DIRECTORY

ADDRESS—Duquesne University,
600 Forbes Avenue, Pittsburgh, Pa 15282
Telephone Call specific number (see following)
for other offices, call (412) 396-6000

When on campus, only the last 4 digits need to be
dialed, with the exception of the Bookstore

ADMISSIONS—Dean of Domestic Admissions
and International Affairs
Administration Building, First Floor
Telephone (412) 396-5000
(800) 436-6590 (Outside of 412 Area Code)

ADVISORS
McAnulty College of Liberal Arts
College Hall, Room 212
Telephone (412) 396-6570

Division of Continuing Education
Rockwell Hall, Room 210
Telephone (412) 396-6572

Palumbo School of Business Administration
Rockwell Hall, Room 705
Telephone (412) 396-6277/6570

School of Education
Canavan Hall, Room 213
Telephone (412) 396-6579

Rangos School of Health Sciences
Health Sciences Bldg., Room 302
Telephone (412) 396-6578

Mary Pappert School of Music, Room 303
Telephone (412) 396-6574

Bayer School of Natural and Environmental Sciences
100 Mellon Hall
Telephone (412) 396-6572

School of Nursing, College Hall, Sixth Floor
Telephone (412) 396-6576

Mylan School of Pharmacy,
Bayer Learning Center, Room 304
Telephone (412) 396-6579

BOOKSTORE—Duquesne Union, Second Floor
Telephone (412) 396-6626

CAMPUS MINISTRY—
Administration Building, First Floor
Telephone (412) 396-6620/5046

CAREER SERVICES CENTER—
Rockwell Hall
Telephone (412) 396-6644
School of Education Career Center
Telephone (412) 396-6647

CASHIER—Payment of Tuition and Fees,
Administration Building, Ground Floor
Telephone (412) 396-6585/6587/6588

COMMUTER AFFAIRS—
117 Duquesne Union
Telephone (412) 396-6660

CONTINUING EDUCATION—
Rockwell Hall, Second Floor
Telephone (412) 396-6579

FINANCIAL AID—Loan, Scholarship,
Student Employment, Applications
Administration Building, Ground Floor
Telephone (412) 396-6572

OFFICE OF FRESHMAN DEVELOPMENT AND
SPECIAL STUDENT SERVICES—
Duquesne Union, Third Floor
Telephone (412) 396-6657

OFFICE OF GREEK LIFE—
Duquesne Union, Third Floor
Telephone (412) 396-6572

GOVERNMENTAL AFFAIRS—
Administration Building, Fifth Floor
Telephone (412) 396-6570

HEALTH SERVICE—
Duquesne Towers, Second Floor
Telephone (412) 396-6570

IDENTIFICATION CARDS—
Duquesne Union, Second Floor
Telephone (412) 396-6579

INFORMATION CENTER—For University Events,
Duquesne Union, Third Floor
Telephone (412) 396-6571/5028

LEGAL SERVICES—
Administration Building, Ground Floor
Telephone (412) 396-6572

LEARNING SKILLS CENTER—
Administration Building, Ground Floor
Telephone (412) 396-6572

PSYCHOLOGY CLINIC—
Rockwell Hall, Ninth Floor
Telephone (412) 396-6572

PUBLIC AFFAIRS—
220 Fisher Hall
Telephone (412) 396-6572

PUBLIC SAFETY—Public Safety Building
Telephone (412) 396-6572

REGISTRAR—For Transcripts and Records,
Administration Building, Ground Floor
Telephone (412) 396-6572/5028

RESIDENCE LIFE—Assumption Hall, Ground Floor
Telephone (412) 396-6572

STUDENT ACCOUNTS—
Administration Building, Room 208
Telephone (412) 396-6585/6587/6588

STUDENT HEALTH INSURANCE—
Fisher Hall, Room 202A
Telephone (412) 396-6572

UNIVERSITY COUNSELING CENTER—
308 Administration Building
Telephone (412) 396-6572
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 in character. The University, therefore, reserves the right to change requirements and regulations contained herein, including fees, tuition, and board and room, and to determine whether an individual has satisfactorily met the requirements for admission or graduation.

NOTICE OF NONDISCRIMINATION AND NONHARASSMENT POLICY

Duquesne University, motivated by its Catholic identity, values equality of opportunity, human dignity, race, color, religion, national origin, sex, age, 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 statement. This policy applies to all educational programs and activities of the University, including, but not limited to, admission, 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, state and local laws and regulations. Nothing herein, however, should be interpreted as a waiver by the University of its own Constitutional and legal rights based upon its religious affiliation. The person responsible for coordinating its efforts under this policy is Dr. Judith Griggs, Affirmative Action Officer.

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, and daily crime logs are available for review in the Public Safety Department. Information contained in this catalog is accurate to the date of publication.

Published annually by Duquesne University, 600 Forbes Avenue, Pittsburgh, PA 15282

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# Academic Calendars
## Fall 2000 — Summer 2001
### FALL SEMESTER — 2000
- **Classes Begin**: August 28 (Monday)
- **Labor Day Holiday**: September 4 (Monday)
- **All Saints Day**: November 1 (Wednesday)
- **Holy Day**
- **Thanksgiving Holiday**: November 20-25 (Monday-Saturday)
- **Immaculate Conception Holy Day**
- **Friday Class Schedule Followed**: December 8 (Friday)
- **Final Exams**: December 14-20 (Thursday-Wednesday)
- **Commencement**: December 21 (Thursday)

### SPRING SEMESTER — 2001
- **Classes Begin**: January 8 (Monday)
- **Martin Luther King Holiday**: January 15 (Monday)
- **Spring Break**: March 5-10 (Monday-Saturday)
- **Monday Class Schedule Followed**: April 10 (Tuesday)
- **Easter Holiday**: April 12-16 (Thursday-Monday)
- **Friday Class Schedule Followed**: April 25 (Wednesday)
- **Final Exams**: April 27-May 3 (Friday-Thursday)
- **Commencement**: May 5 (Saturday)

### SUMMER SEMESTER — 2001
- **Summer Term Begins**: May 7 (Monday)
- **Ascension Holy Day**: May 24 (Thursday)
- **Memorial Day Holiday**: May 28 (Monday)
- **Independence Day Holiday**: July 4 (Wednesday)
- **End of 12 week term**: July 27 (Friday)
- **Assumption Holy Day**: August 15 (Wednesday)

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Please refer to the current schedule of classes booklet for detailed academic calendar dates and deadlines.

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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 2000.
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 43-acre campus overlooking the City of Pittsburgh. Duquesne was cited by USA Today as having one of the safest urban 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, three parking garages, a multi-purposed recreation center, a Victorian campus throughway, a theater/classroom complex, the new Arthur J. Rooney Football/Soccer Field in the center of campus, 45 new multimedia classrooms, and a state-of-the-art classroom building.

Recently named one of the top ten national 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 in 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 10,000 students in nine schools of study, including the College and Graduate School of Liberal Arts (1878), and the Schools of Law (1911), Business Administration (1913), Pharmacy (1925), Music (1926), Education (1929), Nursing (1937), Health Sciences (1990), School of Natural and Environmental Sciences (1994) and the Division of Continuing Education. 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 Spiritus est qui vivificat, "It is the Spirit 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 throughout the world and encourages its students and faculty to take advantage of opportunities to study and teach abroad.
The University believes that the sharing of the multiple traditions and mores of societies is an invaluable element in the educational process. In a world that is growing ever smaller, it is imperative that Duquesne reach out to peoples of different cultures to afford them the opportunity to acquire educational experiences not otherwise available to them. Interaction among international and American faculty and students will enrich all and enhance their ability to be better citizens of our shared world.

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

**The University Setting**

Located adjacent to downtown Pittsburgh, Duquesne University’s modern hilltop campus is readily accessible to the business, entertainment and shopping centers of the city, while still offering students the privacy and peace of its own self-contained 43-acre site.

Long noted 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 centers in the U.S., 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 theatregoer 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, three prestigious events which draw their participants from numerous social and cultural groups.

Each classroom has whiteboards, projection screens and an overhead projector permanently available. Faculty in each classroom have complete control over VCRs, laserdisc players, slide projectors, video cameras and CD-ROM players from a single control device. Students can electronically ask questions to professors without moving from their seat, observe a lecture presented at another location through distance learning technology and save lectures on disk. The Bayer Learning Center houses the teaching and research laboratories of the Mylan School of Natural and Environmental Sciences, and the administrative, student services, and faculty offices of the Mylan School of Pharmacy.

**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, Classroom, Business Office, University Counseling Center, Financial Aid Office, Learning Skills Center and the offices of University Events, Alumni, and Development. Adjacent to the building is the University Chapel, which offers daily Masses.

**A J Palumbo Center** dedicated in 1988, is the home of the Duquesne men’s and women’s basketball as well as the volleyball and wrestling teams. In addition to the five suites located on the center floor, the center serves as a recreational facility for students, faculty and staff. The 6,200-seat arena also houses intramural activities, racquetball and squash courts, modern athletic training facilities, 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 1,776 student capacity, the facility has its own recreation area, and houses both single and double occupancy rooms. The facility includes a front desk area equipped with security cameras and ID card readers and each student room has access to the campus computer mainframe.

**The Bayer Learning Center** is one of Duquesne’s classroom buildings. With its multimedia classrooms, it has become one of the most advanced classroom facilities in the region complete with satellite downlinks, electronic “white” boards and interactive student response pads. Because of the center, Duquesne now ranks in the top one percent in the nation for educational technology according to New Media Centers, a consortium of firms whose initiative is aimed at helping university campuses harness interactive media.
ACCRREDITATION AND AFFILIATION

- The Simon Silverman Center Phenomenology Collection — Focusing primarily on the work of German philosopher Edmund Husserl and his predecessors, Kerkegaard and Nietzsche. The various disciplines which utilize or offer criticism of the phenomenological approach are represented in the collection.

- Cardinal Wright Collection — Included in this collection are the Cardinal’s personal library, with emphasis on deliberations from Vatican Council II and the Synods. His sermons, addresses and papers cover the field of spirituality, including the role of the laity in the Church and relations of Church and State.

- Rabbi Herman Halpern Collection — Rabbi Halpern was the spiritual leader of Pittsburgh’s Free of Life Synagogue from 1922-1973. This collection of more than 2,600 volumes focuses on Judaico-Christian intellectual and theological relations during the Middle Ages.

- Honorable Michael A Musmanno Collection — A collection of the papers and personal library of the former State Superior Court Justice, U.S. Congressman, Nuremberg War Crimes Judge, and author. Many interesting topics on local and national history are represented in this collection through primary source material, including the abolition of the Coal and Iron Police, interrogations of the close associates of Adolf Hitler, transcripts of the Nuremberg trial that Musmanno presided over, and information on the Sacco and Vanzetti trial in which Musmanno was part of the defense team.

In keeping with its mission to support the teaching, learning and research of Duquesne’s students and faculty, the library offers instruction in a state of the art classroom that is available to students for their personal use whenever there is no class in session. Library faculty collaborate with faculty from the Department of Mathematics and Computer Science and the School of Music to teach a one-credit computer and information literacy course for freshmen.

The Cumber Library publishes BiblioTech, a print and online newsletter. A virtual tour of the library is available at [http://www.duq.edu/library](http://www.duq.edu/library)

McCloskey Field, dedicated in the mid-1970s, and renovated in 1998, is the center for outdoor intramural activity. The lighted field is made up of artificial turf and covered by a bubble all-weather track used by the University track and field teams. Other athletic facilities include four tennis courts, a six-lane swimming pool and an outdoor basketball/tennis court.

The Public Safety Building is headquarters for the University’s Public Safety Office.

Richard King Mellon Hall of Science, an attractive, four-story structure dedicated in 1968, houses the departments of biological sciences and chemistry, the Dean’s Office for the Bayer School of Natural and Environmental Sciences and part of the Mylan School of Pharmacy and Graduate School of Pharmaceutical Sciences. Designed by one of the world’s most renowned architects, Mies van der Rohe, the building won the “Laboratory of the Year” award in 1969. Instructional facilities include two large amphitheater-style lecture halls with seating capacities of 250 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, which houses 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 A.J. Palumbo School of Business Administration. John F. Donahue Graduate School of Business and whose skyscraper connects downtown Pittsburgh with Duquesne’s campus. The building has been almost totally remodeled in recent years. Rockwell Hall also houses a student lounge, a student services area, Rockwell Express (Burger King and Pizza Hut), three modern School of Business computer laboratories, Center for Communication and Information Technology, Chrysler Corp. Small Business Development Center, the Division of Continuing Education, Career Services Center, Psychology Clinic, Printing and Graphics Department, the Mailing Center, the Mills Complex, University Press, and University Purchasing Department.

Arthur J. Rooney Field is a multi-purpose field named in honor of Arthur J. Rooney, former owner of the Pittsburgh Steelers and Duquesne graduate. The facility provides a home for Duquesne University’s football, men’s and women’s soccer and women’s lacrosse teams as well as intramural activities. In the winter, an air-supported structure (a bubble) is erected over a majority of the field, which serves as the winter practice facility for the Pittsburgh Steelers. The field, which is equipped with lights and a special astroturf surface, houses an adjacent football field with locker room facilities, an athletic training room and coaches offices.

St. Ann’s Living-Learning Center, dedicated in 1964, is a seven-floor coed residence hall which houses 526 freshman students. The women and men are housed on separate floors of the hall, allowing for privacy. The facility includes a front desk area equipped with security cameras and ID card readers, laundry machines, a recreational lounge, a chapel, computer labs, and vending machines. Each student room has access to the campus computer mainframe.

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.

Vickery Hall, opened for Fall 1997. It is a 283 bed, air-conditioned facility, double rooms, bathroom shared by two rooms (four people). Hallways and lounge areas are carpeted. Studio for lounge on each floor. Laundry room on each floor, with one washer and two dryers. Front desk security, security cameras in elevators and all outside doors. Ground floor multi-purpose room for meetings, programs and building function. Each room has individual heating and air-conditioning units. Upper classroom building. Coed by floor, 2, 3 and 4 are male, and 5, 6, 7 and 8 are female.

ACCRREDITATION AND AFFILIATION

University

- Accreditation: Middle States Association of Colleges and Schools
- State Board of Education of the Pennsylvania Department of Education
- Membership: 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 Colleges and Schools
- National Association of College Admission Counselors
- National Association of College and University Business Officers
- National Association of Foreign Student Affairs
- National Association of Student Personnel Administrators
- National Association of Student Financial Aid Administrators

General Information

- Pennsylvania Association of College and University Admissions Officers
- Pennsylvania Association of Colleges and Universities
- Pennsylvania Association of Student Financial Aid Administrators
- Pittsburgh Council on Higher Education

McAnulty College of Liberal Arts

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

A J. Palumbo School of Business Administration

- Accreditation: Middle States Association of Colleges and Schools
- Pennsylvania Department of Education
- Membership: American Association of Collegiates for Teacher Education
- Association of Independent Liberal Arts Colleges for Teacher Education
- International Council on Education for Teaching
- The Pennsylvania Association of Colleges and Teacher Educators

Rangos School of Health Sciences

- Accreditation: The Commission on Accreditation of Allied Health Education Programs (CAHEP) in collaboration with the Joint Review Committee on Educational Programs in Athletic Training (JRC-AT)
- The Bachelor of Science in Health Management Systems (BSHMS) degree program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAHEP) in collaboration with the American Health Information Management Association
CONTINUING EDUCATION

School of Nursing
Accreditation
National League for Nursing
Pennsylvania State Board of Nursing
Membership
American Association of Colleges of Nursing
National League for Nursing (Council of Baccalaureate and Higher Degree Programs)
Pennsylvania Higher Education Nursing Schools, Inc.
Mylan 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
Accreditation
American Bar Association — Paralegal Institute
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

COMPUTING AND TECHNOLOGY SERVICES (CTS)
Call (412) 396-4357 The Main Office and Help Desk are located on the Concourse Level of Rockwell Hall.
The CTS Help Desk is available to answer your questions about computing at the University. Call xHELP (412) 396-4357 or visit our office Monday through Friday 8:00 a.m. - 6:00 p.m. Visit the Help Desk site anytime at http://www.duq.edu/Technology/cts/helpdesk.htm

CTS offers short classes on a variety of topics, including electronic mail, the World Wide Web, Microsoft Office and Excel and much more. Some classes are specifically designed for students. For schedule information or to register, visit http://www.duq.edu/Technology/training/

Duquesne University's Division of Continuing Education offers a variety of educational opportunities for adults. Courses are conveniently offered in the evenings, on Saturdays and online. Bachelors' degrees, masters' degrees and professional certificates are available.

For additional information, please see the Division of Continuing Education section of this catalog or call (412) 396-5600.

HARRISBURG CAMPUS
Duquesne University offers some continuing education opportunities in Harrisburg. Please call (412) 396-5600 or (717) 720-4450 for more information.

SUMMER SESSIONS
Undergraduate and graduate courses are offered each summer in most areas. They are open to qualified Duquesne students and students 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 Division of Continuing Education, 216 Rockwell Hall, at (412) 396-5600 or 1-800-283-3853.

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Part II: Admissions and Financial Aid

Admissions

OFFICE OF ADMISSIONS
The Office of Domestic Admissions is located on the
first floor of the Administration Building.
Telephone: (412) 396-5000
(800) 456-0590 (Outside of 412 Area Code)
Fax: (412) 396-5644
Office hours: Monday through Friday from
8:30 a.m. to 4:30 p.m.
e-mail: admissions@duq.edu

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.

ADMISSIONS REQUIREMENTS
1. A candidate should have been graduated from an approved secondary school in the upper two-thirds of the class and demonstrated exemplary personal conduct in that institution. Applicants who have not completed four years of high school must submit a High School Equivalent Diploma issued by their state department of education, in addition to a high school transcript.
2. High School curriculum must include 16 units distributed as follows: four units in English, eight units in any combination from the area of social studies, language, mathematics, and science, and four elective units for which the secondary school offers credit toward graduation. In specific instances, and at the discretion of the Committee on Admissions, the genuine equivalent of these requirements may be accepted in lieu of the precise requirements specified. (Note: Candidates planning to enroll in pharmacy 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 1 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.

EARLY ACTION PROGRAM
This program holds a deadline of December 1 and allows the student to receive a decision during their senior year, well in advance of the normal response dates.

APPLICATION—NEW FIRST-YEAR STUDENTS
Applications should be addressed to the Dean of Domestic Admissions, Duquesne University, Pittsburgh, Pennsylvania 15282. An application may be submitted at any time during the candidate’s 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 $50 non-refundable application fee with the application form. No application will be processed for consideration by the Committee on Admissions unless accompanied by the required fee.
3. Request the secondary school principal or guidance counselor to submit a transcript of the candidate’s academic record. A recommendation is 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 complete application by January 10 of their senior year.
7. Early Decision deadline (for students who have Duquesne as their first College choice) is November 1. Notification will be by December 15 if accepted under the Early Decision Plan. Accepting students are asked to submit a non-refundable tuition deposit of $200 within two weeks. Residents students are asked to submit a $500 non-refundable deposit within two weeks.
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 $200 for commuters or $500 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.

ADMISSION AND FINANCIAL AID

EARLY ADMISSION/HONORS PROGRAM
Although the University believes that most students profit from four years in the secondary school, the Early Admission/Honors Program is open to outstanding students who desire a true academic challenge. This is a plan whereby unusually able and mature candidates who have completed less than four years of a secondary school program may begin their university studies after their junior year, prior to high school graduation. The high school diploma is awarded following successful completion of the freshman year at Duquesne.

Applicants for the Early Admission/Honors Program must be in the top ten percent of their class with a grade point average of 3.0 or above. A minimum 1,000 Composite or 26 ACT score is necessary for admission. An essay and an interview are also required. Written approval from the applicant’s high school principal and/or guidance counselor must be provided outlining the courses needed to receive the high school diploma. Applicants under the age of 18 requesting residence on campus must have parental permission. Students entering the Early Admission/Honors Program will be given priority consideration for the Integrated Honors Program.

Advanced Credit Honors Initiative
High School Juniors and Seniors who wish to take university courses may do so at Duquesne if they fill the requirements set forth by the Duquesne University Honor Program.

Students must have no lower than a 3.0 grade point average. A letter of recommendation from a high school counselor must accompany their application.

Students enrolled in the program receive University credit for courses taken. Courses will be offered at a reduced tuition rate.

Students who maintain a 3.0 grade point average while at Duquesne will be given guaranteed admission into full-time studies at the University when application is made. Due to limited enrollment in select programs, students must consult with a Duquesne University student advisor upon acceptance into the Advanced Credit Honors Initiative. The advisor will assist students with academic planning.

Further information and tuition rates can be obtained from the Duquesne University Office of Admissions.

The International Baccalaureate (IB)
Most of the prominent universities in the United States have developed policies for the International Baccalaureate. Duquesne University awards up to 30 academic credits to a student completing the diploma with a score of 3 or above and in three higher-end subjects.

1. Higher Level scores of 5, 6 or 7 will be accepted to a maximum of 30 semester hours. 1 B Subsidiary level scores of 6 or 7 will be accepted in foreign languages to a maximum of six semester hours per language. No credit will be given for other subsidiary level courses.

Advanced Placement
Students who have followed the College Entrance Examination Board college level program in secondary schools and have performed satisfactorily in the advanced placement examinations are eligible for advanced placement at Duquesne University, as well as placement, for achievement that merits such consideration. Subjects included in the program are English composition, history (American and European), history of art, modern foreign languages (French, German, Spanish), Latin, mathematics AB, mathematics BC, physics B and C, chemistry, biology, and computer science.

Applicants who hope to receive advanced placement credits must request that scores be sent to the University. Credit will be given on a maximum advanced placement score determined yearly by the College of Liberal Arts.

College Level Examination Program (CLEP)
A student may acquire credits by achieving a satisfactory score on one or more of the College Level Examinations — Subject and General. Any of these examinations may be taken at Duquesne's University Counseling Center or at a CLEP Center. Additional information regarding test dates, applications, and sample test questions is available from the University Counseling Center, 308 Administration Building, phone (412) 396-6204/6208.

Students should double check with the College of Liberal Arts to ensure that they are eligible to receive credit for the particular exam(s) they plan to take (students must wait six months to retake a test). The policy is subject to change.

Honors College/Integrated Honors Program
Roberta Aronson, Director

Highly qualified, motivated, and committed students are searching for challenge and enrichment in a college education. For these students, the future leaders in every field, Duquesne University offers its Honors College:

- Advanced credit honors initiative
- Early action program
- Early decision program
- Admissions and financial aid
- College level examination program
- International baccalaureate
- Advanced placement
- College counseling center
Duquesne University's Honors College provides an intellectual breadth and depth of experience which not only enhances the life of the mind, but also offers practical advantages in our increasingly competitive world. It combines liberal arts with opportunities for professional studies while providing the thinking, writing, and speaking skills necessary for continuing success.

The foundation of Duquesne's Honors College is the Integrated Honors Program, an enhanced track of the nine-course University Core Curriculum. Special honors sections of Core courses feature some of the University's most distinguished faculty. Honors College students are dedicated to good teaching, as well-known scholars in their fields, and possess a ready willingness to engage students in extended discussions. They believe learning is a lifelong adventure.

HSP courses focus on our essential human heritage and on the major ideas and issues forming the background and direction of modern life. They are taught in small class sections, allowing for close interaction between students and teachers and encouraging individual initiative as well as collaborative learning.

Honors College Advantages
Participation in an honors program offers a competitive edge in admission to professional and graduate schools and in obtaining assistantships and fellowships.

While graduation from an honors program cannot guarantee employment, persons with broadly based liberal arts and sciences backgrounds are often preferred for professional and managerial positions.

APPLICATION—OTHER CATEGORIES
It is the responsibility of persons who apply for evening study, or as international students, re-admission students, transfer, 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 or transfer 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 freshman-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,
- c) Original or certified copies of all academic records of secondary and any post-secondary study. Credentials should be submitted in the native language and with certified English translation,
- d) One letter of recommendation, and
- e) Application fee in the amount specified on the application form.

Duquesne University is authorized under federal law to enroll non-immigrant foreign nationals. However, no immigration documents can be issued until all application materials, including financial resource certification, have been received. In order to complete the application, sending the financial aid application, language proficiency testing, and registration, accepted international students should plan to arrive approximately one week before classes begin unless otherwise informed. All international students are required to have health insurance per U.S. immigration law and University policy.

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 the English Language Placement Tests upon arrival. Students who submit scores on the Test of English as a Foreign Language (TOEFL) which are current to within one year and greater than 575 may be partially waved from English Language Placement Tests. If additional assistance with English language proficiency development is indicated, 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.

NOTE: Undergraduate applicants who have completed one year or more of successful post-secondary study in the United States or who submit acceptable scores (current to within one year) on the Test of English as a Foreign Language (TOEFL) may qualify for conditional waiver directly into full-time academic coursework. Therefore, while TOEFL scores are not required in order to receive an undergraduate admissions decision, submission of TOEFL scores is strongly recommended. The Duquesne University TOEFL Institution Code is 2196.

Applicants to English as a Second Language Program
The same application procedures detailed above may also be used by international students interested in applying only 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 completion basis. A full description of the English as a Second Language Program is found on page 11.

Additional Information on International Student Applications
Please direct all inquiries and requests for additional information and application materials to the Director, Office of International Affairs, Duquesne University, 610 Duquesne Union, Pittsburgh, Pennsylvania 15282-1660. Telephone 412-396-6113 FAX 412-396-5178. e-mail naa@duq.edu

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 if the Bachelor's degree was received from an institution other than Duquesne. Proof of degree is required either by an official transcript or a certificate of graduation.

RE-ADMISSION
Any student who withdraws from the University must apply for re-admission through the Office of Admissions regardless of the time interval involved since withdrawal. A student who is dismissed for academic reasons must appeal to the Committee on Student Standing of the school to which application for re-admission is being made, once the application has been submitted to the Admissions Office. The school then will be responsible for notifying both the student and the Office of Admissions of any decision concerning acceptance or rejection.

TRANSFERS
A student who wishes to transfer from another college must have complete transcripts of high school and college records forwarded to the Office of Admissions and must submit an application for admission. When accepted, the student must supply to the dean of his/her school a description of courses which appear on the college transcript. The student should contact the Admissions Office of his/her school for placement and curriculum planning following a reasonable period for evaluation of the college transcript.

The College of Liberal Arts, the School of Natural and Environmental Sciences, and the School of Education award 60 semester hours of credit to accepted...
FINANCIAL AID

Transfer applicants who have an Associate's degree in Arts from a regionally accredited two-year institution

Students transferring from a regionally accredited institution must present academic records which show an overall average of C+ (2.5 on a 4.0 quality point system). Only credits will transfer, not grades.

Persons seeking admission to the University as transfer students from a state-approved college which does not have regional accreditation must have earned a cumulative average of 3.0 based on a 4.0 quality point system. In addition, such prospective students must take the College Entrance Examination Board tests and attain the appropriate scores.

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

TEMPORARY TRANSFERS

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

No Temporary Transfer Student will be granted admission without formal application to the Division of Continuing Education and an official transcript or permission from an official at the University at which the student is enrolled. A Temporary Transfer Student must re-apply if he/she desires 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 DUQUESNE STUDENTS

Any Duquesne University undergraduate student who was granted continuance at the close of the preceding Spring Semester is authorized to register in the Summer Session. Students who were dismissed by their school at the close of the preceding Spring Semester, for academic reasons may re-register for summer classes by permission of the Committee on Student Standing of their School. All students must have their course selections approved by their academic advisor.

Graduates and other former students, including any who withdrew from the University, must obtain re-admission before they may register for summer classes.

STUDENTS FROM OTHER INSTITUTIONS

A student of another college or university who wishes to enroll for the Summer Session, and who intends thereafter to return to the original institution and is eligible to continue there, may be admitted to the Summer Session. A tear-out admissions application and registration form for the summer study is provided in the announcement of summer offerings, which may be obtained from the Summer School Office at mid-March. These students are considered to be Temporary Transfer Students.

Financial Aid

Financial aid is defined as scholarships, grants, loans, and part-time employment awarded to help meet the cost of education. Cost of education includes tuition, fees, room and board or a living expense, books and allowances for personal and transportation costs.

Awards can be merit based or need based and come through a variety of sources including Federal and State Government, Private Organizations and the University itself.

APPLICATION PROCEDURE

Students must apply for any awards by May 1 of each year. Where awards are based in whole or part on financial need, the student must also complete a Free Application for Federal Student Aid (FAFSA) each year. Since this form also constitutes application for State Grants special attention should be paid to state grant deadlines listed with the FAFSA form — for Pennsylvania the deadline is May 1.

PROGRAMS OF AID ADMINISTERED BY THE FINANCIAL AID OFFICE

University Scholarships/Grants

Initial academic eligibility is determined by the Undergraduate Admissions Office, based on the academic credentials of the applicant pool each year. Awards are renewable for the normal course of the student's undergraduate program provided (1) student is full time, (2) maintains minimum cumulative GPA required by award, (3) files a University Aid Application by May 1 each year, and, (4) continues to meet any other requirements of the award.

Available to incoming freshmen — then renewable with cumulative GPA indicated

Chancellor's Scholarship $3,500
Founders Merit Scholarship $3,000
Presidential Merit Scholarship $3,000
Parish Merit Scholarship $2,750 or $3,000
Provost Merit Scholarship $2,750 or $3,000
Lavel Merit Scholarship $2,750
Libermann Scholarship for International Students $2,750

Available to renewal students only — with cumulative GPA indicated

President's Scholarship $3,000 and need
*If funds are available, new applicants with minimum 30 credits earned at Duquesne, with 3.0 cumulative GPA and need will be considered

Scholars/ROTC

Assistance toward room and board costs for ROTC Scholarship winners. Renewable with re-application, minimum 3.0 cumulative GPA. Applicants for campus ROTC award

Duquesne Grant

These grant funds are available to students entering with the Fall 2000 semester and later. They are awarded to students with remaining need after utilizing all aid resources available. Renewable with minimum cumulative GPA of 2.0, and continued need for funds after utilizing other aid sources available.

Auxiliary Grant

This grant was initially awarded to students who began prior to the Fall 2000 semester. It is renewable provided the student demonstrates need. The minimum cumulative GPA for renewal is 2.00, effective Fall 2000.

Liz & John E. Murray, Jr. Scholarship

Every 4 years Dr & Mrs. Murray will fund scholarships to incoming freshman students. Students will receive one-half tuition and university fee. Renewable for four years provided student maintains a minimum cumulative GPA of 3.0. Continues to demonstrate exceptional need, applies for financial aid and resides on campus.

Federal Supplemental Educational Opportunity Grant (SEOG)

Grant funds received through the Federal Government awarded to undergraduate students with exceptional need. Preference to students who receive Federal Pell Grants.

Federal Perkins Loans

Recipients are selected in accordance with guidelines published by the Federal Government with amount of award based on available funding. Repayment begins nine months after borrower terminates at least half-time study, and is normally scheduled over a 10-year period at an interest rate of 5% per year.

Federal Nursing & Health Professions Loans

Selection and repayment identical to Perkins loan except that only full-time, dependent undergraduate Nursing Students are eligible for the Nursing Loans and only full-time, dependent undergraduate Pharmacy (not Pre-Pharmacy) students are eligible for the Health Professions Loan.

Institutional Loans

Limited loan funds are available to full-time undergraduate students. Repayment and interest rates vary. Funds made available through Alcoa Foundation, Kerschgens Estate, and Stanley K. Power Trust of the Pittsburgh Foundation available only to residents of Allegheny County in Pennsylvania. Funds made available through Gulf Oil Corporation are available to final year students.

Student Employment

Financial eligibility for the Federal Work-Study Program of part-time employment is determined by the Financial Aid Office based on Federal guidelines. Students who do not qualify for Federal Work-Study employment may be placed in part-time non-clearance positions. The Office of Human Resource Management bears the responsibility for actual placement of all student employees. Placement is contingent on positions available.

OTHER SOURCES OF AID

Federal Pell Grant

Program Direct grant assistance through the Federal Government is available to undergraduates based on an eligibility formula. Students are advised to apply for the Federal Pell Grant.

State Grants

The majority of states that provide grants to students use the FAFSA as the basic application. deadline for each state appears in the FAFSA information. Pennsylvanian's deadline is May 1.

Loans

Federal Stafford Loans

Receives completion of FAFSA and Stafford Loan Master Promissory Note (MPN). New applications can be requested through most banks and lending institutions. Available to students who enroll at least half-time. Interest rates vary. Loan limits vary with academic level.

Federal Perkins Loans

Eligible for first and second academic levels.

Federal PLUS Loans

Available for parents of dependent students whose parent is denied for the Federal PLUS Loan. Can apply for this loan using the Federal Stafford Loan Master Promissory Note (MPN). Interest rates vary with academic level.

Federal Unsubsidized Stafford Loans

Available to independent students and dependent students whose parent is denied for the Federal PLUS Loan. Can apply for this loan using the Federal Stafford Loan Master Promissory Note (MPN). Interest rates vary with academic level.

Federal Stafford Loan

Eligible for all levels.

Federal PLUS Loans

Available to parents of dependent students. Loan applications may be obtained through most banks and lending institutions. Interest rates vary. Maximum is calculated cost of education minus all financial aid.

University Discounts

The following discounts are available to students meeting the requirements indicated. Discounts will be at basic tuition rate and may be used toward only one degree or part thereof. No other form of tuition remission or discount can be used simultaneously. Some program restrictions may apply.
Catholic High School Graduates  A 25% discount on basic tuition is extended to graduates of Vincentian Academy-Duquesne University. This discount is effective with initial enrollment at Duquesne University immediately in the fall following graduation. This discount applies with the class entering in the Fall of 1998. A 10% discount on basic tuition is extended to graduates of Roman Catholic High Schools in the Dioceses of Pittsburgh and Greensburg who enroll as full-time students in the fall immediately following graduation. Renewal requires continuous full-time enrollment during the academic years following initial enrollment, and re-application through the Financial Aid Office.

Clergy/Religious Members of University-recognized Christian and Jewish Religious orders who have been ordained, or professed members of a Catholic Clergy/Religious Order may be eligible to receive a 50% discount. Official certification of ordination and documentation of formal theological education is required for first-time non-Catholic clergy applicants.

Lay Teachers Current full-time lay teachers or high school administrators required to obtain Administrative Certification in a Catholic School located in Roman Catholic schools in Pittsburgh, Greensburg, or Altoona-Johnstown Dioceses or lay teachers from other dioceses who have completed a minimum of two years of full-time teaching in a Catholic School may be eligible to receive a 50% discount.

Senior Citizen Men and women who are 60 years of age or older may be eligible to receive a 50% discount.

Lay Ministers Men and women employed as lay ministers within the Roman Catholic Diocese of Pittsburgh as Pastoral Associates, Professional Youth Ministers, Parish Social Ministers, and Campus Ministers may be eligible to receive a 50% discount. Eligibility must be verified by the Institute for Ministers of the Diocese of Pittsburgh.

Music Ministers Men and women employed as organists or choir directors at recognized religious institutions may be eligible to receive a 50% discount. May not be full-time students and must be enrolled in either Continuing Education (non-degree) or the School of Music. Discount maximum would be 50% of basic tuition.

