupational Therapy Foundations.

**435 Occupational Performance Assessment**  
3 crs  
Introduction to tests and measurements including theories, methods, scales, procedures, statistics, interpretation, and ethics. Assessment of occupational performance and the performance components will be presented. Prerequisites 305 Occupational Therapy Foundations and 410 Life Span Occupational Performance.

**437/438 Functional Kinesiology/Biomechanics/Lab**  
3 crs  
This course is designed to study, in detail, the elements of normal human motion. Specifically, the course will focus on integrating the "Laws of Motion" which influence movement with anatomical concepts and the concepts of osteokinematics and arthromechanics of joints. Corequisite: 307 Anatomy.

**440 Interpersonal Communication/Group Dynamics**  
2 crs  
Understanding and directing communication between people for therapeutic and supervisory functions. Concepts and theories of group formation, development, and structure for application with clients and staff. Prerequisite: 305 Occupational Therapy Foundations.

**441 Medical Sciences I**  
3 crs  
This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifest by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working clinical therapy diagnosis. Prerequisite: 307 Anatomy.

**445 Activity Analysis and Adaptations**  
3 crs  

**460 Sociocultural Diversity in Treatment**  
3 crs  
The purpose of this seminar is to integrate information across the curriculum, explore clinical reasoning, and participate in interdisciplinary clinical education activities. Focus will be on establishing therapeutic interactions, clinical observation, and case study methodology. Includes 40 hours of practicum. Prerequisites: 435 Occupational Performance Assessment, 441 Medical Sciences I, 445 Activity Analysis and Adaptations, and 460 Sociocultural Diversity in Treatment.

**501 Neuroscience**  
4 crs  
This course examines the central, autonomic, and peripheral nervous system from an anatomical and physiological perspective. Microscopic and macroscopic structures will be identified and examined in detail. Prerequisites: 307 Anatomy and 305 Physiology.

**505 Biomechanical Treatment**  
4 crs  
Biomechanical theories and intervention strategies in occupational therapy. Focus will be on the application of neuropsychological principles, sensory motor learning and movement, and specific interventions such as neuromotor developmental treatment and sensory integration. Prerequisites: 501 Neuroscience and 515 Clinical Education and Reasoning II.

**535 Cognitive Approaches to Treatment**  
2 crs  
Cognitive and information processing theories and rehabilitation approaches in occupational therapy. Focus will be on arousal, orientation, recognition, memory sequencing, concept formation, generalization, language and problem-solving skills, and remediation. Cognitive rehabilitation approaches in neuropsychological conditions will be emphasized. Prerequisites: 501 Neuroscience and 515 Clinical Education and Reasoning II.

**540 Research Procedures**  
2 crs  
Implementation of a research project. Self-directed activities will include applying for institutional approval, securing subjects and completing the data gathering phase. Prerequisites: 510 Clinical Research Methods and 515 Clinical Education and Reasoning II.

**541 Medical Sciences II**  
3 crs  
This course is a continuation of Medical Sciences I. As such, it will also incorporate the sciences of pathology and physiology with the medical specialties of radiology and the medical laboratory to pro-
545 Occupational Performance

4 crs
This course will synthesize material from preceding treatment courses and emphasize provision of occupational therapy service within systems. Topics to be covered will include a variety of service settings such as medical rehabilitation and hospital-based clinics, school systems, early intervention, family-centered care, home health, work readiness, and private practice. The role of occupational therapy in these settings will be explored. Prerequisites: Biomechanical Treatment, 515 Clinical Education and Reasoning I, 525 Psychological Approaches to Treatment, 530 Neuromotor and Sensory Treatment, and 535 Cognitive Approaches to Treatment.

552 Environmental Adaptation & Rehabilitation Technology

3 crs
Modification of the physical environment and rehabilitation technologies to assess environmental resources and perform occupations. Computer access and utility, environmental control, and adapted living and communication devices which assist individuals in performing the activities of daily living will be presented. Prerequisites: 505 Biomechanical Treatment, 515 Clinical Education and Reasoning I, 525 Psychological Approaches to Treatment, 530 Neuromotor and Sensory Treatment, and 535 Cognitive Approaches to Treatment.

555 Level I A Fieldwork (12 weeks)

8 crs
Prerequisite: 516 Clinical Education and Reasoning I.

556 Level I B Fieldwork (6 weeks)

4 crs
Prerequisite: 555 Level I A Fieldwork Education.

557 Level I C Fieldwork (6 weeks)

4 crs
Prerequisite: 556 Level I B Fieldwork Education.

Clinical education including exposure to a wide range of diagnoses and treatment in a variety of settings which will be supervised by a registered occupational therapist. The last 6-week placement will provide the development of specialized clinical skills.
An understanding of pathological conditions that exist in all organ systems with special emphasis on the cardiovascular system. Acquired and congenital defects will be discussed. Attention will be given to pathological conditions that exist in patients requiring perfusion.

401 Clinical Perfusion Technology
Clinical experience in the preparation of extracorporeal circulatory devices and physiological monitoring instrumentation in support of cardiovascular surgery. Major areas of experience will include heart-lung bypass for adults, adjunctive techniques used with extra-corporeal circulation, and patient monitoring techniques.

402 Clinical Circulation Technology
Special applications of perfusion technology will be presented. They are cardiac catheterization, right and left heart bypass, autotransfusion, hepatic and cardiac transplantation, renal dialysis, and hypothermia.

450 Clinical Practicum in Perfusion Technology
An opportunity is given to acquire skills necessary for clinical perfusion. Students will be directly supervised during all procedures. Major areas of experience include laboratory experience, heart-lung bypass, long-term supportive extracorporeal circulation, monitoring, hypothermia, pulsatile flow devices, red blood cell concentration and hemodilution, and pharmacologic intervention. Monitoring techniques will include hemodynamic measurements, temperature monitoring, blood gas analysis, electrophysiology, coagulation status, fluid-electrolyte balance, bubble detection, and level-sensing. A sufficient number and variety of clinical perfusions to satisfy the recommendations of the American Board of Cardiovascular Perfusion will be completed.