Other Possibilities In addition to programs outlined above financial aid may be obtained through private sources. Students should inquire through (1) high school guidance offices, (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.
FINANCIAL AID

ADMISION AND FINANCIAL AID

C S McCarthy Scholarship Need based Juniors and Seniors majoring in Journalism

William Rush Scholarship Through Journalism Preference to senior majoring in advertising, journalism, public relations or radio/television Need is not a factor

School of Business Administration

Scholarship application/information available from the Accounting Office, 705 Rockwell Hall

Accounting Scholarships Available to juniors and seniors majoring in accounting. Awards are based on need and academics Apply by October 1 Applications available from Accounting faculty

Alumni Association Scholarship Awarded annually to qualified Business student(s) Based on financial need and merit

Glen Benson Scholarship Based on need and academics (3.5 QPA) Available to sophomore, junior or senior Business students

Clifford E Brown Endowed Scholarship Awarded annually to an undergraduate Business student, based on financial need and merit Administered by the Financial Aid Office

Anthony Ciputti Memorial Endowed Scholarship Awarded annually to an undergraduate or graduate Business student Based on financial need and merit Administered by the Financial Aid Office

Consolidation Coal Company Scholarship for Information Technology Awarded to a student majoring in Information Technology, with 30 QPA and senior standing by fall of award year Final determination based on essay

Duquesne African-American Accounting Scholarship African-American accounting majors who maintain a 30 QPA Application and information available from the Director of the African-American Accounting Scholars Program

Joseph P Gorham and Karen Gorham Kates Endowed Scholarship Awarded annually to an undergraduate or graduate Business student based on financial need, merit and a minimum 2.5 QPA Administered by the Financial Aid Office

Joseph Montevale Scholarship For sophomores, juniors and seniors Based on academic achievement - 3.5 QPA, University and community service and a personal statement

Physical Therapy Financial aid and scholarship information may be obtained from the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314 Phone: (703) 684-2782

Daniel V Linco Scholarship One fifth year Physical Therapy student is awarded this scholarship based on academic achievement. Service and leadership Not renewable

pt Group Scholarship One fifth year Physical Therapy student is awarded this scholarship based on outstanding clinical performance during clinical education

Physician Assistant Financial aid and scholarships are available through the American Academy of Physician Assistants, the Physician Assistant Foundation Scholarship Program, and the Pennsylvania Society of Physician Assistants. The Department of Physician Assistant will provide information to students

Traffic Club of Pittsburgh Competitive Scholarship for junior or senior Supply Chain Management majors with minimum 2.75 QPA Apply in February

James F and Mary Ellen Will Endowed Scholarship Awarded annually to an undergraduate Business student with financial need Administered by the Financial Aid Office

School of Business Administration

Mary Bischoff Scholarship Need based

Katherine Carney Scholarship Based on need and academics Special education major

Elizabeth Melcher Award Sophomore involvement in on or off campus professional development

Hearst Scholarship Must be an athlete Preference to minority students who have completed associate degree at Allegheny, Beaver or Butler County Community College

Roche Memorial Scholarship Juniors Based on need and academics

M E Sullivan Scholarship Juniors or Seniors with Special or Elementary Education majors

School of Health Sciences

Athletic Training Scholarships and grants are available to students who are members of National, Regional and State athletic trainers' associations

Contact Department of Athletic Training for details

Health Management Systems Loans and scholarships for final year students Information available through American Health Information Management Association, 919 N Michigan Avenue, Suite 1400, Chicago, IL 60611-1683 Phone 1-800-433-3243

Occupational Therapy Scholarships for students in professional phase Applications available through the American Occupational Therapy Foundation, 4720 Montgomery Lane, PO Box 31226, Bethesda, MD 20824-1220

Physical Therapy Financial aid and scholarship information may be obtained from the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314 Phone: (703) 684-2782

Daniel V Linco Scholarship One fifth year Physical Therapy student is awarded this scholarship based on academic achievement, service and leadership Not renewable

pt Group Scholarship One fifth year Physical Therapy student is awarded this scholarship based on outstanding clinical performance during clinical education

Physician Assistant Financial aid and scholarships are available through the American Academy of Physician Assistants, the Physician Assistant Foundation Scholarship Program, and the Pennsylvania Society of Physician Assistants. The Department of Physician Assistant will provide information to students

Florence M Pauz Memorial Scholarship Need based Order of preference (1) Marital Status - single parent, child of single parent, married, other (2) Sex - Female, Male (3) Race - African-American, other US Government minorities, other

Jane and George Pfifer Scholarship Need based on need and academics

Dr and Mrs Arthur William Phillips Scholarship Based on academics Pennsylvania residents from Allegheny, Armstrong, Butler, Clarion, Crawford, Jefferson, Lawrence, Mercer or Venango counties

Pioneer and War Years Scholarship Need based

JW and Ruth Leons Radke Scholarship Need based

No more than three awards per year

Alan Reynolds Scholarship Need based

Marie B Roche Scholarship Need based

Frank W Schnitz Scholarship Based on need and academics Enrollment in A J Palumbo School of Business

R P Simmons Family Scholarship Need or Merit based Residents of Tri-State area — Pennsylvania, Ohio, West Virginia

Jerry Smith II Scholarship Need based, average grades

Spring Hill Foundation Wayne County, PA residents with preference to children of employees or residents of Sterling Township A 2.6 QPA needed for renewal

Patrick F and Susan M Spano Scholarship Need based Enrollment in A J Palumbo School of Business

John A and Patricia D Staley Scholarship Need based on need and academics Enrollment in A J Palumbo School of Business

Jane B Stutler Scholarship Need based

Patrick and Mary Stinley Scholarship Need based

Classicus major

Margaret Edges Sullivan Scholarship Juniors or Seniors majoring in Special or Elementary Education

Patrick C Tissue Scholarship Need based

Donald L Vey Scholarship Based on need and academics

Donald W Weber Scholarship Based on need and minimum 30 QPA

James F and Mary E Will Scholarship Need based Preference to business majors

Virginia Kushner Williams Scholarship Based on need and academics Education majors

Thomas J Winstel Scholarship Need based

Harry Witt Scholarship Based on need and academics

Ronald and Lisbeth Wolf Scholarship Need based

The Richard Wright Scholarship Based on need and academics

Joseph A Young Scholarship Need based Preference to members of St Aloysius Parish, Pittsburgh

The following are awarded by financial aid and outside representatives

Albert and Ambrosina Comelcha Scholarship Based on academics Juniors and Seniors in McAnulty College of Liberal Arts or Bayer School of Natural and Environmental Sciences with specific majors

Nathan and Harry Daly Scholarship Based on need and academics Residents of Butler County, PA

SGA Scholarships Based on need and activities Apply through SGA Office by April 1

Melville A Eberhardt Memorial Fund Based on need, academics and activities

Merle E Gillard Scholarship Based on need and academics

USX Good Fellowship Scholarship For children of USX employees with minimum 2.5 QPA

Student Life

Barbolic Scholarship Based on need, academics and service Sophomores and Juniors in Business

Coalhouse Scholarship Based on need and volunteer activities

Clint Eddy Goodwin Memorial Scholarship Based on academics Pharmacy students

Patrick and Mary Hogan Scholarship Need based

Harry McCloskey Memorial Award Based on academics, character and volunteer activity

George R Piskar Scholarship Awarded to disabled students based upon need and academics

Van Henz Travel Award Female students selected on the basis of academic achievement and interest in intercultural or international relations

Demarco Scholarship Award based on need or emergency situation to those of Italian Heritage Administered jointly by Executive Vice President of Student Life and Director of Financial Aid

College of Liberal Arts

Carroll Scholarship Based on academics and creative writing Apply through English Department

Cheyfers Scholarship Based on recommendations of English Department Chair Juniors and Seniors in English

Krakowsky Scholarship Based on need and academics Communication majors

Laurits Scholarship Based on need and academics Incoming freshmen, non-renewable Journalism majors

On or off campus professional development

Not renewable

pt Group Scholarship One fifth year Physical Therapy student is awarded this scholarship based on outstanding clinical performance during clinical education

Physician Assistant Financial aid and scholarships are available through the American Academy of Physician Assistants, the Physician Assistant Foundation Scholarship Program, and the Pennsylvania Society of Physician Assistants. The Department of Physician Assistant will provide information to students
School of Natural & Environmental Sciences

Bayer Undergraduate Summer Research Fellowships for Bayer School of Natural and Environmental Sciences students

Chemistry Department Scholarship for chemistry majors

School of Nursing

Behian Scholarship for nursing students

Hauser Scholarship for nursing students

Migliorino Thomas Award for nursing students

Connie Miller Scholarship for nursing students

H Schreiber Scholarship for nursing students

Barbara Ann Verhar Endowed Scholarship for nursing students

School of Pharmacy

Unless otherwise stated, apply through School of Pharmacy

Women of Galen - Provided by Women's Auxiliary of Galen Pharmaceutical Society of Pittsburgh to deserving final year Pharmacy students

Samuel W Curtis Loan to provide assistance for Pharmacy students

Chibon Loan to provide assistance for Pharmacy students

Joel P Laughlin Scholarship Awarded by the Graduate Chapter of Phi Delta Chi in memory of Joel P Laughlin Awards made to fraternity brothers who have demonstrated academic achievement and active participation in fraternity functions

Manzione Family Scholarship Endowed fund established in 1994 Awarded annually to a Pharmacy student in the professional phase Based on need and academics

Clinton Eddy Goodwin Scholarship in memory of Clinton Eddy Goodwin Candidates must be a declared Pharmacy major, possess a minimum QPA, and have an interest in and demonstrated support of the University athletic program

NCPA Foundation provides loans to Pharmacy students in the last two and one-half years of professional study for tuition, fees and books through the School of Pharmacy

Fred Schiller Loan for students entering the second year of the curriculum based on need and expressed interest in a career in pharmacy practice

Dr. B. Olive Cote Graduate Loan Fund established in 1994 to assist an alumna member enrolled in program of graduate study and research in the pharmaceutical sciences Application must be received by the Dean of the College of Pharmacy and the Graduate Program Director

The award amount is determined by need and academic standing and expressed interest in the College of Pharmacy

Tau Alumni Chapter of Lambda Kappa Sigma - Rose Manzone Scholarship in memory of Rose Manzone Foundation established in 1994 to assist an alumna member enrolled in program of graduate study and research in the pharmaceutical sciences Application must be received by the Dean of the College of Pharmacy and the Graduate Program Director

The award amount is determined by need and academic standing and expressed interest in the College of Pharmacy

American Pharmaceutical Association Auxiliary Irene Parks Loan Fund provides loans to Pharmacy students in the final years of the Pharmacy degree program

Geraldine (Muia) Furgiuele Scholarship awarded annually to a Pharmacy student in memory of Geraldine (Muia) Furgiuele, P50 Provides scholarships for needy and deserving female students in the School of Pharmacy

Rosemane Bevacqua Scholarship in memory of Rosemane Bevacqua, P55 Provides scholarships for needy and deserving female students in the School of Pharmacy

Richard H. and Marie W Barry Scholarship in memory of Richard H. Barry, P39 Selection of recipients from Pharmacy classes will be based on academic standing and need

School of Music

Alfred d'Aulibe Scholarship Based on need and academic record

Barry Scholarship - Music Recommended by the Dean

Dorothy M. Freelsch Scholarship Based on musical and academic ability

LaVelle Scholarship Trumpet player Need based

Mauns Scholarship Need based, academic secondary

Music Therapy Scholarship Music Therapy students

Patton locker fund based on musical and academic excellence

Pendel Trombone Scholarship Based on talent and promise of jazz trombone student

Renhold Scholarship Based on musical and academic excellence

Riley Piano Award One award per semester for piano excellence

Rectoro Scholarship Woodwind major Based on music

Matty & Eddie Shauer Students studying brass instruments

Vegodich Scholarship Cello student, minimum 30 QPA

Womens Advisory Scholarship Full time student

Other Awards Contact Dean's Office for information

Presbyterian Scholarship, Loyal Christian Benefit Association Award, Polish Arts League Scholarship, Music School Scholarships

Speech-Language Pathology Financial aid and scholarships information may be obtained by writing to the American Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville, MD 20852 Phone (301) 897-5700

William and Mary Lourey Scholarship. One is awarded this scholarship based on significant financial need. RSHS fourth year students in the professional phase are eligible to apply. Not renewable

Institutional Employment Contracts Hospitals in Southwestern Pennsylvania may provide scholarships for students in the professional phase. While information may be posted by departments, the University will not initiate or coordinate these programs. Students must independently seek out these sources. Students are advised to seek legal counsel before signing any documents.

American Pharmaceutical Association Auxiliary Irene Parks Loan Fund provides loans to Pharmacy students in the final years of the Pharmacy degree program

Con C. Caton, Norma Wells, Mary Connolly Lussington Educational Grants. Grants awarded annually to members in good standing of Lambda Kappa Sigma, enrolled in Doctor of Pharmacy program. Must rank in upper half of their class and present evidence of financial need. Application information from School of Pharmacy.

Powers-Scheurig Scholarship. Granted to a student entering the final year of the Pharmacy program. Must have minimum 2.5 QPA in the professional program and demonstrate financial need

Alfred J. Pfenning, Jr Memorial Scholarship. In memory of Alfred J. Pfenning, P52 Annual award to a Pharmacy student in the final years of study. Based on need and service to the Duquesne campus.
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 during the Fall Semester in 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, housing charges, deposits, financial aid awards, and balance due is mailed to the student at his or her permanent address a month before classes begin, thus enabling the student or parent to make payment by mail.

Final registration for students who have neither preregistered 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 after the opening day of classes is subject to the official withdrawal policy. Withdrawal from the room and board reservation contracts is to be made in accordance with the provisions of the contract.

See Room and Board—Withdrawal and Refund, pages 30-31 of 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 on 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.

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.

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 periods of Preregistration, Final Registration, and Late Registration.

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 an academic advisor and processed with the Registrar.

Schedule change requests processed with the Registrar during Late Registration must also have the signatures of the instructors whose classes are being added or dropped.

Students who process change forms late are not entitled to a refund for 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 and Terminations of Attendance' 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.

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 with the Dean of Domestic Admissions and International Affairs.
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 all 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 assessing the student's eligibility for the course in which s/he intends to enroll. Full credit and grades 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 (e.g., for purposes of participation in campus organizations, 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 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 Schools and 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**

A Cross-Registration form is obtained either from an Advisor or the Registrar's Office. The student then completes the form by indicating which course(s) s/he wishes to enroll in at the host institution. Copies of the class schedules of all PCHE institutions are maintained in the Registrar's Office. The completed Cross-Registration form must be submitted to the student's advisor for approval. All copies of the form are to be delivered to the Registrar's Office. The Registrar of the host institution will notify applicants whether or not the cross-registration has been accepted.

**LATE REGISTRATION**

Late Registration may be permitted for serious cause with the approval of a student's dean and with payment of the penalty fee. However, no student may be registered and begin attending classes later than the latest date for Registration and Change of Schedule as announced in the Academic Calendar (published in the Schedule of Classes booklet).

**RECORDS AND REPORTS**

**SEMESTER 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 obligation to the University has a complete 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 any errors to the Registrar in writing.

To obtain additional copies of academic records, students must write to the Registrar requesting transcripts for themselves or for mailing to other institutions and agencies. All official transcripts mailed by the Office of the Registrar may bear the signature of the Registrar and are printed on secured paper. 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 to the student to the University have been fulfilled. A fee of $5.00 is charged for the issuance of each transcript and 24-hour processing time is required for 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 contents of either may be revealed only in accordance with the Family Educational Rights and Privacy Act of 1974 (Public Law 93-380, Section 438, as amended).

In order that parents of students may receive from University officials information concerning the academic record of their child, it is required that either the parents must prove the 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 student must grant a waiver of rights.

Students wishing to waive the FERPA requirements relating to the release of academic information must complete the waiver obtainable at the office of the academic advisor or the Registrar's Office

**Academic Policies**

**POLICIES**

**ACADEMIC ADVISEMENT**

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

The student must consult with the academic advisor with regard to any questions of an academic nature. No student may register without an academic advisor's approval.

**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 by consulting the Office of the Registrar and the individual schools. Fees for auditing are uniform for all students.

Registration in a course as an auditor must be declared at registration and is irrevocable after the last date for change of schedule each semester, as indicated in the 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 "Certificate of Attendance" for non-degree students will be awarded by the Division of Continuing Education.

Audited courses are not eligible to be converted to matriculated credits. Courses audited may not be challenged later or completed via CLEP or other advanced standing tests.

Coursed 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 the School of Natural and Environmental Sciences, courses in humanities and social sciences can be audited, but communications and laboratory courses may not be audited.

Students enrolled for audit may attend lectures, complete course assignments, and take the final examination given by the professor in charge of the course. However, students enrolled for audit do not receive academic credit from the University.

**CANCELLATION OF COURSES**

The University makes every reasonable effort to offer courses as announced in the Schedule of Classes booklet and the summer session timetable. 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 considered essential for maximum educational advantage and is strongly encouraged. The responsibility for all course material rests wholly with the student. Schools may require attendance at every class.

It is the prerogative of each school to establish policy for attendance at classes, laboratories, tests, examinations, deadlines for reports, and specific school requirements. It is the instructor's responsibility to make the school's policy known at the first class session as it pertains to the course and school. The student should supply any required written verifications as soon as possible.

The student must submit work assigned and take the examination in the course at the specified time. If work is not submitted or an examination is not taken at the scheduled time, the policy is to assign a zero for that part of the course. An accumulation of zero grades could result in a final grade of F. If a student has for significant reasons missed a part of the course or an examination, the grade may be submitted as an I. If the temporary I grade is to be replaced by a passing grade, the work must be completed by the time stated in the Academic Calendar (published in the Schedule of Classes Booklet). Failure on the part of the student to remove the temporary grade results in conversion of that grade to an F recorded on the transcript.
CLASSIFICATION OF STUDENTS

Freshman  less than 30 credits completed
Sophomore 30 to 59 credits completed
Junior 60 to 89 credits completed
Senior 90 or more credits completed

1. Full-time Student  A student with an academic schedule of at least 12 credits is considered a full-time student. With this status a student is entitled to the benefits of various activities. A student may not change status during the semester without the permission of the academic advisor and the Dean of the student’s school.

2. Part-time Student  Anyone who carries under 12 credits is regarded as a part-time student.

3. Post-graduate Student  A person who has completed a baccalaureate degree and is seeking additional undergraduate credits.

COURSE EXAMINATIONS

Unsat 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 $300 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.

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

PLUS/MINUS GRADING OPTION

The Plus/Minus Grading System is the official grading system of the University.

Faculty are to announce at the first class meeting whether or not plus and minus grade values will be used in grading course work and rating academic performance of the students in their class.

REGISTRATION AND SCHOLASTIC POLICIES

D  Lowest passing scale grade
F  Failure (Course must be repeated for credit)
CG  Contested Grade (Used when there is a question of academic dishonesty. Final grade to be determined after proper review by appropriate University personnel)
H  Honors (Used in some courses where scaled grading is inappropriate. Indicates completion of course work with credits earned and with honors but without quality points and is independent of the Quality Point System)
I  Incomplete (A temporary grade given by an instructor when neither a passing nor failing grade can be determined because of incomplete course work. Unless a convincing explanation of extenuating circumstances, acceptable to the instructor, is presented and the missed examination or required assignment is made up by the date specified in the Academic Calendar, the I becomes a permanent F grade)
LG  Late Grade (Used to indicate that grade was not reported by faculty in time for the semester grade report to be sent to student)
N  Not Pass/Fall (Used to indicate Failure in a course Not Pass graded course is independent of the Quality Point System. Course must be repeated for credit)
P  Pass (May be used in some courses where scaled grading is inappropriate. Indicates satisfactory completion of course work with credits earned but without quality points and is independent of the Quality Point System)
S  Satisfactory (Used in Pass/Fail elective courses and is independent of the Quality Point System)
U  Unsatisfactory—Failure (Used in Pass/Fail elective courses and is independent of the Quality Point System. Credit can be determined because of incomplete course work. Unless a convincing explanation of extenuating circumstances, acceptable to the instructor, is presented and the missed examination or required assignment is made up by the date specified in the Academic Calendar, the U becomes a permanent F grade)
W  Official Withdrawal (Used on a Student's permanent record to indicate termination of attendance in courses under conditions of official withdrawal) (See catalog and Schedule of Courses for Withdrawal from a course and Withdrawal and Termination of Attendance)
X  Used to indicate that although student continued to appear on rosters, student never attended classes

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. The result of the final attempt in a repeated course is, however, the student's status in the course with regard to attempted credits, earned credits, and the completion of requirements retrogradation, a corollary of the repeat credit rule under which a student may earn credit only for a course, prescribes that a student may not move backward from an advanced course to a lower level course and receive credit for both. Any doubtful situation must be decided by the department chairperson or dean involved.

PASS/FAIL ELECTIVES

One course a semester, elected by a junior or senior and approved by the academic advisor as providing an opportunity to expand and enrich the student's experience, may be taken on a pass/fail (S-U) basis. If passed, the credits will count for graduation, but neither grade nor credits will be calculated in the quality point average.

A class inaugurated in plus/minus grading may not revert to non plus/minus grading, vice versa.

The grading system for graduate students is published in the catalog of the particular graduate school.

COMPUTATION OF THE QUALITY POINT AVERAGE

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

Grade  Quality Points Per Credit
A+  4.0
A-  3.7
B+  3.3
B  3.0
B-  2.7
C+  2.3
C  2.0
D  1.0
F  0.0

Grades H, S, E, U, I, N and W are independent of the Quality Point System. Courses credits graded F; U, N, I, and W do not earn credit, and if required for graduation, must be repeated and passed.

REGISTRATION AND SCHOLASTIC POLICIES

Once a course has been identified as a pass/fail elective, the course must be completed as such, and the grade submitted must be an S or a U. No required course may be taken on this elective pass/fail basis.

The decision to elect 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

Prospective to 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 the students who have attempted 31-60 credits, or more than 30 credits in one year, the guidelines are:

Academic Warning 175 to 199 QPA (Letter of warning may be sent by appropriate Dean)
Probation 150 to 174 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 150 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 155 to 199 QPA (Letter or warning may be sent by appropriate Dean)
Probation 150 to 174 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 150 QPA (Readmission may be permitted on recommendation of the appropriate Committee on Student Standing)

For the students who have attempted 61 or more credits and who have a QPA of between 185 and 199 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 20.
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 with regard to 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 GPA at all times in order to be academically eligible to compete in intercollegiate competition. GPAs for student athletes are calculated at the end of each semester.

ACADEMIC COORDINATOR OF INTERCOLLEGIATE ATHLETICS

The academic progress of student athletes engaged in intercollegiate competition is monitored by the office of the Academic Coordinator of Intercollegiate Athletics. This office also provides other academic support services for student athletes including, but not limited to, study halls, tutorial assistance, academic advisement, registration assistance as well as orientation.

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 graduate school catalogs.

GRADUATION REQUIREMENTS

The candidate for a University degree must be a person of good moral character who has satisfactorily completed all academic requirements for the degree program and, in addition, has the recommendation of the appropriate Academic Dean, filed the Application for the University Degree with the Office of the Registrar, or before the latest date to apply for graduation as announced in the Academic Calendar, and satisfied all financial obligations with the University.

It is the student's responsibility to determine that courses taken in each semester are sequentially correct and necessary for the degree program.

The student, in consultation with an advisor, must periodically review progress toward graduation, and resolve any question about fulfillment of graduation requirements.

Each school and each department determines requirements for graduation which the student is expected to know, as well as the following:

1. The bachelor's degree requires a minimum of 120 semester hours of credit. This is a 4.0 system (Students should further determine the need for minimum GPA requirements in their major, science course, etc.)
2. The final year's work (a minimum of 30 semester hours of credit) must be completed in residence at the University.
3. Undergraduates must complete the University Core Curriculum.
4. Undergraduates must complete a minimum of four writing intensive courses at the 200 level and above.
5. Students on academic probation may be candidates for graduation only with permission of the Committee on Student Standing of their school.
6. The candidate who has satisfied graduation requirements by a Challenge Examination (credit by examination), within the last 30 semester hours of study for the degree, will fulfill the residence requirement provided a minimum of 30 semester hours of credit has been earned in course work at the University in the final year's study.

WRITING INTENSIVE COURSES

It is universally recognized that the ability to write clearly, correct, and effectively is an indispensable component of being an educated person. It is, therefore, entirely appropriate that Duquesne includes among its central objectives the development of the ability to write clearly, correctly, and effectively.

Every graduating student must have completed a minimum of four Writing Intensive courses beyond the two-semester Core Writing sequence. At least two of the courses must be taken in the student's major field. The other two courses may be taken in either the major field department or in the student's school or college. Writing Intensive courses are offered in every department at the 200 level and above and emphasize the principles and practices of writing unique to the respective field.

HONORS

Degrees are awarded with special mention, cum laude, magna cum laude, or summa cum laude to students who have completed the regular course with unusual distinction and who have completed a minimum of 60 credits in residence. Honors are based on these standards:

Cum Laude—Quality Point Average 3.50 to 3.74
Magna Cum Laude—Quality Point Average 3.75 and above
Summa Cum Laude—Upon recommendation of the Faculty and a 3.90 GPA, the Magna Cum Laude citation may be raised to Summa Cum Laude.

Honors degrees are recognized by the University and are noted on the Transcripts of students who meet the requirements. Honors degrees are awarded on the basis of academic achievement and are not based on athletic participation.

UNIT OF CREDIT

The unit of credit is the 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 preregistration. It is the advisor's responsibility to effect the change.

WITHDRAWAL FROM A COURSE

First semester freshmen may withdraw from courses with the approval of an academic 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. If approval is granted, the student then initiates the appropriate form through the advisor.

A student who is not granted approval of the request and withdraws from the course unofficially will receive an F grade for the course.
Part 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 2000-2001 term only, unless otherwise indicated.

TUITION

RATE 1 (Arts, Business, Education, Nursing)
Full-time Undergraduate Tuition (12-18 cr) $15,769.00
University Services Fee 1,351.00
Total 17,120.00

Per-credit
Undergraduate Tuition 512.00 Graduate Tuition 535.00
University Services Fee 50.00 University Services Fee 53.00
Total 565.00 Total 588.00

RATE 2 (Natural and Environmental Sciences, Pre-Pharmacy)
Full-time Undergraduate Tuition (12-18 cr) $16,012.00
University Services Fee 1,351.00
Total 17,363.00

Per-credit
Undergraduate Tuition 515.00 Graduate Tuition 539.00
University Services Fee 50.00 University Services Fee 53.00
Total 568.00 Total 592.00

RATE 3 (Health Sciences)
Full-time Undergraduate Tuition (12-18 cr) $17,750.00
University Services Fee 1,351.00
Total 19,001.00

Per-credit
Undergraduate Tuition 1,565.00 Graduate Tuition 568.00
University Services Fee 50.00 University Services Fee 53.00
Total 618.00 Total 621.00

RATE 4 (Music)
Full-time Undergraduate Tuition (12-18 cr) $18,852.00
University Services Fee 1,351.00
Total 20,203.00

Per-credit
Undergraduate Tuition 620.00 Graduate Tuition 624.00
University Services Fee 53.00 University Services Fee 53.00
Total 673.00 Total 677.00

FEES

Application (non-refundable) $100.00
Matriculation Deposit (non-refundable) 200.00
Residence Hall Pre-Payment (non-refundable) 100.00
Change of Schedule 5.00
Credit by Examination for each semester hour for recognition of proficiency of course credit (See policy in Part III, page 24) 30.00
Orientation (New Students) 300.00
Late Registration 15.00
Removal of I Grade 25.00
Registration Correction Fee 100.00
Continuing Registration Fee 100.00
*Undergraduate Pharmacy Student Activities (for Third, Fourth, Fifth, and Sixth Year Students) 40.00
*University Services Fee 53.00 per credit

*Charged on each semester registration

TESTING FEES

*Testing fees apply to the 2000-2001 academic year
*English Language Placement Testing (ESL) 50.00

*English Language Placement Testing (ESL) fee is a one-time fee

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, and does not apply to other charges, such as the University Fee, course fee, and laboratory fees, nor to the reduction of credits resulting from course withdrawals made after the Change of Schedule period.

Within the Semester | Percent of Remission
--- | ---
First Week | 80
Second Week | 60
Third Week | 40
Fourth Week | 20
After Fourth Week | None

Within the Summer Session—Based on a Six-Week Session Standard

First Week | 60
Second Week | 20
After Second Week | None

ROOM AND BOARD

The request for on-campus residence is made on the same form used for application for admission to the University. After the student has completed the application and paid the matriculation deposit, the residency request is referred automatically to the Director of Residence Life. The request is processed and necessary application forms are forwarded to the student.

The University requires that a prepayment of $300, which is applicable to the following semester’s room and board account, accompany all applications for room reservations or renewals. Thus prepayment is non-refundable.

Reservations are made on an annual basis—August to May. Rooms may be occupied no earlier than the first day of orientation for all freshmen and new transfer students.

Room assignments are made on a first-come, first-serve basis. Therefore, it is extremely important for the student to return his/her housing application immediately upon receipt of it. Overcrowded conditions have occurred in the past and students have been temporarily assigned three rooms, or as an alternative, the students have been housed in temporary housing, placed on a waiting list, or have been assigned a space in the residence area.

All students occupying rooms in the University residence halls are required to take a University Meal Plan. The Primary Plan billed to all students is a $135 flexible spending account which can be used at Rockwell Expressway, Options, Off-Ramp, and the in-room pizza delivery program. Two additional plans are offered—19 Meals per week with $5000 flexible spending and 10 Meals per week with $2000 flexible spending.

Residence Halls are closed during vacation periods (Thanksgiving, Christmas, Easter and Spring break). The University reserves the right to modify these charges or exigencies require such action.

Regular Session—Room and Board (14 meals a week)

Single for each semester | $4,112.00
Double for each semester | $3,252.00
Summer Sessions—Room and Board* (Summer ‘00 rates)

Single per day | $27.68
Double per day | $22.68

ROOM AND BOARD—WITHDRAWAL AND REFUND

The Office of Residence Life Housing Agreement must be signed by the Student and the University. The Student is obligated to pay to the University the full room fees and board fees for the entire Academic Year. There will be no exceptions to this obligation except as follows:

a) If the Student decides not to live in the Living-Learning Centers and so notifies the Assistant Director of Residence Life IN WRITING BEFORE CLASSES BEGIN, the Student will be released from obligations under this Housing Agreement. All amounts which the Student has previously paid pursuant to this Housing Agreement shall be refunded with the exception of the $300.00 room reservation fee which is not refundable.

b) If a Student fails to occupy an assigned room or make written notification of late arrival by the start of the second week of classes the Student gives up all reservation and claims to any room on campus. The Student will be released from all obligations under this Housing Agreement and all amounts which the Student has previously paid pursuant to this Housing Agreement shall be refunded with the exception of $300.00 non-refundable room reservation fee and $100.00 penalty.

c) If the Student notifies the Assistant Director of Residence Life after classes begin that the Student has decided to move out of the Living-Learning Centers or ceases to be a student of the University, the obligation to pay the room fees shall continue for the remainder of the Academic Term and the University will refund to the Student an amount equal to seventy-five percent (75%) of the board fees, provided, however, that no board fee will be refunded if the notice is received after the middle of the semester.

d) Prior to the end of the Fall semester, Students will be permitted to cancel their room reservation for the Spring semester by completing a Spring Release Form. This Spring Release form cancellation will result in a $500 penalty. Spring Release Forms available in Administration Building. The University will refund to the Student an amount equal to seventy-five percent (75%) of the board fees, provided, however, that no board fee will be refunded if the notice is received after the middle of the semester.

FINANCIAL MATTERS

All charges for tuition, fees, room and board, less financial assistance authorized by the Financial Aid Office, are payable at registration. For your convenience, registration 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's charges less financial aid authorized and other payments, to be repaid to the University in two equal installments. Interest is charged at the rate of 2.5% of 1% 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 $50, whichever is less, except that a minimum charge of $10 may be made.

Ten-Month Payment Plan

The University is now offering a 10-month payment plan through Tuition Management Systems (TMS). The basics of the program are:

1) The parent pays TMS $130.00 to enroll in the plan. Enrollment must be completed prior to August 31st.

2) The parent makes 10 monthly payments to TMS making allowances for any financial aid and TMS then forwards payment to the University on a monthly basis.

For additional information, contact TMS at 1-800-722-4867.

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 make and type of check. A $20 must accompany each application. After accepting the deposit, the deposit is applied toward the room and board expenses. This deposit is not refunded if the room is not occupied. Rates shown are for 2000 summer session only.

STUDENT PROBLEMS

Enrollment must be completed prior to August 31st.

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.
Part V: Student Life, Programs, Services, and Organizations

A. DIVISION OF STUDENT LIFE

MISSION

The mission of the Division of Student Life is to establish and maintain a total living, learning, and developmental environment that will enhance students' growth for the individual self-actualization and positive involvement in the world community.

PHILOSOPHY

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

ORGANIZATION

The Executive Vice President for Student Life coordinates the Departments of Athletics, Commuter Affairs, University Counseling Center, Duquesne Union, Financial Aid, Freshman Development and Special Student Services, Greek Life, Health Services, Judicial Affairs, Residence Life, and Student Activities. Several of 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

The Duquesne University Department of Athletics sponsors 20 NCAA Division I sports including baseball, men's and women's basketball, men's crew, men's and women's cross country, football (Division I-AA), men's golf, women's lacrosse, rifle (co-ed), men's and women's soccer, men's and women's swimming and diving, men's and women's tennis, women's indoor and outdoor track, women's volleyball, and wrestling. In addition, cheerleading, men's crew, hockey, and men's indoor and outdoor track are offered as club sports. Duquesne University believes in and promotes the concept of student athlete, evidenced by an Academic Support staff within the Department of Athletics. Athletic grants-in-aid are available in all varsity sports, with the exception of football.

In addition, the Department of Intramurals and Recreation offers to all students the use of a weight room, cardiovascular room, racquetball courts, and various aerobic classes. Other activities in which students can participate include tennis, flag football, street hockey, basketball, softball, and soccer. Just to name a few.

OFFICE OF COMMUTER AFFAIRS

Whether living with relatives or commuting from their own apartment, the Office of Commuter Affairs offers valuable services and programs for commuter students. 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. PAT bus schedules are available. Passes are sold in the Information Center of the Union.

Off-Campus Housing Information: Up-to-date listings of rooms, apartments, houses, and roommates are available. Area maps and apartment directories are also available.

Commuter Message Center: If someone needs to get a non-emergency message to a student on campus, they may call (412) 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 and family programming.

Commuter Assistant Program: This program is a support network of upperclassmen students who serve as advisors and provide resources for new commuters. Their planned activities, provide information and supply encouragement.

Other Services Include: Suggestions/Complaints, Commuter Update, distribution of Student Directory and Student Handbook to commuter students.

The Office is located in the Duquesne Union, Room 117. Office hours are extended during the Fall and Spring semesters when the Office is open Monday through Thursday, 8:30 a.m. - 5:30 p.m. and Friday until 4:30 p.m. For further information call (412) 396-6660.

OFFICE OF STUDENT ACTIVITIES

The Office of Student 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 (DUV), the University's volunteer program. The staff of this office provides services and amenities required to meet the daily needs of campus life. The program includes advice and assistance in all phases of campus programming, arranges all scheduling of events in the Duquesne Union, provides leadership training for student organizations 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 Duquesne Program Council is the student organization of the Duquesne Union which involves students in all aspects of planning and implementing various programs. The DPC offers students a chance to be creative and to gain effective leadership, communication, and program planning skills. The Duquesne University Volunteers is the organization which promotes all volunteer activities of Duquesne students.

OFFICE OF JUDICIAL AFFAIRS

The Office of Judicial Affairs protects the rights and freedoms of all students while insuring that such rights and freedoms are exercised within the context of students' responsibilities to the University community. Legal techniques are minimized and attention is focused on the student development process.

OFFICE OF RESIDENCE LIFE

The Office of Residence Life is committed to creating an environment in each of the five (5) Living Learning Centers in which the student may grow and develop as a total person. Its philosophy and programs are based on the belief that the Living Learning Center experience is an important part of the total University education. The purpose of the Office of Residence Life is to facilitate the personal and academic growth of the resident student. To this end, the professional and resident assistant staff will provide the means to foster such development.

All freshmen students and sophomores with a GPA of below 2.5, except those residing with their parents or relatives, are required to live in one of Duquesne's Living Learning Centers. All students living on campus are further required to take 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.

B. PROGRAMS

COMPREHENSIVE STUDENT ADVISEMENT

Students pursuing undergraduate studies are assigned to a student advisor who will work with them throughout their undergraduate career at the University. The student advisor, located in the school in which the student is majoring, acts as an...
NOTICE

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

Please contact the University Counseling Center at (412) 396-6204/6208 for any additional information. The Counseling Center is located in Room 308 of the Administration Building. Please call (412) 396-6204 for an appointment or to obtain more information.

HEALTH SERVICE

Medical/Nursing

The Health Service provides for the evaluation and treatment of illness and injury

Staff

The medical/nursing professional staff consists of Registered Nurses, Certified Nurse Practitioners, and Board Certified Physicians

Immunizations

Duquesne University has established a Pre-Matriculation Immunization Policy. All incoming undergraduate students (Freshmen, Transfers, Fellows, and Second-Degree) are required to provide documentation of immunizations. Immunization requirements will follow guidelines from the Centers for Disease Control. Students must provide this documentation or registration for class will not be permitted.

In-Hospital Care

University physicians are attending staff physicians at the Mercy Hospital of Pittsburgh. In emergency situations, students are transported and referred to the Emergency Room at 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 Learning Living, (412) 396-1650/1652

Eligibility

All full-time registered students. Cost of treatment or diagnostic procedures by non-University physicians, clinics or hospitals must be assumed by students, their family or their medical insurance.

Insurance

It is strongly recommended that each student obtain some form of health insurance. The University provides a Student Health Insurance Plan designed to meet the needs of students and is priced lower than individual health insurance policies. Inquiries about health insurance should be directed to Genny Hughes (412) 396-6677.

The University is not responsible for medical expenses resulting from participation in intramural sports.
COMMUTER COUNCIL
Commuter Council is a student run governing body designed to identify commuter concerns and to provide educational, social and service-oriented programs for the University's large commuter population.

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 purpose of the Interfraternity Association is to develop and maintain fraternity life and interfraternity relations at a high level of accomplishment. The Interfraternity Association is lead by the Interfraternity Council (IFC) which serves as the governing and regulatory body for its 9 member social fraternities. The IFC promotes superior scholarship and social and moral development. It represents the fraternities to the administration, faculty and student body. The IFC regulates all Men's Greek Activities including Rush, Pledge Education, Carnival, Greek Week, Intramural Sports, and social events and services as a forum for the airing of constructive proposals for the improvement of the fraternity system.

PANHELLENIC ASSOCIATION
The purpose of the Panhellenic Association is to develop and maintain sorority life and inter-sorority relations at a high level of accomplishment. The Panhellenic Association is a student run governing body for its 7 member social sororities. The Panhellenic promotes superior scholarship and social and moral development. It represents the sororities to the administration, faculty and student body. The Panhellenic regulates all Greek Women's activities including Rush, Pledge Education, Carnival, Greek Week, social events, and others. It serves as a forum for the airing of constructive proposals for the improvement of the sororities.

E STUDENT ORGANIZATIONS
GENERAL
There are more than 120 student organizations at Duquesne. Some serve the needs of specific interest groups. Others relate directly to major areas of study, and some honor academic achievement. Many are formed to meet social, service or religious needs and interests.

The Office of Student Activities provides administrative and programming support for all recognized student organizations. Any student group wishing to apply for official University recognition must initiate this process through the Office of Student Activities. Recognized organizations must also annually update their registration.

HONOR SOCIETIES
These societies have as their primary purpose recognition of academic excellence and leadership achievement. There are normally cumulative grade point and leadership requirements for membership in these groups.

PROFESSIONAL AND DEPARTMENTAL ORGANIZATIONS
These professional organizations exist to provide opportunities for career development and the exchange of ideas pertinent to students' academic pursuits. With this purpose in mind, these organizations sponsor numerous programs including debates, symposiums and lectures.

DUQUESNE PROGRAM COUNCIL
The Duquesne Program Council (DPC) is the major student programming organization of the University. It provides social, recreational, educational and cultural activities for the entire University. The DPC, directed by students is comprised of several committees which present such events as concerts, dances, art exhibits, lectures and ski trips. Membership is open to all students.

DUQUESNE UNIVERSITY VOLUNTEERS
The Duquesne University Volunteers is the University's volunteer program which coordinates and monitors the volunteer activities of all individual students and all student organizations. Student volunteers provide a high standard of service to the campus and local community while, at the same time, they are fulfilling the University's Mission Statement which seeks to install "a spirit of service" in all students.

FRATERNITIES AND SORORITIES
Fraternities and Sororities are organizations composed of college men and women who have joined together. They sponsor and promote social, athletic, service, and academic events.

PERFORMANCE GROUPS
TAMBURITZANS
Based on the exciting traditions of Eastern Europe and neighboring cultures, the Duquesne University Tamburitans show is a colorful extravaganza of dance, song, and music. The longest-running university-based performing ensemble in the United States, the Tamburitans is named after the stringed instrument prevalent in many of the cultures which the group artistically represents. Established in 1937, the ensemble's mission is to preserve and perpetuate the cultural heritages of Eastern Europe and its neighbors through performance, while awarding scholarships to talented and deserving student performers. The group travels extensively throughout the U.S. during its August-to-June performing season, presenting an average of 80 shows.

Experience in folk arts performance is not required, performers with ballet, tap, jazz, band, orchestra, chorus, or musical theater experience may have the skills required to qualify for a scholarship and a position with this unique ensemble. Vacancies are filled through an annual audition process, inquiries should be made in the fall prior to general auditions, which are held in February. Contact the Tamburitans for further information.

Phone (412) 396-5185 fax (412) 396-5583 http://www.duq.edu/Tamburitans e-mail pudlak@duq2.cca.du.edu

THEATRE
The Red Masquers provide an extracurricular outlet for students who wish to participate in theatre. The organization's aim is to provide the University and its students with the educational and cultural benefits that accrue from a drama program. Any Duquesne student is eligible for membership.

MEDIA ORGANIZATIONS
WDQ
WDQ is the Duquesne Student Radio. It broadcasts approximately nineteen hours per day, seven days per week during the Fall and Spring Semesters.

PUBLICATIONS
The Student Handbook and Code of Student Rights, Responsibilities, and Conduct
The Student Handbook contains information about the University which concerns the students. The Student Code, which is a part of the Student Handbook, is the definitive statement of expectations, policies, and procedures regarding students' rights and responsibilities, campus organizations, student governance, student records, student conduct, and the University Judicial System. Copies are available in the Office of Student Activities, 305 Union.
Part VII: Campus Ministry

Campus Ministry is committed to fostering the religious life and growth of all Duquesne students. Its policies and programs are oriented to furthering that growth at the personal as well as the community level. Eucharistic liturgies are celebrated daily, and the Sacrament of Reconciliation is scheduled regularly and by appointment. For all students, faculty and staff, whatever their faith, the Campus Ministers are available to help with spiritual direction, counseling, advice, or sympathetic listening, all in strict confidence. The Campus Ministry provides a listing of services of nearby worship sites, and referrals can be made to introduce the students to the religious leaders of their various faith traditions in the area. The University Chapel is open each day for private prayer and quiet meditation. It is available too, to groups for specific services of a religious nature. Prayer rooms are available in the Towers and St. Ann Living/Learning Centers. In addition, there is a Muslim prayer space above the Chapel.

The Campus Ministry sees itself at the service of all in an open, unstructured, trusting relationship, and invites the participation of the entire Duquesne community in religious, social and community activities.

All are invited to stop in to offer suggestions for programs or services, or just to get acquainted with the Staff at any of the following Campus Ministry locations: 102 Administration Building, the Campus Ministry Center in Duquesne Towers, the Student Union and the Living/Learning Centers of St. Ann, Assumption and St. Martin.

Part VIII: University Programs and Courses

THE UNIVERSITY CORE CURRICULUM

STATEMENT OF PURPOSE

The core curriculum is a cluster of courses within Duquesne’s general curriculum that focus 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 universality of vision; they assist students in building a foundation for professional studies; they encourage students to cultivate the habit of life-long 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 richness 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 embedded 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 Across the Curriculum 3 cr
Practice in analysis and expression in many disciplines

102 Imaginative Literature and Critical Writing 3 cr
A college-level introduction to imaginative literature and to 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 115), Fundamentals of Statistics 125 or Biostatistics 225.

132 Basic Philosophical Questions 3 cr
Philosophy, "the love of wisdom," is a discipline for discussing basic questions about ourselves and our world. Students read selected works by major figures throughout the history of philosophy, they are encouraged to think critically and to formulate their own answers to perennial philosophical questions.

141 Social, Political and Economic Systems 3 cr
The course examines questions about equality and inequality in various societies from the vantage points of economics, political science and sociology. Specifically, it addresses economic, political and legal issues as they relate to gender, age, race and ethnicity.

151 Shaping of the Modern World 3 cr
An understanding of change through time is essential to the comprehension of the world in which we live. This course integrates the 20th Century experience of the United States with that of Europe, Asia, Latin America and Africa as it examines the forces which have produced the great changes of our century.

161 Arts and the Human Experience 3 cr
The visual and musical arts are explored in light of changing societies. Students learn to live. This course integrates the 20th Century experience of the United States with that of Europe, Asia, Latin America and Africa as it examines the forces which have produced the great changes of our century.

Core Science 3 cr
Students may choose one of the courses described below (171, 172, 173, 174 or 175). Each course presents a body of fundamental knowledge to provide the student with an awareness and understanding of the discipline. Students may also satisfy the Core Science requirement by one of the following courses: Biology 121 or 122, General Chemistry 121 or 122, General Physics 201 or 202.

171 Biology 3 cr
Evolution, inheritance, and the interrelation of energy, life and the physical environment provide the unifying themes 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 critical to effective citizenship in our changing world such as disease, reproduction, genetics, genetic engineering, and ecology.
Surveys the successes and failures of one of the most influential periods in Western history, the Golden Age of Greece. It has been accurately stated that a majority of the questions which concern moderns were addressed by the ancients as well, and that the answers to these questions were formulated as well then as they have been in modern times. In this regard, the fifth century Athens was preeminent, establishing for generations concepts in politics, literature, art and philosophy which are still valid for the twentieth century.
172 Chemistry
The fundamental concepts of structure, bonding, properties and chemical reactivity are presented through lecture and laboratory experimentation. 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
Through lecture and classroom demonstration, students investigate the fundamental notions of mechanics, motion, 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. This course introduces students to the analytical processes of the scientific method and also helps them recognize applications to the physics involved in everyday life.

174 Earth Science
Introduction to Earth science for non-science majors. Survey of the Earth in relation to its physical composition, structure, history, atmosphere and oceans. Also included is how each of these impacts humans and how humans have an influence on the processes of the Earth, its oceans, and its atmosphere.

175 Evolution of Modern Science
This course outlines the history of science from Aristotelian to the present. The course will focus on the modern history of four scientific disciplines: physics, chemistry, geology, and biology, and will include computer-based virtual laboratories to demonstrate the classical experiments that have led to our modern understanding of science. In addition to the material on science, the development of mathematics, as it has influenced the development of science, will be presented in six areas: arithmetic, Euclidean geometry, formal logic, algebra, analytical geometry and calculus. The course will use World Wide Web resources.

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
An introduction to the central issues of moral theology (religious ethics), including methodological and practical concerns, with a focus on the Christian tradition but some attention to other approaches.

183, 184, 185, 186, 187 Judaism, Christianity, and Islam
A study of the beliefs and practices of these three monotheistic religions; the distinct character of each, the varieties within each religion, and the continuities and the differences among all three.

184 Introduction to the Bible
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
A study of some of the world's great religions representative of humanity's religious experience, including archaic traditions, Hindu and Buddhist traditions, Chinese traditions, and the Islamic path.

186 Roman Catholic Heritage
An introduction to the fundamental beliefs of Roman Catholicism and their expression in literature and the visual arts, from the Origins of Christianity to the Contemporary Era.

187 Christian Understanding of the Human Person
An investigation into the question of "What does it mean to be human?" according to Judeo-Christian teaching, including the relationship of the human person to self, others, the world, and the Divine as the basis for humanness.

Note: In general, students will complete the Core requirements according to guidelines established by their respective schools and in consultation with their academic advisors.

PRE-HEALTH PROFESSIONS PROGRAM

The Pre-Health Professions Program is a University-wide program for students pursuing a career in medicine, dentistry, veterinary medicine, optometry, or chiropractic school. The program provides guidance to students in acquisitng the requisite experiences and academic background for applying to health professional schools. Students in the program meet regularly with pre-health advisors to evaluate the student's academic progress and receive professional guidance in gaining volunteer and community service, clinical, internship and research experience. The program sponsors seminars and workshops which provide information about health professional schools, careers in the health professions and the development of personal skills needed for a health professions career. University and college core requirements offer each student the liberal arts education that provides a solid foundation for a career in a health profession. Most health professions schools prefer their applicants to have had a broad and well-rounded academic background with a diverse set of life and health-oriented experiences.

It is important for each student to register with the program as early as possible in his/her academic career and preferably upon first entering the University and to meet with a pre-health advisor to plan a tentative four-year academic program and other activities that are best suited for the individual student. Students in the program must complete the Pre-Health Professions Core Curriculum, including the required courses, and declare a major. Students are urged to select a major in any area that is of the most interest to the student: Biology, psychology, biochemistry, English, history, psychology, and mathematics are a few of the more commonly chosen paths.

Generally, students submit their applications during the summer following the junior year in order to matriculate at a health professions school in the fall following graduation. Duquesne's Pre-Health Professions Program provides each student with guidance throughout the complex application process. Gaining admission to a health professional school is dependent on a variety of factors that include meeting standard criteria for overall grade point average, and admissions test scores. Each qualified student is interviewed and evaluated by members of the Pre-Health Professions Committee. This evaluation along with evaluations submitted to the Pre-Health Office by faculty and others provide the basis of the overall evaluation and recommendation sent to the schools to which the student is applying.

Several programs are available to students interested in a career in medicine and include the "3+4 Compacted Program in Family Practice" between Duquesne University and the Lake Erie College of Osteopathic Medicine (LECOM). This program offers qualified students an intensive three-year academic program at Duquesne University followed by four years at LECOM. Students must apply to this program when applying for admission to Duquesne University. Students admitted to this program are enrolled in The McNulty College of Liberal Arts, each student will meet with a pre-health advisor to obtain a baccalaureate degree from Duquesne University after successfully completing the first year at LECOM. For a student interested in the management of health delivery, the Pre-Health Professions Program in combination with the Rangos School of Health Sciences offers a degree track for pre-health students in the department of Health Management Systems.

The core courses are as follows:

- English: 2 semesters
- Chemistry with laboratory: 2 semesters
- Organic Chemistry with laboratory: 2 semesters
- Biology with laboratory: 2 semesters
- Physics with laboratory: 2 semesters
- Mathematics: 2 semesters
- Behavioral Sciences: 2 semesters

ENGLISH AS A SECOND LANGUAGE (ESL) PROGRAM

The ESL Program (ESLP) is open to students accepted to degree programs who do not meet the ESL program eligibility requirements. The ESL offers intensive (20 hours per week) or semi-intensive (4 to 16 hours per week) programs at basic, intermediate, and advanced levels. Placement tests are administered to all students who may also earn a Certificate of Program Completion. Qualified students may combine courses in academic degree majors with ESL study. Undergraduate degree program students earn academic credit for each program level successfully completed. The ESLP offers classes in Fall (late August to December), Spring (January to April) and Summer sessions (May to early August).

CORE COURSES

Level and course assignments are determined by placement tests or successful completion of Duquesne courses at prior levels.

Basic-level Courses 0-2 cr

- 120/124 Basic ESL Grammar A/B
- 121 Basic ESL Speaking
- 122/127 Basic ESL Reading A/B
- 123/128 Basic ESL Writing A/B
- 124 Basic ESL Comprehension

Up to 20 hours of basic English for non-native speakers.

Intermediate-level Courses 0-2 cr

- 125 Intermediate ESL Grammar
- 126 Intermediate ESL Speaking
- 129 Intermediate ESL Comprehension
- 140 Intermediate ESL Reading
- 141 Intermediate ESL Writing

Up to 20 hours of intermediate English for non-native speakers.

Advanced & Special Purpose Courses 0-2 cr

- 130 Advanced ESL Grammar
- 131 Advanced Oral Skills
- 132 Advanced ESL Reading-A
- 133 Advanced ESL Writing
- 134 Advanced Comprehension/ Presentation

Up to 20 hours of advanced English for non-native speakers.

Special Purpose Courses Var Hrs/Week

- 135 Special Topics - ITA Seminar 0-3 cr
- A multi-skills course for international teaching assistants

- 143 ESL Graduate Research Paper
- A course in writing academic English for graduate students
The McAnulty College of Liberal Arts

**HISTORY**

In 1878 the Fathers of the Congregation of the Holy Ghost and the Immaculate Heart of Mary established a College of Arts and Letters which was incorporated in 1882 as Pittsburgh Catholic College of the Holy Ghost with authority to grant degrees in the arts and sciences. In 1911 the College and University Council of the Commonwealth of Pennsylvania extended the charter to university status and approved the amendment in favor of the corporate title, Duquesne University.

**STATEMENT OF MISSION AND OBJECTIVES**

Throughout history, education in the liberal arts has produced, nurtured and transmitted civilizations' greatest ideas and accomplishments. Study of the liberal arts prepares students for the future. It teaches them to seek the truth, to understand the knowledge and values of many disciplines, and to bring these insights to bear on modern problems in a world of change, complexity and diversity.

The McAnulty College of Liberal Arts is at the center of Duquesne University's *Education for the Mind, Heart and Soul*. Founded in 1878 as the first of the University's schools, the College embodies both Duquesne's Catholic tradition and its ecumenical atmosphere. We strive for academic excellence, search for truth, aspire to live a virtuous life, respect the dignity of the human person, foster a spirit of service to the poor and to all others, and seek to build the communities in which we live and work.

A liberal arts education provides the practical intellectual framework for informed choice that leaders require in the 21st Century. Successful leaders must have the skills that a liberal arts education best cultivates: disciplined thought, careful analysis, articulate presentation of ideas, and organized and persuasive writing and speech. They also need the human values and broad perspective that are hallmarks of graduates of the McAnulty College.

**DEGREES**

The College confers two undergraduate degrees: Bachelor of Arts and Bachelor of Science. Students who complete the major in classics, communication, English, history, modern languages and literatures, philosophy, political science, psychology, sociology or theology receive the B.A. degree. Students majoring in mathematics or computer sciences can follow a curriculum leading to either a B.A. or B.S. degree.

**GRADUATION REQUIREMENTS**

To receive the Degree of Bachelor of Arts or Bachelor of Science in the College of Liberal Arts, 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
University Writing Intensive Requirement
College General Requirements, as described below.

Major program (see departmental listings)
Minor program (see departmental listings)

An overall minimum cumulative quality point average of 2.0. A minimum 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

Pre-registration (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 degree candidate prior to submission of this form and official registration for the degree

College General Requirements

Students enrolled in the College of Liberal Arts for the B.A. or B.S. 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
Math/Science (mathematics, computer science, biology, chemistry, physics) 3 cr
Social Sciences (political science, sociology, psychology) 6 cr
History/Literature 6 cr
Philosophy/Theology 6 cr
Communication 3 cr

Transfer Credits from Junior or Community Colleges
A maximum of 60 academically acceptable credits from accredited junior or community colleges may be transferred. If a student has attended one or more colleges preceding a community or junior college, the total number of academically acceptable credits is still limited to 60.

Accommodating Academic Probation
No course taken by a student in the College as a senior may be transferred. If a student has attended one or more colleges preceding a community or junior college, the total number of academically acceptable credits is still limited to 60.

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.

Transfer Credits from Junior or Community Colleges
A maximum of 60 academically acceptable credits from accredited junior or community colleges may be transferred. If a student has attended one or more colleges preceding a community or junior college, the total number of academically acceptable credits is still limited to 60.

Sequential Courses
Sequential courses must be taken in proper sequence. Credit will not be given for a prerequisite course if courses for which it is prerequisite have already been taken.

SPECIAL PROGRAMS

MINOR IN WOMEN'S AND GENDER STUDIES
The Women's and Gender Studies minor is an interdisciplinary and multidisciplinary program based in the humanities and social sciences that offers an undergraduate minor to all students across the University. This program introduces students to the rapidly expanding areas of scholarship focused upon women, men, and gender that have developed within the academy that is transforming scholarship in virtually every academic discipline today. The program promotes open dialogue directed toward a vision of a world community that embraces diversity, justice, peace, freedom — values central to a liberal education.

CERTIFICATE IN BUSINESS
This program enables students to preserve the benefits of a liberal education while also acquiring business skills. The program consists of four prerequisite courses (12-14 credits) in the College of Liberal Arts and eight courses (24 credits) in the School of Business Administration. Further information may be obtained from the advisement office in the College of Liberal Arts or the School of Business Administration.

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 Gerontology (Department of Sociology). Several of these are offered in conjunction with the Division of Continuing Education. Further information may be obtained from the appropriate office or from the Continuing Education Office.

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, the student will be expected to meet degree requirements in the major department, as well as admission requirements of the law school of their choice.

Bachelor of Arts — Liberal Arts
This program offers students who prefer not to choose a formal major or minor offered in a traditional discipline. All requirements other than the major and minor must be completed. Students must select one area of concentration within Humanities or Social Sciences. A concentration requires a minimum of 30 credit hours and a maximum of 39 hours. Courses must be chosen from courses 200 and above.

Further information is available in the Dean's Office.

BACHELOR/PROFESSIONAL SCHOOL
A student who has completed 90 credits with a 3.5 overall average and satisfied all undergraduate curricular requirements may apply for the bachelor's degree after the successful completion of the first year of professional work in an accredited medical or law school. Further information is available from the Dean's Office.

Three-Year Bachelor's Degree
For more information contact the Office of Admissions or the Dean's Office.

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 enrich-
332 century in Europe and America, with special emphasis on attitudes of man, manuscripts in England, France, Italy and Germany. Systems, monumental architectural sculpture, stamped and decorated art.

Focus is upon the development of stone vaulting in the United States and upon the interaction of art and photography. Close examination of the confrontation between artists and photographers.

A survey of art, sculpture and decorative arts.

175 Introduction to Asian Art 3 cr A survey of the art and archaeology of China, Japan, Korea and India with an emphasis on the art's historical and social context.

210 American Art 3 cr An overview of American architecture, painting, sculpture and decorative arts.

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

312 Late Medieval Art 3 cr Western European Art from the 11th to the 14th century. Focus is upon the development of stone vaulting systems, monumental architectural sculpture, stained glass, fresco and panel painting, and illuminated manuscripts in England, France, Italy and Germany.

321 15th Century Renaissance Art 3 cr An investigation of the Renaissance spirit of the 15th century. Concentration is upon attitudes of man, nature, and social structure, and to materials, techniques, pictorial representation and iconography.

331 Art of the Nineteenth Century 3 cr An assessment of the major movements of the 19th century in Europe and America, with special emphasis on the social, political and economic aspects that determined Modernism in Europe from 1879 to 1890.

332 Art of the Twentieth Century 3 cr Examination of the major American and European artists and movements of the early 20th century. Beginning with the work of Cézanne and his impact on the formation of Cubism and Futurism, the contradictions and parallels in the various avant-garde practices from 1905-1945 are assessed and evaluated.

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

374 Michelangelo: His Art and His World 3 cr This course examines the genius of Michelangelo in the context of the artistic and cultural forces which combined to create the Renaissance.

376 Contemporary Art 3 cr 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 20th century.

398 Art and Society 3 cr This course explores the ways that social and political conditions and demands affect artists' aesthetic choices. Although many of the examples discussed in class are drawn from the visual arts, other art forms such as literature, drama, music and dance are included as appropriate. The class will examine thematic topics through history such as art and social protest, art in the service of government, and commercial art. It also looks at issues of controversy in contemporary art worlds.

431 Direct Readings 1-3 cr Permission of Department.


442 American Architecture 3 cr Construction, style, building types, and concepts of city planning in American architecture from the 17th century to the present. The social and political forces affecting style are emphasized. The course also includes an introduction to the theory and practice of historic preservation.

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.

478 Internship 3 cr 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.

COURSE DESCRIPTIONS

478 Internship 3 cr 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.

DEPARTMENT OF CLASSICS
Chair: Lawrence E. Gaichas, Ph.D.

The study of Classics is a unique discipline. It is not the study of language or literature alone; it is rather the study 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 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 (knowledge in both Latin and Greek required), and Classical Civilization (no knowledge of Greek/Latin required). Credits applied to any major must be at the 200 level or above:

1) The Classical Latin major requires at least eighteen credits in Latin as well as six credits in ancient archaeology, 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 archaeology, 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 in ancient archaeology, 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 archaeology courses. Students majoring in Classical Civilization must consult with the Classics Department before registering for this major. Students must fulfill the requirements for both Latin and Greek.

5) The Classical Civilization major is an individually designed program of twenty-four credits of ancient literature, history, art, and archaeology courses. Students majoring in Classical Civilization must consult with the Classics Department before registering for this major. Students must fulfill the requirements for both Latin and Greek.

6) The Classical Civilization major is an individually designed program of twenty-four credits of ancient literature, history, art, and archaeology courses. Students majoring in Classical Civilization must consult with the Classics Department before registering for this major. Students must fulfill the requirements for both Latin and Greek.

REQUIREMENTS FOR THE MINORS

A minor is a minimum of 12 credits above the 100 level. The Department offers a minor in Latin, a minor in Greek, and a minor in Classical Civilization with concentration in Greek Civilization, Roman Civilization, Archaeology, Ancient History, and Ancient Art and Literature with approval of the Department and advisors.

ORIGINAL LANGUAGE COURSES

101, 102 Basic Latin I and II 4 cr each
The fundamentals of Latin grammar and syntax with exercises in translation

103, 104 Basic Greek I and II 4 cr each
The fundamentals of Greek grammar and syntax with exercises in translation

111, 112 Basic Sanskrit 3 cr each
The fundamentals of Sanskrit grammar and syntax with exercises in translation.

201, 202 Introduction to Latin Readings I and II 3 cr each
Selections of major Latin author(s)

203, 204 Introduction to Greek Readings I and II 3 cr each
Selections of major classical Greek author(s)

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

211, 212 Survey of Sanskrit Literature 3 cr each
Selected readings from major Sanskrit texts.

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

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

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

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

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

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

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

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

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

500 Independent Readings and Research 3 cr

CLASSICS COURSES IN ENGLISH

NO GREEK OR LATIN REQUIRED)

121 General Etymology 3 cr
A study of Greek and Latin roots to facilitate the comprehension of English

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

123 Classical Mythology 3 cr
The major myths of Greece and Rome with attention to contemporary interpretations and the influence on art and literature

230 Ancient Theatre 3 cr
An examination of the origins and development of ancient tragedy and comedy

231 Ancient Epic 3 cr
A study of ancient epic literature with particular attention to the techniques of oral and literary composition

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

233 Ancient Satire 3 cr
Investigation of the satiric element with reference to the writings of Lucan, Lucilius, Horace, Persius, Martial, and Juvenal

242 Ancient Law 3 cr
A survey including the contributions of the Greeks and of the Romans to the development of law

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

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

246 Hellenistic History 3 cr
Hellenistic 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
The consolidation of the Roman imperial structure from Augustus to the death of Commodus

248 History of the Late Roman Empire 3 cr
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.

260 The Classical Tradition 3 cr
A study of the influences of Greco-Roman civilization on later cultural life

300 Seminar 3 cr
Topics variable

315 Archaeological History of the Ancient Greek World 3 cr
A survey of the archaeology of Greece from prehistoric times to the end of the Persian War

316 Archaeological History of Athens 3 cr
An investigation into the topography and monuments of Athens and Attica, from the pre-historic to the Roman period

317 Archaeological History of the Ancient Roman World 3 cr
A survey of the archaeology of Italy from pre-history to the middle fourth century A.D.

318 Archaeological History of Rome 3 cr
An investigation of the topography and monuments of Rome from pre-history through Constantine

319 Archaeological History Seminar 3 cr
Possible topics include The Bronze Age Aegean, The development of Vase Paintings, The Etruscans, etc.

DEPARTMENT OF COMMUNICATION

Chairperson
Ronald C. Arnett, Ph D

DEFINITION OF THE DISCIPLINE

Communication is both an ancient and extraordinarily contemporary discipline—from its origin in classical Greek culture to what has been called the “Communication Century.” It is a practical liberal art for leadership in professions and communities.

Communication in written and oral form helps us know, establish, and clarify beliefs, and act upon the environment to bring about change or to reinforce stability in communication contexts ranging across interpersonal, organizational, intercultural, advanced technological and media environments. The comprehensive nature of our communication program introduces the student to corporate communication (profit and not-for-profit), media, multimedia, journalism, public relations, advertising, marketing and management career options. The MARC Center for Excellence, located on the third floor of the McNulty College and Graduate School of Liberal Arts, serves as the focal point for departmental activities. The departmental resources include classroom space for courses dealing with relational and public communication issues, three writing/word processing computer laboratories and teleconferencing equipment. Additionally, the Des Places Language Center houses an instructional laboratory, a television production studio, the studios of public radio station WDUQ, and a Debate Center.

DEPARTMENT OBJECTIVES

 Majors
Our department is unique, a leader in a national trend toward comprehensive communication departments. All areas of communication are represented within one department. Communication ethics is the departmental cornerstone. The Department of Communication fosters an educational environment that invites innovation, diversity, resilience, and moral values in a changing world.

The Department of Communication consists of five different academically rigorous majors with areas of emphasis or concentration: (1) Major in Communication Studies with emphases in Corporate Communications/ Interpersonal Public Relations, Integrated Marketing Communication, Management Communication, Information Management in Organizations, Media Organizations, Rhetoric and Argumentation, and a Self-Designed Program; (2) Major in Media Communication with concentrations in Mass Communication, Media Marketing, Corporate Media Design, Rhetoric of Mass Media, and Media Writing and Production; (3) Major in Journalism with emphases in Print Journalism, News Production and Management, Advertising, Public Relations, Broadcast Journalism, and Online Journalism; (4) Major in Multimedia Arts with concentrations in Business and Industry, Instructional Multimedia, Web Design, Sound and Music, Entertainment, and Multimedia Programming; and (5) Major in Theatre Arts with concentrations in Theatre and Literature. This comprehensive communication department prepares students with a wide array of course options taught by dedicated teachers/scholars.

Practical Experience

An important characteristic of the Duquesne communication program is the quality of internship opportunities. Nearly all jobs require experience. We have more than 250 internship sponsors in the Pittsburgh area alone. We also place students in internships from New York to Los Angeles. We employ our own internship director, reflecting our commitment to internship experience and introduction to professional challenges.

In addition to a comprehensive curriculum and extensive internship program, we have significant on-campus organizations, such as a student newspaper and radio station that provide excellent opportunities for learning, including production experiences for our public radio station (WDUQ)

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.

“Coherence” is provided by following the requirements of one of the degree programs listed below. “Balance” is achieved by taking a range of courses representing different perspectives, levels, and types. In order to facilitate this goal, five core courses are required of all majors.

COMM 201 Human Communication & Society
COMM 210 Mass Communication & Society
COMM 301W History of Communication
COMM 407 Intercultural Communication
COMM 494W Communication Ethics

SPECIFIC REQUIREMENTS BY DEGREE

1 Major in Communication Studies

A Five core courses 15 hours
B Communication Studies Requirements 6 hours
1) 103 Introduction to Interpersonal Communication OR 454W Interpersonal Communication
2) One of the following 102 Public Speaking 304W Persuasion
333 Advertising & PR Campaigns
C Specialization dependent on advisement 9 hours
Corporate Communication/ Interpersonal Public Relations
Integrated Marketing Communication
Management Communication
Information Management In Organizations
Media Organizations
Rhetoric & Argumentation
Self-Designed Program
We also offer a program that allows you to earn both a Bachelor's and Master's degree in five years. See the Director of Undergraduate Studies in Communication.

11 Major in Media Communication
A Five core courses 15 hours
B Media Communication Requirement
111 Introduction to Media Arts
C Specialization dependent on advice admission
D Journalism
E Media Management
F Media Marketing
G Corporate Media Design
H Rhetoric of Mass Media
I Media Writing and Production
J Self-Designed Program

111 Major in Journalism
A Five core courses 15 hours
B Journalism Requirements 9 hours
C Specialization dependent on advice admission
D Practicum 6 hours
E Print Journalism
F News Production and Management
G Advertising
H Public Relations
I Broadcast Journalism
J Online Journalism

Requirements for the Minor in Communication Studies, Media Communication or Journalism
Required 18 Hours minimum
COMM 494W Communication Ethics (3 hours)
COMM 213 Introduction to Multimedia
COMM 416 World Wide Web Publishing
COMM 494W Communication Ethics
FINAR 245 Studio Art
Two electives (300 or 400 level)

11 Major in Theatre Arts — 30 to 45 hours
(Affiliated Degree with the Department of English)
A Theatre Arts Requirements 9 hours
*COMM 190 Introduction to Theatre Arts
*ENGL 204W Introduction to Drama
ENG 483 Theatre, Values and Society
*Prerequisite to any 300-400 level course in the major
B Theatre Courses 6 hours
COMM 151 Voice and Diction
COMM 280 Acting I
COMM 353 Oral Interpretation of Literature
COMM 360 Acting II
C Literature Courses 9 hours
300 or 400 level English or Communication courses that emphasize dramatic literature in their title
D Practicum 6 hours
Three semesters at two credit hours per semester as part of the affiliation with The Pittsburgh Irish and Classical Theatre

Requirements for the Minor in Theatre Arts
Required 18 hours minimum
Required courses 9 hours
COMM 190 Introduction to Theatre Arts
ENGL 204W Introduction to Drama
ENGL 483 Theatre, Values and Society

We offer a program that allows you to earn both a Bachelor's and Master's degree in five years. See the Director of Undergraduate Studies in Communication.

11 Major in Media Communication
A Five core courses 15 hours
B Media Communication Requirement
111 Introduction to Media Arts
C Specialization dependent on advice admission
D Journalism
E Media Management
F Media Marketing
G Corporate Media Design
H Rhetoric of Mass Media
I Media Writing and Production
J Self-Designed Program

111 Major in Journalism
A Five core courses 15 hours
B Journalism Requirements 9 hours
C Specialization dependent on advice admission
D Practicum 6 hours
E Print Journalism
F News Production and Management
G Advertising
H Public Relations
I Broadcast Journalism
J Online Journalism

Requirements for the Minor in Communication Studies, Media Communication or Journalism
Required 18 Hours minimum
COMM 494W Communication Ethics (3 hours)
COMM 213 Introduction to Multimedia
COMM 416 World Wide Web Publishing
COMM 494W Communication Ethics
FINAR 245 Studio Art
Two electives (300 or 400 level)

11 Major in Theatre Arts — 30 to 45 hours
(Affiliated Degree with the Department of English)
A Theatre Arts Requirements 9 hours
*COMM 190 Introduction to Theatre Arts
*ENGL 204W Introduction to Drama
ENG 483 Theatre, Values and Society
*Prerequisite to any 300-400 level course in the major
B Theatre Courses 6 hours
COMM 151 Voice and Diction
COMM 280 Acting I
COMM 353 Oral Interpretation of Literature
COMM 360 Acting II
C Literature Courses 9 hours
300 or 400 level English or Communication courses that emphasize dramatic literature in their title
D Practicum 6 hours
Three semesters at two credit hours per semester as part of the affiliation with The Pittsburgh Irish and Classical Theatre

Requirements for the Minor in Theatre Arts
Required 18 hours minimum
Required courses 9 hours
COMM 190 Introduction to Theatre Arts
ENGL 204W Introduction to Drama
ENGL 483 Theatre, Values and Society

The (30/24) Double Major Options
Students can double major in two of the three majors in the Affiliation of Communication and English (Communication, English, Theatre Arts). The first selected major requires 30 credits and the second 24 credits.

Students majoring in Multimedia Arts may double major in Theatre Arts. The Multimedia Arts major requires 36 credits and the second 24 credits.