460 Clinical Practicum in Circulatory Technology
An opportunity to acquire skills necessary to perform procedures required in circulatory technology. Students will be directly supervised during all procedures where applicable. They include an exposure to cardiac catheterization, echocardiogram, EKG, pacemaker insertion, PTCA, and laser surgery. Adjunctive techniques utilizing supportive long-term extracorporeal circulation, intra-aortic balloon pumping, red blood cell concentration and dilution, hemodynamic measurements, temperature monitoring, electrophysiology, coagulation potential and fluid-electrolyte balance. Special applications will include renal dialysis and plasmapheresis. A sufficient number of applications to satisfy the recommendations of the American Board of Cardiovascular Perfusion will be completed. Opportunity for cardiovascular rounds and conferences are presented.

305 Physiology
4 crs
This course in human physiology is designed with four purposes to provide more than just a basic appreciation of those aspects of physiology that are of particular importance to the human body, to reinforce and expand the functional knowledge that you have already acquired, to serve as a sound foundation for your subsequent, more clinically-oriented training, and, to provide direct correlations of this pre-clinical science with pertinent clinical applications. Prerequisites: 207/208 Anatomy and Physiology I/Lab and 209/210 Anatomy and Physiology I/Lab.

310 Anatomy
5 crs
This course is designed to present an in-depth consideration of the musculoskeletal and peripheral nervous systems of the human body, with limited considerations of pertinent aspects of the cardiovascular and other body systems as well. An introduction to pertinent developmental aspects also will be presented. This material will be presented formally in lecture format, and supplemented by direct laboratory experience, examining human skeletal materials, dissecting human cadaver specimens, anatomical models, audiovisual tapes, films and slides. Prerequisites: 207/208 Anatomy and Physiology I/Lab and 209/210 Anatomy and Physiology I/Lab.

310-411 Perfusion Technology Seminars
1 cr (each)
Conferences, group discussions, and lectures of selected topics of interest pertaining to cardiac surgery and perfusion technology will be presented.

313 Business Management for Health Professionals
2 crs
Basic functions of management will be described with emphasis on the organization and business structure of hospital systems. Topics to be included are budget skills, cost-containment, inventories, purchasing, and personnel management.

320 Surgical Techniques
2 crs
Lectures and demonstrations relating to perfusion technology in the use of extra-corpooreal devices and monitoring instrumentation in controlled in-vitro and in-vivo laboratory environments will be presented. During this time, writing skills, computer literacy, and presentation skills will be reinforced. This will be in conjunction with Applied Perfusion Technology.

330 Cardiovascular Pharmacology
2 crs
A survey of pharmacology emphasizing cardiovascular drugs and agents used in perfusion technology and surgery. Particular emphasis will be placed on the interactions of these drugs as they apply to the cardiovascular and respiratory systems.

331/332 Cardiovascular Pathophysiology I/II
2 crs (each)
An understanding of pathological conditions that exist in all organ systems with special emphasis on
A course in human physiology is designed with four purposes to provide more than just a basic appreciation of those aspects of physiology that are of particular importance to the human body, to reinforce and expand the functional knowledge that you have already acquired, to serve as a sound foundation for your subsequent, more clinically-oriented training, and to provide direct correlations of this pre-clinical science with pertinent clinical applications. Prerequisites 207/208 Anatomy and Physiology I/II and 209/210 Anatomy and Physiology I/II.

### Educational Objectives

1. **Central, Autonomic, and Peripheral Nervous System**:
   - The course examines the central, autonomic, and peripheral nervous systems from an anatomical and physiological perspective. Microscopic and macroscopic structures will be identified and examined in detail. Prerequisites: 310 Anatomy, 401 Physiology.

2. **Exercise in Health & Disease**: An in-depth study of the body’s physiological function during exercise and its capacities for exercise within the contexts of athletics, recreation, aging, disease prevention and rehabilitation. The role of the physical therapist in recognition, treatment, rehabilitation, prevention of cardiovascular and pulmonary pathologies from infancy through the older adult is emphasized. Prerequisite: 305 Physiology.

3. **Clinical Education I**: This is an introductory clinical experience, which will broaden the student’s perception and understanding of the physical therapist’s professional role. It is an opportunity for the student to apply his/her current professional knowledge base using problem-solving strategies with the assistance of Physical Therapy clinical faculty.

4. **Clinical Education II**: This course will serve as an introduction to basic evaluation techniques. This will include observation and inspection, range of motion, manual muscle testing, basic neurological testing, postural analysis, and ADL/Functional abilities. This course will consist of lecture and laboratory.

5. **Clinical Education III**: This course is designed to provide an in-depth consideration of the musculoskeletal and peripheral nervous systems of the human body, with limited considerations of pertinent aspects of the cardiovascular and other body systems as well. An introduction to pertinent developmental aspects will also be presented. This material will be presented formally in lecture format, and supplemented by direct laboratory experience, examining human skeletal materials, dissecting human cadaver specimens, anatomical models, audiovisual tapes, films, and slides. Prerequisites: 207/208 Anatomy and Physiology I/II and 209/210 Anatomy and Physiology I/II.

6. **Clinical Education IV**: This course is designed to study, in detail, the elements of normal human movement. Specifically, the course will focus on the integration of the “Laws of Nature” which influence movement with anatomical concepts and the concepts of osteokinematics and arthrokinematics. Prerequisite: 310 Anatomy.

7. **Clinical Education V**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

8. **Medical Sciences I**: This course features the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

9. **Medical Sciences II**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

10. **Medical Sciences III**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

11. **Medical Sciences IV**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

12. **Medical Sciences V**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

13. **Medical Sciences VI**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

14. **Medical Sciences VII**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

15. **Medical Sciences VIII**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

16. **Medical Sciences IX**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.

17. **Medical Sciences X**: This course incorporates the science of pathology in conjunction with the technology of radiology and the medical laboratory to provide the student with a more complete understanding of disease processes which are manifested by patients as symptoms. By applying appropriate diagnostic tools, students will learn how symptoms can be formulated into a working physical therapy diagnosis. Prerequisite: 310 Anatomy.
550 PT Science IV 4 crs
This course will cover theories of motor control, motor development, and motor learning, as these areas relate to the treatment of neurological dysfunctions in all age groups. A problem-solving approach will be used as the students will make clinical decisions based on the integration of previous course work in basic and applied sciences. Approaches to therapy will be examined and critically reviewed. Prerequisite: 549 PT Science III Corequisite: 501 Neuroscience

551 PT Science V 4 crs
This is an advanced course which examines difficult neurological deficits, evaluations, and treatment protocols. Specific topics will include spinal cord injury and traumatic brain injury. Other neurological disorders will be discussed as well. Prerequisites: 501 Neuroscience, 534 Evaluation Methods IV, and 550 PT Science IV

561 Research Methods & Statistics 3 crs
This course is intended to provide the student with the understanding necessary to develop appropriate research designs for identified research questions. In addition, considerable emphasis is placed on the correct selection, application, and understanding of statistics necessary to evaluate and produce research in the health professions. The assumptions required by statistical methods will be discussed in detail. Prerequisite: 460 Introduction to Research

562/563 Research Project I & II 2 crs (each)
During the second professional year, students are required to develop a research question, conduct meaningful research, and contribute to the research proposal. These courses are designed to launch such research experience and encourage collaboration with the faculty advisor. The end result should be a written document of the quality to be published or presented at professional meetings. Prerequisite: 561 Research Methods & Statistics

566 PMT Management 3 crs
A thorough examination of the position of Manager of Physical Therapy Service/Department will be undertaken. This will include a basic overview of the routine challenges that influence and impact the day-to-day operation of a Physical Therapy Service/Department Class discussion and participation in classroom activities in an integral component of this course

567 Patient and Consumer Health Education & Consultation 2 crs
This course will provide the student with basic tools of instructional design and the teaching/learning process in order to meet the increasing educational needs of the patient population and community

568 Special Topics in Physical Therapy 3 crs
This course is designed to study in detail the most frequent diagnoses, evaluation techniques, and treatment protocols of the pediatric and geriatric populations. While focusing primarily on pathological processes, attention will also be given to the needs of the non-involved members of these groups as well. Finally, an overview of the human aging process from birth to death will be discussed.

DEPARTMENT OF PHYSICIAN ASSISTANT (PA)
Chairman
Diane M. Zyzwokto, M.P.M., PA-C
Medical Director
Michael J. Essig, M.D
Associate Medical Directors
Louisa M. Hauber, M.D.
Jack E. Wiltberger, M.D., F.A.C.S.

A physician assistant is a skilled member of the health care team who practices medicine under the supervision and responsibility of a doctor of medicine or osteopathy, fulfilling a broad range of medical services which would otherwise be provided by a physician in accordance with state laws. The physician assistant is qualified by academic and clinical training to perform initial and follow-up evaluations of the patient, elicit a detailed history, perform an appropriate physical examination, and record and present pertinent data including interpretive recommendations in a manner meaningful to the physician.

Additional tasks performed by the physician assistant include preparing patient summaries, collecting specimens, initiating requests for commonly-performed initial laboratory studies, and identifying findings and abnormal findings on history, physical examinations and lab studies.

The physician assistant also participates in the evaluation and management of emergency patients, performs numerous clinical procedures, provides counseling and instruction regarding common patient problems, and interacts with community health services and other community resources which facilitate the continuity of patient care. Physician assistants are employed in hospitals, rural clinical rehabilitation centers, HMOs, and within private practice offices. Physician assistants are staff in both medical and surgical settings.

In 1989, the Pennsylvania Department of Labor and Industry projected a 46 percent growth rate for the profession of physician assistant for the period of 1984-1995, making physician assistant the second most rapidly growing health care profession in the state. Nationally, the Department of Labor and Industry has projected a 23 percent increase in the number of physician assistant jobs from now through the year 2000. This makes the profession one of the top 15 career choices.

The Physician Assistant program at Duquesne University is a five-year entry-level master's degree program. Upon successful completion of the fourth year, students who have not already earned a bachelor's degree will be awarded a Bachelor of Science in Health Sciences. Upon successful completion of the fifth year, students will be awarded a Master of Physician Assistant and will be eligible to sit for the National Commission on Certification of Physician Assistants (NCCPA) Examination.

PHYSICIAN ASSISTANT CURRICULUM
Pre-Professional Phase — 90 Credits
GHHS Course — 10 Credits
Health Sciences Orientation
Anatomy
Physiology

University Core — 21 Credits
Thinking and Writing Across the Curriculum
Inaugurative Literature and Critical Writing
Basic Philosophical Questions
Social, Political, and Economic Systems
Shaping of the Modern World
The Arts and the Human Experience
Christian Understanding of the Human Person

Science, Math, and Humanities — 45 Credits
General Biology I
General Biology II
General Chemistry I
General Chemistry II
General Physics I
General Physics II
Elements of Computer Science
Fundamentals of Statistics
Introduction of Psychology
Developmental Psychology I
Developmental Psychology II
Communication Course

(Clinical Problem Solving
Clinical Externship I
Clinical Externship II
Clinical Externship III
Clinical Externship IV
Community Health Resources

Medical Sciences — 11 Credits
Anatomy and Physiology I
Anatomy and Physiology Laboratory I
Anatomy and Physiology II
Anatomy and Physiology Laboratory II
Biochemistry of Microbes

General Electives — 3 Credits

Professional Phase — 80 Credits
Fourth Year

Summer Term
Introduction to PA Profession
Community Health Resources
Clinical History Skills and Practice
Clinical Lab Methods
Clinical Pharmacology

Fall Semester
Clinical Medicine I
Applied Clinical Methods I
Basic Pathology
History and Physical Examination I

Credits
13

Spring Semester
Clinical Medicine II
Applied Clinical Methods II
Clinical Problem Solving II
History and Physical Examination II
Research Concepts and Skills

Credits
14

Summer Term
Clinical Medicine III
Health Policy and Preventive Medicine
Clinical Problem Solving III
Clinical Externship IIA
Clinical Externship IIB

Credits
10

Fifth Year

Fall Semester
Clinical Externship IIC
Clinical Externship IIIA
Clinical Externship IIIB

Credits
9

Summer Term
Clinical Externship IIIC
Clinical Externship IV
Master's Independent Research/Study

Credits
11

*Clinical Externship II-III Each student is required to complete a minimum of 32 weeks in primary care and a maximum of 12 weeks in non-primary care. Clinical Externship IV involves eight weeks in either a primary or non-primary care medical setting.