UNDERGRADUATE CURRICULUM

102 Public Speaking 3 cr
Develops communicative skills necessary to analyze verbal discourse and to perform effectively in public speaking situations that confront the educated person

103 Introduction to Interpersonal Communication 3 cr
Develops communication skills in a variety of relationships such as friendships, romantic relationships, work relationships, and family relationships

107 Acting Workshop 3 cr
A practical introduction to the art of the theatre with an emphasis on acting. After a brief exploration of the esthetics of performance, students will work with seasoned university actors in exercises involving diction, movement, blocking, interpretation and timing

111 Introduction to Media Arts 3 cr
Familiarizes students with equipment applications and technology, and provides basic hands-on experience in media production

151 Voice and Diction 3 cr
Trains students in the voice and diction skills required of professionals

177 Language for Journalists 0 cr
Teaches students the basic rules of English grammar

182 Digital Imaging 3 cr
(majors only)
Introduces students to the use of photography as a medium of communication. Teaches the fundamentals of camera work, light, filters, film development, and printing

190 Introduction to Theatre Arts 3 cr
Dramatic criticism and theatre history are combined with the pragmatic considerations of play production

201 Human Communication 3 cr
and Society (Core Requirement)
Examines how people communicate, and are influenced by, institutions, groups, and other individuals

202 Business & Professional Communication 3 cr
Focuses on one-to-one, group, and individual communication in business, government, industrial, and not-for-profit or service organizations

203W Communication and Professional Civility 3 cr
Develops communicative skills in group and organizational relationships

210 Mass Communication and Society (Core Requirement) 3 cr
Explores the social impact of mass communication through considerations of the (1) functions and uses of all forms of mass communication, (2) sociopolitical and cultural context of media institutions, delivery systems, technology and diffusion, (3) influence of media content on social constructions of reality, and (4) major theories and research through which we attempt to understand this impact

213 Introduction to Multimedia 3 cr
Emphasizes on the use of technology within multimedia, the process of developing interactive multimedia projects, an overview of the multimedia field, and the impact of multimedia upon various societal segments

214 Introduction to Debate 3 cr
Outlines how to develop an argument in opposition to a given position

215W Media Design and Scriptwriting 3 cr
Introduces the theory, process, and techniques of designing and writing for corporate media, employee communication, training, and marketing promotion

224 Sound Design 3 cr
Explores the digital side of audio, sound file management, recording techniques for video and audio based presentations, and the use of sound in multimedia

226 Designing for the World Wide Web 3 cr
Introduces students to the technical and creative aspects of web page design. Students study the best ways to add multimedia content including graphics, text, animation, video and interactive content to web sites Co-requisite COMM 213 or instructor permission

240 Video Production Studio 3 cr
Introduces fundamental of "live" television studio production techniques, coupling basic technical and aesthetic considerations

250 Modeling and Animation Principles 3 cr
An introduction to the creation of two and three dimensional objects, this course looks at specific modeling techniques, including splines, nurbs, lighting, camera management, texture, environments, and rendering Prerequisite FINAR 245

251 News Analysis 3 cr
Investigates current issues and the world's trouble spots considering histories, economies, ethical differences and trends, religious differences, and political systems
366 Multimedia and Society 3 cr
Provides extensive knowledge of the basic techniques of digital media, the production of electronic publications, standards of electronic documents and skills necessary for using and sharing international Internet resources

388 Digital Videography 3 cr
Students discuss theories behind video production and compression, film language, lighting, cameras, lenses, film genres, movement, characters, color, and capture software and hardware Prerequisite COMM 213, FINAR 245

340 Video Production EFF/ENG 3 cr
Introduces electronic news gathering and electronic field production as remote location video production techniques. Covers pre-production planning and design, on-location production, and post-production editing

341 Writing for Multimedia 3 cr
Students learn how to create multimedia content and shooting scripts, how to plan, organize and write for WWW body text Prerequisite COMM 213

351 News Announcing 3 cr
Applies principles of effective speaking to broadcasting

353 Oral Interpretation of Literature 3 cr
Analyzes literature from all genres for purposes of reading aloud, a skill which is both an art in itself and a useful discipline for announcers and actors

355 Acting for the Camera 3 cr
An introduction to the art of acting, beginning with characterizations and applying whatever performing techniques are required for the role

367 Radio-TV Principles & Writing 3 cr
Studies and applies writing principles and practices for radio and television news in a lecture-laboratory course

368 Media Management and Economics 3 cr
Introduces students to the basic management operations of a contemporary electronic media facility and the economic parameters of the U.S. media industries

369 Media Programming 3 cr
Introduces students to various programming strategies in the electronic media

370 Media Promotion 3 cr
Develops the ability to write and produce effective on-air and external communication for an electronic media outlet using marketing theory, media principles and promotion techniques

371W News Writing & Reporting I 3 cr
Teaches advanced writing of news stories, such as business, government, and court stories, and introduces students to in-depth, analytical coverage of public issues Prerequisite COMM 271W

375W Editing for Print 3 cr
Teaches editing and presentation of the written word for the print news media (including electronic editions) in a laboratory course Prerequisite COMM 271W and 371W

380 Acting II 3 cr
An advanced course dealing with the principles and techniques of various acting styles with major concentration on the oral communication of a dramatic role Prerequisite COMM 280

390 20th Century Theatre 3 cr
A survey of major features of the theatre from the turn of the century to the end of the millennium examined in light of the sociopolitical events of the time

402 Argumentation and Debate 3 cr
Applies the principles and methods of critical deliberation to a significant contemporary social issue Emphasizes advocating, defending, and refuting a proposition of policy

405 Multimedia Advertising & Public Relations 3 cr
Introduces students to the use of the World Wide Web and the role of advertising and PR strategies and teaches the techniques for the development of commercial advertising sites and public relations vehicles

407 Intercultural Communication 3 cr
Intercultural communication exposes the student to the importance of communication among and between politically, culturally, and ethically diverse people as a bridge to understanding in an increasingly multicultural world

410 Directing Workshop 3 cr
Studies principles, theories, and practices involved in directing plays for performance, emphasizing problems of staging and interpretation confronting the director

411W Rhetorical Criticism 3 cr
Examines critical methods and approaches to the study and analysis of rhetorical acts, movements, and speeches

412 Literary Journalism 3 cr
Focuses on American literary journalism and the many writers who traverse fiction and lyrical journalism Looks at writers from other countries

413 Multimedia Authoring for Windows Platforms 3 cr
Students complement their cross-platform authoring skills by learning an advanced object-based Windows authoring system Prerequisite COMM 326

414 Rhetoric, Religion, and Society 3 cr
Introduces the rhetorical language of religious symbols and enriches our everyday living
Examines communication processes in small groups

455 Small Group and Team

Examines communication between individuals in small groups. Includes discussion of group formation, structure, decision-making, errors in decision-making, interaction models, conflict, and methods of doing research in and about small groups

456W Organizational Communication

Examines the scope and function of the communication process in organizations in order to provide students with an understanding of the concepts and theories

457 Communication, Science, and Revolution

Examines how communicative beliefs built upon "imagination" over beliefs dominated by "science" has changed our understanding of communication. Covers the rhetorical-communication theories of the Sophists, Plato, Aristotel, Bacon, Ramus, Burke, Perelman, Ong and Hudson

461 Advanced Writing for Radio & Television

Teaches news writing for radio and television in a lecture-laboratory course

471 Civic Journalism Reporting

Focuses on applying theories of sales and marketing for consumer advertising

472 Writing Editorials, Critiques

Teaches feature article writing for the general and specialized print publication. Includes writing thoughtful, informative editorials on local, national and world affairs

473 Feature Writing

Examines feature article writing for the general and specialized print publication. 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 print news reporter

474 International Mass Communication

Studies world news systems and analyzes their roles as instruments of world understanding

475 Communication Research Methods

Examines the principles and practices of marketing communication. Emphasizes promotion area of the marketing mix including advertising, sales promotion, public relations, and personal selling

486 Directed Reading

Examines the basic principles of reviewing art forms and writing thoughtful, informative editorials on local, national and world affairs

487 Feature Writing

Examines the triumph of beliefs dominated "imagination" over beliefs dominated by "science" and the relationship between the "modern" world's understanding of communication and Revolution

456 Communication and Popular Culture

Examines how the triumph of beliefs dominated "imagination" over beliefs dominated by "science" has changed our understanding of communication. Covers the rhetorical-communication theories of the Sophists, Plato, Aristotel, Bacon, Ramus, Burke, Perelman, Ong and Hudson

462 Practicum in College Radio

Conducts formal critiques of WQED and related college media. Designed for all persons working for a college radio station

464 Health Communication

Examines communication theory and research as it relates to the health care context

465 Special Topic

Check semester class offerings for special classes offered

491 Media Information and Technology

Examines societal impact and the political economy of information and technological diffusion

492 Seminar Current Issues in Communication

Discusses professional problems and advancements in the field of Communication

494W Communication Ethics

Examines the ethical implications of the mass media and electronic products (e.g., brochures, slide shows, video programs, etc.) commissioned by universities or community organizations

495 Internship

Provides a supervised observation/experience program of 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

496 Undergraduate Honors Thesis

Proposal submitted by student approved by thesis advisor and Chair of Department

497 Special Project

Based on the student's audition) or as a member of the stage management team, as assigned in accord with the particular needs of the production(s) that occur during the time of the practicum. Prerequisite: COMM 190, COMM 280, ENGL 204W

THE DEPARTMENT OF COMMUNICATION

The Department of Communication offers a wide range of courses in English and American literature, writing, linguistics, and literary theory. Although courses are taught from a variety of critical perspectives, the faculty are committed to imparting to every student a clear sense that no literary work exists in a historical vacuum. Every work of the creative imagination is a product of its own time that also stands in some meaningful relation to what has preceded it, in its turn it becomes a part of the historical matrix out of which succeeding generations of artists bring forth new works. Literary study is the intensive study of texts in their manifold relations as aesthetic objects, as social documents, as chapters in the history of an idea or a people, as occasions for meditation or revolution.

Students of English learn literature, but through the opportunities for analysis, discussion, and written composition, they also develop clarity of thought, precision of expression, and informed critical judgment.

English Majors choose a concentration in either Literature Studies or Writing. Both concentrations require a core of four courses which insure that all majors are grounded in a historical approach to literature, and are prepared to situate the study of literature in an ethical framework. For courses beyond the core, majors plan a coherent course of study in conjunction with a faculty advisor.

The affiliation of the Department of English and the Department of Communication, professionally separate but sharing a common center in language and interpretation, creates the possibility of distinctive interdisciplinary programs, such as a double major in English and Communication. Under this program students must meet all existing requirements for a major in one of these disciplines, and may complete a second major in the other, with only 24 additional credits.

The Departments of English, Classics and Modern Languages and Literatures offer a major in World Literature.

The Department of English and Communication, in conjunction with the Pittsburgh Irish and Classical
Theatre offer an interdisciplinary major in Theatre Arts, which includes experience with a professional theatrical company. The Department of English and the School of Education offer a course of study leading to two degrees, a B A in English and a B S in Education, and initial certification in English, in a total of 129 credits.

Prerequisites — For all 200-level courses, students must have completed Core 101, Thinking and Writing Across the Curriculum (or its equivalent) Core 102, Imaginative Literature and Critical Writing (or its equivalent), may be taken concurrently by permission of the Chair. For all 400-level courses, students must have taken Core 101 and 102 and at least one English course at the 200-level. Individual courses numbered above 200 may require specific prerequisites, for more information, consult the Department.

**REQUIREMENTS FOR THE MAJOR**

**MAJOR IN LITERARY STUDIES OR WRITING**

**Required 30 credits**

**All Majors**

**Core requirements — 12 credits**

ENGL 300W Ethical and Critical Issues in Literary Studies Survey courses, 9 credits

Three courses chosen from English 301-304

**Concentration in Literary Studies — 18 credits in addition to Core requirements**

One 400 level period course (English 401-457)

One 400 level Literature Across Boundaries course (English 458-468)

No more than two 200-level courses may be counted toward the required 30 credits

**Concentration in Writing — 18 credits in addition to Core requirements**

Three writing courses at the 300 or 400 level

One 400 level literature course

No more than two 200-level courses may be counted toward the required 30 credits

**Requirements for the Minor in Theatre Arts**

Required 18 hours minimum

Required courses 9 hours

COMM 190 Introduction to Theatre Arts

ENGL 204W Introduction to Drama

ENGL 483 Theatre, Values and Society

Elective courses 9 hours

Selected from courses in the Theatre and Literature areas in consultation with an advisor, with at least one course chosen from each area

**UNDERGRADUATE CURRICULUM**

**NOTE** For technical reasons related to changes in the English curriculum, some of the following courses may be offered with different course numbers than those listed. The course content will not be affected.

**201W Introduction to the Short Story** 3 cr

Introduction to the varieties of short fiction, emphasizing critical analysis and writing

**202W Introduction to the Novel** 3 cr

Introduction to various types of novels, emphasizing critical analysis and writing

**203W Introduction to Poetry** 3 cr

Critical analysis of British and American traditional and experimental poetry

**204W Introduction to Drama** 3 cr

A historical survey of dramatic forms from the classics to the modern

**205W Survey Literature of Western World I** 3 cr

A historical survey of western literature through the Renaissance

**206W Survey Literature of Western World II** 3 cr

Historical survey of western literature since the Renaissance

**207W Readings in Non-Western World Literature** 3 cr

Representative Asian and African literature, studied in translation

**210W Introduction to Film** 3 cr

A basic introduction to the technology and art of the motion picture

**211W Science Fiction** 3 cr

Study of the thematic and formal concerns of science fiction, giving due attention to the impact of science and technology on culture, and to science fiction as a continuation of traditions of allegory and romance

**212W Science Fiction on Film** 3 cr

Study of science fiction in literature and on film

**213W Women Novelists** 3 cr

Introductory study of American women novelists from several historical periods

**214W Literature of Crime & Detection** 3 cr

The literature of crime and detection, historical and contemporary

**215W American West Text & Film** 3 cr

Original writers of the American West as represented in fiction and film

**300W Ethical and Critical Issues in Literary Studies** 3 cr

Introduction to the major approaches to literary study and to ethical issues raised by literature and criticism

**301W Survey of British Literature I** 3 cr

Representative works of British literature in their literary and historical contexts, medieval to eighteenth century

**302W Survey of British Literature II** 3 cr

Representative works of British literature in their literary and historical contexts, late eighteenth century to contemporary

**303W Survey of American Literature I** 3 cr

Representative selections from American authors treated in their literary and historical contexts, colonial to Civil War period

**304W Survey of American Literature II** 3 cr

Selected histories and tragedies

**305W Catholic Voices in Literature** 3 cr

Significant literary works that engage problems of Catholicism and Literature 3 cr

**310W Expository Writing** 3 cr

Builds upon writing skills learned in Core 101/102, emphasizing organization, development, clarity and precision. Admission by instructor’s permission only

**311W Poetry Writing** 3 cr

A writing workshop in which students share their work with each other and a poet-instructor

**312W Fiction Writing** 3 cr

Fiction writing workshop concentrating on short fiction or a part of a longer work

**313W Writing for Business and Industry** 3 cr

Introduction to the forms and conventions of many types of business oriented documents

**314W Professional and Technical Writing** 3 cr

Introduction to precise technical writing through individual and group projects

**315W Playwriting Workshop** 3 cr

A workshop in play writing, concentrating on producing notable scripts

**320W Advanced Writing** 3 cr

Further development of exposition in longer forms. Admission by instructor’s permission

**400 Special Topics**

**Catholicism and Literature** 3 cr

Topics of particular concern to Catholicism, chosen from various areas of literature

**402 Medieval English Drama** 3 cr

Introduction to the forms and conventions of medieval drama

**403 Chaucer** 3 cr

Detailed study of selected works by Chaucer, read in Middle English

**404 Arthurian Literature** 3 cr

Literature of King Arthur, from its historical and mythological origins, with emphasis on a particular theme: Merlin, Avalon, etc.

**408 Special Topics Medieval Literature** 3 cr

Topics chosen to reflect current interests of faculty and students

**409 Spenser** 3 cr

Reading Spenser’s Faerie Queene, emphasizing medieval and renaissance conventions of allegorical poetry

**410 English Renaissance Drama** 3 cr

The drama of Shakespeare’s contemporaries

**411 Shakespeare I Comedies and Romances** 3 cr

Selected comedies and romances

**412 Shakespeare Tragedies and Histories** 3 cr

Selected histories and tragedies

**413 Shakespeare Text and Film** 3 cr

Parallel study of selected plays and filmed versions of them

**414 Sixteenth Century British Literature** 3 cr

Non-dramatic sixteenth century literature including Sidney, Spenser, and Shakespeare
### American Romanticism (3 cr)
- Post-Civil War fiction of Twain, Howells, James, Chopin, Wharton, Crane, and Norris
- 441 American Realism and Naturalism
- Topics chosen to meet the needs of advanced students in the writing concentration, or students in other majors who require advanced instruction
- History of the English Language
- Linguistic analysis with primary emphasis on the history of the structure of English
- ENGL 477 Introduction to Linguistics is recommended preparation for this course
- 477 Introduction to Linguistics
- Basic principles and methods of modern linguistics, emphasizing phrase-structure grammar and its practical application to teaching
- Applied Linguistics
- Application of linguistic theory to literary analysis and the teaching of writing
- 478 Modern English Grammar
- Phase-structure (generative- transformational) grammar and its application to writing
- Advanced English Grammar
- Further study of phrase-structure grammar and its applications
- 454 Contemporary American Fiction
- Topics chosen to reflect current interests of faculty and students
- 452 American Literature 1900-1945
- Poetry, fiction, non-fiction in such diverse literary genres as Modernism, the Harlem Renaissance, the Southern Renaissance, and regional writing
- 447 Special Topics American Literature
- Topics chosen to reflect current interests of faculty, and students
- 446 The Irish Renaissance
- The resurgence of Irish culture in the late-nineteenth and early-twentieth century as manifested in literature and drama of the period
- 449 English Literature 1890-1945
- Tradition and innovation in the works of such writers as Conrad, Yeats, Eliot, Rhys, Woolf, and Joyce
- 450 English Literature Since 1945
- Literary innovations reflecting the century's cultural and philosophical shifts
- 451 Contemporary Drama
- A study of selected plays emphasizing the specifically modern aspects of twentieth century theater
- 452 American Literature 1900-1945
- Poetry, fiction, non-fiction in such diverse literary genres as Modernism, the Harlem Renaissance, the Southern Renaissance, and regional writing
- 453 Twentieth Century American Poetry
- Works of selected poets
- 454 Contemporary American Fiction
- The varieties of American fiction since mid-century, emphasizing new developments in narrative form
- 457 Special Topics Twentieth Century Literature
- Topics chosen to reflect current interests of faculty and students
- 458 American Modernism and the Visual Arts
- Parallel development of the modernist movement in literature and visual arts, including painting, photography, and theatrical design
- 459 Southern Literature
- Literature of the American South considered as a cultural phenomenon with a distinctive character
- 468 Special Topics Literature Across Boundaries
- Varying topics reflecting the current interests of faculty and students, in courses that transcend the boundaries of a single culture, language, or discipline

### Women Writers (3 cr)
- Women novelists from the eighteenth and early-nineteenth centuries
- 430 Special Topics Restoration and Eighteenth Century Literature
- Topics chosen to reflect current interests of faculty and students
- 431 British Romanticism
- The aesthetic, moral, and literary aspects of English romanticism focusing on Wordsworth, Coleridge, Byron, Shelley, and Keats
- 432 Victorian Literature
- Victorian novel: the poetry of Tennyson, Browning, and Arnold and the prose of Carlyle, and Ruskin
- 433 Victorian Novel
- Novels of the period of Dickens, Thackeray, and Trollope
- 437 Special Topics Nineteenth Century Literature
- Topics chosen to reflect current interests of faculty and students
- 438 Colonial American Literature
- A cultural/historical approach to the theological, political, and aesthetic developments in 17th and 18th century America
- 439 American Literature of the National Period
- Post-revolutionary literature focusing on Irving, Brown, Cooper, Simms, Rowson, Child, and Sedgwick
- 440 American Romanticism
- The Romantic/transcendental movement emphasizing Emerson, Thoreau, Poe, Hawthorne, Melville, and Whitman

### DEPARTMENT OF HISTORY

#### REQUIREMENTS FOR THE MAJOR
- A minimum of thirty credits must be taken including Writing History (311), and three of the following courses: History of the United States I (103), History of the United States II (104), Western Civilization I (113), and Western Civilization II (114). At least three credits must be taken at the 200 level and at least six credits must be taken at the 400 level. Six credits of Art History can count for a History major.
- A History major with a concentration in Art History is required to take 30 credits of History and Art History courses, which must include Western Civilization I and II (113, 114), Art History Ancient through Medieval Art (111) and Art History Renaissance to Modern World (112), and a Senior Honors Seminar or a Directed Readings course in Art History. The fifteen additional credits, at least nine must be taken in Art History courses above the 200 level. No more than twelve transfer credits in History can be applied to the major requirement.

#### REQUIREMENTS FOR THE MINOR
- A student minoring in history is required to take fifteen credits, with six at the 100 level and nine at the 200, 300, and 400 levels.
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>103</td>
<td>History of the United States to 1877</td>
<td>3 cr</td>
</tr>
<tr>
<td>104</td>
<td>History of the United States since 1877</td>
<td>3 cr</td>
</tr>
<tr>
<td>113</td>
<td>Western Civilization I</td>
<td>3 cr</td>
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<tr>
<td>114</td>
<td>Western Civilization II</td>
<td>3 cr</td>
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<tr>
<td>254</td>
<td>The History of the Modern Middle East</td>
<td>3 cr</td>
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<td>255</td>
<td>History of Asia</td>
<td>3 cr</td>
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<td>257</td>
<td>Russia Before Communism</td>
<td>3 cr</td>
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<td>258</td>
<td>Russia in the Twentieth Century</td>
<td>3 cr</td>
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<td>261</td>
<td>Eastern Europe From Nationalism Through Communism</td>
<td>3 cr</td>
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<td>265</td>
<td>England to 1715</td>
<td>3 cr</td>
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<td>266</td>
<td>Modern Britain</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

This course covers the fascinating modern history of the lands situated between Germany and Russia, focusing on diverse ethnic groups, such as Poles, Croats, Slovaks, Serbs, Slovenes, Ukrainians, and Hungarians. The major themes include struggles for national independence, the impact of Soviet control after World War II, and the reassessment of national sovereignty after the end of the Cold War.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>267</td>
<td>Canada</td>
<td>3 cr</td>
</tr>
<tr>
<td>270</td>
<td>Colonial Latin America</td>
<td>3 cr</td>
</tr>
<tr>
<td>271</td>
<td>Modern Latin America</td>
<td>3 cr</td>
</tr>
<tr>
<td>277</td>
<td>Mexico, Puerto Rico, and the Caribbean in the Twentieth Century</td>
<td>3 cr</td>
</tr>
<tr>
<td>302</td>
<td>Age of Crusades</td>
<td>3 cr</td>
</tr>
<tr>
<td>303</td>
<td>Age of Columbus</td>
<td>3 cr</td>
</tr>
<tr>
<td>305</td>
<td>History of Medicine</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

A survey exploring the development of medicine as both an art and a science. The latter part of the course will focus on the social and institutional aspects of the development of American medicine.
386 The American South 3 cr
By focusing primarily on the antebellum era, this course offers an examination of a distinctive region and culture that illuminates the construction of American civilization

387 Native American History Contact, Conquest, and Colonization 3 cr
This course focuses on Native American societies and the nature of their contact and conflicts with European settler societies from the 1490s to the 1840s

388 United States 1945 to the Present 3 cr
A discussion of selected contemporary issues, foreign and domestic, which illustrate the identity crisis in the U.S.

389 Europe Industrialism and the Masses 3 cr
A historical analysis of Europe in the last two centuries with particular attention to the relationship between technological and social change and its impact on politics and culture

390 Historical Geography 3 cr
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

391 History of the American City 3 cr
The rise of urban centers, addressing such topics as city growth and change, industrialization, immigration, and renewal in the latter half of the twentieth century

392 Reform in Modern America 3 cr
The study of the progressive reform movements in the United States since the Civil War

393 Economic History of the United States 3 cr
Investigates the economic development of the United States, emphasizing its impact on social and political issues as background for current economic problems

Please Note
Courses at the 400 level are open to upper-level undergraduate enrollment. They require, at the very least, that students have first taken appropriate 100-level courses.

401 Medieval Europe 3 cr
An exploration of the elements which, when taken together, comprise the unique culture of the Middle Ages.

413 Renaissance Europe 3 cr
A lecture and discussion course, including audiovisual presentations, emphasizing political, economic, social, and cultural developments in Europe from 1500 to 1600, with special emphasis on these developments in Italy

414 Reformation Europe 3 cr
A lecture and discussion course, including audiovisual presentations, describing Protestantism (with emphasis on Martin Luther), the Catholic Reformation, and the Counter-Reformation in the context of economic, political, and social developments in western Europe from 1500 to 1648

417 Reason and Revolution 3 cr
An examination of the history of Europe between 1648 and 1815, this course will concentrate on the rise of absolutism as personified by Louis XIV, the intellectual developments of the Enlightenment, the social and economic changes that underlay and undercut the Ancien Regime, and the great catalysis of the French Revolution that ushered in the modern world

419 19th-Century Europe 3 cr
An examination of the European experience between 1815 and 1914, with emphasis on political, social, and cultural trends

421 Europe in the Era of Fascism 3 cr
An examination of the impact of World War I on European society, the rise of fascist movements and the paralysis of democracy, the nature of the fascist regimes, and the impact of fascism on European diplomacy

422 20th-Century Europe 3 cr
A study of the European experience between 1914 and the present, centering on such topics as the great wars, fascism, and contemporary trends in both eastern and western Europe

433 American Women in Historical Perspective 3 cr
An investigation of the historical experience of American women beginning with the European heritage, continuing with the special conditions in the country that led to the rise of the world's first women's movement, and concluding with the changes that women have faced in the industrial and post-industrial world of the twentieth century

445 Imperial Russia 3 cr
An investigation of the political, social, and intellectual evolution of the Russian Empire in the 18th and 19th centuries

446 Soviet Russia 3 cr
A study of the political, social, and intellectual evolution of the Soviet Union since the Bolshevik Revolution of 1917

447 The Hapsburg Empire 3 cr
An analysis of the rise and fall of the multinational, dynastic state of the Hapsburgs from the sixteenth to the early twentieth century

448 Ottoman Empire and Balkans 3 cr
An examination of the Turkish conquest of southeastern Europe and the Ottoman impact on the peoples of that area

449 Global Socioeconomic Development Historical Perspectives 3 cr
A course analyzing the history of economic development and social change, examining both capitalist and noncapitalist models from the beginnings of industrialization in the West through contemporary struggles for a better life in Asia, Africa, and Latin America

450 Cold War 3 cr
An analysis of the diplomatic and political struggle between the United States and the Soviet Union in the aftermath of the Second World War and the ideological conflict between free enterprise and communism around the world

452 History of American Daily Life 3 cr
An exploration of how Americans have lived over the whole course of our history, from the Amerindian context and early settlement through the industrialization and commercialization of American life

453 Explorations in Psychohistory 3 cr
An examination of the connections between historical research and psychological theories and case studies through the study of selected topics in American history

460 New American Immigration 3 cr
An examination of the dynamics of immigration to the United States with emphasis on the arrival of immigrants from southern and eastern Europe as the twentieth century began

461 American Science and Technology 3 cr
The development of science and technology in America from colonial times to the twentieth century

462 The American Character 3 cr
Since the discovery of the New World, many Americans and others have claimed that the "American experience" is unique and has fostered a new sort of individual. This course will examine the American character through a variety of psychological studies of the nation's past

470 American Urbanization in Historical Perspective 3 cr
This course examines the development of the American city with special focus upon changes in land-use patterns, social class arrangements, political organizations, mobility and migration, ecological patterns, industrial and commercial developments, transformation of the built environment, and the creation of a national urban policy

472 U.S. Labor and Capital 3 cr
An analysis of the forces which have shaped American industrialization, focusing on the impact of unionization and the development of big business on the everyday lives of Americans from preindustrial craftsmen to industrial workers

478 Family and Society in America 3 cr
An examination of American social history from the perspective of the American family, this course will begin with the patriarchal colonial family, examine the changes in family structure that accompanied democratization and commercialization, investigate the impact of industrialization, and conclude by seeking to understand today's family structures

479 Diplomatic History of the United States 3 cr
Emphasis is upon involvement of the United States in both World Wars and its role as an imperial power

480 American Popular Culture 3 cr
By examining the pastimes that Americans throughout their history have engaged in relaxation, like the entertainment industry, sports, popular fiction, and even transitory "crazes," this course will illuminate aspects of the past too often overlooked

491 Senior Honors Seminar 3 cr
Students pursue primary-source research on a topic of their choice under close faculty direction in a seminar format

499 Directed Reading, Selected Historical Topics 3 cr
With permission from the department and close consultation with a faculty member, students can undertake an in-depth exploration of a topic of their choice

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
Chairperson
Thomas Keagy, Ph D

MATHEMATICS PROGRAM
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 liberally educated person in support of other disciplines

REQUIREMENTS FOR A MAJOR
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 another discipline. The B.S. program, which requires a minimum of 39 semester hours of mathe-
Mathematics, is recommended for students interested in scientific applications or further study in mathematics on the graduate level. Requirements are as follows:

Mathematics Core (B A & B S) 115 (or 114), 116, 215, 300W, 315, 402W, and 415W. A grade of C or better must be achieved in all mathematics core courses. Remaining courses must be taken at the 300 level or above.

Requirements for a Minor:
The minimum requirements for a minor in mathematics are 115 (or 114) -116 and 9 additional hours in courses numbered 125 or above including at least one course numbered 300 or above.

Mathematics Courses:
101 College Algebra 3 cr
Algebraic expressions, equations and inequalities, Algebraic, exponential, and logarithmic functions and graphs, simultaneous equations and inequalities. Credit is not allowed for both 101 and 104.

104 Calculus with College Algebra and Trigonometry I 4 cr
Initial topics of 115 with topics from 101 and trigonometry integrated as needed. Credit is not allowed for both 101 and 104.

111 Calculus for Non-science Students 3 cr
Limits, continuity, differentiation of algebraic, exponential, and logarithmic functions. An introduction to integration. Credit is not allowed for both 111 and 115 or for both 111 and 114. Prerequisite 101 is equivalent.

114 Calculus with College Algebra and Trigonometry II 4 cr
Remaining topics of 115 with topics from 101 and trigonometry integrated as needed. Credit is not allowed for both 111 and 114 or for both 114 and 115. Prerequisite 104.

115 Calculus I 4 cr
The same topics as 111 except trigonometric functions are included. Credit is not allowed for both 111 and 115 or for both 114 and 115.

116 Calculus II 4 cr
Applications of the definite integral, parametric equations, polar coordinates, sequences, and series. Prerequisite 114 or 115.

125 Fundamentals of Statistics 3 cr
Descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Credit not allowed for both 125 and 225.

135 Discrete Mathematics 3 cr
Sets, functions, relations, partial order, methods of propositional logic, introduction to predicate logic, counting, recurrence relations, asymptotic analysis, proof, including induction, introduction to probability, graphs.

215 Calculus III 4 cr
Calculus of functions of several variables and vector valued functions. Line and surface integrals.

225 Introduction to Biostatistics 3 cr
Descriptive statistics, sampling distributions, confidence intervals, hypothesis testing, non-parametric methods, chi-square tests, regression and correlation methods, and analysis of variance. Credit is not allowed for both 125 and 225. Prerequisite: Evidence of college level algebra skills.

300W Foundations of Higher Mathematics 3 cr
Mathematical logic, proof techniques, sets, relations, and functions. Prerequisite 116.

301 Introduction to Probability and Statistics I 3 cr
Univariate and multivariate probability distributions of discrete and continuous random variables, mathematical expectation, limit theorems. Prerequisite 116.

302W Introduction to Probability and Statistics II 3 cr
A continuation of 301 including probability and sampling distributions of random variables, confidence intervals, and hypothesis testing. Prerequisite 301.

308 Numerical Analysis 3 cr
Linear systems, interpolation, functional approximation, numeric differentiation and integration, and solutions to non-linear equations. May be counted as either mathematics or computer science, but not both.

Prerequisite: 116 and Computer Programming (150).

311 Fourier Theory 3 cr
Divisibility, congruences, quadratic residues, finite fields, and complex numbers. Prerequisite 300W.

315 Linear Algebra and Differential Equations 4 cr

325W Applied Statistics with Regression 3 cr
One-way, two-way analysis of variance, Latin squares, methods of multiple comparisons, analysis of covariance, balanced and unbalanced designs, linear and multiple regression. Prerequisite 225 or 301, or permission of instructor.

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

402W Abstract Algebra I 3 cr
An introduction to algebraic structures such as rings, ideals, integral domains, fields, and groups, as well as homomorphisms and isomorphisms. Prerequisites 215, 300W, and 315.

403W Topology 3 cr
Topological spaces, homeomorphisms, connectedness, compactness, regular and normal spaces, metric spaces, convergence, and separation axioms. Prerequisites 402W or 413W.

412W Abstract Algebra II 3 cr
A deeper examination of the algebraic structures studied in 402W including quotient groups and rings, extension fields, and other selected topics. Prerequisites: 402W.

415W Advanced Calculus I 3 cr
Functions, sequences and series, limits, continuity and uniform continuity, derivatives. Prerequisites 215, 300W, and 315.

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

420 Introduction to Complex Variables 3 cr
The complex number plane, analytic functions, integration of complex functions, sequences and series, and conformal mappings. Prerequisite 415W.

425W Experimental Design 3 cr
Factorial designs, fixed and random effects models, nested and nested-factorial designs, split-plot designs, response surface designs. Prerequisite 325W or permission of instructor.

491-99 Selected Topics in Mathematics 1-3 cr

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, C++, Java, Lisp, and Prolog, and operating systems including Unix and Windows. Offerings provide opportunities for students seeking courses supporting other disciplines as well as comprehensive programs leading to a major or minor in computer science.

Requirements for a Major:
The student may choose to pursue a major in computer science with a program leading to a Bachelor of Science (B S) or a Bachelor of Arts (B A). The B A program, which requires a minimum of 30 semester hours in computer science, allows a great deal of flexibility for persons interested in combining the major with a strong major in a double major in a non-science discipline. The B S program, which requires a minimum of 40 semester hours in computer science, is recommended for students interested in scientific applications or study in computer science at the graduate level. Requirements for all majors are as follows:

Computer Science Core 150, 210, 220, 253, 300, and 325W (each with a grade of "C" or better).

Additional B A Computer Science Requirements At least 14 additional hours at the 300 level or above (at least 6 of which must be taken at the 400 level).

Additional B S Computer Science Requirements At least 24 quarter hours at the 300 level or above. In addition, at least 800W and at least an additional 9 hours at the 400 level or above.

Extraderpartmental Requirements
B A 115-116 (Calculus I & II) and 135 (Discrete Mathematics).
B S At least 30 credits of mathematics and science including at least 15 credits in mathematics (115-116, Calculus I & II) and 135 (Discrete Mathematics), and either 225 (Biostatistics) or 301 (Introduction to Probability and Statistics I). Science at least 12 credits including at least one sequence chosen from BIOL 121-122 & 123-124, or CHEM 121-122, or PHYS 211-212.

Requirements for a Minor:
A minimum of 15 credits in computer science and 3 credits in Discrete Mathematics is required for a minor. All programs must include Computer Science 150 and 210 and nine additional hours numbered 200 and above with at least 3 credits at the 300 level or above.
COMPUTER SCIENCE COURSES

100 Elements of Computer Science 2 cr
A survey of topics necessary for basic computer literacy. Includes laboratory exercises. Credit not given to computer science majors or minors.

101 Basic Programming 3 cr
Microcomputer programming in Visual Basic. Algorithm development and data representation. Credit not given to computer science majors or minors.

103 JavaScript Programming 3 cr
Programming constructs and heuristics using JavaScript, including object based programming, objects, properties, events, methods, variables, constants, functions, and structured concepts. Emphasis is on using JavaScript for web interactivity and forms processing.

130 Fundamentals of the Internet 3 cr
Technical concepts of electronic mail, web browsing and advanced features, HTML, and web page design. Technical concepts of the internet, advanced internet services, concepts and issues in electronic publishing, ethics and security issues. Prerequisites COSC 220 or equivalent.

150 Computer Programming C++ 3 cr
Object oriented programming, objects and classes, functions, files and libraries, selections, repetitions, arrays, strings, structures, searching, and sorting.

210 Data Structures 3 cr
Dynamic allocation, stacks, queues, linked lists, recursion, recursion, stacks, trees, string processing, advanced searching, and sorting, and hashing. Prerequisites 150 and MATH 135 (may be taken concurrently).

220 Computer Organization and Assembly Language 3 cr
Basic structure of computer hardware and software, data representation, addresses and instructions, control structure, device drivers, files, and macros. Prerequisite 210.

253 Programming Languages JAVA 1 cr
Object-oriented language, containing such features as classes, objects, inheritance, message passing, and exception handling. Prerequisite 210.

300 Advanced Data Structures 3 cr
Data organization, connections between the design of algorithms and the efficient implementation and manipulation of data structures. Abstract data types, trees, trees, B-trees, and graphs. Prerequisite 210.

305 Digital Logic 3 cr
Boolean algebra and logic gates, combinational logic, decoders, encoders, multiplexers, registers, counters, memory units, flip-flops, algorithmic state machines, and digital integrated circuits. Prerequisite 220.

308 Numerical Analysis 3 cr
Identical to MATH 308. Credit only given for COSC 308 or MATH 308. Prerequisites 150 and MATH 116.

311 System Programming and Design 3 cr
Interaction between software and hardware components in an integrated system, program translation issues, assemblers, linkers, loaders, and compilers. Prerequisite 220.

325W Operating Systems and Computer Architecture 3 cr
Organization of operating systems and basic computer architecture. Implementing multiprogramming, memory management, communicating with input/output devices, concurrency, synchronization, file systems and scheduling the processor. Prerequisite 220.

350W Computers and Humanity 3 cr
An exploration of the impact of computers on present and future society including technological and philosophical issues in computer science. Prerequisite. One course in computer science or permission of instructor.

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

410 Artificial Intelligence 3 cr
Knowledge representation and natural language processing, search strategies, design and applications of heuristics, expert systems, and applications. Prerequisite 300.

418 Formal Languages and Automata 3 cr
Formal languages and their relation to automata. The Chomsky language hierarchy, recognition of languages by automata, Turing machines, decidability, and computability. Prerequisite 300.

425 Computer Graphics 3 cr
Geometric generation of two- and three-dimensional graphics. Scan conversion, geometric transformation, clipping, interaction, curves and surfaces, and animation. Prerequisite 300.

435 Theory of Programming Languages 3 cr
Syntactic and semantic issues in program language definition and implementation. Static vs dynamic properties, parameter passing, recursion, and language comparisons. Prerequisite 300.

445W Systems Analysis and Software Design 3 cr
Methods and tools for the structuring and modular design of large systems, organization and techniques of team programming, design evaluation and validation. Prerequisite 300.

DEPARTMENT OF MODERN LANGUAGES AND LITERATURES

Charperson Carla E. Luciente, Ph. D.

The Department of Modern Languages and Literatures offers courses in Chinese, French, German, Italian, Japanese, and Spanish. The four language skills (reading, writing, speaking, and oral comprehension), are emphasized at all levels. Fluency in the active use of the language is emphasized. Courses beyond conversation and composition stress literary studies in which the student is systematically introduced to the literature and culture of the groups whose language he/she is studying. Courses are also offered in linguistics, language for business, language for medicine, and language for musicians. A certificate in International Business and also in written and oral translation, internships here and abroad can be obtained. All courses at the 300 and 400 levels are conducted in the target language. All students prior to enrollment in their first language course are required to take the language placement test. It is recommended that students who must fulfill language requirements begin these courses in their freshman year.

Majors and minors are urged to spend a summer, a semester, or a year abroad. Further information may be obtained in the Department office. It is also recommended that majors in the Department include a course in the culture of the country of the language in which they specialize as well as one course in another literature other than their major. A maximum of 12 transfer credits will be accepted toward 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 Department offers major programs in Spanish and Modern Languages. In addition, if offers a minor in French, German, Italian, as well as non-major courses in Chinese and Japanese.

Elementary and intermediate courses must be taken in sequence. Credit toward the major or minor will not be given for 101, 102, and 202 or its equivalents. Proficiency at the 202 level or its equivalent is the prerequisite to all courses numbered 301 and above.