Externships
- Family Practice Medicine
- Obstetrics-Gynecology
- Cardiology
- Onology
- Geriatrics
- Infectious Diseases
- Orthopedics
- General Surgery
- Endocrinology
- Gastroenterology
- Internal Medicine
- Neurology
- Emergency Medicine
- Pulmonary Medicine
- Physical Medicine and Rehabilitation

School of Health Sciences
406 Clinical Lab Methods 3 crs
This course provides information concerning clinical skills and diagnostic modalities, it is designed to prepare the student for common professional responsibilities and practices in patient care. Instruction for selected procedures and diagnostic tools will be presented to the student by various methods including theory discussion, rationale for procedure, identification of necessary equipment, principles of appropriate skill technique, demonstration of skill when applicable, skill workshop/practice time, identification of special clinical considerations and precautions, documentation aspects and reviewed elements of patient education. Opportunities to observe certain procedures and diagnostic tools are correlated when possible. Prerequisite: PHYSA 406 Clinical Lab Methods.

413 Clinical Problem Solving I 3 crs
Designed to promote the integration of didactic sciences and unfold the art of medicine, this course teaches the strategy of cooperative learning. Statements and questions are introduced and actively engage in analyses of 5 primary care clinical case scenarios with faculty monitoring/guidance. Function-oriented clinical skills such as symptoms evaluation formulation of differential diagnosis, appropriate ordering of lab tests, and use of various medical interventions are developed. Prerequisite: HLTC 450 Clinical Medicine I Corequisite: PHYSA 402 Clinical Medicine II.

415 Basic Pathology 4 crs
Principles of pathology beginning with cellular, organ and systematic changes associated with the human disease process are introduced and discussed, as well as an introduction of the real-life responses associated with the human disease process. Prerequisite: PHYSA 406-01 Clinical Lab Methods. HLTC 310 Anatomy, HLTC 305 Physiology Corequisite: HLTC 450 Clinical Medicine I.

418 Community Health Resources 2 crs
This course will introduce the complexities of public health through a community-oriented approach. The opportunity for in-depth study of institutional and community-based care models will be accomplished both in the classroom and by field experience. Students will be prepared to take an active role in coordinated care, understand the roles of patients and health professionals in the multi-disciplinary care process and be sensitized to racially, culturally and physically diverse populations.

420 History & Physical Examination I 3 crs
A practical study of diagnostic techniques are introduced and combined with a systematic approach to history-taking, integration of examination systems patient assessment, and documentation practices. Normal physical findings of the pediatric, geriatric and obstetric patient are studied as well as variants of normal and common abnormal physical findings pertinent to musculoskeletal and neurologic problems. Prerequisites: PHYSA 420 History & Physical Examination I, PHYSA 403 Clinical History Skills and Practice Corequisite: PHYSA 402 Clinical Medicine II.

425 Research Concepts and Skills 2 crs
This course will introduce students to the concepts and skills necessary for the conduct of research. Students will evaluate published research and will develop components of a research instrument. Prerequisite: MATH 125 Fundamentals of Statistics.

505 Clinical Problem Solving III 3 crs
The setting for this course is the clinical field site designated for supervised clinical practice. Each week the student presents a complete case study of one of their patient encounters in the presence of preceptors, physician assistants, other students and clinical coordinator. Prerequisite: PHYSA 505 Clinical Problem Solving II Corequisite: PHYSA 530 Clinical Externship 2.

515 Fundamentals of Surgery 2 crs
A comprehensive lecture/discussion and issue presentation series on current trends, issues and public policies reflective of America's evolving health care system and designed to prepare students to facilitate growth and leadership as health professionals. Prerequisite: PHYSA 418 Aspects of Community Health and Resources.

528-536 Clinical Externships I-IV 24 crs (total)
A series of supervised clinical education spanning the remaining professional program where students engage in patient care in ambulatory clinics, hospitals, long-term care facilities and community practices. Student externship assignments include a minimum of 32 weeks in primary care, a minimum of 12 weeks in non-primary care, and an 8-week elective in either primary or non-primary care medicine. Prerequisite: Successful completion of didactic curriculum.

540 Master's Independent Research Study 4 crs
An academic, independent research project jointly negotiated by the student, Coordinator of Student Research and the Program Director. This endeavor, when possible, should be correlated with clinical interests and opportunities. Research efforts must culminate in a scholarly report suitable for publication. Prerequisite: MATH 125 Fundamentals of Statistics.
Reserve Officers' Training Corps (ROTC)

DEPARTMENT OF MILITARY SCIENCE ARMY OFFICERS COMMISSIONING PROGRAM

PROGRAM
The Army Reserve Officers' Training Corps (ROTC) program has been a member of the Duquesne family since 1936. ROTC exists to train the future officer leaders of the United States Army. Over 60% of all Army officers on active duty (55% of the generals) were commissioned through ROTC on college campuses. The focus of ROTC is leadership training and evaluation. It provides students with the opportunity to earn commissions as officers in the U.S. Army, Reserves, or Army National Guard. The curriculum is structured to develop individual leadership in a variety of training environments and to evaluate the student's potential to command and lead soldiers. The program is normally completed in four years, but a two-year option is available to sophomores and graduate students with permission from the Professor of Military Science. The normal four-year program consists of a Basic Course and an Advanced Course.

THE BASIC COURSE
The Basic Course is usually taken in the freshman and sophomore years. Students take ROTC courses as they would any other college courses. There is no military service obligation for participants at this level. The Freshmen and Sophomore courses follow an adventure, basic skill, and leadership track designed to enhance self-confidence and place students in realistic hands-on leadership situations. Freshmen concentrate on leadership traits, self-assessment and confidence building. They receive practical training in first aid, oral and written communication, planning, organizing, and problem solving. Sophomore students are introduced to the organization of the Army and are trained in basic soldiering skills, including land navigation, drill and ceremony, rifle marksmanship, and customs and courtesies of the service. Leadership training is continued throughout the year, emphasizing the transition from developing individual traits and skills to their application in small group settings. Army uniforms may be issued for some training. Wear of the uniform on campus is voluntary for Basic Course students. Those students who wear the uniform must conform to military grooming and appearance standards.

RESERVE OFFICERS' TRAINING CORPS

The basic course can be compressed into a one-year period if the student meets certain requirements.

**Basic Course Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Freshmen (MS I)</td>
<td></td>
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<tr>
<td>Fall Semester</td>
<td>MS 101 Foundation of Leadership Skills</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>MS 102 Leadership Development Skills</td>
</tr>
<tr>
<td>Sophomores (MS II)</td>
<td></td>
</tr>
<tr>
<td>Fall Semester</td>
<td>MS 201 Basic Military Skills</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>MS 202 Small Unit Leadership Skills</td>
</tr>
</tbody>
</table>

TWO-YEAR PROGRAM
The two-year program is designed primarily for Transfer students and students who did not participate in ROTC as freshmen or sophomores. Any student with at least two academic years remaining (undergraduate or graduate) is eligible. Students may qualify for this program and enrollment in the Advanced Course by successfully completing a paid summer camp at Fort Knox, Kentucky. This training is completed during the summer preceding the student's last two academic years.

DIRECT ENTRY INTO THE ADVANCED COURSE
Students may receive placement credit for MS I and II and be granted direct entry into the Advanced Course. This placement credit may be granted for:
1. Completion of Army Basic Training or its equivalent in the Navy, Air Force, Coast Guard, and Marine Corps.
2. Attendance at a service academy for one or more years.
3. Completion of equivalent level training in Navy or Air Force ROTC.
4. Completion of three or more years training in Junior ROTC during high school (any service) or NDCC.

The Professor of Military Science must approve all requests for placement credit.

THE ADVANCED COURSE
After completing the Basic Course, students who have demonstrated officer potential and meet Army physical and medical standards are eligible to enroll in the Advanced Course. The Advanced Course is normally taken in the final two years of college. At the beginning of the junior year, students must decide whether they wish to become officers and must enter into a formal contract with the Army to begin the advanced phase of the program. Students not wishing to enter into this contract may still participate in the Advanced Course as conditional or auditing students, but are ineligible for commissioning. Contracted students who enter the Advanced Course receive a tax-free subsistence allowance of $100 per month during the school year. The junior year is performance-oriented and prepares students for attendance at a six-week Advanced Camp in the summer following the end of the academic year. The senior year further prepares cadets to make the transition from student to lieutenant. It covers such subjects as military law, administration, logistics, staff functions, professionalism, and ethics. Leadership development and evaluation are continuously emphasized throughout the Advanced Course.

**Advanced Course Curriculum**

<table>
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<tr>
<th>Course</th>
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<tr>
<td>Juniors (MS III)</td>
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<tr>
<td>Fall Semester</td>
<td>MS 301 Advanced Military Skills</td>
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<td>Spring Semester</td>
<td>MS 302 Advanced Tactics</td>
</tr>
<tr>
<td>Summer Between Junior and Senior Year</td>
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<tr>
<td>All cadets must attend a six-week ROTC Advanced Camp in the summer following their junior year training. Nurses attend special medical training at this time, for which they may receive academic credits from the School of Nursing.</td>
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<tr>
<td>Seniors (MS IV)</td>
<td></td>
</tr>
<tr>
<td>Fall Semester</td>
<td>MS 401 Applied Leadership</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>MS 401 Professional Development</td>
</tr>
</tbody>
</table>

ADDITIONAL EDUCATION REQUIREMENTS
Army leadership is an expertise which must be applied within the context of world society as a whole. A broad liberal arts education provides the best academic background for developing expertise. To ensure officers have received a sufficiently broad liberal education, cadets are required to complete college courses in the following areas of study:
- Written Communication Skills
- Human Behavior
- Mathematical Reasoning
- Military History
- Computer Literacy

The University Core Curriculum will fulfill the first three requirements. The history and computer courses must be accepted as electives for some students. ROTC scholarship students must complete at least one semester of foreign language study as an additional requirement. ROTC instructors will advise students of the specific university courses that meet these requirements.

SIMULTANEOUS MEMBERSHIP PROGRAM (SMP)
This program permits students to participate in the Army ROTC Advanced Course and serve in a Reserve or National Guard unit as an officer trainee at the same time. An advantage to the SMP is that students will receive regular drill pay from the Reserve or National Guard as well as the $100 per month subsistence allowance for participating in the Army ROTC. The only scholarship cadets authorized to be in the SMP are those awarded a dedicated Reserve Forces Duty (RFD) scholarship, or a basic Camp RFD scholarship. The SMP is mandatory for these cadets.

ARMY ROTC SCHOLARSHIPS
Army ROTC offers four-, three-, and two-year scholarships which are awarded on a competitive basis. All students are eligible to apply, including those not currently participating in ROTC. Each scholarship pays for most of tuition, textbooks, laboratory fees and other purely academic expenses. Scholarship students also receive the tax-free subsistence allowance of $100 each month during the school year while on scholarship status. For details, see the ROTC Scholarship listing in the Financial Aid section of this catalog, or call the Department of Military Science.