The major programs consist of courses at the 300-level and above:

(1) Spanish — 27 credits at the 300 and 400 levels
(2) Modern Languages — 24 credits at the 300 and 400 levels in one language, 12 credits at the 300 and 400 levels in a second language, and 12 credits at any level in a third language.

REQUIREMENTS FOR THE MINOR

The minor program consists of a minimum of 12 semester hours at the 300-level and above. As for the certificates, inquire at the Department office.

490 Independent Field Study
(2) Modern Languages 24 credits at the 300 and 400 levels in one language, 12 credits at the 300 and 400 levels in a second language, and 12 credits at any level in a third language.

French

101 Elementary French I 4 cr
Fundamentals of oral and written French. Weekly lab attendance.

102 Elementary French II 4 cr
Fundamentals of oral and written French. Weekly lab attendance. Prerequisite French 101 or its equivalent.

115 French for Musicians 2 cr

120 Intensive French 6 cr

102 Intermediate French II 4 cr
Emphasis on the written and oral aspects of the language. Weekly lab attendance. Prerequisite French 102 or its equivalent.

301 French Conversation and Composition I 3 cr
Prerequisite 202.

302 French Conversation and Composition II 3 cr
Prerequisite 301.

306 Intensive French Conversation and Composition 6 cr
Theories of the two movements in the latter part of

The "avant-garde" theatre since

French 202

The equivalent of
phasis on Corneille, Moliere, and Racine

An overview-of the theatre of

France through its literary works

The major cultural and socio-political movements

transactions

Moliere

Will also include a play of Corneille, Racine, and

Emphasis on 17th Century French prose and poetry

326

17th Century French Literature

3 cr

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

Moliere

18th Century French Literature

3 cr

An overview of the Sicle des lumieres

French for Business

3 cr

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

French Culture and Civilization

3 cr

The major cultural and socio-political movements

of France through its literary works

From the Chanson de Roland

through 18th Century

5 cr

Literary Survey I

Literary Survey II

17th Century French Theatre

3 cr

An overview of the theatre of le grand seicle
Emphasis on Corneille, Moliere, and Racine

19th Century French Theatre

3 cr

Beginning with the influence of the Revolution on
French literature, through the literary movements
of the Century

20th Century French Theatre

3 cr

From Jules Romains to Ionesco and the Theatre of
the Absurd

Directed Readings

1-6 cr

Readings of literary texts under close faculty superv-

sion, for majors only and only with written per-
mission of the Department chairperson

The Theatre of the Absurd

3 cr

German

101 Elementary German I

4 cr

Fundamentals of oral and written German Weekly
lab attendance

102 Elementary German II

4 cr

Fundamentals of oral and written German Weekly
lab attendance

115 German for Musicians

2 cr

For majors in music

202 Intermediate German II

4 cr

An emphasis on the oral and written aspects of the
language Prerequisite German 102

301 German Conversation and
Composition I

3 cr

Prerequisite German 202

302 German Conversation and
Composition II

3 cr

Prerequisite German 301

306 Intensive German Conversation
and Composition

6 cr

Prerequisite German 202

302 or 306 is the prerequisite for all courses above
this level

320 German Culture and Civilization

3 cr

360 German for Business

3 cr

Spoken and written language of business German
letter writing, import, export, and commercial
transactions

460 German Literature from the
Middle Ages to the Baroque

3 cr

461 German Literature from the
10th Century to the 20th Century

3 cr

Italian

101 Elementary Italian I

4 cr

Fundamentals of oral and written Italian Weekly
lab attendance

102 Elementary Italian II

4 cr

Fundamentals of oral and written Italian Weekly
lab attendance Prerequisite Italian 101

109 Italian for Lawyers

2 cr

115 Italian for Musicians

2 cr

For majors in music

202 Intermediate Italian II

4 cr

Emphasis on the oral and written aspects of the
language Prerequisite Italian 102

306 Advanced Italian Conversation
and Composition

6 cr

Prerequisite 202 or equivalent Prerequisite for all
courses above 306

314/315 Individual Study

Var cr

With written permission of the Department chair-

person

321 Introduction to Italian Literature

3 cr

324 Introduction to Italian Poetry

3 cr

326 Italian Culture and Civilization

3 cr

400 Italian Cinema

3 cr

Japanese

101 Elementary Japanese I

4 cr

Fundamentals of oral and written Japanese Weekly
lab attendance

102 Elementary Japanese II

4 cr

Fundamentals of oral and written Japanese Weekly
lab attendance Prerequisite Japanese 101 or

equivalent

202 Intermediate Japanese II

4 cr

An intensified continuation of oral and written
Japanese Prerequisite Japanese 102

Spanish

101 Elementary Spanish I

4 cr

Fundamentals of oral and written Spanish Weekly
lab attendance

102 Elementary Spanish II

4 cr

Fundamentals of oral and written Spanish Weekly
lab attendance Prerequisite Spanish 101

105/107 Medical Spanish

2 cr each

109 Spanish for Lawyers

2 cr

202 Intermediate Spanish II

4 cr

Emphasis on the oral and written aspects of the
language Prerequisite Spanish 102

230 Intensive Spanish

12 cr

301 Spanish Conversation and
Composition I

3 cr

Prerequisite Spanish 202

302 Spanish Conversation and
Composition II

3 cr

Prerequisite Spanish 301

306 Intensive Spanish Conversation
and Composition

6 cr

Prerequisite Spanish 202

302 or 306 is a prerequisite for all courses above this
level

317 Modern Tradition Post Modern Turn

3 cr

322 The Nineteenth Century Novel

3 cr

Examines the realist, naturalist, and regionalist
novel

323 Don Juan as a

World Literary Figure

3 cr

324 The Generation of 98

3 cr

Major works of Spain's turn of the century authors
in their aesthetic and historical contexts

325 Contemporary Spanish Novel

3 cr

The Spanish novel since the Civil War

326 Contemporary Spanish-
American Fiction

3 cr

327 Spanish Culture and Civilization

3 cr

A study of the major cultural and socio-political
movements of Spain through its literary works
### DEPARTMENT OF PHILOSOPHY

**Chairperson**
Wilhelm S. Wurzer, Ph D

Philosophy is at the heart of a liberal education, philosophical reflection encourages human beings to seek the truth and to examine the moral foundations of their thought and action. The general program in philosophy introduces students to philosophical thinking, both past and present, and provides a discipline for asking the basic questions of human life. Courses encourage concentration on original major texts from Plato, through the medieval and modern periods of philosophy, up to the present. Contemporary continental philosophy is a specialty.

Philosophy fosters the ability to read with understanding, to think logically, to argue rationally, and to evaluate positions critically. Majors have distinguished themselves in careers in medicine, politics, journalism, law, business and education.

The department offers an Honors Program for outstanding undergraduate majors with an overall GPA of 3.3 and a 3.5 in Philosophy. Students must be recommended to the program by a faculty member in the department. The program requires successful completion of two graduate courses in Philosophy. Students must also complete an acceptable Honors Thesis, for which 3 credits will be given.

### REQUIREMENTS FOR THE MAJOR

A total of 30 credits

- at least 24 credits above the 100-level,
- at least 9 credits from courses 300-400,
- at least 6 credits at the 400-level.

### REQUIREMENTS FOR THE MINOR

A total of 15 credits

- no more than 6 credits at the 100-level,
- at least 6 credits at the 300-400-level.

### INTRODUCTORY COURSES

<table>
<thead>
<tr>
<th align="left">CORE 132 Basic Philosophical Questions</th>
<th align="right">3 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td align="left">Philosophy, &quot;the love of wisdom,&quot; is a discipline for discussing basic questions about ourselves and our world. Students read selected works by major figures throughout the history of philosophy, they are encouraged to think critically and to formulate their own answers to perennial philosophical questions. This course is required for all students in the university. It counts as the first course for the major and minor in philosophy.</td>
<td align="right"></td>
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<table>
<thead>
<tr>
<th align="left">105 Ethics</th>
<th align="right">3 cr</th>
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</thead>
<tbody>
<tr>
<td align="left">The course provides an introduction to important ethical theories, past and present, and some of their applications to concrete issues.</td>
<td align="right"></td>
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<table>
<thead>
<tr>
<th align="left">106 Introduction to Logic</th>
<th align="right">3 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td align="left">This course includes an analysis of valid reasoning, logical fallacies, types of definitions, arguments in ordinary discourse, and the formal logic of inferences.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th align="left">107 Medical Ethics</th>
<th align="right">3 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td align="left">Ethical questions that arise in medical care and research are examined. Possible topics: doctor-patient relation, informed consent, euthanasia.</td>
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<table>
<thead>
<tr>
<th align="left">108 Business Ethics</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">Ethical questions which relate to business are examined, in theory and in practice.</td>
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<thead>
<tr>
<th align="left">109 Contemporary Moral Problems</th>
<th align="right">3 cr</th>
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</thead>
<tbody>
<tr>
<td align="left">This course concentrates on concrete case studies from various fields.</td>
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### BASIC COURSES are useful electives for general undergraduates. Prerequisite PHIL 105 Ethics.

<table>
<thead>
<tr>
<th align="left">200 Introduction to Phenomenology</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">The phenomenological method originated by Husserl will be explored. Possible topics may include intentionality, signs, and meaning.</td>
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<table>
<thead>
<tr>
<th align="left">204 Philosophy and Literary Theory</th>
<th align="right">3 cr</th>
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</thead>
<tbody>
<tr>
<td align="left">This course explores philosophical themes in selected works of literature and studies the relation between recent continental philosophy and theories of literature and of literary criticism.</td>
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<table>
<thead>
<tr>
<th align="left">206 Philosophy &amp; Film</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course examines the art of cinema from a philosophical perspective.</td>
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<thead>
<tr>
<th align="left">208 Existentialism</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">Working our way through a family of thinkers often labeled existentialists, such as Kierkegaard, Nietzsche, Marcel, Heidegger, Sartre, and Camus, we shall guide our inquiry into this school of philosophy by means of a few shared themes: freedom, anguish, responsibility, and meaning.</td>
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<table>
<thead>
<tr>
<th align="left">212 Political Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">Fundamental political questions are explored through readings in some classical but mainly from contemporary sources. The link between philosophical and practical political themes is emphasized as much as possible.</td>
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<table>
<thead>
<tr>
<th align="left">213 Philosophical Roots of Psychology</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course examines the philosophical roots and psychological incarnations of four important approaches to understanding human existence: rationalism (Descartes, Kant, and cognitive psychology); empiricism (Hume and Skinner's behaviorism); phenomenology (Merleau-Ponty); and genealogy/psychoanalysis (Nietzsche and Freud).</td>
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</table>

### HISTORICAL COURSES are designed for majors, minors, and serious students of philosophy. Prerequisites at least two 100-level or 200-level courses or instructor's permission.

<table>
<thead>
<tr>
<th align="left">214 Philosophy of Sex</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course provides an introduction to some of the basic themes and texts, both traditional and contemporary, related to the philosophical study of sexuality.</td>
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<table>
<thead>
<tr>
<th align="left">219 Introduction to Christian Thought</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course studies the meaning of the Incarnation of Christ and other basic Christian symbols. It analyzes these in relation to the nature of religious knowledge, the problem of evil in biblical experience, and phenomenology of the holy.</td>
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<thead>
<tr>
<th align="left">220 Philosophy of Death and Living</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course provides an introduction to traditional and contemporary themes and texts related to this topic. In asking how human beings can be happy in the face of death, it emphasizes the art of living.</td>
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<thead>
<tr>
<th align="left">225 Philosophy of Technology</th>
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<tbody>
<tr>
<td align="left">This course examines how our lives are shaped by technology and the relation of technology to science, art and politics.</td>
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<thead>
<tr>
<th align="left">260 Philosophy of Law</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course includes a study of major legal traditions and considers topics such as justice, ethics and law, legal reasoning, and philosophical issues in evidence and procedure.</td>
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<table>
<thead>
<tr>
<th align="left">270 American Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course covers the main figures in American pragmatism, including both classical (e.g., Peirce, James and Dewey) and recent (e.g., Quinn, Putnam, and Rorty).</td>
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<tr>
<th align="left">280 Oriental Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course provides an introduction to Oriental thought through the study of traditions such as Confucianism, Taoism, Buddhism, and Hinduism.</td>
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<thead>
<tr>
<th align="left">285 Introduction to Marxist Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course examines the way in which issues of gender and sexual differences reshape our understanding of selfhood and personal identity, and thereby impact traditional philosophical views of political and ethical relationships, of the nature and scope of knowledge, and of the relationship between power and language.</td>
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<thead>
<tr>
<th align="left">290 Concentrated Philosophical Readings</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This is a private tutorial arranged with an individual instructor. It is intended for a student who needs to concentrate on a philosophical topic which is not offered in a regular course.</td>
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### 300W Ancient Philosophy            | 3 cr |
|:-------------------------------------|-----:|
| This course spans the beginning of philosophy in Greece, from the Pre-Socratics to Plotinus, with readings taken primarily from Plato and Aristotle. |

<table>
<thead>
<tr>
<th align="left">301 Medieval Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">A sampling of Christian and Islamic thought from late antiquity through the thirteenth century, with emphasis on the continuity, the development, and the interpaly of the Platonic and the Aristotelian traditions. Such themes as knowledge, the existence of God, the problem of evil, the relation between divine and natural causes, and the soul will receive special attention, always through primary sources.</td>
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<thead>
<tr>
<th align="left">302 Early Modern Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">Major issues in modern thought beginning with Descartes are discussed. Selected texts might include figures such as Montaigne, Pascal, Spinoza, Leibniz, Hume, and Kant.</td>
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<tr>
<th align="left">304 Later Modern Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">A study of the period of philosophy initiated by Kant, this course deals with some of the crucial thinkers of the 19th century such as Hegel, Feuerbach, Kierkegaard, Marx, Mill, and Nietzsche.</td>
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<thead>
<tr>
<th align="left">305 Contemporary Philosophy</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course concentrates on philosophy from 1900 to the present and covers the methods of selected 20th-century movements, such as phenomenology, hermeneutics and deconstruction.</td>
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<thead>
<tr>
<th align="left">311 Aesthetics and Philosophy of Art</th>
<th align="right">3 cr</th>
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</thead>
<tbody>
<tr>
<td align="left">This course explores a branch of philosophy concerned with questions of art and beauty, art theory and art criticism, aesthetic judgment and the sublime. Selected readings are from the writings of Plato, Plotinus, Kant, Hegel, Nietzsche, Heidegger, and Adorno.</td>
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</table>

### ADVANCED COURSES are designed for majors, minors, and other serious students of philosophy. Prerequisites at least one 200- or 300-level course and instructor's permission. Many 400-level courses are also 500-level graduate courses. A list of specific courses taught is available each semester at preregistration. The following are a small sample from courses taught recently.

<table>
<thead>
<tr>
<th align="left">404 Plato's Republic</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">This course concentrates on Plato's text, with a consideration of various interpretations.</td>
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<thead>
<tr>
<th align="left">415 Elements of Thomistic Thought</th>
<th align="right">3 cr</th>
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<tbody>
<tr>
<td align="left">An introduction to the philosophical thought of St. Thomas Aquinas through his own writings, especially those on the relation between faith and reason, the existence and attributes of God, knowledge, and language. Students will learn how to interpret his works in light of their sources, historical context, and literary forms.</td>
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</table>
DEPARTMENT OF POLITICAL SCIENCE

420 Saint Augustine 3 cr
The early dialogues and the Confessions will be discussed. Possible topics: skepticism, truth, free will, the existence of God, faith and reason, the soul, memory, and time.

422 Saint Thomas Aquinas
Treatise on Man 3 cr
Original texts will be read and discussed in the light of Aquinas' psychology, epistemology, and theory of appetite, and will cover topics such as love, will, affectivity, and emotion.

423 Aristotle
Philosophy of Action 3 cr
This course emphasizes an analysis of Aristotle's various discussions of Praxis in both his theoretical and practical writings.

424 Adorno's Aesthetic Theory 3 cr
This course explores in great detail one of the most dynamic and influential texts in philosophy of art and art theory, Adorno's Aesthetic Theory.

434 Senior Honors Seminar — Hermeneutics 3 cr
This course focuses on one of the most outstanding exponents of hermeneutics and a master of hermeneutic praxis, Hans-Georg Gadamer and his text Truth and Method. We shall study theories of interpretation with regard to ancient, medieval, and modern texts as well as the function of understanding and the role of language in communication.

463 Problems in Ethics 3 cr
This course consists of a discussion of selected issues in ethics.

469 Honors Research 3 cr
Designed for students in the Honors program in philosophy. Consists of directed readings, periodic reports, and work on Honors thesis.

498 Philosophy of God 3 cr
This course introduces students to selected traditional and contemporary texts and basic themes in the philosophy of God, including the problem of evil, the existence of God, freedom and determinism, and the problem of religious experience.

Requirements for the Major

Thirty semester hours are required, no more than six of which can be at the 100-level. These credits must include 105, 208 or 209, 245, 317 or 318, and 427 or 436.

A student transferring from another College or University may receive a maximum of 12 transfer credits applied to their major requirements.

Requirements for the Minor

Fifteen credits are required, no more than three of which can be at the 100-level. A maximum of six transfer credits can be applied to the minor.

105 American National Government 3 cr
This course is designed to provide students with an introduction to American politics and government, with a focus on the development of political institutions, policy-making processes, and public policies.

110 Current Problems in International Politics 3 cr
A survey of issues that states currently face in world politics.

115 Human Being and Citizen 3 cr
An introduction to problems of politics through literature.

120 Intro To Political Economy 3 cr
An introduction to how government decisions about trade, investment, debt and market developments impact people domestically and worldwide. Special attention is given to the problems experienced by poorer countries and responsibilities of developed nations.

203 The American Congress 3 cr
An investigation of the operation of the Congress within the U.S. system of Government.

208 Comparative Political Systems 3 cr
An introduction to government, politics, culture, and economic policy in Europe and Japan.

210 Comparative Politics 3 cr
An introduction to government, politics, culture, and economic policy in the developing world.

235 Mass Media and Politics 3 cr
Studies the role the media play in politics and the impact of the media on politics.
DEPARTMENT OF PSYCHOLOGY

Chairperson
Russell Walsh, Ph D

The undergraduate program of the Department of Psychology is designed 1) to introduce and familiarize students with the fundamental content, issues, and interest of various areas of psychology and critically evaluate and reformulate these in the context of psychology as a human science, 2) to foster intellectual and personal freedom and critical thinking as essential to the humanizing process, 3) to prepare the professionally oriented student for advanced study, 4) to provide a foundation for careers involving human services. To these ends, the department offers a wide variety of courses covering psychology conceived as a human science, a natural science, and within a historical perspective.

REQUIRED FOR THE MAJOR

The major program consists of 103-Introduction to Psychology plus a minimum of 24 semester hours. These credits must include 220, 223, and 328 223 Introduction to Existental Phenomenological Psychology, and 328 Psychology of Personality are designated as writing-intensive courses. In addition, majors must complete 213 Philosophical Roots of Psychology offered by the Department of Philosophy. Majors desiring to pursue graduate study in psychology are strongly advised to take six additional credits through cross-registration at other universities (Learning Theory, Experimental, Perception, Memory, etc.), and Statistics (125 Fundamentals of Statistics offered by the Mathematics department may be considered part of the mathematics/science requirement). Finally, it is recommended that majors enroll in a hospital or community practicum for credit, and/or do volunteer work in a neighborhood clinic. Three credits earned in practicum count toward the 24 required credits, an additional three credits in practicum may be earned above and beyond the required minimum of 24. A minimum of 15 credits in psychology exclusive of practicum must be taken at Duquesne University for the major.

REQUIREMENTS FOR THE MINOR

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

INSTRUCTION

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

220 Systematic Psychology (3 cr)
   For majors only. Traditional approaches (behaviorist, psychophysiological, psychoanalytic) to sensation, perception, learning and motivation. Required for majors.

223 Introduction to Existental Phenomenological Psychology (3 cr)
   Introduction to a human-science alternative to psychology as a natural science. Prerequisite for 356 and 410, required for majors. Writing-intensive course.

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

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

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

238 Psychology of Personality (3 cr)
   Critical examination of major theories of personality, required for majors and minors. Writing-intensive course.

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

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

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

DEPARTMENT OF SOCIOLOGY

Chairperson
Douglas Harper, Ph D

Sociology offers students a greater understanding of the social structures and processes that underlie our daily lives, and an awareness of the possibilities of social-scientific research for increasing our understanding of society. Duquesne's program in sociology provides a strong academic foundation. Our core curriculum teaches social theory and research methods, which prepare the student for graduate study or employment in the social sciences. Our electives courses offer knowledge relevant to specific areas of students' interests. For students who wish to specialize early in their careers, we offer academic concentrations in Social Policy and Criminal Justice. Our concentration in Social Policy prepares students for graduate programs in social science and for research in government agencies, private research firms, the non-profit sector and other applied research areas. The Criminal Justice concentration provides substantive background for work or further education in the criminal justice field.

For students who wish to move quickly and efficiently into graduate study we offer a five-year program which leads to both a B.A. in Sociology and an M.A. in Social and Public Policy. Qualifying students may apply in their third year for this program. The fourth year curriculum overlaps the two programs as these courses count for both undergraduate and graduate credit. The MA degree is then completed during the fifth year. Leaving Duquesne with two degrees in the social sciences can provide students with a significant advantage on the job market, or a rapid track toward a Ph D.

REQUIREMENTS FOR THE MAJOR

A minimum of 34 semester hours is required for the major. These must include 101 Survey of Sociology, 200W Classical Sociological Theory, 201 Sociological Methods I, 202 Sociological Methods II, Sociological

430 Internship in Practical Politics (3 cr)
   A work experience in government offices. Permission of department required.

436 Advanced Seminar (3 cr)
   An in-depth consideration of selected topics in the discipline. Open to seniors and advanced juniors only. Permission of instructor required.

450 Workshop-International Studies (3 cr)
   Democratization, cultural conflict, weapons proliferation, economic development, and international organizations in the third world. Permission of instructor required.

499 Directed Readings in Political Science (1-3 cr)
   An opportunity for selected students to engage in independent study and research. Permission of instructor required.

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. Usualy those intending to complete a thesis, and 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. Prerequisites vary with instructor. Permission of department head for non-majors.

450 Workshop-International Studies (3 cr)
   Democratization, cultural conflict, weapons proliferation, economic development, and international organizations in the third world. Permission of instructor required.

THE McANULTY COLLEGE OF LIBERAL ARTS

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

470 Psychology of Aesthetic Experience (3 cr)
   Theoretical and empirical explorations of aesthetic experience.

491 Applied Psychology Practicum (3 cr)
   An applied psychology setting provides opportunity for working directly with professionals. Settings have included psychiatric hospitals and community centers. Majors only. Permission of department head required. Repeatable once.

492 The Individual and His/Her World (3 cr)
   Examination of individual's relation to society, from a development and cross-cultural perspective.

493 Principles of Psychoanalytic Thought (3 cr)
   Examination of the times and contributions of Freud and selected other major psychoanalytic theories of permission of department head for non-majors.

494 Psychology of Language and Expression (3 cr)
   Communication as a life-embedded relation of person to world and others. Emphasis is on phenomenological, modern psycholinguistics, and/or post-structuralist approaches. Permission of department head for non-majors.

410 Advanced Existental-Phenomenological Psychology (3 cr)
   Detailed investigation of selected works in existental-phenomenological philosophy and psychology. Prerequisite 223 Permission of department head for non-majors.

426 History of Psychology (3 cr)
   Overview of figures and issues in the history of psychology, from precursors to present. Prerequisite Philosophy 213.

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

460 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.

453 Psychology of Gender (3 cr)
   This course explores men's and women's existence as gendered beings. The theoretical as well as existential dimensions of gender are thematized, and the biological, social, and personal contexts will be discussed.
DEPARTMENT OF SOCIOLGY

THE SOCIOLGY CLUB

Sociology majors are invited to join the Sociology Club of Duquesne University. This club meets regularly through the year to enhance the culture of our major on campus, and schedules special events such as the annual "Professional Day" and field trips to sites of sociological interest! The requirements for membership are as follows:

- The student must be enrolled in a sociology course, have a minimum of 2.00 GPA, and a genuine interest in Sociology.

ALPHA KAPPA DELTA

Members of the Sociology Club who meet the following requirements may be invited to join the Delta Chapter (Pennsylvania) of Alpha Kappa Delta. Each semester the files of sociology majors are reviewed and invitations sent to eligible students.

- The student must be a junior, have a minimum cumulative GPA of 3.00, a 3.00 QPA in sociology, and a minimum of 12 credits in sociology.

REQUIREMENTS FOR MEMBERSHIP

101 Survey of Sociology
3 cr
Introduction to sociological concepts, processes, and institutions that are the subject matter of sociology as an academic discipline. Required for all Sociology Majors.

103 Introduction to Criminal Justice
3 cr
An introduction to the criminal justice system, including police, courts, correctional facilities, and community-based corrections. Required for the Criminal Justice Concentration.

104 Cultural Anthropology
3 cr
An introduction to a major subfield of Anthropology which explores the origins, development and diversity of human cultures.

105 Intro to Peace and Justice
3 cr
An introduction to conceptual, practical, and spiritual dimensions of peace and justice. Peace and justice are treated as the by-products of intra- and interpersonal, situational, organizational, regional, national, and global conflicts.

200W Classical Sociological Theory
3 cr
An intensive review of basic sociological principles, and a study of several classic sociological theories. Required for all Sociology Majors.

201 Sociological Methods I
3 cr
A discussion and application of the techniques and research procedures used in sociological research. Required for all Sociology Majors.

202 Sociological Methods II
3 cr
A study of quantitative research methods used in social science. Emphasis is placed on the application and interpretation of statistics using computerized statistical packages such as SPSS. Required for all Sociology Majors.

202L Sociological Methods Lab II
1 cr
Lab provides guided computer training in data set construction and analysis. Required for all Sociology Majors.

203 Social Gerontology
3 cr
An examination of the social and cultural forces that impact the process of aging and the statuses and roles of the aged in human societies.

205 Person and Society
3 cr
A study of the person's interaction with societal groups, organizations and institutions. Required for Sociology Majors.

206 Social Problems and Social Policy
3 cr
A study of the major social problems in American contemporary society, including poverty, violence, and environmental decline. Required for students in the Social Policy Concentration.

207 Sociology of Health and Illness
3 cr
A study of the ways in which health and illness are influenced by societal institutions, how gender shapes the self, behavior and social relationships, and the characteristics of gender inequality. Required for Sociology Majors.

209 Social Stratification
3 cr
The class system, with a primary focus on the U.S. Required for Sociology Majors.

210 Sociology of Sex and Gender
3 cr
The study of how conceptions of masculinity and femininity are influenced by sociological institutions, how gender shapes the self, behavior and social relationships, and the characteristics of gender inequality. Required for Sociology Majors.

211 Social Deviance
3 cr
A study of the forms and consequences of social deviance and law. Required for Sociology Majors.

212 Drugs and Society
3 cr
Drug use as a socially constructed deviant activity, and its applications to the study of deviant behavior and society. Required for Sociology Majors.

213 Criminology
3 cr
A study of sociological explanations for criminal behavior. Required for Sociology Majors.
215 Mass Media and Society 3 cr
The study of the role of mass media in contemporary
society by examining the social, economic,
political, and cultural contexts within which they
operate Prerequisite 101

216 Delinquency and Society 3 cr
The nature of juvenile delinquency. Theories regarding
the causes of juvenile delinquency. Evaluation of
policies designed to lessen juvenile delinquency.
Prerequisites 101 or 103

217 Social Movements 3 cr
A study of sociological theories of social movements
and an exploration of contemporary examples.
Prerequisite 101

218 Treatment and Community Corrections 3 cr
Community and institutional rehabilitative programs
are considered in terms of treatment methods used
and their effectiveness. Prerequisite 103.

225 Family Systems 3 cr
A study of the family institution and its interaction
with other community institutions.

264 Police and Society 3 cr
The occupation of policing, an analysis of the role
of police in the community, and an examination of
critical issues in law enforcement. Prerequisite 103

300W History of Social Thought 3 cr
An introduction to Western thought which predates
the formal discipline of Sociology and an examina-
tion of the social context which led to the develop-
ment of these ideas. Prerequisite 101 or permission
of the Department. This course OR 301W is required
of ALL Sociology Majors.

301W Contemporary Sociological Theory 3 cr
A study of selected contemporary theories and
schools of thought. Prerequisite 101. This course
OR 300 is required of ALL Sociology Majors.

303 Sociology of Mental Health and Illness 3 cr
An examination of the incidence and prevalence of
indicators of mental health and illness and an
in-depth scrutiny of the history, social construction,
and implications of issues of mental health and ill-
ness. Prerequisite 101.

310 The Law and The Juvenile Offender 3 cr
A survey of those aspects of the legal system that
relate to the identification, processing, and rehabili-
tation of the juvenile offender. Prerequisite 103.

311 The Law and The Adult Offender 3 cr
The legal procedure from arrest through sentenc-
ing emphasizing applicable state statutes and U S
Supreme Court cases. Prerequisite 103.

314 The American Judicial System 3 cr
Development of local, state and federal court
systems, the operation of these courts, and the
issues in administration and case law. Prerequisite
103.

315 Socialization and the Life Course 3 cr
An examination of the socialization process through-
out the life, with a particular focus on the adult years.
A study of stability and change in statuses and roles
of age groups. Prerequisite 101.

316 Social and Cultural Change 3 cr
An analysis of the perspectives, directions, pro-
cesses, consequences and mechanisms of social and
cultural change. Prerequisite 101.

318 Sociology of the City 3 cr
This course provides an overview of the patterns,
problems and persistence of cities. We study the
relationship between cities and society, including
how this relationship has changed as societies have
developed. Prerequisite 101.

320W Organizations 3 cr
A critical examination of organizations in contem-
porary society. Emphasis is placed on the
sociological interpretations and critical/analytical
understandings of contemporary social organiza-
tions. Prerequisite 101 or 103.

321 White Collar Crime 3 cr
The study of the character, causes, and conse-
quences of white collar crime in the United States.
Prerequisite 103.

369 Race, Gender, and Crime 3 cr
This course examines how different races, genders,
and social classes experience crime, both as of-
fenders and victims. Prerequisite 103.

NOTE SEVERAL OF THE FOLLOWING COURSES ARE CROSS-LISTED WITH THE GRADUATE CENTER FOR SOCIAL AND PUBLIC
POLICY

404/504 Social Ecology and Political Culture 3 cr
This is a socio-political analysis of urban culture
including demographic diversity and trends, and
socialization. Historical and contemporary expla-
nations of the urban and suburban environments
which define our understanding of today's metropolis
as the fabric for human groups to live and survive
Prerequisites 101 and senior standing.

408/508 Population 3 cr
This course examines interrelationships among
population processes and social, economic and
political patterns of development. Specific emphasis
is placed on the demographic contexts and conse-
quences for policies in developing and developed
societies. Prerequisites 101 and senior standing.

409/509 Correctional Policy and Practice 3 cr
In this course we examine the methods and motives
of punishing criminals. In addition, we investigate
the history of correctional policy and practice.
Prerequisites 103 and senior standing.

415/515 Health, Illness and Social Policy 3 cr
This course considers the major health and illness
issues apparent in both regional and national areas.
An opportunity to study the nature and developments in social policy with special reference to
HIV, smoking and illness, and national health in-
surance. Emphasis is placed on cross-national data set analysis.

416/516 Minorities and Public Policy 3 cr
The historical evolution of American public policy
inward toward minorities. This includes the legal/constitu-
tional changes, migratory patterns, social institutions
and political mobilization. Contemporary problems
and issues are evaluated within this context. Prere-
quises 101 and senior standing.

450/515 Fieldwork I, II (6 credits for 450, 3 credits for 451)
Internships are available in a number of different
settings. 225 hours of placement are required for 6
credits Prerequisite. Majors must have 21 completed
credits in the major. Required of students in the
Social Policy Concentration. Please note: Our supervised internships do not
count toward the 34 credits required for the major, except in the Social Policy Concentration.

454 Selected Readings 1-2 cr
Independent supervised reading. Prerequisite 27
completed credits in the major SENIORS AND MA-
JORS ONLY.

455W Senior Seminar — Sociology 3 cr
A seminar designed to serve as a capstone to the
student's academic career. Prerequisite 21.
Completed credits in the major. Required for Sociology
Majors who graduate without a concentration, and
for all students who choose our Social Policy Con-
centration. Seniors and majors only.

456W Senior Seminar — Criminal Justice 3 cr
A seminar designed to serve as a capstone to the
student's academic career. Prerequisite 21.
Completed credits in the major. Required for Sociology
Majors with a Criminal Justice emphasis. Seniors
and majors only.

498 Special Topics 3 cr
These courses cover current and noteworthy topics of
sociological interest. Prerequisite 101.

STUDIO ART

Director
Madeline C. Archer, Ph.D

A B A in Studio Art is offered as a component of a
liberal arts degree.

REQUIREMENTS FOR THE MAJOR

Ten courses in Studio Art, including FINAR 101, 103,
120, and 130. In addition, four courses in Art History
including ARTHY 111, 112, and 332.

REQUIREMENTS FOR THE MINOR

Five courses in Studio Art, including FINAR 101 and
103.

101 Design I 3 cr
Design I is a foundation course that prepares students for more advanced work in art. It intro-
duces the basic visual elements, principles of com-
position, and introductory design theory. Most of
the work is two dimensional, and in black and white.

103 Drawing 3 cr
An introductory course that exposes students to a
systematic study of formal elements, visual percep-
tion, and drawing techniques and media. Problems
lead students from simple forms and concepts to
more complicated ones, culminating in drawing the
human form.

120 Advanced Design 3 cr
This course builds on the principles introduced in
Design I, with additional work and study in three
dimensional design and color theory. Students are
encouraged to move away from preconceived no-
tions about art, and to develop critical thinking skills
in their discussion and analysis of compositions. An
introduction to graphic art principles is included.

130 Painting I 3 cr
This is a foundation course that employs the acrylic
media to create projects that explore and develop
design and compositional issues, color theory, expres-
sive issues, and conceptual development. Prerequisite
101 or 103.

203 Figure Drawing 3 cr
This course provides students with the opportunity
for intensive study of the human figure through
various drawing techniques. Prerequisite 102.

230 Advanced Painting 3 cr
A further development of the skills and theory intro-
duced in FINAR 130. The acrylic medium is used.
Prerequisites 101 or 103 and 130.

235 Introduction to Computer Art 3 cr
Students will be engaged in expression through
digital media and immersed in computer-mediated
artistic activity. Through practice and application,
computer tools will become effective vehicles for
expressing conceptual ideas. The developing theory
regarding the computer generated art and design will
be studied, and students will be encouraged to
analyze their own content, decisions, and tech-
niques. Prerequisites 101 or 103.

245 Computer Graphic Design 3 cr
Using graphics software such as Adobe Illustrator
and Photoshop students will be exposed to current
design aesthetics and historical design criteria. Work
ranges from creative typography and free-hand
drawing to digitally composed pieces, fusions of
graphics and text, industrial graphic design, and
advertising. Prerequisites 103 and 235.
315 Relief Printmaking 3 cr
This course enables students to explore printmaking media such as woodcut and lino cut. Prerequisite 101 or 103

316 Intaglio Printmaking 3 cr
Intaglio media such as etching, aquatint and engraving are introduced in this course. Prerequisite 101 or 103

317 Lithography 3 cr
The planographic medium of lithography is explored in this printmaking course. Prerequisite 101 or 103

320 Watercolor Painting 3 cr
Both optical and conceptual compositions are developed in this course, using the watercolor technique. Prerequisites 103 and 130

330 Oil Painting 3 cr
Still life, figurative painting, illustration, and abstract problems are explored, using the oil medium. Prerequisites 101 or 103 and 130

335 Advanced Computer Art 3 cr
The focus of this course is on projects from computer and applying and applying skills acquired in FINAR 235. Work includes high resolution production and color printing, and the use of interactive media and video to create digital narrative pieces. Prerequisite 235

350 Illustration Methods and Techniques 3 cr
This course explores the integration of drawing, painting, design and concept, expressed in illustration practices. Prerequisites 101, 103 (120 and 203 recommended)

360 Sculpture I 3 cr
This course explores sculptural elements through various materials and techniques with the goal of increasing the student's spatial conceptual abilities. Prerequisites 101 and 120

365 Advanced Sculpture 3 cr
A continuation of the principles introduced in FINAR 360, using more permanent materials and more complex forms and projects. Prerequisites 101, 120 and 360

375 Computer Assisted Illustration 3 cr
Computer technology and software are explored as aids to solving problems in illustration. Prerequisites 101, 103, 203, 350

385 Photography 3 cr
Photographic techniques and equipment are introduced in this course. Students will explore compositional and conceptual issues while executing photographic assignments, and will study the history of the medium for analytical and comparative purposes. Prerequisite 101

415 Natural History Illustration 3 cr
Prerequisites 103, 130, 350 (245 and 320 recommended)

416 Medical and Scientific Illustration 3 cr
Prerequisites 103, 203, 235, 350 and 375

423 Advanced Computer Imaging 3 cr
Prerequisites 101, 103, 235, 350

453 Advanced Computer Graphics 3 cr
Prerequisites 101, 120, 235 and 245

445 Introduction to Multimedia 3 cr
Through the use of multimedia authoring software, students study and practice the integration of visual, audio and text sources that culminate in animated and interactive pieces. Both commercial and purely artistic problems will be explored. Prerequisites 101, 120, 235 and 245

475, 476, 477, 478 Special Topics in Computer Assisted Design and Imaging 3 cr each
Prerequisite As indicated for special topic. Permission of Department required

405 Independent Study 3 cr
Permission of Department required. Minimum of 18 credits of Studio Art must have been completed.

410 Studio Art Internship 1-3 cr
Permission of Department required. Minimum of 18 credits of Studio Art must have been completed.

DEPARTMENT OF THEOLOGY
Chairperson James P. Hangan, Ph D

Duquesne's Department of Theology offers a program which undertakes an academic study of religion and experience. The Department emphasizes Catholic Theology, in dialogue with other Christian traditions, non-Christian traditions and Judaism.

REQUIREMENTS FOR THE MAJOR
The major program consists of a minimum of 27 credits taken at the 200-level and above, chosen with the mentor's approval. These credits will include 2 courses in Biblical Studies, 3 in Religious and Theological Studies, 2 in Ethical Studies, 1 elective course from any of the above areas and the seminar course (number 498). A minimum of 12 credits, including the Seminar, must be done in the Department.

REQUIREMENTS FOR THE MINOR
A minor consists of 12 credits taken at the 200-level or above. Students should consult the undergraduate mentor of the Theology Department for the design of the minor.

THE MCEWAN COLLEGE OF LIBERAL ARTS

COURSE INFORMATION
The Department has organized its courses into three divisions: Biblical Studies, Religious and Theological Studies, Ethical Studies.

The numbering of the courses indicates the level of the approach.

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 3 cr
A presentation of the Old Testament writings in the context of their culture, literary modes, theologies, and themes.

214 The New Testament 3 cr
A presentation of the New Testament, including its literary makeup, historical origins and theological content.

311 The Torah 3 cr
A study of the first five books of the Bible in the light of their historical, literary and theological features.

317 The Wisdom Literature of the Bible 3 cr
An illumination through archaeology of the historical setting, the cultural background, and the events described in the Bible.

315 Prophetic Literature of the Old Testament 3 cr
A study of classical Israelite propheticism which was characterized by sharp protests against social abuses, and an urgent call to return to the roots of the Israelite faith.

316 The Pauline Literature 3 cr
A critical study of the letters traditionally attributed to Paul (including Hebrews).

317 The Wisdom Literature of the Old Testament 3 cr
A study of Proverbs, Ecclesiastes, Job and other wisdom writings which treat both the practical search for happiness and the more speculative quest for meaning in life.

321 The Gospel Literature 3 cr
A critical study of the four Gospels in the light of contemporary scholarship.

324 The Johannine Literature 3 cr

329 Special Topics in Biblical Studies 3 cr
An opportunity to pursue a particular interest of professor and students.

200 Field Experience in Biblical Archaeology 3 cr
Six weeks of supervised participation in an archaeological excavation in the Ancient Near East. Offered every two or three years, approval of participants by core staff required.

493 Directed Readings in Biblical Studies 1-3 cr
Independent Study. Department permission required.

RELIGIOUS AND THEOLOGICAL STUDIES
205 The Mystery of God 3 cr
An exploration of basic questions concerning God and the world, and how it is possible to think about them.

220 Jesus the Christ 3 cr
A study of the humanity and divinity of Jesus, in Scripture, church tradition, and in contemporary times.

225 The Theology and Practice of Prayer 3 cr
Exploration of the experience, understanding, and various forms of prayer in the Christian tradition.

230 The Church 3 cr
The major influences that have shaped the Christian community, and how they provide insights for contemporary church and society.

232 Faith and Atheism 3 cr
An examination of the claims which atheists make against faith and the response made by believers to these arguments.

235 Christian Worship 3 cr
An experience-based study of how ritual functions in human life, leading to a survey of how worship has both expressed and formed the Christian tradition.

242 Love in Theological Thought 3 cr
A study of family love, friendship, and romantic love and their relationship to God's love.

258 Catholicism 3 cr
The spirit, beliefs and practices of Roman Catholicism, and the issues confronting it today.

274 Beginnings of Christianity 3 cr
How in 300 years the Jesus whom the Romans crucified became the God even the emperor worshiped.

280 Religious Experience 3 cr
How the Divine is sensed and responded to in various geographical, cultural, and chronological contexts.

283 Judaism 3 cr
The faith, beliefs and practices of Jewish life over the centuries and today.
301 Marriage 3 cr
An examination of conjugal love as the basis for marriage as a Christian sacrament

311 The Church in The Modern World 3 cr
How the Christian community is a prophetic presence in secular society and a community which affirms and sustains human dignity and values

335 Theology of The Sacraments 3 cr
The seven sacraments as rituals and symbols in the growth of the life of Christians

345 Women and Christianity 3 cr
From the Bible to the churches today, with special attention to contemporary roles and spirituality

348 Religion in The United States 3 cr
The role played by religion in American society and culture, with special attention to historical developments and contemporary trends

372 Religious Themes in Literature and Film 3 cr
An exploration of religious experience and religious concepts as expressed in significant worlds in film and literature

375 Special Topics in Theology 3 cr
An opportunity to pursue a particular interest of professor and students

473/573 Spiritual Theology 3 cr
A study of the theological dimension of Christian spirituality, in its major historical manifestations

494 Directed Readings in Religious and Theological Topics 1-3 cr
Independent Study Department permission required

498 Seminar in Theology 3 cr
A critical analysis of selected topics in theology or of selected works by outstanding theologians, restricted to theology majors in their final year

Department permission required

ETHICAL STUDIES

245 God, Money, and Power 3 cr
A study of the religious and ethical meaning of wealth and power in human life, both personally and socially

248 Religion and Ecology 3 cr
A study of the relation of the human to the rest of the earth community and the role religion has played in defining it

351 Sexuality, Sex, and Morality 3 cr
An analysis of the nature of sex and sexuality in Christian thought, the relevance of these concepts for contemporary moral life

353 Health Care Ethics 3 cr
A study of practical and theoretical issues in the ethics of health care

356 Special Topics in Ethics 1-3 cr
An opportunity to pursue a particular interest of professor and students

441/541 Foundations of Moral Theology 3 cr
A study of the principles of moral conduct based on the New Testament and on the teachings of the Church

447/547 Special Issues in Health Care Ethics 3 cr
An advanced course exploring selected theoretical and practical concerns in health care ethics and applied issues

449/549 War and Peace in Christian Perspective 3 cr
An analysis of Christian teaching of the moral permissibility of using violence and participation in war from biblical times to the present

495 Directed Readings in Christian Ethics 1-3 cr
Independent Study Department permission required
General Requirements as described below

- Language
  - Proficiency at the 202-level
- History/Literature
  - 6 cr. (must include literature)
- Social Sciences
  - 6 cr. (2 disciplines must be represented)
- Psychology, Sociology, Political Science
- Communications
  - 3 cr.
- Philosophy/Theology
  - 6 cr. (must include Philosophy)

- Major program (refer to departmental requirements)
- An overall minimum cumulative quality point average of 2.0
  - A minimum cumulative quality point average of 2.0 in the major
- Removal of 1 and F grades both in the major department and in the required courses
- Pre-registration (on form SRI) for the B.S./B.A. 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 degree candidate prior to submission of this form and official registration for the degree

ACADEMIC POLICIES

Effective Catalog

Academic policies and degree requirements are those stipulated in the catalog of the year in which the student matriculates. The student is responsible for knowing the requirements for the degree program. Requirements may be changed without notice or obligation. Major requirements are those stipulated in the catalog of the year in which the student declares the major

QPA

Students must maintain a quality point average (QPA) of 2.0 or better to remain enrolled in the School

Academic Load

Students normally carry five courses (15-17 credits) in one semester, although a 12-credit schedule in a regular semester is considered full-time study. A schedule of more than 12 credits must be approved by the Student Advisor. Students who wish to carry more than 12 credits must consult with the Chair of the department in which the student is majoring.

Residence Requirement

The last thirty credits must be taken in residence at Duquesne University

MAJORS

A major may be declared at the time of a student’s admission into the BSNES, and must be declared at the end of the student’s freshman year. Transfer students must declare a major when accepted into the BSNES

MINORS

A student may, at his/her discretion, declare a minor. An overall minimum cumulative quality point average of 2.0 is required in the minor for graduation. Refer to Departmental listing for specific minor requirements

SEQUENTIAL COURSES

Sequential courses must be taken in proper sequence. Credit will not be given for a prerequisite course if courses for which it is a prerequisite already have been taken

BSNES Temporary Transfers (Summer Classes)

No course taken by a student in the BSNES as a Temporary Transfer at another institution may count toward the degree unless approved by the Chair of the department in which the student is majoring.

Science classes - The BSNES will accept science courses taken at a 4-year college/university outside Duquesne University upon the approval of the course description by the department of the student major. If the student has not yet reached 6 credits, the student may take the class at a two-year college upon approval of the student’s major department.

Non-science classes - The BSNES will continue to accept courses that are not science courses taken at a 4-year college/university outside Duquesne University. The course description should be approved by the student’s faculty mentor prior to taking a course. If the student has not yet reached 60 credits, the student may take the class at a two-year college.

CLEP and Advanced Placement

(Refer to page 9 of the Undergraduate Catalog)

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

SPECIAL PROGRAMS

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, the students will be expected to meet degree requirements in the major department, as well as admission requirements of the law school of their choice.

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 the University of Pittsburgh. Under the guidance of a faculty mentor, students will follow a three-year program at Duquesne University, then enter an engineering program at Case Western Reserve University or the University of Pittsburgh.

Upon completion of the program at Case Western Reserve University or the University of Pittsburgh, students will be awarded the B.A. Degree in Physics from Duquesne and the B.S. Degree from the School of Education.

For details, consult with the faculty mentor for the Binary program in Engineering in the Physics Department.

BACHELOR’S-MASTER’S PROGRAM IN BIOLOGY, MICROBIOLOGY, OR CHEMISTRY AND ENVIRONMENTAL SCIENCE AND MANAGEMENT

For students planning careers as environmental professionals, the School offers a five-year program providing a bachelor of science degree in biology, microbiology, or chemistry and a master of science in environmental science and management.

Students who wish to complete the joint BS/MS program will follow the curriculum for the appropriate major in the Bayer School of Natural and Environmental Sciences. They may begin course work in the environmental sciences in the third year. The bachelor of science degree will be awarded at the end of the fourth year if all University and College Core Curriculum requirements have been met.

Students must have earned a cumulative GPA of 3.0 or better to be permitted to continue graduate coursework in the Environmental Science and Management (ESM) program during the fifth year.

JOINT DEGREE PROGRAMS FOR SCIENCE TEACHERS

For students who are seeking a rewarding career as science educators, the BSNES and the School of Education offer a unique five-year Bachelor of Science in biology, chemistry, or physics and a Master of Science in Education joint degree program.

Students enroll in the BSNES in the Departments of Biological Sciences, Chemistry and Biochemistry, or Physics and apply to the Graduate School of Education in their junior year. Students who wish to seek certification in General Science take additional courses beyond the requirements in one of the natural science disciplines. The Bachelor of Science degree is generally awarded in the senior...
DEPARTMENT OF BIOLOGICAL SCIENCES

Biology Requirements (Continued)

Organismal concentration 3 cr
Lab I Experimental 3 cr
Lab II, III or IV 3 cr
Biology Electives 6 cr

ELECTIVES
May be chosen from courses listed above, other departmental courses, Biochemistry (CHEM 401), microbiology, and apply for admission to health-related professional schools

Courses in CONCENTRATIONS

GENETICS pick one
General Genetics Fall every year
Microbial Genetics Fall every year
Human Genetics Fall every year

MICROBIOLOGY pick one
General Microbiology Fall every year
Nat Hist of Animal Viruses Fall every year
Immunology Spring every year

PHYSIOLOGY pick one
Mammalian Physiology Fall every year
Comp Envir Physiology Fall every year

ORGANISMAL pick one
Microbial Ecology Fall every year
Evolution Spring every year
Environmental Micro Spring every year
Developmental Biology Spring every year
Plant Ecology Fall every year
Environmental Ecology Spring every year

Co-requsite Science/Math Requirements

Total co-req credits 37
General Chemistry I 5 cr
General Chemistry II 5 cr
Organic Chemistry I 4 cr
Organic Chemistry II 4 cr
Biochemistry 4 cr
General Physics I 4 cr
General Physics II 4 cr
Calculus I 4 cr
Biostatistics (Math 225) 3 cr

REQUIREMENTS FOR THE MINOR
A minor in Biology consists of BIOL 111 or 115, 112 or 117, 113 or 116, 114 or 118, and a minimum of 12 credits selected from the Department's courses numbered 200-495 Normally, this will include BIOL 211 and 213 and 2-3 other courses Individual prerequisites for courses must be satisfied

NON-MAJOR COURSES (Courses may not be taken for Biology major credit)

101 Introduction to Life's Processes 2 cr

An emphasis on the fundamental biochemical and cellular concepts required for a solid understanding of life's processes This information will provide the background for the Anatomy & Physiology and Biology of Microbes courses Lecture and recitation

102 Introduction to Life's Processes Laboratory 1 cr

Laboratory experiments and demonstrations illustrating biochemical and cellular processes The lab is designed to accompany the lecture & recitation

201 Biology of Microbes 2 cr
Examination of a common microorganism and its role in the environment and human disease Focus is on the prokaryotic level

203 Introductory Microbiology 3 cr
Introduction to macroorganisms, their morphology, metabolism, ecology, and cultural characteristics, with emphasis on their interaction with other organisms, including man Principles of medical and health related aspects of microbiology, immunology and animal virology are presented This course is restricted to Health Sciences students only Lecture

204 Introductory Microbiology Laboratory 1 cr
207 Anatomy and Physiology I 3 cr
This course is for aspiring health care workers. It provides a solid foundation in normal human anatomy and physiology, then helps the student to integrate the knowledge with exposure to patho-
logical conditions and clinical applications. The focus during this first semester is on body organiza-
tion, movement and control mechanisms Prereq-
209 usites

208 Anatomy and Physiology I Laboratory 1 cr
Laboratory exercises include both microscopic and
gross examination of human anatomy, studies of
physiological processes and exposure to basic
clinically significant procedures. The "hands-on"
approach in the laboratory provides an opportu-
nity for students to experience and better understand
the topics covered in lecture Prerequisite 207 (or
209 concurrent registration)

209 Anatomy and Physiology II 3 cr
Continuation of BIOL 207, emphasizing the mechan-
isms employed to maintain the body. Prerequisites
101, 102 or 111 or 115, 112 or 117, 113 or 116, 114
or 118, 207 & 208 recommended Laboratory

210 Anatomy and Physiology II Laboratory 1 cr
Continuation of 208. Prerequisite or co-registration
209, 207 & 208 recommended Laboratory

MAJOR COURSES
All courses for majors are also open to non-majors,
providing that individual course prerequisites/back-
ground expectations are satisfied

111 Biology I Cells, Genetics, Development 3 cr
Study of living systems at the molecular, cellular,
and multicellular levels. An introduction to cell
chemistry, cell structure and function, energetics,
inheritance, reproduction and development. This
course and Biology II provide basic information and
concepts necessary to understanding living systems
and their interrelationships Lecture

112 Biology II Diversity, Ecology, Evolution 3 cr
This semester is an introduction to the scientific
study of living systems at the organanel, commu-
nity, and ecosystem levels by surveying diversity in
the five kingdoms, ecology and evolution 111 is not a
prerequisite to 112 Lecture

113 Biology I Laboratory 1 cr
Laboratory exercises and demonstrations illus-
trating cellular and molecular biological principles,
energetics, inheritance, reproduction and develop-
ment

114 Biology II Laboratory 1 cr
Laboratory exercises and demonstrations which
illustrate animal and plant diversity, ecological prin-
ciples, and evolutionary concepts

115 Biological Inquiry I 3 cr
This course investigates the biological world at the
level of biomolecules and cells. It also provides an
introduction to the mechanisms of inheritance, how
genes work, and the process of development — the
progress from fertilized egg to adult. Information
and concepts essential to understanding the biological
sciences are integrated with the process and
experiences of scientific discovery. This course is not a
prerequisite for 117 or 112. This course is restricted to
science majors Prerequisite permission of instruc-
tor Lecture

116 Biological Inquiry I Laboratory 1 cr
Laboratory experiments in cellular and molecular
biology, genetics, and development focusing on the
protein level of scientific discovery. Experiments, data
analysis, and laboratory reports are emphasized.
This course is restricted to science majors. Prereq-
usite permission of instructor

117 Biological Inquiry II 3 cr
This course investigates living systems at the organ-
ismal, community, and ecosystem levels. Included
is a survey of the diversity of life, ecology, and
evolution. The information and concepts essen-
tial to understanding the biological sciences are inte-
gerated with the process and experience of scientific
discovery. This course is restricted to science ma-
jors. Prerequisite permission of instructor Lecture

118 Biological Inquiry II Laboratory 1 cr
Laboratory experiments and demonstrations illus-
trating the diversity of life, ecological principles, and
evolutionary concepts. Experiments, data analysis,
and laboratory reports are emphasized. This course is
restricted to science majors. Prerequisite permis-
sion of instructor

211 Cell Chemistry 3 cr
An introduction to cellular macromolecular struc-
ture, cell biochemical pathways, metabolic control,
and gene expression. This sophomore level course
will survey cell biochemical processes and is
designed to prepare biology students for the cell
biology, microbiology, developmental biology, gene-
tics and cell biology core courses. Cell Chemistry is
not a substitute for CHEM 401 Concurrent
enrollment in organic chemistry is highly recom-
213 End recommended Prerequisites C or better in BIOL 111 or
115, 112 or 117, 113 or 116, 114 or 118 and C or bet-
ter in CHEM 112 Lecture

213 Cell Biology 3 cr
An introduction to the structure, function and physi-
ology of cells. This course will include examinations
of cellular organelles, nuclear and chromatin struc-
ture, membrane systems, protein trafficking, the
cytoskeleton, the cell cycle, cell-cell communications,
extracellular matrices. Prerequisite biology ma-
jors or C or better in 211, other majors equal and
permission of instructor Lecture

219 General Microbiology 3 cr
Survey of the microbial world, metabolism, biosyn-
thesis, regulation, growth, structure and function.
Also included is an introduction to the fundamen-
tals of microbiology. Recommended for students
majoring in biology or microbiology, and post-baccalaureate students. Prerequisite C or better
in 213 Lecture

311 Genetics 3 cr
This course covers a survey of the subject of genetic
analysis and the use of statistics in biology. A problem solving approach is used to demonstrate the principles of genetics.
Topics include classical Mendelian genetics, chromosomal inheritance, human genetic disease, population genetics, and principles of molecular biology. Prerequisites C or better in BIOL 211 and 213 or consent of
instructor Lecture

313 Developmental Biology 3 cr
The study of the progression through time and
space from a single cell, the fertilized egg, to a com-
plicated multicellular organism. The powerful tools of
molecular and cellular biology have linked the fields
of embryology, morphology, genetics, and evolu-
tionary biology to reveal how cells, tissues, organs,
and organisms develop. This course explores the
processes that govern the growth, differentiation,
formation, growth, and reproduction at the molecu-
lar, cellular, and organismal levels to provide a cur-
rent overview of development in a wide variety of
organisms. Prerequisites C or better in 213. 311 is
recommended Lecture.

315 Mammalian Physiology 3 cr
Examination of the molecular and cellular mechan-
sisms of mammalian body function, including con-
sideration of the basic components of physiological
control systems and the manner in which various
tissues and organ systems contribute toward the
maintenance of physiological homeostasis in health
disease. Prerequisites C or better in 213 or permis-
sion of the instructor Lecture

316 Comparative and Environmental Physiology 3 cr
This course focuses on the diversity of physiological
mechanisms that different animals employ, includ-
ing the high level of physiological and biochemical
adaptation and specialization found in animals
that live in diverse and emerging environments, and
explore other exceptional physiological abilities. Pre-
requisite C or better in 213 or permission of the
instructor Lecture

334 Medical Microbiology 3 cr
A systematic coverage of medical microbiology and
its role in clinical medicine. Emphasis is placed on
the current concepts of infectious disease and microbial
genetics as it pertains to pathogenicity. Special atten-
tion is given to host-parasite interactions and to the
interpretation and significance of laboratory findings
in the diagnosis and treatment of human microbial
disease. Prerequisites 111 or 115, 112 or 117, 113 or
116, 114 or 118, and 219 or equivalent or permission
of the instructor Lecture

340 Evolution 3 cr
Evolution is the single most important concept unifying the many fields of biology. This course
covers the theory of evolution and the various levels
at which evolution works in living systems. Topics to be addressed include evolutionary genetics (in-
cluding molecular evolution), adaptation and natural
selection, evolution and diversity (including phyloge
ny reconstruction), and paleobiology and macroevolution. Prerequisites C or better in 211, 213,
a genetics course is strongly recommended Lecture.

370 I Experimental Biology 3 cr
This junior level lab course is designed to provide
students with a multidisciplinary lab that
 reflects the integration among different disciplines in
the broad areas of cellular and molecular biology.
The course emphasizes techniques and approaches
in cell, molecular, biochemistry, and cellular biology
of organisms from bacteria to mammals. Included
are an introduction to research skills (computer use,
library resources), characterizations and manipula-
tions of nucleic acids, proteins, and enzymes, and
microscopy. Prerequisites C or better in 211, 213
Laboratory and recitation

371 Lab II Cell and Molecular Biology 3 cr
The second semester continues to build on BIOL 370
through investigative labs in cellular and molecular
biology (experimental embryology, genetics, mapping,
constructing transgenic organisms, microscopy of
cellular structures) and includes a capstone lab man-
project for the last portion of the semester. Prereq-
370 Laboratory and recitation

372 Lab III Cell and Systems Physiology 3 cr
The second semester continues to build on BIOL 370
through investigative labs in cardiovascular/ respi-
natory physiology, muscle and neurophysi-
ology, and endocrinology. Students will investigate
selected physiological processes at different levels
(whole organismal to molecular) using a range of
techniques (electrophysiological, isolated organ,
pharmacological, cellular, molecular) and proc-
edures (computer-based data acquisition, surgical,
tissue culture, microscopy). This course exposes stu-
dents to a broad range of skills and understanding
that contemporary physiological research encom-
passes Prerequisites 315 or 316, 370 Laboratory and
recitation

373 Lab IV Microbiology 3 cr
The second semester continues to build on BIOL 370
through investigative labs in microbial physi-
ology, ecology and genetics. This laboratory also ex-
amines cell culture, virology and immunological
techniques used in microbiology and virology. Pre-
requisites 370 Laboratory and recitation
### Microbial Genetics
**3 cr**
A course providing the fundamentals to the rapidly growing field of microbial genetics. Emphasis is on gene structure and function. Areas to be discussed are DNA replication, transcription, translation, control of gene expression, recombination, transformation, conjugation, transduction, transposition, genetic fine structure and colinearity, mapping methods, mutation, DNA repair, plasmids, and their properties. Genetic engineering and gene cloning are described. Lecture

### Electron Microscopy
**3 cr**
This course provides a broad hands-on introduction to contemporary techniques in molecular biology. Manipulation of cloned DNA using restriction endonucleases, ligases, and phosphatases will be carried out. Molecular cloning using both plasmid and bacteriophage vectors will be done. Nucleotide sequencing and sequence analysis will be discussed. The student will carry out a nucleic acid hybridization experiment in the form of a Southern blot. Cloned DNA will be transposon mutagenized. Analysis of cloned DNA using a reporter gene will be carried out. DNA amplification using the Polymerase Chain Reaction will be done. Introduction to organic chemistry or permission of the instructor. Lecture and laboratory.

### Research Skills
**3 cr**
Students experience a variety of contemporary microscopy skills that are essential for efficiently carrying out and publishing thesis research. Areas of familiarization include intermediate level proficiency in using various common softwares, photographic, and electronic slide making skills, electronic scanning and capturing and manipulation techniques, automated data acquisition, reduction, and analysis techniques, scientific graphing, computer network skills, nucleic acid sequence analysis, library skills, electronic reference searching and retrieval procedures, personal reference database establishment and management techniques, and scientific writing skills. Prerequisite: permission of the instructor. Lecture and laboratory.

### Techniques in Light and Electron Microscopy
**3 cr**
This course includes an introduction to light microscopy (phase, differential interference contrast, brightfield, darkfield, and fluorescence microscopy), transmission electron microscopy, and scanning electron microscopy. It covers specimen preparation (fixation, embedding, sectioning), photomicroscopy, and darkroom techniques (film developing and printing), in addition to image analysis, enhancement, and interpretation. Students are required to do a project outside of class hours. Prerequisite: permission of the instructor. Lecture and laboratory.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>395</td>
<td>Special Topics - Biology</td>
<td>1-3 cr</td>
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<tr>
<td>396</td>
<td>Special Topics - Microbiology</td>
<td>1-3 cr</td>
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<tr>
<td>398, 399</td>
<td>Undergraduate Research</td>
<td>1-3 cr</td>
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<td>400</td>
<td>Biotechnology Laboratory Techniques</td>
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<td>402</td>
<td>Research Skills</td>
<td>3 cr</td>
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<tr>
<td>403</td>
<td>Techniques in Light and Electron Microscopy</td>
<td>3 cr</td>
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<td>405</td>
<td>Microbial Genetics</td>
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<td>407</td>
<td>Recombinant DNA Techniques</td>
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<tr>
<td>414H</td>
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<td>415H</td>
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<td>417</td>
<td>Vertebrate Microstructure</td>
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<td>418</td>
<td>Vertebrate Microstructure Laboratory</td>
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<td>420</td>
<td>Natural History of Animal Viruses</td>
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<td>421</td>
<td>Cell Culture and Virology</td>
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<td>424</td>
<td>Immunology</td>
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<td>425</td>
<td>Molecular Virology</td>
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<td>426</td>
<td>Pathogenic Microbiology</td>
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<td>427</td>
<td>Microbial Ecology</td>
<td>3 cr</td>
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<td>428</td>
<td>Microbial Physiology</td>
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<td>429</td>
<td>Microbial Pathology</td>
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<td>432</td>
<td>Environmental Microbiology</td>
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<td>436</td>
<td>Environmental Ecology</td>
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<td>444</td>
<td>Plant Biology</td>
<td>3 cr</td>
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<td>445</td>
<td>Advanced Cell Biology</td>
<td>3 cr</td>
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<tr>
<td>455</td>
<td>Cardiovascular &amp; Respiratory Physiology</td>
<td>3 cr</td>
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The primary objectives of this laboratory are 1) to familiarize students with a variety of techniques and analytical instruments used by researchers and clinicians alike to quantify and assess cardiovascular and respiratory system function, and, 2) to enhance the student’s ability to analyze and meaningfully interpret cardiovascular and respiratory system data through laboratory experiments supplemented by interactive microcomputer simulations. Prerequisites an animal-based physiology course or permission of the instructor.

457 Reproductive Physiology 3 cr
This course offers a broad overview of mammalian reproductive processes. Major emphasis will be on human/primate biology, but other mammalian species will be included for comparison. The application of modern techniques of cellular and molecular biology to answer central questions of reproductive physiology will be explored in more detail. Prerequisites 315 or 316 or comparable and permission of the instructor. Lecture.

460 Endocrinology 3 cr
This advanced integrative physiology course investigates the role of endocrine system in coordination and regulation of body activities. Topics include homeostasis, reflex arcs, hormone synthesis, hormone action and signal transduction, hypothalamic/pituitary axes, regulation of salt, mineral and water balances, regulation of energy metabolism, reproduction, growth and development. This course is appropriate for biology and biochemistry majors interested in physiology, as well as for pre-health profession students. Prerequisites 211, 213 or 315. Lecture.

466 Terrestrial Field Biology 2 cr
This applied ecology course is designed to present an overview of field and laboratory methods used by ecologists to describe and analyze plant and animal aggregations and to study their environmental effects. The course focuses on the principles and practice of various ecologic procedures with explanation of how to collect, record and analyze data. The course reviews the basic concepts of ecology that are needed to understand the various methods and their significance. The course material is presented as a combination of lecture, laboratory and field sessions. Prerequisites There are no specific course prerequisites; however, students should have knowledge of basic biology, chemistry and fundamental algebra. Lecture and laboratory.

467 Molecular Biology 3 cr
An advanced course in molecular genetics with emphasis on eukaryotic organisms. Content will vary from year to year but will include topics in gene regulation, gene expression, and genome structure and function. Special topics include experimental approaches to human genetic disease and transgenic organisms. This course is designed for biology seniors who have had BIOL 311 and biochemistry majors who have completed CHEM 402. Lecture.

468 Human Genetics 3 cr
This course is a current survey of molecular aspects of the genetics of humans, with an emphasis on diagnosis and genetic analysis of diseases. Topics covered include strategies for mapping and identifying chemical and molecular basis for genetic diseases, gene therapy, epidemiology, the genetic basis of cancer, and the human genome project. Prerequisites BIOL 311 or CHEM 402 or permission of the instructor. Lecture.

469 Signal Transduction 3 cr
This advanced cell biology course addresses the question of how the messages from various chemical signaling molecules are "transduced" into biochemical responses. Topics include modes of cell communication, types of chemical signals, steroid hormone action, transduction by cell-surface receptor proteins, channel-linked receptors, G protein-linked receptors, catalytic receptors, second messengers, cAMP, calcium, calmodulin, inositol trisphosphate pathway, dacylglycerol pathway, protein kinases and growth factors. Prerequisites 211, 213 and instructor approval. Lecture.

475 Neurobiology 3 cr
Study of the properties of neurons including excitation, conduction, transmission, and integration, as well as sensory mechanisms, neural processing, and behavior using vertebrate and invertebrate examples. Prerequisites: a course in animal physiology and approval of the instructor. Lecture.

480 Readings in Cellular and Molecular Biology 1 cr
Discussion and critical evaluation by faculty and students of significant papers from the recent research literature.

481 Readings in Cell and Systems Physiology 1 cr
Discussion and critical evaluation by faculty and students of significant papers from the recent research literature.

482 Readings in Microbiology 1 cr
Discussion and critical evaluation by faculty and students of significant papers from the recent research literature.

490 Seminar 1 cr
Students attend and participate in weekly depart mental research presentations and demonstrations by biological scientists from the Department of Biological Sciences, field stations, biotechnology laboratories, and other universities.

492/592 Stream Field Biology 3 cr
This course is the study of the functional relationships and productivity of fresh water streams as they are affected by their physical, chemical and biotic environment. The course material is presented as a combination of lecture, laboratory and field sessions. Prerequisites: There are no specific course prerequisites; however, students should have knowledge of basic biology, chemistry and fundamental algebra.

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

Chairperson
Jeffrey D Madura, Ph.D.

Professors
H. M. Kingston, Ph.D.
David W. Seybert, Ph.D.
Omar W. Steward, Ph.D.

Associate Professors
Bruce D. Beaver, Ph.D.
Fraser F. Fleming, Ph.D.
Jeffrey D. Madura, Ph.D.

Assistant Professors
Shahed U.M. Khan, Ph.D.

Assistant Professors
Jack W. Hauser, Ph.D.
Kurt C. Schreiber, Ph.D.

Adjunct Professors
Heinz W. Machatzke, D.Sc.

The Chemistry and Biochemistry program is designed to provide the student with a fundamental background in chemistry and an understanding of the relationship of chemistry to other sciences and disciplines. Elective courses and the opportunity to do undergraduate research allow the chemistry major to develop interests in a specialized area of chemistry, such as analytical, inorganic, physical, biochemistry, or 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, the space industry, education, the environmental sciences and the health professions, such as 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.

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REQUIREMENTS FOR THE MAJORS

All students must take 121, 122, 321, 322, 325L, 325, 475, Mathematics 115, 116, Physics 211, 212, Biology 111, 112.

Chemistry Major
B A Chemistry 122 cr All students must take 211, 212, 211L, 212L, 322, 422, Math 215, Biology 113, 114.
B S Chemistry 126 cr All students must take 211H, 212H, 221L, 222L, 322, 422, two Chemistry electives, and Math 215.

Environmental Chemistry Major
B S Environmental Chemistry 137 cr All students must take Chem 211H, 212H, 221L, 222L, 322, 275, Biology 113, 114, Math 215, 225, and four environmental science electives.

Biochemistry Major
B A Biochemistry 125 cr All students must take 211, 212, 211L, 212L, 401, 402, Biology 113, 114, 213.
B S Biochemistry 128 cr All students must take 211H, 212H, 221L, 222L, 401, 402, 322, 422, two Chemistry electives, and Math 306.

The Biochemistry Major must take 322, and 422 for certification.

REQUIREMENTS FOR THE MINORS

A minor in Chemistry or Biochemistry consists of 121, 122 and a minimum of 12 credits selected from Departmental courses numbered 200 or above. Normally, 211 and 211L, 212 and 212L, and 401 will constitute a minor in Biochemistry. Individual course prerequisites must be satisfied.

121, 122 General Chemistry 5 cr each
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 the principle of ionic equilibria including qualitative inorganic analysis. Prerequisite for 121 Math 105 (College Algebra and Trigonometry) or Math SAT greater than 500 and/or Math Placement Exam score greater than 17. Toledo Chemistry Placement Exam is required by all students. Prerequisite for 122 121 Lecture, three hours, laboratory, three hours, recitation, two hours.
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

121H, 122H Honors General Chemistry 5 cr each
The fundamental principles and concepts of chemistry are presented from a molecular standpoint. The basic concepts of bonding, molecular structure, intermolecular forces, thermodynamics, chemical kinetics, and equilibrium are introduced with relevant biological and environmental examples. A discovery-based approach format is used in the laboratory. Toledo Placement exam is required. Prerequisites of 121, 122 apply. Lecture, three hours; laboratory, three hours; recitation, two hours.

131, 132 Fundamentals of Chemistry 5 cr each
This course covers the fundamental principles of inorganic chemistry, organic chemistry, and biochemistry in an integrated two-semester sequence. The first part of the course deals with basic chemical concepts, including stoichiometry, the periodic table, equilibrium, structure and bonding, and acid-base chemistry. The next part of the course provides a survey of the chemical properties of the principal functional groups of organic chemistry, including alcohols, aldehydes, ketones, carboxylic acid derivatives. Integrated with this functional group discussion is an introduction to the preparation of the carbonyl compounds. The latter portion of the course provides an overview of metabolism and emphasizes the roles of enzymes in catalyzing and regulating the various reactions involved in energy transformations in the cell. This course does not serve as a prerequisite for CHEM 211, 212. Prerequisite for 131 high school algebra or its equivalent, as evidenced by satisfactory performance on a math placement examination. Prerequisites for 132 131 Lecture, four hours; laboratory, three hours; recitation, two hours.

211H, 212H Organic Chemistry 3 cr each
Students are given a firm foundation in the fundamentals of the structure and reactivity of organic compounds. Emphasis is on the basic mechanistic principles of the reactions and the strategies used to synthesize organic compounds. The use of NMR and IR spectroscopy to identify organic compounds is also emphasized. Prerequisites 122 for 211, 211 for 212. Lecture, four hours.

211H, 212H Organic Chemistry Lab 3 cr each
Students cover the same techniques as 211L, 212L labs. In 211L and 212L, students are taught additional techniques useful for undergraduate research. They are permitted hands-on use of various instrumentation such as the NMR spectrometer, gas chromatograph, and GC-MS instruments. Students are introduced to the chemical literature and perform individual research projects involving the synthesis of compounds. Prerequisites 211L for 212L. Prerequisite for 211H must be taken prior to or concurrent with 211L. Prerequisite for 212H must be taken prior to or concurrent with 212L. Lecture, six hours.

211H, 212H Lab Organic Chemistry Honors Lab 1 cr each
Students cover the same techniques as 211L, 212L labs. In the Honors labs, students are taught additional techniques useful for undergraduate research. They are permitted hands-on use of various instrumentation such as the NMR spectrometer, gas chromatograph, and GC-MS instruments. Students are introduced to the chemical literature and perform individual research projects involving the synthesis of compounds. Prerequisites 211L for 212L. Prerequisite for 211H must be taken prior to or concurrent with 211L, and 212H must be taken prior to or concurrent with 212L. Lecture, laboratory, three hours.

230L Research Laboratory Techniques 1 cr
This course stresses the refinement of quantitative analytical wet method techniques and the applicability of basic principles of data analysis. Prerequisites: 121, 122 Laboratory, four hours.

275 Environmental Chemistry 3 cr
Provides students with training in correlation, interpretation, and analysis of related topics and issues involved in environmental chemistry including aquatic, atmospheric, and geochemical interactions. They will receive experience in environmental chemical sampling, modeling, and testing methods. Prerequisites: 121, 122, and 211 or 211H.