OFF-CAMPUS TRAINING AND SOCIAL ACTIVITIES
In an urban environment, it is often not possible to provide students with the kind of surroundings suitable for conducting rappelling and tactical training. Therefore, weekend field trips to off-campus sites are utilized to reinforce techniques taught in the classroom. Some weekend activities are often planned and executed by cadets with instructor supervision. For this reason, these activities are ideally suited for cadets to practice leadership, organization, and military technical skills.

Some weekday or weekend evenings are set aside for social activities that incorporate exposure to military customs and traditions. These events include formal and informal gatherings and awards ceremonies.

MILITARY SCIENCE CURRICULUM

**BASIC COURSE (Military Science (MS) — Levels I and II)**

MS 101 — Foundations of Leadership Skills
An introduction to leadership, this course concentrates on identifying the traits of successful leaders.
introduces the Leadership Assessment Program, and begins the process of self assessment. Confidence building is undertaken through physical and mental challenges. Oral and written communication skills are stressed. The course also offers basic first aid, white water rafting, rappelling, and rope bridging instruction, and an introduction to the Army's unique leadership environment. Participation in one weekend field trip is mandatory. Books, uniforms, equipment, and activity fees are provided at no additional cost to students.

MS 202 — Small Unit Leadership Skills

This course builds competence in the basic military skills and dimensions of leadership that were the focus of MS 201. Small group leadership techniques are practiced at the team and squad levels through rotating leader/follower positions. Participation in physical training sessions, Leadership Laboratory, and field training exercises is required. Prerequisite: MS 201 or permission of the Professor of Military Science.

RESERVE OFFICERS' TRAINING CORPS

CONTINUING EDUCATION

Continuing Education

Administration

Executive Director

Benjamin Hodes, Ph D

Center of Continuing Education Director

Robert A. Aronson, M A, M A, M B A

Office of Evening and Summer Programs Director

Darlene Zellers, M A

CREDIT PROGRAMS

The Center for Continuing Education (396-5034) gives adult students access to undergraduate courses offered in the many schools and colleges within Duquesne University. Entry requirements are that the individual be twenty-one (21) years of age or older and have a high school diploma or GED equivalency.

Junior College students may pursue course work for a variety of reasons:
1. to earn a Bachelor of Science in Professional Studies degree (BS P S)
2. to pursue course work as preparation for application to an undergraduate or graduate program.
3. to earn a Professional Certificate.
4. to take courses for self-enrichment.

The Bachelor of Science in Professional Studies Degree

The Bachelor of Science in Professional Studies is designed for adult students who seek flexibility in a bachelor's degree program. Students are provided the opportunity to customize plans of study to meet personal and professional goals. A strong foundation in both business and the liberal arts allows students to individually design two major areas of study, designated as concentrations. Concentrations are designed in conjunction with an academic advisor and are available in a wide range of business and/or liberal arts subjects. A minimum of 120 total credits is required to complete degree requirements.

University Core Curriculum — 30 Total Credits

The University Core provides undergraduates with a common intellectual experience as the foundation for their college careers. Core courses focus on issues and values central to the tradition and mission of the University. These courses are not merely preparation for professional study but for lifelong learning.

General Core

1. Thinking and Writing
2. Across the Curriculum
3. Cr
A minimum of 15 credits is required to complete a concentration, two-thirds of which must be above five (5-9) credit courses that comprise a focused area of professional knowledge. Candidates for the professional certificate programs usually have an Associate's or Bachelor's degree and typically enroll in a certificate program in order to enter a new profession or to advance in their current careers. Some of these certificate programs have prerequisites. Please call 396-6232 for a complete catalogue with all prerequisites and course work specifics. Professional certificates are available in the following areas:

**Accounting (Basic)**
This certificate is a five-course, 15 credit program of the following courses:
- 211 Intro to Accounting I
- 212 Intro to Accounting II
- 311 Intermediate Accounting I
- 312 Intermediate Accounting II

Select one (1) of the following:
- 315 Cost Accounting
- 411 Auditing

**Accounting (Advanced)**
This certificate is an eight-course, 24 credit program including the five courses from the Basic Certificate plus the following three courses:
- 305 Computer Programming I
- 306 Computer Programming II
- 200 Computer Organization and Assembly Language

Select four (4) of the following:
- 308 Numerical Analysis
- 410 Data Base Management Systems
- 411 Artificial Intelligence
- 445 Systems Analysis and Software Design
- 480 Senior Project

**Management Information Systems (MIS)**
This certificate is an eight-course, 24 credit program of the following courses:
- 182 Microcomputer Software Applications
- 383 Management Information Systems
- 382 Information Processing with COBOL
- 384 Computer Programming with COBOL
- 385 Computer Systems
- 481 Systems Analysis and Design
- 482 Data Base Management
- 483 MIS in Organizations

**Marketing**
This certificate is a six-course, 18 credit program of the following courses:
- 371 Principles of Marketing
- 373 Sales Administration

**Computer Science**
This certificate is a five-course, 15 credit program of the following courses:
- 321 Business Finance
- 332 Money & Financial Institutions
- 333 Financial Management
- 335 Business Financial Problems
- 432 Credit Management

**Financial Analysis (Basic)**
This certificate is an eight-course, 24 credit program including the five courses from the Basic Certificate plus the following three courses:
- 336 Security Analysis
- 337 Investment Analysis
- 433 Financial Markets

**Financial Analysis (Advanced in Securities Analysis)**
This certificate is a five-course, 15 credit program of the following courses:
- 305 Computer Programming I
- 306 Computer Programming II
- 200 Computer Organization and Assembly Language

Select four (4) of the following:
- 308 Numerical Analysis
- 410 Data Base Management Systems
- 411 Artificial Intelligence
- 445 Systems Analysis and Software Design
- 480 Senior Project

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- 483 MIS in Organizations

**Marketing**
This certificate is a six-course, 18 credit program of the following courses:
- 371 Principles of Marketing
- 373 Sales Administration