321, 322 Physical Chemistry 4 cr each
A study of the structure and properties of the various states of matter, thermodynamics, thermochromy, kinetics, and an introduction to quantum chemistry. Prerequisites: Physics 202 or 212, Chemistry 122, Mathematics 116 Lecture, four hours.

325L Advanced Integrated Lab I 3 cr
Students consolidate basic laboratory technique and learn to use and interpret results from modern chemical analytical instrumentation. Experiments are open-ended allowing students to approach problems in a genuine scientific format of designing their approach to defined problems, extracting the experiments, and interpreting the results. Topic areas are drawn from inorganic synthesis, kinetics, chemical analysis, biochemical analysis, and spectroscopy techniques include chromatography, spectroscopy, electrophoresis, computational methods, and statistics. Students will begin learning to interpret and communicate their work. Prerequisites 321, 421 Laboratory, eight hours.

401 General Biochemistry I 4 cr
An introduction to modern biochemistry at the molecular level. The course includes discussion of the structure and function of proteins, the chemical mechanisms and regulation of enzyme catalysis, biocatalytic structure and function, the structure and metabolism of carbohydrates, and the bioenergetics of ATP synthesis and utilization. Prerequisite 212 Lecture, four hours.

402 General Biochemistry II 4 cr
This course is a continuation of CHEM 401. The course presents an overview of the metabolic transformations of fatty acids and the complex lipids. Amino acids and the complex lipids, amino acid metabolism, and nucleic acids are studied. The second half of the course offers a discussion of the molecular basis of genetics, including DNA and RNA, metabolism, protein biosynthesis, and an introduction to the biochemical basis of recombinant DNA methodology. Prerequisite 401 Lecture, four hours.

421 Analytical Chemistry 3 cr
Theoretical and practical training in modern chemical analysis with emphasis on instrumental methods. Prerequisites 321 Lecture, three hours.

422 Inorganic Chemistry 3 cr
A survey of the basic principles required for understanding inorganic chemistry including atomic and molecular structure, crystal structure, nonaqueous solvents and coordination compounds. Prerequisites 322 Lecture, three hours.

425L Advanced Integrated Lab II 3-4 cr
Students work in small teams on real research problems. Each team contributes to a single problem, and several chemical and biochemical problems may be studied over the course of a semester. Examples include determining the expression of quality markers and antioxidants in wine production, problems of self-assembled biomolecules, protein structure-function relationships, lipid reactivity and physicochemical behavior, etc. Problems are designed according to student career interests. They will also learn advanced data analysis and presentation skills. Prerequisites 325L Laboratory, eight hours.

475 Senior Seminar 1 cr
Students learn to prepare the presentation of a chemistry topic to a general audience having some knowledge of chemistry. They learn to use scientific references, journals, and electronic information retrieval. Students will incorporate different types of multimedia in presenting a seminar. Prerequisite 325L.

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

DEPARTMENT OF PHYSICS

Chairperson K. Thomas R. Davies, Ph.D.
Professors K. Thomas R. Davies, Ph.D. Rev. J. Cliffon Hill, Ph.D.
Associate Professor Barbara M. Mann, Ph.D.
Assistant Professors Scott Cohen, Ph.D. Simonetta Fritelli, Ph.D. Monica Sorescu, Ph.D.
Instructor Anna D'Erano, 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 an understanding of 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 that will best fit the graduate for the challenges faced in the many professions that are based on the science of physics. Also, it is realized that there are many expanding paths to professional growth. The Department program, therefore, is structured to provide the essential background for students who will enter graduate school, as well as equipping students 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

Requirements for the Physics Major, Track #1 (primarily for those students who are planning to attend graduate school)

39 semester hours of physics courses are required for this track. These credits must include: PHYS 211, 212, 301, 329, 330, 350, 361, 372, 402, 430, 471, and two of the following three courses: PHYS 404, 480, and 482. It is also strongly suggested that each major take SPRG 103

Extra Departmental Science and Mathematics Requirements
Chemistry 121, 122 or Biology 111, 112, Mathematics 115, 116, 215, 308, and 315, Computer
The objectives of the course are to make the student aware of the dependence of society on technological background, and is open to all students within the University.

Science 150 or an approved substitute. Mathematics 301 is strongly recommended, but not required.

**Requirements for the Physics Major, Track 2** (primarily for those students who are pursuing the five year joint B S/Physics/MS Education program)

36 semester hours of physics courses are required for this track. These credits must include PHYS 211, 212, 301, 329, 330, 361, 372, 402, 430, 471 and one of the following two courses PHYS 480 and 482.

The students are also required to take SPRG 103 or an approved substitute.

**Requirements for the Minor**

The minor consists of eight hours in 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 Bayer School of Natural and Environmental Sciences Core requirements, each binary engineering student is required to complete the following physics courses: PHYS 211, 212, 350, and 471; Chemistry 121 and 122; Mathematics 115, 116, 215, 308 and 315; and Computer Science 150 or an approved substitute.

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 332; Physics 301, 329, 330, 361, 372, 480, and 482; and Mathematics 301. Selection of additional courses must be discussed with and approved by the Binary Engineering Faculty Mentor.

**Physics Courses**

167 Technology and Society 1 cr

The objectives of the course are to make the student aware of the dependence of society on technological advancements, the influence technology has on many facets of human thought and behavior, to derive from technology, and the interaction between technology and society from various society perspectives.

170 Acoustics 3 cr

A course which presents the physical principles underlying the production, propagation, and perception of sound. Examples of these principles are drawn mostly from the world of musical sound. No mathematical preparation beyond high school algebra is necessary.

200 Physics for Pharmacy 4 cr

A laboratory course designed especially for Pharmacy students to provide a basic knowledge of Physics and its relationship to pharmaceutical science. Topics 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 instructed in 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 Physics for the Life Sciences I, II 4 cr each

Designed to give the student a basic knowledge and understanding of mechanics, properties of matter, heat, wave motion, sound, magnetism, electricity, light, and modern physics through the use of modern day examples and applications. At the completion of this course, the student should have attained a working knowledge of physics, its techniques and reasoning such that the knowledge of physics gained may be applied to future work in the sciences or other fields of endeavor. Prerequisite: Mathematics 105 or the equivalent. Students who have completed Mathematics 116 and pre-engineering students should take 211, 212 Lecture, four hours, Laboratory, two hours.

203 Astronomy 3 cr

This course provides the student with a sampling 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.

211, 212 General Analytical Physics I, II 4 cr each

An introduction to the fundamental theories and applications of classical physics designed for engineering students. The topics normally covered include kinematics and dynamics, energy relations in electrostatic fields, dielectrics, currents and their interaction, magnetic properties of matter, AC circuits, Maxwell's equations, and electromagnetic radiation. Prerequisites: 211 or consent of instructor.

305/505 Theoretical Methods in Science 3 cr

This course will include a variety of theoretical methods that are useful for general problem solving in advanced science and engineering courses for example, in atomic and molecular structure, mechanics, electricity and magnetism, thermodynamics, and hydrodynamics. There are a variety of specialized differential equations (both ordinary and partial) that will be studied. We will also address certain elementary problems involving the Schrodinger wave equation, which occurs in quantum mechanics. In addition, we will include other important theoretical topics, such as vector, matrix, and tensor methods, complex arithmetic and complex variable theory, Fourier and Laplace transforms, and general expansions using orthogonal functions. Also simple statistical methods and numerical algorithms may be covered, e.g., least squares fitting, Newton's method, and various Gaussian integration schemes. Prerequisite: Mathematics 215.

361/561 Mechanics 4 cr

An intermediate level theoretical classical mechanics involving concepts and problems that require the mathematical skills of vectors, calculus, matrices, etc., many of which will be reintroduced in the course. A good calculus background is indispensable. The topics normally covered are oscillations, the motion of a particle in 3-dimensions, central force systems, dynamics of many particles, transformation to the center-of-mass system, collisions, nonrelativistic systems, and the Lagrangian and Hamiltonian formulations of mechanics. Prerequisites: 212, Mathematics 215.

372/572 Electromagnetism 4 cr

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

407 Optics 4 cr

This course introduces the student to the principles and applications of wave optics, geometric optics and quantum optics. Specific topics include Maxwell's equations as they apply to electromagnetic radiation, reflection and refraction with dielectric and conducting media, polarizations, Jones formalism, properties of lenses and mirrors, photon theory and the laser. Lecture, three hours, laboratory, two hours. 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, polarizations, 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: 407 or consent of the instructor.

DEPARTMENT OF PHYSICS

The department will discuss the following courses: PHYS 211, 212, 215, 308, 315; Computer Science 150 or an approved substitute.

200 Physics for Pharmacy 4 cr

A laboratory course designed especially for Pharmacy students to provide a basic knowledge of Physics and its relationship to pharmaceutical science. Topics 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 instructed in 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 Physics for the Life Sciences I, II 4 cr each

Designed to give the student a basic knowledge and understanding of mechanics, properties of matter, heat, wave motion, sound, magnetism, electricity, light, and modern physics through the use of modern day examples and applications. At the completion of this course, the student should have attained a working knowledge of physics, its techniques and reasoning such that the knowledge of physics gained may be applied to future work in the sciences or other fields of endeavor. Prerequisite: Mathematics 105 or the equivalent. Students who have completed Mathematics 116 and pre-engineering students should take 211, 212 Lecture, four hours, Laboratory, two hours.

203 Astronomy 3 cr

This course provides the student with a sampling 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.

211, 212 General Analytical Physics I, II 4 cr each

An introduction to the fundamental theories and applications of classical physics designed for students of science and engineering. A good algebra and trigonometry background is presumed and methods of using the calculus are presented. The approach is strongly quantitative and emphasizes the solving of problems. Mechanics and electromagnetism are treated in detail in 211 and 212.
419 Introduction to Microcomputers 3 cr
An introduction to the electronic design of micro
and mini (PC-type) computers 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 200, Com-
puter Organization and Assembly Language, and
Computer Science 325, Operating Systems and
Computer Architecture 1 Some electronic back-
ground 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
discrete and digital electronics that relate to the use
of these concepts for interfacing the microcom-
puter with the "real," analog world Some of the
topics covered are assembly language programming
for an 8085 microprocessor, use of parallel and serial
I/O ports, analog to digital and digital to analog con-
version circuits, timer speed control and per-
cess control Prerequisite Physics 419, or consent of
the instructor

426 Problems in Microcomputers 1-4 cr
Special topics and problems in microcomputers,
microcomputer interfacing circuitry and related sub-
jects suitable for independent work Prerequisite
Physics 419, or consent of the instructor

427 Robotics 3 cr
This is an introductory course that deals with robotic
controllers, programming, operational aids, drive
systems, interfacing, end effectors, sensors and
robotic applications Prerequisites Physics 212, or
202 and permission of the instructor

430 Senior 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 pre-
sent results of his work at a department seminar or
an appropriate scientific meeting if deemed ad-
visable A research topic is selected from those sug-
gested 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

471 Modern Physics 3 cr
This course provides an introduction to quantum
physics with applications drawn mainly from
modern theories of atomic and nuclear structure.
Topics include the old Bohr Theory, the periodic
table, the wave-particle duality, the uncertainty prin-
ciple, the Schrodinger equation, and other aspects
of elementary quantum mechanics We may include
Fermi-Dirac and Bose-Einstein statistics, the Pauli
exclusion principle, and elementary angular
momentum theory We may also study develop-
ments in nuclear physics, condensed-matter physics,
and applied elementary particle physics Prerequisite
Physics 419

474 Quantum Mechanics 3 cr
This course provides an undergraduate introduction
to the formalism of modern quantum theory.
The course usually begins with a review of Schrodinger
theory The main course content includes one-
dimensional potentials, the harmonic oscillator,
angular momentum, spin, and perturbation theory.
Throughout the course, emphasis is placed on the
Hilbert space formalism, the Dirac notation and the
matrix representation Prerequisites Physics 212,
Mathematics 215 (The department will accept Graduate
Chemistry 537, Quantum Chemistry, in lieu of 474.)

480/580 Chaos 3 cr
This course provides an introduction to the theory
and applications of chaos. The topics presented in-
clude characterization of dynamical systems and
of maps and flows, sensitivity to initial conditions
studies of one-dimensional maps including fixed
points, periodic motion, and chaos The period-
doubling cascade to chaos, universal scaling
laws and the Feigenbaum constants, the relation of
the critical orbit to the Schwarzian derivative, and
the Newton Fixed Point Theorem Then, the last part
of the course is devoted to fractals, Julia Sets, and
the Mandelbrot Set. If time permits we may study
the Lyapunov exponents and the Lorenz attractor.
Prerequisite Mathematics 115

482 Elementary Particle Physics 3 cr
This course will cover elements of nuclear structure,
as well as the discoveries and ideas of modern
elementary particle physics. The topics presented
may include the charge-independent, nuclear inter-
action, the nuclear shell model, the four fundamen-
tal forces in nature, the properties of baryons,
mesons, and leptons, the quark structure of the
hadrons, including the "flavor" and "color" labels,
"asymptotic freedom" and "infrared slavery," and
the electroweak theory. Connections between par-
ticle physics and cosmology may be discussed.
Prerequisite Mathematics 115

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 sufficient student demand to justify the
offering of the course.
The courses offered include 484 Introductory
Solid State Physics, 485 Relativity and 486 Shop
Techniques Descriptions of these courses follow

484 Introductory Solid State Physics 3 cr
Bulk properties of materials are discussed with both
the phenomenological and microscopic approaches.
Typical topics include 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 Relativity 3 cr
This course serves as an introduction to Special
and General Theories of Relativity. A list of topics
which may be discussed are space-time coordinates
and four vectors, the Lorentz transformation, the
Lorentz contraction, time dilation, relativistic dynamics,
space-time curvature, the gravitational red shift
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 con-
struction techniques and practical applications.

487/587 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

495 Field Studies I 1-4 cr

EARTH SCIENCE COURSES

(NOTE: these courses have Physics Department
course numbers)

PHYS 101 Physical Geology 3 cr
Comprehensive survey of materials, rocks, struc-
tures and geologic processes of the solid earth.
Topics covered may include earthquakes, plate tec-
tonics, volcanism, surface and groundwater,
glaciers, and mountain formation. This course
presumes little or no geologic or scientific back-
ground, 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 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
evaluations of important geologic processes. Volcan-
ism, mountain building tectonic activity, glaciation,
groundwater and geothermal activity, and river ero-
sion are represented. Geologic history and features of
each of the parks will be presents using slides,
supplementary reading material, and maps. This
course presumes little or 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 as an earth science course
for School of Education students

PHYS 301 Environmental Earth Science 3 cr
Analysis of geologic aspects of man's environment
with emphasis on geologic hazards and environ-
mental impact of society's demand for water,
minerals, and energy. Topics covered may include:
coastal processes, earthquakes, volcanic eruptions,
rivet alternative energy sources, and environmental
law. This course presumes little or no geologic or
scientific background, and is open to all students
within the University. It is also suitable for comple-
tion of non-core science requirements for students
in the College of Liberal Arts, and as an earth science
course for School of Education students

PHYS 491 Environmental Hydrogeology 2 cr
The course introduces students to the fundamen-
tals of geologic materials and soils and deals with
ground and surface water and hazardous earth pro-
ces. Non-core science requirements for students
in the College of Liberal Arts, and as an earth science
course for School of Education students

SCIENCE PROGRAM COURSES

SPPG 101 Foundations of Modern Science 3 cr
Outlines the history of science from Aristotle to
the present. The course will focus on the modern
history of four scientific disciplines: physics, chem-
istry, geology, and biology, and will include computer-
based laboratory experiences in the classics of the
scientific experiments that have led to our modern
understanding of science. In addition to the
material on science, the development of mathematics, as
it has influenced the development of science, will be
presented in six areas: arithmetic, Euclidean geo-
metry, formal logic, algebra, analytical geometry and
calculus. The course will use World Wide
Web resources No prerequisite of science or mathematic
is required
SPPG 103 The Big Bang and Beyond 3 cr
Deals qualitatively with the modern scientific understanding of the origin and evolution of the universe. The theory of the Big Bang is presented, together with its observational evidence: the redshift of distant galaxies, the cosmic background radiation and the cosmic abundance of hydrogen and helium. The inflationary universe and the dark matter problem are included. The topics of relativistic cosmology, white dwarfs, neutron stars, black holes, and gravitational waves manifest explicitly the gravitational tone of the course; gravity modeling the cosmos, ruling star evolution and opening a new window to the universe. The course uses computer-based resources and includes field trips to nearby observatories. No previous knowledge of astronomy, physics or mathematics is required.

A. J. Palumbo School of Business Administration

Administration
Dean
James C. Stalder, B.S
Associate Dean and Director of Undergraduate Studies
Thomas A. Pollack, Ph.D
Associate Dean and Director of Graduate Studies
William D. Presutti, Jr., Ph.D

HISTORY
The A. J. Palumbo School of Business Administration was established in 1913 as the School of Accounts and Finance. 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 seven decades, new degree programs were added to enhance the scope of the curriculum and help prepare students for careers in all types of organizations.

Following a generous endowed fund 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 knowledge 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 for itself the following key objectives:

- Strive to be that Business School which understands clearly the critically important changes and challenges occurring in the business world and responds effectively by providing 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 personnel and resources from elsewhere in academe, business, government and labor.
- Become leading practitioners of continuous world-class quality and productivity improvement by outstanding offerings and expert lecturers, resource-effective processes throughout the School, and innovative pedagogical 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, Central and South America and the Far East. Introduce leading-edge know-how by developing programs on relevant topics 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 contribute substantially to the overall Duquesne goal of becoming The Outstanding Catholic University in America.
- Fully benefit from the resources of existing Advisory Boards and the Dean's Student Advisory Council 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 Duquesne University Office of Admissions, 600 Forbes Avenue, Pittsburgh, PA 15282 — Phone (412) 396-5000. The regular University admission requirements can be found on page eight.

Acceptance of all international students will be contingent upon the successful completion of the Duquesne University English Placement tests and any required English language course work. This may involve at least one semester or more of course work until such time as the student's English proficiency sufficiently improves to take undergraduate classes.

Students transferring from a school of business that is accredited by AACSB — The International Association for Management Education must present an overall quality point average of 2.5 (on a 4.0 scale) or better. For other students, including those...

DEPARTMENT OF PHYSICS
transferring from another school within the University, a quality point average of 2.50 or better overall and a grade of C or better in all business courses and in their highest level math course are necessary. Up to sixty credits of course work taken outside of the School of Business will be accepted for transfer credit. No more than 27 of those credits may consist of business courses. Exceptions will be made if the student is enrolled in a school with an established articulation agreement with Duquesne University. If extenuating circumstances exist, the student may petition the Student Standing Committee. For further information, the student should consult an academic advisor.

DEGREE

The School of Business Administration grants the degree of Bachelor of Science in Business Administration. Description of advanced degrees are found in other publications available from the John F. Donahue Graduate School of Business.

SATURDAY PROGRAMS

The School of Business Administration offers six accounting and information technology programs in a Saturday format. These accelerated programs provide adult learners the opportunity to earn a degree by attending classes only on Saturdays. For additional information on these programs, please contact the School of Business Administration Admissions Office.

SECOND BACHELOR'S DEGREE

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

THREE-YEAR BACHELOR'S/J D

A student who has completed 90 credits in the A J. Palumbo School of Business Administration with a 3.5 or better overall average and who has satisfied all undergraduate curricular requirements at Duquesne University may apply for a 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 their sophomore year to plan their program of studies. Because of the restrictive nature of this program, it is not open to transfer students.

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 their senior year. Dean's List students interested in this program should consult their advisors early in their junior year.

EARLY ADMISSION TO MBA PROGRAMS-BS PHARMACY/MBA

The School of Business Administration and the Mylan School of Pharmacy have a cooperative program, but students must be accepted for the Pharmacy program to apply for early admission to the MBA program. Pharmacy students interested in this program should consult their advisors.

DUAL DEGREE PROGRAMS WITH COLLEGE OF LIBERAL ARTS

The School of Business Administration and the College of Liberal Arts have developed a dual degree (BSBA/BA) option. Students interested in this program should consult the advisors in the School of Business Administration or in the College of Liberal Arts.

BUSINESS CERTIFICATE PROGRAM WITH COLLEGE OF LIBERAL ARTS, SCHOOL OF EDUCATION, SCHOOL OF NURSING AND SCHOOL OF MUSIC

The School of Business Administration and the College of Liberal Arts, the School of Education, the School of Nursing and the School of Music have developed certificate programs in business for liberal arts, education, nursing and music students. Students in the College of Liberal Arts, the School of Education, the School of Nursing and the School of Music who are interested in the program should consult the advisors in the School of Business Administration.

HEALTH MANAGEMENT SYSTEMS JOINT PROGRAM WITH SCHOOL OF HEALTH SCIENCES

The A J. Palumbo School of Business Administration, in conjunction with the Rangos School of Health Sciences offers a joint program in Health Management Systems for students interested in the application of information technology and business skills to the management of health care. The Health Management Systems program offers specialization tracks in Systems and Administration.

SCHOOL CENTERS/INSTITUTES

The School operates several independent Centers designed 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. Among the most active of the Business School's Centers are the following.

Center for Economic Education

The Center for Economic Education is charged with the responsibility of initiating and promoting economic education in the community at large. More specifically, it develops and coordinates economic education within Western Pennsylvania and the Tri-State area primarily to upgrade economic literacy and teaching competency in the school system. The Center also conducts economic education programs for clergy and media professionals.

The Beard Center for Leadership in Ethics

The mission of the Beard 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. Important initiatives in this mission are the Distinguished Speaker Series on Ethics and the Ethics Breakfast Forums. These programs promote ethics to the local and national business community by sharing experiences and values.

The Institute for Economic Transformation

The Institute for Economic Transformation (IET) collaborates with universities, industry and community sectors to improve the economic performance of our region by rebuilding the global competitive advantages of our industrial base. The IET is committed to be the premier source of assistance for education, training and the creation of broadly based business networks in industry and industry support organizations. The IET introduced its new "Center for Corporate Development." This Center was created to serve as a single marketing source for performance improvement and training programs offered by the IET's Connelly Center and Pittsburgh Supplier Training Center and also offers specialized programs in executive education.

Investment Center

The School of Business Investment Center is one of only a handful of facilities in the nation designed to assist students to manage real money using state-of-the-art software and computer technology. The Center provides a wide range of analytical models and decision-making tools in a lab environment, this software that allows real-time access to stocks, bonds, futures, currencies and options markets from around the world.

SCHOOL OF BUSINESS ADMINISTRATION COMPUTER FACILITIES

The A J. Palumbo School of Business Administration operates a Technology Center consisting of three large computer laboratories on the sixth floor of Rockwell Hall. The general purpose personal computer laboratory provides application software associated with the Business School curriculum. The Multimedia Laboratory serves as the School's classroom teaching laboratory and provides business as well as general multimedia software. The third laboratory serves our students primarily in the areas of network and database applications. All laboratories provide connectivity to the Internet. The sixth floor of Rockwell also houses the Investment Center which provides online real-time connectivity to all the major financial markets. In addition, all classrooms in Rockwell Hall provide access to the University computer network as well as the Internet.
STUDENT ORGANIZATIONS

The following 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 Phi is the local honorary scholarship society of the School. Its membership is limited to juniors and seniors in the Business School who have attained Q P A s of 3.25 or better.

Beta Alpha Psi is the premier national honorary accounting fraternity. Less than 15% of (AACSB) The International Association for Management Education accredited schools eligible for membership have achieved active status. The fraternity sponsors professional growth and development programs, as well as community and University service activities.

The Delta Chapter of Beta Gamma Sigma, a national honorary fraternity for accredited schools of Business Administration is open to all Duquesne University students and faculty.

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.

Phi Chi Theta, a national professional business fraternity, organized to promote the cause of higher business education and training for all individuals, is represented by the Gamma Upsilon Collegiate Chapter.

Phi Sigma Epsilon - Delta Chi Chapter is the national, professional, coeducational fraternity in marketing, sales and communications affiliated with Sales and Marketing Executives International and the Pittsburgh SME chapter.

ADVISORY BOARDS

Ten separate Advisory Boards, comprised of high-ranking business professionals, serve the School of Business. These business executives, representing the various disciplines within the School, offer advice and counsel on matters of curriculum development, promotion, assessment, internship, and employment opportunities and other matters of concern to students, faculty, and the business community as a whole.

ACADEMIC PROGRAMS

The A J Palumbo School of Business Administration offers a total of eleven concentrations (majors) from which to choose courses. The respective areas of concentration include Accounting, Finance, Information Technology, International Business, Investment Management, Management, Marketing, Pre-Law, Sports Marketing, Supply Chain Management and Technology Marketing.

Recommended programs of study for specific disciplines are listed on the pages that follow.

Students entering the School of Business Administration are expected to inform their advisors about their career objectives and their academic areas of concentration, and to consult with them when choosing junior and senior courses in any area of concentration. Their proposed curriculum choices must, of course, include the University requirements and Business Administration Core requirements as indicated in the illustrations set forth in this catalog.

Students are strongly encouraged to include additional course work in speech/communications and in advanced writing in their programs. Regulations for certification in accounting make the program very rigid, this is dealt with in the section describing the accounting curriculum on the following pages.

Students' concentrations should be based upon career objectives and constitute a broad and flexible educational process. Students are also encour-aged to tailor cross-disciplinary educational programs to meet their individual needs. Career advice should be sought from many and varied sources in the University, but especially faculty. Course suggestions and degree requirements for all major areas of concentration can be obtained from the Academic Advisement office.

PROGRAM FOR PROFESSIONAL DEVELOPMENT

All students in the School of Business Administration are required to participate in the following professional development program in order to complete their degree requirements.

Pre-Business Experience

This orientation program is designed to introduce business students to the broad context 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.

Students meet with A J Palumbo School of Business faculty and administrative staff to develop personal relationships and to become acquainted with the offerings and organization of the School and the resources available. Participation in this program is required for graduation.

FOUR YEAR SAMPLE PLAN

(Effective September 1999)

FRESHMAN YEAR

University Core

101 Thinking and Writing
Across the Curriculum
3 cr

102 Imaginative Literature and
Critical Writing
3 cr

103 College Algebra
3 cr

111 Calculus
3 cr

132 Basic Philosophical Questions
3 cr

141 Social, Political and Economic Systems
3 cr

151 The Shaping of the Modern World
3 cr

161 The Arts and the Human Experience
3 cr

TOTAL Credits
18 cr

BUSINESS Core

182 Information Systems I
3 cr

183 Information Systems II
3 cr

TOTAL Credits
6 cr

SOPHOMORE YEAR

Major Area of Concentration
3 cr

Specified Non-Business Elective
3 cr

TOTAL Credits
12 cr

JUNIOR YEAR

Major Area of Concentration
3 cr

Specified Non-Business Elective
3 cr

TOTAL Credits
6 cr

SENIOR YEAR

Major Area of Concentration
3 cr

Specified Non-Business Elective
3 cr

TOTAL Credits
12 cr

Electives

Non-business Elective
3 cr

TOTAL Credits
30 cr

TOTAL Credits
30 cr
The Accounting curriculum prepares students for excellent career opportunities as professionals in the areas of corporate, industrial, government, nonprofit and public accounting. The program provides students with a sound theoretical foundation as well as practical business experience opportunities, such as accounting internships. Students must satisfy the preparation requirements for the Certified Public Accountant (CPA) exam and the Certified Management Accountant (CMA) exam.

Students interested in the CPA exam are strongly encouraged to take the following courses in their major area of concentration: 216, 311, 312, 314, 411, 412, and 414. Additionally, Law 534 is strongly recommended.

Students interested in other areas of accounting should take at least six (6) of the above listed Accounting courses along with additional electives from the areas of Accounting, Information Technology or Finance, such as QSMIS 481, 485 and Finance 533.

Students should contact an academic advisor or a member of the accounting faculty for further information.

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 Liberal Arts, the Music School, the Nursing School and the School of Education who wish to take business courses should follow the business certificate program or the dual degree option. Students should consult their advisors on this matter.

Prerequisite: upper level business courses

In addition to any specific prerequisites that are listed in the course descriptions, all freshman and sophomore required business courses must be completed before the student may enroll for upper level business courses, that is, those business courses numbered in the 300s and 400s. The student must also have completed 60 credits or more.

General Business Courses

The Pre-Business Experience is required for all students enrolled in the School of Business Administration. The Business Administration Internship is strongly recommended for all who qualify.

203 Pre-Business Experience

Not for credit

This orientation program 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, the philosophy of cooperative learning, and the realities of the global marketplace.

401 Business Administration Internship

3 cr

This internship program provides the student with professional work experience in an organizational environment. Internships must be approved in advance by a faculty sponsor and are available to students in all business concentrations. Grading is Pass-Fail.

Prerequisites: Junior standing; six credits completed in major, an overall GPA of 2.5 or better, and completion of at least 15 credits at Duquesne University.

Accounting Curriculum

Economics Curriculum

The Economics curriculum 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 is stressed in courses in Economics.

Course Prerequisites - see p 106

Economics

Courses

The Economics curriculum 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 is stressed in courses in Economics.

Course Prerequisites - see p 106

Economics

Courses
121 Elements of Economics 3 cr
An introductory course that provides an understanding of how a free market economic system works, of the forces which affect the level, composition, and distribution of the output of the economy, and the economics of current issues Not counted toward a degree in the School of Business Administration

221 Principles of Economics I 3 cr
Microeconomics acquaints the student with the concepts and 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 government revenues and expenditures with emphasis on American practices and policies at the various levels of government Includes benefit-cost and cost-effectiveness analysis together with the economic consequences of various tax structures and alternative social choice mechanisms Prerequisites Economics 221 and 222

222 Principles of Economics II 3 cr
Macroeconomics concerns with aggregate economic relationships Includes theories of national income determination and the interactions among domestic and foreign economies Monetary and fiscal policies and their implications for inflation, unemployment, economic growth and foreign exchange are analyzed

223 Global Economic Perspectives 3 cr
Uses economic principles and concepts to analyze business-related current issues in a global context Emphasis is placed on the process of economic development in different parts of the world, research incorporating the World Wide Web, and overall geographic literacy Prerequisites Economics 221 and 222

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 output and income Prerequisites Economics 221 and 222

322 Price Theory 3 cr
Price theory examines producer and consumer theory from a mathematical perspective Students will construct mathematical models which represent the motivating factors behind and the constraints placed upon consumer and producer behavior By manipulating these models, students will observe how consumers and producers interact to arrive at market prices Students are expected to have a polished knowledge of calculus Prerequisites Economics 221 and 222

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 Includes benefit-cost and cost-effectiveness analysis together with the economic consequences of various tax structures and alternative social choice mechanisms Prerequisites Economics 221 and 222

324 Comparative Economic Systems 3 cr
A comparative study of the history and development of the theories and paradigms of capitalism, socialism, communism and other economic systems Emphasis will be placed on the philosophies and economic implications of the various systems Prerequisites Economics 221 and 222

328 Urban Land Economics 3 cr
A study of the economic forces that influence business and residential location in a metropolitan area Specific areas of study include transportation, housing, poverty, and the urban public sector Prerequisites Economics 221 or 222

420 Labor Economics 3 cr
Analysis of strikes, wage and employment determination in the U.S. economy under monopsony conditions as well as under collective bargaining arrangements Includes the factors underlying labor demand and supply with an emphasis on a human capital approach to relative earnings differentials Prerequisites Economics 221 or 222

423 Econometrics and Forecasting 3 cr
In this course, students apply statistical theory to economic and business data in an attempt to quantitatively measure relationships Students will learn how to detect and correct for the major statistical anomalies that plague time series and panel data Students will also learn to estimate statistical relationships using various procedures and to interpret their results as well as to construct and interpret economic and financial forecasts Prerequisites Economics 221 and 222, QSMIS 281 and 284

424 Business and Public Policy 3 cr
A study of the regulatory techniques used by government to influence and modify business behavior Includes an analysis of market structure, and conduct and performance considerations pertaining to the firm and the industry Emphasis is given to the anti-trust laws and special regulatory problems Prerequisites Economics 221

425 Current Economic Issues 3 cr
Focuses on current economic issues The course and its content vary for example, topics might include the federal budget deficit, economic policies, or the economic changes in Europe and Asia Prerequisites Economics 121, 221, 222 or Core 141

426 Monetary Policy and Money 3 cr
Deals with the chief theoretical contributions in monetary theory along with their policy implications Specific topics include the modern quantity theory of money, the Keynesian model, 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

429 Seminar in Economics 3 cr
Provides vehicle for advanced student to investigate separate subject areas in the field of Economic Theory The seminar procedure will stress written and oral reports Prerequisite Permission of the instructor

442 International Economics 3 cr
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, customs union theory, commercial policy, theory of foreign exchange markets, history of the international monetary system, and flexible versus fixed exchange rates Prerequisites Economics 221 and 222

FINANCE CURRICULUM
Students who look forward to careers in finance may select a program of courses in any of these areas securities and investments, 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 333, 336, 337, 338, 339 and 450

423 Econometrics and Forecasting 3 cr
Advanced study of econometrics and forecasting Focuses on advanced econometric techniques and their applications in finance and economics Prerequisites Economics 221 or 222

431 Real Estate Investment Analysis 3 cr
Designed to develop an understanding of the mechanics of real estate investment and the economic forces that influence real estate values The course examines the relationship between real estate values and various factors such as location, condition, and market trends Prerequisites Economics 221, 222, Accounting 214, and QSMIS 281

432 Credit Management 3 cr
Provides a theoretical or conceptual framework that financial managers can use to make decisions Focuses on fundamental choices and compromises involving risk and return Prerequisite Finance 331

434 Risk Management 3 cr
A study of the broad spectrum of risk exposures in business enterprises, with special attention to the need for identifying these in terms of nature and magnitude Emphasis is on techniques available to aid the decision-maker in making decisions under constraints of uncertainty Prerequisite Finance 331

436 Security Analysis 3 cr
An intensive study of the analytic techniques applicable to the selection of the various securities of private as well as public entities Consideration is given to the markets in which these securities are traded and the types of information necessary to the decision-making process of the investor Prerequisite Finance 331

438 Futures and Options 3 cr
Designed to develop an understanding of futures and options and other derivative financial instruments The main emphasis is on the reduction of asset and liability risk for business and financial institutions through hedging operations in debt and equity instruments, commodities and currencies Students will have an opportunity to study actual market behavior through project analysis Prerequisites Finance 331 and 336

439 Financial Management 3 cr
A study of the problems involved in financing residential, commercial and industrial real estate from the points of view of both owner and lender

431 Real Estate Investment Analysis 3 cr
Emphasis is on the estimation and revenues and return relationships in investment valuation of property and the effects of financing, income taxes, and entity selection upon investment profitability Prerequisite Real Estate 339

432 Credit Management 3 cr
Provides an understanding of the function of credit management Students will have the opportunity to integrate knowledge from financial sources with that of other disciplines to arrive at a logical, sound credit decision Prerequisite Finance 331
433 Financial Markets 3 cr
An extensive and intensive study of the market in which the financing of needs takes place. Financial institutional structures are emphasized as they act and interact when serving as sources or intermediaries and users of funds for both short-term and long-term capital. Prerequisite Finance 331

437 International Financial Management 3 cr
Provides a conceptual framework within which the key financial decisions of the multi-national firm can be analyzed. Emphasis is placed on working capital management, capital budgeting, cost of capital and financial structure, and evaluation and control of operations. In addition, exchange risks and political risks are examined extensively. Prerequisite Finance 331. Recommended prerequisite Economics 442

439 Seminar in Finance and/or Real Estate 3 cr
Concentration upon selected contemporary topics presented by distinguished visiting professors or resident faculty. Open only to senior students. Prerequisite Finance 331

450 Cases in Finance 3 cr
The aim of this course is to provide a vehicle in which the student can utilize material from previous courses to solve problems of a financial nature. Using case studies, the student is expected to be able to identify problems, reach conclusions, recommend solutions, and identify implementation techniques. Prerequisites Finance 331 and 333

INFORMATION TECHNOLOGY CURRICULUM

The Information Technology program prepares students for career opportunities in the analysis, design, development, implementation, integration, management, and maintenance of evolving information systems in organizations. The IT curriculum provides exposure to established hardware, software and methodologies as well as incorporating emerging technologies. Emphasis is placed on the ability of technology to provide added value to the processes, products, methods and decision making found in organizations. For a concentration in IT, completion of QSMIS 387, 385, 381, 382, 384, and 386 is required. In addition, two elective courses must be chosen from the following: 382, 384, 385, 482, 483 and 484.