**Corporate Communication (Basic)**
This certificate is a five-course, 15 credit program of the following courses:
- 460-306 Business and Professional Communication
- 460-333 Advertising and PR Campaigns
- 460-456 Theory & Practice of Organizational Communication
- 460-475 Communication Research Methods

Select one (1) of the following:
- 480-383 Writing for Business and Industry
- 480-385 Professional and Technical Writing
- 480-430 Public Relations Practice
- 480-433 Advertising Practices

**Corporate Communication (Advanced)**
This certificate is a seven-course, 21 credit program including five courses from the Basic Certificate plus two of the following courses:
- 304 Persuasion
- 432 Print Production and Graphic Design
- 436 Marketing Communication
- 484 Health Communication

**Human Resource Management**
This certificate is a seven-course, 21 credit program of the following courses:
- 361 Principles of Management
- 364 Personnel Management
- 365 Industrial Relations
- 366 Behavior in Organization

Select three (3) of the following:
- 356 Legal Aspects of Human Resource Management
- 445 Multinational Human Resource Management
- 461 Japanese Business and Management
- 461 Human Relations
- 463 Collective Bargaining
- 466 Compensation Management
- 467 Human Resource Planning
- 468 Training in Business and Industry

**Paralegal Studies**
This certificate is an eight-course, 24 credit program of the following courses:
- 336 Legal Aspects of Human Resource Management
- 384 Management Information Systems
- 382 Information Processing with COBOL
- 384 Computer Programming with COBOL
- 385 Computer Systems
- 481 Systems Analysis and Design
- 482 Data Base Management
- 483 MIS in Organizations

**Marketing**
This certificate is a six-course, 18 credit program of the following courses:
- 371 Principles of Marketing
- 373 Sales Administration

**Corporate Communication (Basic)**
This certificate is a five-course, 15 credit program of the following courses:
- 460-306 Business and Professional Communication
- 460-333 Advertising and PR Campaigns
- 460-456 Theory & Practice of Organizational Communication
- 460-475 Communication Research Methods

Select one (1) of the following:
- 480-383 Writing for Business and Industry
- 480-385 Professional and Technical Writing
- 480-430 Public Relations Practice
- 480-433 Advertising Practices

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- 445 Multinational Human Resource Management
- 461 Japanese Business and Management
- 461 Human Relations
- 463 Collective Bargaining
- 466 Compensation Management
- 467 Human Resource Planning
- 468 Training in Business and Industry

**Gerontology**
This certificate is a six-course, 18 credit program of the following courses:
- 321 Principles of Marketing
- 373 Sales Administration

**Social Development**
- 203 Social Gerontology
- 321 Principles of Marketing
- 373 Sales Administration

**Social Aspects of Death and Dying**
- 324 Social Aspects of Death and Dying

**Gerontological Practicum**
- 403 Gerontological Practicum

**NON-CREDIT PROGRAMS**

**The Paralegal Institute**
As the need for legal services has increased over the past decade, the demand for paralegals has risen dramatically. Government studies show that the paralegal profession is the fastest growing profession in America today. Paralegals are employees of lawyers who do research, drafting, organization of complex litigation, and a variety of other work including that formerly done by lawyers. They work for private law firms, for local services projects, for banks and corporations, and for the government. Under the supervision of a lawyer, the legal assistant shall apply knowledge of the law and legal procedures in rendering direct assistance to lawyers, clients and courts, design, develop and modify procedures, techniques, services and processes, prepare and interpret legal documents, detail procedures for practicing in certain fields of law, research, select, assess, compile and use information from the law library and other references, and analyze data to handle procedural problems that involve independent decisions. In response to the demand for highly trained well qualified paralegals, the Center for Continuing Education at Duquesne University established the Paralegal Institute. The Institute offers a program of studies designed to accommodate students who wish to develop the specialized skills necessary to enter the paralegal profession. A certificate in Paralegal Studies is awarded at the successful completion of nine courses. Five core courses Introduction to the Legal System and Paralegalism, Legal Research, Legal Writing, Computer Literacy and Legal Ethics are required of all students. Students may choose to specialize in Corporate Law, Civil Litigation, or Employee Benefit Plans. Students enrolled in the program would have access to the Duquesne University Law Library as a part of their preparation in Legal Research.

**Entry Requirements**
Admission to Duquesne University's Paralegal Institute is restricted to qualified candidates. Students may be considered for admission to the program if they possess a Bachelor degree.

*This program has been approved by the American Bar Association*

*In certain cases the Admissions Committee may waive this requirement and consider other related factors such as previous experience*

Call 396-6143 for complete information, including a catalogue and an application.
Academic Standards

Students must maintain a 2.5 grade point average for successful completion of the program and certificate. Students with academic deficiencies may be required to complete additional coursework. The Director of the Paralegal Institute and the Academic Review Committee will evaluate deficiencies on a case-by-case basis and recommend the appropriate course of action.

Duquesne Benefits Institute

The Duquesne Benefits Institute is an educational institution associated with the Center for Continuing Education of Duquesne University and devoted to continuing professional education for those who work in the field of employee benefits.

Once principally the domain of tax lawyers, the employee benefit field exploded with the passage of the Federal Employee Retirement Income Security Act of 1974 (ERISA). This field has become one of the most challenging areas of professional practice, encompassing professionals from the areas of law, human resources, management, consulting, actuarial science, insurance, and investment management, banking, accounting, and many other disciplines.

This is an intensive training program in all phases of employee benefit plans, from qualified pension and profit sharing plans to group insurance plans, IRAs, VEBAs, and fringe benefits.

The Curriculum consists of five (5) courses and leads to the awarding of the Certificate in Benefit Plans, entitling the holder to use the designation "CBP" after his or her name.

For those entering the field, the Program is designed to provide a solid foundation of practical skills which will enable the certificate holder to discharge major responsibility in the design, installation, and operation of employee benefit plans.

For those already in the field, the Program is designed to provide a combination refresher/update on all of the latest developments in this fast-moving area, as well as broaden the professional's base within the field.

Entry Requirements

A college degree is normally required for admission to the Benefit Plan Certificate Program. In certain cases, the Admission Committee may waive this requirement and consider other related factors such as previous experience.

Call 396-1642 for complete information, including a catalogue and an application.

The Nurse Management Institute

The Nurse Management Institute is sponsored by Duquesne University's School of Nursing and the Center for Continuing Education. The Institute's program is a nine-session series that trains nursing managers to manage more effectively. The program emphasizes practical skills and methods that managers will be able to put to immediate use to improve their ability to manage and to increase their professional opportunities.

Call 396-1642 for additional information.

The Nursing Education Institute

The Nursing Education Institute is sponsored by Duquesne University's School of Nursing and the Center for Continuing Education. This stimulating, integrated series of one-day sessions encompasses professionals from the areas of law, human resources, management, consulting, actuarial science, insurance, and investment management, banking, accounting, and many other disciplines.

This program will help each participant to enhance the educational skills he or she already possesses.

Call 396-1642 for additional information.

Exam Preparation Courses

Three review courses are offered for individuals interested in preparing to sit for examinations required for graduate school admission.

Each preparation course will enable you to take the selected exam with confidence and skill. Learn how to approach and analyze complex questions and discover the most effective ways to use your test time — identify and strengthen your weak areas.

Instructors are members of the Duquesne University faculty.

LSAT

Performance on the LSAT can count for as much as 50% of your chances to be admitted to the school of your choice.

GRE

The Graduate Record Exam — four days of intensive review include math, logic, and verbal sections of the exam. Each section is analyzed in detail.

GMAT

For applicants to graduate business school. Register early and receive advance GMAT study and preparation materials. Note: mailed only if registration is received two weeks before review program begins.

LSAT (continued)

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</tbody>
</table>

*Class held on Sunday

University reserves the right to cancel class based on enrollment.
Part VIII: Directors and Officers

THE MEMBERSHIP OF THE DUQUESNE UNIVERSITY CORPORATION

m

Chairman

Rev Donald J McEachin, C S Sp
Rev Richard J Horne, C S Sp
Rev Joseph A Katarmcic
Rev Ralph C Boettcher
Rev Robert L Beranek

Ex-Officio Members

Rev Norman E Bevan, C S Sp
Rev Thomas J Farrelly, C S Sp
Rev Francis X Hanley, C S Sp
Rev J Clifton Hill, C S Sp
Rev H Eugene Hillman, C S Sp

Term Members

Chancellor

Marilyn L Donahue
Rev John M Jendzura, C S Sp
Rev Daniel R Lackner
Rev Joseph A Katarmcic
Rev Richard L White
Rev Charles J Fenner,

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Isadore R Lenglet, M P A
Sean Hogan, C S Sp
Patrick M Joyce
Charles J Fenner, C S Sp, Ph D
Henry J McAnulty, C S Sp

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John E Murray, Jr, JD, SJD
Michael Weber, D A
Isadore R Lenglet, M P A
Sean Hogan, C S Sp
Patrick M Joyce
Charles J Fenner, C S Sp, Ph D
Henry J McAnulty, C S Sp

*This information has been provided by the Office of the Secretary of the University
Michael C Cahall  
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B A , Ohio Wesleyan University  
M A , Ph D , University of Illinois  

Rev. Michael Cahill, C S S P  
Associate Professor of Theology  
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S T L , Gregorian University, Rome  
L S S , Biblical Institute, Rome  
Ph D , Institut Catholique De Paris  

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Ph D , Montana State University  

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B S , National Taiwan University  
M S , Ph D , Kansas State University  

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Professor of Classics  
A B , Princeton University  
M A , Duquesne University  
M A , Ph D , University of Pittsburgh  

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M A , Catholic Theological Union  
Ph D , Catholic University of America  

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M Litt , Ph D , University of Pittsburgh  

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M S , Ph D , University of Pittsburgh  

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M A , Ph D , Duquesne University  

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M Sc , Ph D , University of Pittsburgh  

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Instructor of Physics  
B S , Carlow College  

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A B , Holy Cross College  
M D , Georgetown University Medical School  

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B S , M S , University of Pittsburgh  

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Ph D , University of California, Berkeley  

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Assistant Professor of Computer Science  
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M A , Wroclaw University  
Ph D , Jagiellonian University  

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Ph D , Miami University of Ohio  

D Clark Edwards  
Associate Professor of Communication  
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M A , University of Missouri  
Ph D , University of New Mexico  

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Lecturer in Communication  
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M Fr , Bowling Green State University  

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Assistant Professor of Philosophy  
B A , M A , University of Indiana  
M A , University of Regina  
Ph D , State University of New York at Stony Brook  

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M A , University of Notre Dame  
Ph D , Loyola University of Chicago  

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Ph D , Catholic University of America  

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M A , Ph D , University of Kentucky  

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M A , Ph D , University of Connecticut  

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M A , Duquesne University  

Ronald Freeman  
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Ph D , University of Michigan  

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Ph D , University of Maryland  

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Ph D , University of Texas  

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B Sc , M Sc , M Phil, Aligarh University  
Ph D , McMaster University  

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M A , University of Chicago  

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M Ed , Ph D , University of Pittsburgh  

Frank R Gorga  
Assistant Professor of Chemistry  
B S , Adelphi University  
Ph D , Dartmouth College  

Geoffrey Gurd  
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M A , Concordia University  
Ph D , University of Montreal  

Lous Haas  
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M A , Ohio State University  
Ph D , University of Illinois at Urbana-Champaign  

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M A , TESOL, University of Pittsburgh  

John Kenneth Hanes  
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M A , Niagara University  

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M Div., Woodstock College  
Ph D , Duke University  

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M A , Ph D , Kent State University  

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M D , George Washington University  

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B A , M A , University of Georgia, Athens  

H Bernard Hartman  
Professor of Biological Sciences and Department Chairperson  
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M S , American University  
Ph D , University of Connecticut
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Champaign-Urbana  
M.A., Ph.D., Stanford University

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