183 Information Systems II 3 cr
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. Database applications as they relate to the organization are emphasized. Prerequisite QSMIS 182

382 Information Processing with Programming 3 cr
Prerequisites: Advanced computer based programming. The scope of the course ranges from an introduction to the programming process, data comparison, control break logic, sorting, and table handling methods through file creation and file processing techniques. Prerequisites QSMIS 183, COSC 101 or 150

384 Decision Support System 3 cr
The role of information systems in supporting management decision-making is analyzed. Students will have an opportunity to develop decision models to support the various levels of management. Types of decision support systems tools ranging from spreadsheets through advanced systems will be analyzed. Groupware applications are also discussed. Prerequisites QSMIS 183, COSC 101 or 150

385 Computer Systems 3 cr
A detailed survey of current issues and technologies in business organizations. Covers technical aspects of operating systems, multi-media, internet interface development, telecommunications and other emerging technologies. Prerequisites QSMIS 183, COSC 101 or 150

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 software is used to construct general purpose simulation models as well as financial system models. Prerequisites QSMIS 183

387 Object Oriented Programming 3 cr
This course provides an introduction to object oriented programming and Web-based applications using the Java object-oriented language. Emphasis is given to the logical development of Java applications. Java Applets, program control, methods, arrays, strings and characters, graphics, basic and advanced graphical user interface components, exception handling, multithreading, multimedia, network data structures, and Java utilities. Prerequisites QSMIS 183, COSC 101 or COSC 150

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 and object-oriented techniques. Case studies are used to generate detailed data flow diagrams. The issues involving conversion, testing, training, documenting, maintaining and managing a system are addressed. Prerequisites: QSMIS 183, 482 and COSC 101 or 150

482 Database Management 3 cr
Focuses on the theory, derivation and development of the relational database model using entity relationship modeling and a commercial desktop database management system. Emphasis is on the principles of data modeling, data organization and resource issues in database design. Prerequisites QSMIS 183 and COSC 101 or 150 (may be taken concurrently)

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 products and fourth generation languages, students design and implement a project chosen from the local business or University community. Students work in teams toward a solution. Prerequisites QSMIS 382, 385, 481 and 482

484 Networks and Telecommunications 3 cr
Design, implementation, analysis, and operation of the important architectural aspects 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 organizational networks. Prerequisite QSMIS 385

485 EDP Audit and Control 3 cr
Presents EDP auditing standards with a blend of systems concepts and applications. Techniques for testing computer programs, files, and processing systems are presented. Special attention is devoted to the particulars of auditing online, real-time systems. Case studies and generalized audit software are used to create a simulated audit environment. Prerequisite QSMIS 183

486 eBusiness Technologies 3 cr
This course provides an introduction to the topic of electronic commerce through the search for successful e-business models, reflection and application of basic economic concepts underlying e-commerce, and practice at rigorously analyzing e-business strategies and their implementations. Prerequisite QSMIS 484

487 Advanced Systems Concepts 3 cr
The course provides a practical familiarity with higher level technologies used for accomplishing the tasks found in systems analysis, design, and development, specifically those centered on database technologies. This includes advanced database management systems (DBMS) creation and manipulation, as well as the use of computer-aided systems engineering (CASE) tools. Prerequisites QSMIS 481, 482

488 Collaborative Computing 3 cr
This course attempts to make the student aware of the current state of technology, issues in the technical areas of collaborative computing, and how collaborative computing is used in organizations. Emphasis is placed on the business relevance of these technologies. Prerequisites QSMIS 382, 481, 482, 484 (may be taken concurrently)

INTERNATIONAL BUSINESS CURRICULUM

The International Business program prepares students for careers in managing the international operations of business and non-business organizations. Students learn about the global environment of business, international economics and finance, international law and export trade, and business and society in major economic regions of the world. In addition, students develop strong multicultural awareness and competency in a second language. This IB program offers students the opportunity to study abroad in one of the colleges with whom Duquesne University is affiliated. Students majoring in IB may elect to include a functional area of business as part of their program of study.

For a concentration in International Business, students need to take (1) International Business 341, Finance 437, Marketing 443, and Law 454, (2) Four courses from the following: International Business 342, 369, 444, 446, 448, 491, Economics 442, and Management 445, and (3) twelve credit hours of a second language. Students are encouraged to include courses of international studies offered by the College of Liberal Arts as electives. For study abroad opportunities, students are encouraged to consult with their academic advisors, IB professors, or the University's Office of International Affairs. Students can request a waiver of the language requirement if (1) they pass the level proficiency test administered by the Department of Modern Languages or a specialized language testing institute, or (2) they are natives of a non-English speaking nation.

COURSE PREREQUISITES - see p 106

182 Information Systems I 3 cr
An introduction to the productivity potential of spreadsheet, graphics, database, multimedia and word processing applications. In recognition of the importance of information resources, students will develop proficiency using Internet tools.
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)

342 International Business Study Abroad  var cr
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

369 Export Management  3 cr
This course offers a comprehensive study of international export procedures and operations. Topics covered include export documentation, managing export transactions, planning export operations, export communications, shipping and packaging, export payment and collection methods, export insurance, governmental and foreign export regulations, export support programs and services, exports within NAFTA, and designing export management systems (Prerequisite IBUS 341)

437 International Financial Management  3 cr
See Finance Curriculum

442, International Economics  3 cr
See Economics Curriculum

443 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 and politics 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 International Management  3 cr
See Management Curriculum

446 Japanese Business and Management  3 cr
Focuses on the history of Japanese business, the essential elements of Japanese management practices, and the strategies used by successful Japanese global corporations including their approaches to marketing, operations management, human resource management, and financial strategy (Prerequisite Management 361)

448 Business and Society in Latin America  3 cr
Survey of the major cultural, social, political and economic factors influencing the conduct of business and the prospects for continued economic development in Latin America. The impact of contemporary changes in economic and political conditions on the prospects for long term economic development are discussed (Prerequisite courses include a more detailed examination of economic, social and political conditions in Mexico, Brazil and at least one other Latin American country (Prerequisite Management 361)

454 The Law of International Commercial Transactions  3 cr
See Pre-Law Curriculum

491 Practicum in International Business  3 cr
This course integrates international business skills and methods into a professional practicum. Student teams work with an international business firm as consultants to help the company deal with international business projects and issues (Prerequisite Senior standing)

INVESTMENT MANAGEMENT CURRICULUM
The Investment Management Curriculum is closely related to the Finance curriculum. Investment Management students take courses in security analysis, money and financial institutions, futures and options, and portfolio management, along with basic finance courses and a business core curriculum that exposes them to all business disciplines.

Upon successful completion of the Investment Management program, graduates will be able to effectively communicate their analyses of the global economy and its effect on values of financial and real assets. They will have developed an in-depth understanding of the financial models used by investment professionals to develop strategies and make asset allocation decisions between stocks, bonds, mutual funds, money markets, currencies, futures, options, and derivatives.

For a concentration in Investment Management, students will take INVMG 301, 302, 440, and BUADM 401. Students will also take four courses chosen from FINAN 334, 336, 337, 338, and 433, or from electives offered in Investment Management. Students should contact an academic advisor or speak with a member of the finance faculty to develop their courses of study.

COURSE PREREQUISITES - see p 106

301 The Investment Environment  3 cr
The Investment Environment provides important strategies for investing in a broad array of financial assets with a focus on common stocks, bonds and mutual funds. Course topics include the structure and functioning of financial markets, trading mechanics, the measurement and presentation of performance, features of common stocks, bonds and mutual funds, financial market regulation and standards of professional conduct. Attention is given to legal, regulatory and accounting issues. Prerequisite FINAN 331 (may be taken concurrently)

302 Personal Financial Planning  3 cr
Personal Financial Planning provides detailed coverage of important issues and techniques employed in the financial planning process. The course deals with identifying client needs and recommending strategies for establishing retirement plans. Course topics include investments in bonds and mutual funds, insurance, tax and estate planning. Attention is given to developing a financial plan for potential clients (Prerequisites FINAN 330 and INVMG 301)

310 Fixed Income Securities  3 cr
Topics include bond pricing, the Treasury Market (operations of bond dealers, treasury auctions), bond risk management based on duration and convexity, yield-curve, trading strategies, and term structure estimation. Part of the course will be devoted to understanding and using stochastic interest rate models for valuing fixed income securities and derivatives. The course emphasizes modern evaluation techniques (such as forward rates, observed term structure of interest rates, or on a theoretical model of such a structure). Therefore, interest rate risk is a primary consideration. That is, most of the work is based on situations where credit risks are virtually non-existent (i.e., U.S. Treasury securities) or ignored for simplicity, the valuation principles of the default-free framework are fundamentally and widely applicable (Prerequisites FINAN 330 and 331)

401 Business Administration Internship  3 cr
See General Business Curriculum

410 Equity Portfolio Management  3 cr
Extends modern portfolio principles (covered in FINAN 330) to a theory of active portfolio management. Within the context of portfolio optimization, the course provides a general framework for designing, evaluating and implementing a variety of active strategies for selecting common stock portfolios. The essence of active management lies in forecasting abnormal returns, and, to this end, the course reviews a number of empirical regularities in stock returns. A discussion of the basic tools of the 'technician' is also presented. Using the 'trading room,' students apply these concepts in the development and evaluation of their own portfolio strategies (Prerequisites FINAN 330, and a level of comfort with basic statistical concepts such as mean, variance, correlation and linear regression

440 Seminar in Investment Management  3 cr
Concentration upon selected contemporary topics presented by distinguished visiting professors or resident faculty. Prerequisite INVMG 301 and senior standing

MANAGEMENT CURRICULUM
The Management concentration enables undergraduates to acquire key process skills which can be applied to a wide variety of business sectors as well as public and non-profit organizations. In addition, it encourages a student's understanding of at least one specialized business discipline while providing a degree of flexibility in pursuing a wider variety of subjects than permitted in other concentrations. Management students should be able to qualify for a broad range of entry-level positions in all sectors of the economy.

For a concentration in management, students must take at least one course in each of the following areas of people (MGMT 366 or 461), information technology (from Q5MS offerings), international business (five possible choices), and decision making (MGMT 465 or 494). In addition, students must take six to nine credits in another specific discipline, such as marketing, finance, supply chain management, etc. The remaining credits required to complete the major should be chosen in accordance with the student's career plan after consultation with a faculty member and/or academic advisor.

COURSE PREREQUISITES - see p 106

361 Introduction to Management  3 cr
This course is an introduction to the basic tasks, functions and responsibilities of managers and the overall environment in which managers and organizations must operate. Areas covered include the planning, organizing, and leadership of activities and the context (internal and external) in which managers work to discharge their responsibilities effectively.

364 Human Resource Management  3 cr
Explores the strategic role, technical functions and services provided by an organization's personnel/human resources department. Among the topics covered are human resource planning and systems, job evaluation, recruiting, performance appraisal, compensation, occupational health and safety, employee rights, labor unions, and equal employment opportunity issues (Prerequisite Management 361)
365 Management Labor Relations 3 cr
Prerequisite Management 361

366 Behavior in Organizations 3 cr
Students learn a number of theories, concepts, and applications regarding people-oriented managerial issues. Topics covered include motivation, personality, perception, group dynamics, performance appraisal, leadership and decision making, cooperation and conflict, organizational politics, organizational structure, managing change, and organizational development. Prerequisite Management 361

Total Quality and Operations Management 3 cr
An introduction to the principle topics and issues in production and operations management with an emphasis on total quality management. Both manufacturing and service operations are addressed with consideration of how operations support overall strategy and contribute to productivity and competitiveness. Prerequisite: QSMIS 284 and Management 361

368 Business Ethics/Communications 3 cr
Discusses 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 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.

International Management 3 cr
A study of multinational companies' structures, strategies, and management processes. The course includes a thorough understanding of international management, competent awareness of multicultural diversity and development of decision making skills in multinational settings.

Human Relations and Teamwork 3 cr
An advanced, experiential Organizational Behavior course designed to aid the student in developing practical skills in managing interpersonal relationships in the workplace. Topics covered include organizational socialization, learning styles, listening skills, interviewing, personal interactions, small group dynamics, group problem solving, team effectiveness, managing conflict, and the management of change. Prerequisite: Management 361

Public Administration 3 cr
Introduces the student to the content of public management and to the work of the public manager at federal, state, and local government levels. It also compares and contrasts public and private management and links management theory and practice. Prerequisite: Management 361

Entrepreneurship and Small Business Management 3 cr
Deals with the overall management of the small business enterprise. Coverage includes entering the small business arena, organizing and financing a business, operation of the small firm, growth planning, and problems associated with being small. Prerequisite: Management 361

Compensation and Benefits 3 cr
This is an advanced course focusing on pay and benefits issues. Coverage includes relating compensation to strategy, internal equity, job evaluation, market pay surveys, developing a pay structure, variable pay, incentive systems, gain sharing, executive compensation, paying expatriates, employer benefits including social security, workers' and unemployment compensation, medical, retirement, costing out benefits, flexible benefits, benefits management, and cost containment. Prerequisites: Management 361 and 364

Training in Business and Industry 3 cr
Explores the training and development function in human resource management. Covers the assessment of training needs, designing and conducting training programs, and evaluations of training effectiveness. Student teams design and conduct a mini-training program. Prerequisite: Management 364

Independent Scholarly Study 3 cr
Students must initiate an original research project in a field of business of their choice. The research proposal must be submitted (in written form) for approval before a faculty sponsor, then the division Chairperson, and finally, the Associate Dean. The project must be completed within an academic semester. This course is open to students in all concentrations in the School of Business. Once all the necessary signatures have been obtained, the form must be submitted to your Academic Advisor to register. Prerequisite: Student must qualify as a University Scholar.

Business Consulting 3 cr
Business Consulting is an interactive course in which student teams of two or three provide extensive management counseling to a Pittsburgh area small business owner. This course is open to students in all concentrations in the School of Business. Prerequisite: Approval of the instructor.

Strategic Management 3 cr
Strategic Management, the "capstone" course of the undergraduate business curriculum, utilizing top-level, comprehensive organizational case studies as the primary tool to provide an integrative educational experience. Students will be expected to apply strategic management principles to real-world business situations and to develop functional expertise in the areas of strategic planning, corporate strategy, and organizational behavior. Prerequisite: Management 361

465 Marketing 3 cr
Marketing combines the objective analysis of the economic behavior of the buying public with the subjective, personal, and psychological factors that determine the buying decisions of the individual consumer. The overall effects of technological change on people's buying behavior are examined. The course is designed to provide a framework for evaluating marketing decisions at the personal, organizational, and societal levels. Prerequisites: Management 361, Marketing 371

Total Quality and Operations Management 3 cr
A course designed to aid the student in developing basic communication skills.

Marketing Curriculum
In accordance with the objectives of the University and of the School, the Marketing Curriculum aims to:

1. To provide an understanding of the role of marketing in organizations, private and public, profit and non-profit.
2. To develop skills and apply fundamental marketing concepts.
3. To develop communication skills necessary for effective performance in the field of marketing.

For a concentration in Marketing, students will take the following courses:
- Marketing 373, 374, 375, 476, 477, and three of the following: Marketing 443, 472, 474, 475, 478, and 481.

Course Prerequisites - see toe 106

Marketing 371 Introduction to Marketing 3 cr
Provides an understanding of the dynamic role marketing plays in the economy and in the firm. Students build a knowledge base with regard to strategic marketing, market segmentation, marketing research, consumer behavior, and the price versus cost distinction, supplier selection and evaluation, inventory management, and non-profit marketing.

Sales Administration 3 cr
Introduces the fundamentals of salesmanship and the problems confronted by the sales manager. Emphasis will be placed on developing an understanding of production planning, pricing, market analysis, and specific areas of sales management. Attention will be given to management of the sales force, recruitment, selection and ethical considerations. Prerequisites: Marketing 371

Research Applications in Marketing 3 cr
Examines the methods used by business management to get the information needed to support marketing decisions. Selection of target market, design of product, distribution, promotion, and pricing policy. These methods include exploratory (qualitative) research, conclusive (quantitative) research, sampling theory and application, and various statistical techniques used to support marketing research. Prerequisites: QSMIS 281 and 284, and Marketing 371

Business Logistics 3 cr
Analyzes the physical distribution concept in its various components including its interface with other functions in an organization. Costs, governmental regulations, and international aspects of physical distribution are covered in detail. Prerequisites: Management 361, Marketing 371

International Marketing 3 cr
Helps students develop skills in analyzing economic and non-economic factors for identifying and evaluating foreign market opportunities. Students will become familiar with different approaches for segmenting international markets, encourages students to develop skills in formulating product, price, distribution, and promotion strategies in the context of business outside the United States, and helps develop skills in undertaking international strategic marketing planning. Prerequisite: Marketing 371

Services Marketing 3 cr
This course focuses on the marketing of services and the techniques necessary to improve customer service. It is taught from the perspectives of both marketing managers and customers. Students will develop a broad knowledge base regarding the following marketing concepts: customer expectations, complaint behavior, measures of customer satisfaction, relationship marketing, servicescapes, collaborative service culture, discretionary collaborative behavior and service rules. Upon completion of the course, students will understand not only how to effectively market a service, but also how to get the best service. Prerequisites: MKTG 371 and 374

Transportation 3 cr
A detailed and comprehensive examination of the historical evolution, operation, and development of the various components that make up the transportation system of the U.S. The overall effects of technology, regulation (federal, state, and local), deregulation, and world economic factors will also be examined in detail. Prerequisite: Marketing 371

Purchasing Management 3 cr
An introductory course on the principles of purchasing and materials management. Topics covered include the profit-generating potential of purchasing, the role of purchasing in total quality management, the price versus cost distinction, supplier selection and evaluation, inventory management, value analysis, and just-in-time purchasing. Prerequisites: Management 361 and Marketing 371

Consumer Behavior 3 cr
Encourages the student to develop an understanding of the consumer from the perspective of the marketing manager. The course explores the factors that affect the consumer, which range from a macro level (the effect of the physical and social environment on the consumer) to a micro level (knowledge, attitudes, and actions of the individual consumer).
Segmentation, positioning, and marketing mix strategies are discussed in relation to consumer behavior theories. Mini-projects are assigned to allow the student to apply theoretical concepts to real-world experiences. Pre-Law Marketing 371

476 Product Management 3 cr
Examines methods and tools leading to successful product development and commercialization, as well as the maintenance of existing products and product lines, including product positioning, design, market testing, forecasting and product launch, plus product strategy and product life cycle management, using case studies and computer simulations. Prerequisites: Accounting 215, Marketing 371 and 376

477 Strategic Marketing Planning 3 cr
Designed to enable the student to apply acquired marketing knowledge and expertise to real-world opportunities. The case method is employed using marketing situations that illustrate opportunity analysis, marketing environments, product management, communication planning, pricing and distribution strategies, and global planning. Students demonstrate decision-making skills through learning to identify and define a marketing problem, analyze it, recommend solutions, and present solutions concerning implementation for the organization and its environment. Prerequisites: minimum of 12 credits in marketing (including 371). This course is recommended as a spring offering for graduating seniors.

478 Industrial Marketing 3 cr
Focuses on business-to-business marketing. It will demonstrate the differences between industrial and consumer marketing, how industrial marketers evaluate their marketing environments, including an understanding of customers and competitors. Prerequisites: Marketing 371, 373, 354, and 355 as well as electives offered in this concentration.

COURSE PREREQUISITES - see p 106

251 Business Law 3 cr
An introductory course exploring the nature of law, its sources, and its relation to society, government, and business. The course focuses on the traditional business law topics: property, contracts, torts, agency, business organizations, and government regulations.

353 Contracts 3 cr
The fundamental concepts of law of contracts are examined to provide the student with an understanding of the common law system regarding formation, performance, third party rights, the death and discharge and remedies. Prerequisite: Law 251.

354 Commercial Transactions 3 cr
Study of the Uniform Commercial Code (UCC) with reference to the nature and legality of the sale of goods, warranties, nature and kinds of commercial paper, negotiability, methods of transfer, and secured transactions. Prerequisite: Law 251.

355 Law of Business Organizations 3 cr
A course which focuses on laws pertaining to the creation and termination of corporations, franchises, partnerships, agencies and other business entities. Prerequisite: Law 251.

357 Real Estate Law 3 cr
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 borrowers and lenders. Prerequisite: Law 251.

454 The Law of the International Commercial Transactions 3 cr
Provides the student with an overview perspective of the basic legal problems involved in doing business with and in other countries. Topics covered include an introduction to foreign legal systems, study of various forms of business organization, legal problems involved in letters of credit, insurance, risk of loss, antitrust aspects of the sale of goods, forms of dispute settlement, and the problems of enforcing judgments made and against foreign countries. Prerequisites: Law 251.

456 Legal Aspects of Human Resource Management 3 cr
A survey course of state and federal laws that influence the legal environment of personnel and human resource management. Prerequisite: Management 361.

PRE-LAW CURRICULUM
The objectives of this curriculum are:

1. To provide solid preparation for the professional study of law. See three-year Bachelor's D. pr. 102.

2. To provide a concentration in Pre-Law Studies, the students will take Law 353, 354, and 355 as well as electives offered in this concentration.

COURSE PREREQUISITES - see p 106

251 Business Law 3 cr
An introductory course exploring the nature of law, its sources, and its relation to society, government, and business. The course focuses on the traditional business law topics: property, contracts, torts, agency, business organizations, and government regulations.

353 Contracts 3 cr
The fundamental concepts of law of contracts are examined to provide the student with an understanding of the common law system regarding formation, performance, third party rights, the death and discharge and remedies. Prerequisite: Law 251.

354 Commercial Transactions 3 cr
Study of the Uniform Commercial Code (UCC) with reference to the nature and legality of the sale of goods, warranties, nature and kinds of commercial paper, negotiability, methods of transfer, and secured transactions. Prerequisite: Law 251.

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A course which focuses on laws pertaining to the creation and termination of corporations, franchises, partnerships, agencies and other business entities. Prerequisite: Law 251.

357 Real Estate Law 3 cr
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 borrowers and lenders. Prerequisite: Law 251.

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456 Legal Aspects of Human Resource Management 3 cr
A survey course of state and federal laws that influence the legal environment of personnel and human resource management. Prerequisite: Management 361.

QUANTITATIVE METHODS CURRICULUM
Students in the undergraduate School of Business Administration complete a basic sequence in Quantitative Methods. This sequence is concerned with the application of mathematics, statistics, and information processing to the analysis of business and economic problems. Prior to entry into the sequence, Mathematics 101 and 111 in the College of Liberal Arts or the equivalent are required.

COURSE PREREQUISITE - see p 106

182 Information Systems I 3 cr
See Information Technology Curriculum

183 Information Systems II 3 cr
See Information Technology Curriculum

281 Quantitative Analysis I 3 cr
An introduction to probability and the more commonly used statistical techniques for analyzing data from one population, with emphasis on their application to decision making and quality management. Coverage includes basic descriptive statistics, the concepts of probability and specific distributions, and inferential statistics. Prerequisites: QSMIS 182 and Mathematics 111.

284 Quantitative Analysis II 3 cr
A continuation of statistical analysis, extending to the comparison of two or more populations and analyzing the association between variables through regression, correlation, and contingency analyses. Developing basic time series for forecasting and developing and analyzing simulation models are also covered. Prerequisite: QSMIS 281.

367 Total Quality and Operations Management 3 cr
See Management Curriculum

386 Computer Simulation 3 cr
See Information Technology Curriculum

SPORTS MARKETING CURRICULUM
The Sports Marketing Program provides a working understanding of the role of marketing in sports and sports-related organizations, develops skills in applying marketing concepts, explores strategic marketing concepts, sales management, product development and marketing research techniques, while creating a skill base for employment in the sports marketing industry in general. Prerequisites: QSMIS 281 and 386.

COURSE PREREQUISITES - see p 106

376 Sports Marketing and Promotion 3 cr
This course will provide an intensive evaluation of marketing techniques and promotional strategy. In addition, the topical coverage will include the marketing mix, new product strategy and services, interactive promotion, event marketing and value-added marketing. Prerequisite: Marketing 371.

377 Sports Management 3 cr
This course will provide a knowledge base in planning, organizing, motivating and controlling sports organizations. The content of this course will help in the development of skills necessary to manage organizations in the sports industry including marketing firms, licensing agencies, major retailers, professional sports organizations and sporting venues. Prerequisite: Marketing 371.

470 Legal Environment of Sports Management and Marketing 3 cr
This course will cover regulation in the sports industry including NCAA regulations, collective bargaining and codes of industry conduct. In addition, royalties, rights and licensing issues will be covered. Prerequisite: Law 251.

471 Special Topics in Sports Marketing 3 cr
This course will focus on specialized areas of interest in the form of a practicum designed by the instructor or the individual student. This course provides an opportunity for the student to pursue special areas of interest in sports marketing and management covering major issues in specific sports venues or the sports industry in general. Prerequisites: Marketing 376 and 377.

SUPPLY CHAIN MANAGEMENT CURRICULUM
The Supply Chain Management concentration prepares students to assume roles as logistics professionals in both profit 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 materials management, operations management, and physical distribution management dimensions of the field of logistics.

For a concentration in Supply Chain Management, students will take Strategic Logistics Management 469, Marketing 375, 472 and 474, plus four of the following: International Business 341, Law 353, 354 and 355, QSMIS 481 and Business Internship 401.

COURSE PREREQUISITES — see p 106

375 Business Logistics 3 cr
See Marketing Curriculum
469 Strategic Logistics Management 3 cr
Strategic Logistics Management is the capstone course in the Supply Chain Management 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, and outbound logistics including distribution resources planning. Prerequisites: Accounting 215, Management 367, and Marketing 393, 472, and 474.

472 Transportation 3 cr
See Marketing Curriculum

474 Purchasing Management 3 cr
See Marketing Curriculum

TECHNOLOGY MARKETING CURRICULUM
The Technology Marketing program offers a specially-designed curriculum that combines aspects of both marketing and information technology. Not only will students gain an understanding of analysis and design, computer hardware concepts, database applications and networks, but they will also become skilled in applying marketing concepts, sales and market research techniques and in new product development. This unique combination is designed to enhance students' career opportunities in the information technology field and is especially applicable for those interested in business consulting and/or the marketing of high tech products in established or start-up technology companies. For a concentration in Technology Marketing, students must complete eight of the following nine courses. Students must also take either COSC 101 Basic Programming or COSC 150 Computer Programming C++ in their freshman or sophomore year.

COURSE PREREQUISITES - see p 106

373 Sales Administration 3 cr
See Marketing Curriculum

374 Research Applications in Marketing 3 cr
See Marketing Curriculum

385 Computer Systems 3 cr
See IT Curriculum

471 Services Marketing 3 cr
See Marketing Curriculum

476 Product Management 3 cr
See Marketing Curriculum

481 Systems Analysis and Design 3 cr
See IT Curriculum

482 Database Management 3 cr
See IT Curriculum

484 Networks and Telecommunication 3 cr
See IT Curriculum

486 Electronic Commerce 3 cr
See IT Curriculum

488 Electronic Commerce 3 cr
See IT Curriculum

SCHOOL OF EDUCATION

School of Education
http://www.education.duq.edu

Administration
Dean
James E. Henderson, Ed D
Chair, Department of Instruction and Leadership in Education
William P. Barone, Ph D
Chair, Department of Foundations and Leadership
Susan M. Brookhart, Ph D
Chair, Department of Counseling, Psychology, and Special Education
Joseph F. Maola, Ph D
Director, Office of Educational Services
George J. Szymanski, Ph D

HISTORY
The School of Education was founded in 1929. In that year, the newly organized School of Education granted its first degree in Elementary Education. The following programs have since been approved for certification by the Department of Education of the Commonwealth of Pennsylvania:


SELECTION AND ADMISSION TO THE SCHOOL OF EDUCATION
Candidates who desire to become teachers are admitted to the School of Education through the University Office of Admissions. Apply to the Dean of Admissions, Duquesne University, Pittsburgh, PA 15282. During the first two years of study, the curriculum is devoted to broad learnings in general and professional education. Students are expected to demonstrate personal and professional characteristics, attitudes, and competencies that will recommend them as worthy candidates for the teaching profession.

ADMISSION TO THE PROFESSIONAL EDUCATOR CERTIFICATION TRACK
Candidates are formally admitted to the Professional Educator Certification Track after completion of four semesters of full-time or full-time equivalent (60 credits) of college level study. Candidates will be admitted to the Professional Educator Certification Track with a minimum grade point average of 3.0 in each of three areas: General Education Core, Foundations of the Leading Teacher Program and Academic Cognate for Early Childhood and Elementary Education students or Academic Major for Secondary Education students. The Student Standing Committee may accept a limited number of candidates for admission to the certification program who do not meet the minimum GPA. If exceptional circumstances justify admission, Checkpoints and Gateways. The Leading Teacher Program (LTP) provides students with checkpoints and gateways to insure their success in fulfilling the requirements of the Professional Educator Certification Program. Checkpoints are formative in nature and are provided to assist students in assessing their progress toward completion of the program. Gateways are summative in nature, include checkpoint requirements, and must be achieved in order to progress to the next stage of the program. The Pennsylvania Department of Education has periodically changed the Praxis Tests required for state certification.

Semester One
Checkpoint: Act 33 & 34 Clearances, Speech and Language screening, Assessment of language arts and mathematics skills.

Semester Two
Checkpoint: Oral and written demonstration of skills to Foundations' faculty.

Semester Three
Checkpoint: Praxis Pre-Professional Skills Tests for Reading, Writing, Listening and Mathematics. All K-6 and K-12 certification areas require Elementary School Content Knowledge.

Semester Four
Gateway: Formal approval of application to the Professional Educator Certification Track. Minimum 30 QPA in General Education Core, Leading Teacher Program and cognate or academic major.

Semester Five
Checkpoint: None.

Semester Six
Checkpoint: Praxis Principles of Teaching and Learning.
Gateway: Formal application and recommendation for student teaching. Minimum 30 QPA in General Education Core, Leading Teacher Program and cognate or academic major.

Semester Seven
Checkpoint: Placement for student teaching finalized by Office of Educational Services.

Semester Eight
Checkpoint: Praxis for Specialty Area Examinations.
Gateway: Formal application to Certification Committee for recommendation for graduation and/or certification to the Dean of the School of Education.
PROGRAMS
The School of Education offers undergraduate programs approved by the Pennsylvania Department of Education for the preparation of Early Childhood, Elementary and Secondary Education (English, English/Communications, Spanish, Latin, Mathematics, Social Studies and Science) teachers.

Special Education: The Leading Teacher Program (LTP) is based on a curricular infusion model that provides all education majors with significant preparation in adapting instruction to meet the needs of students with learning and behavior challenges. This model reflects best practice in collaborative partnerships and the knowledge and competencies necessary for educating students with disabilities in the nation’s schools. This preparation is transcribed as special education course credits (EDLTD) in Foundations and in each of the three certification programs. Students interested in adding certification in special education may enroll in a one-year Master of Education LTP in Special Education if they are graduates of the Duquesne University baccalaureate LTP program in Early Childhood, Elementary, or Secondary Education and hold an Instructional I Teaching Certificate.

The Early Childhood, Elementary, and Secondary Education programs, in accord with the philosophy and objectives of the School of Education, offer students opportunities to qualify for:
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 Education offers the Bachelor of Science in Education degree.

THE LEADING TEACHER PROGRAM
The School of Education at Duquesne University aspires to become “Home of the Nation’s Leading Teachers.” The Leading Teacher Program meets the standards of excellence for the practice of teaching in the 21st century. Aspiring teachers are challenged throughout the Leading Teacher Program to develop beginning expertise in the critical aspects of becoming a leading teacher and to pursue continuous improvement in the following domains:

Domain I - Becoming a Learning Theorist — this domain emphasizes understanding of pedagogy and the cognitive and affective processes that will address the learning needs of people of all ages.

Domain II - Becoming a Curriculum Designer — this domain emphasizes curricular decisions based on research theory, informed practice, and recommendations of the learned societies.

Domain III - Becoming an Expert in School Context — this domain explores the intellectual, ethical, cultural, economic, political, and government influences upon schools including traditional and emerging perspectives.

Domain IV - Becoming a Master Practitioner — this domain develops competence in instructional strategies, technology, reflective practice, school-community-professional linkages, and academic training.

Domain V - Becoming an Instructional Leader — this domain emphasizes the leader and knowledge of self in relationship with the group and the relationship with the community and society.

Additionally, learning experiences that reflect the themes of leadership, diversity, and technology are infused throughout the Leading Teacher Program.

Leadership: A leading teacher is a lifelong learner, inspiring a community of learners to pursue continuous improvement and growth.

Diversity: A leading teacher is an advocate, creating learning experiences that demonstrate sensitivity, acknowledging students of all abilities and valuing human differences.

Technology: A leading teacher is an architect building learning environments that acknowledge and incorporate the power of technology.

Four major curriculum components comprise The Leading Teacher Program: General Education Core, Academic Cognate/Academic Major, Foundations of the Leading Teacher Program, and Professional Educator Certification Track. The students in the School of Education must also comply with all Pennsylvania Department of Education requirements and will be notified of any modifications regarding entrance into the programs of study. The Undergraduate Advisors and Program Coordinators make the program requirements known to students.

General Education Core: The University and the School of Education require completion of general education courses in humanities, social sciences, natural and behavioral sciences, and theology. Generally, thirty-nine credits of general education are completed during the first two years of study for Early Childhood and Elementary majors. There are slight variations in Secondary Education depending on the specific academic major. Students must consult their advisor for program specific requirements. General Education courses include: Thinking and Writing, Imaginative Literature and Critical Writing, 6 credits of English electives, Problem Solving, Soc/Pol/Econ Systems, Shaping of the Modern World, Arts and the Human Experience, Historical Geography or Human Geography and Geology, Education Core Chemistry, Core Physics, Core Earth Science, Evolution of Modern Science, Basic Philosophical Questions and Core Theology.

Academic Cognate/Academic Major: Students enrolled in the Early Childhood and Elementary certification tracks are required to pursue a 15 credit academic cognate to enhance their knowledge base and competency in a specific academic area. Cognates are available in the following disciplines: Mathematics and Computer Science, Science, Social Sciences, History, English, and Communications, Humanities and Foreign Languages.

Subjects enrolled in a Secondary Education certification track utilize elective credits to build the academic major required for certification in the Commonwealth of Pennsylvania. The academic component includes at least 36 credit hours in the specific content area.

Foundations of the Leading Teacher Program: Students are introduced to the Leading Teacher Program and the teaching profession through learning experiences built around the five domains of learning and the three themes. One credit courses in special education and technology are infused into the Foundations of the Leading Teacher Program. The course content is taught concurrently with the foundations courses in an integrated fashion. At the conclusion of the foundations portion of the Leading Teacher Program, aspiring teachers must demonstrate their readiness to be accepted into one of the three Professional Educator Certification Tracks (Early Childhood, Elementary, or Secondary).

The following course of study is required of all education majors:

Semester 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDLTF 101</td>
<td>Orientation to the LTP</td>
<td>2</td>
</tr>
<tr>
<td>EDLTF 102</td>
<td>Context of the Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>EDLTF 181</td>
<td>EDLTF 182</td>
<td>Cohort Experience</td>
</tr>
</tbody>
</table>

Semester 2

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<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>EDLTF 103</td>
<td>Instructional Technology I</td>
<td>1</td>
</tr>
<tr>
<td>EDLTF 181</td>
<td>EDLTF 182</td>
<td>Cohort Experience</td>
</tr>
</tbody>
</table>

Semester 3

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EDLTF 104</td>
<td>EDLTF 105, 181, 182</td>
<td>Field Experience</td>
</tr>
<tr>
<td>EDLTF 181</td>
<td>EDLTF 182</td>
<td>Cohort Experience</td>
</tr>
</tbody>
</table>

Semester 4

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<tr>
<th>Course</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDLTF 181</td>
<td>EDLTF 182</td>
<td>EDLTF 183</td>
</tr>
</tbody>
</table>

The School has also developed broad and diversified professional laboratory experiences designed to provide opportunities for observing and working with children and youth, beginning the second semester of full-time study. These experiences include planned observations in public and private schools, agencies, institutions and educational settings. The teacher aide and tutorial experiences are provided in urban, suburban, rural and international settings. All of these experiences are completed under professional supervision from the University and from the public or private school or off-campus agency.

Course Descriptions - Foundations of the Leading Teacher Program

EDLTF 101 Orientation to the LTP 2 cr

Orients aspiring teachers to the organizational structures, the professional challenges, and learning opportunities of the Leading Teacher Program. Introduces aspiring teachers to the domains of learning and associated competencies as well as the themes that will frame their documentation of learning and continuous improvement.

EDLTF 102 Instructional Technology I 1 cr

Introduces the teacher to the skills required for modeling and demonstrating technologies for the classroom. Competencies center on the use of technology to communicate and interact with peers and colleagues and include an orientation to personal computers and the campus network, electronic mail, word processing, graphics presentation, and the uses of the Internet for exploration and research.

EDLTF 181, 182, 281, 282 Cohort Experience 0 cr

Aspiring teachers will participate in regularly scheduled cohort meetings. The cohort experience provides opportunities for communication and mentoring with faculty and fellow students. Activities are designed to facilitate reflection on personal and interpersonal development and progress through the Leading Teacher Program.

EDLTF 102 Context of the Teaching Profession 3 cr

Focuses learning on the history of schooling, as a function of society, the political interests of the state in the education of its citizens, and the legal dimension of education. The course is designed to afford aspiring teachers learning opportunities to understand the organizational culture of the professional career they are contemplating.

EDLTF 181 Instructional Technology II 1 cr

Provides the aspiring teacher with the set of technology-based tools required to integrate technology into the curriculum. Advanced features of word processing, graphics presentation, and the Internet are presented. In addition, online lesson plans, content-rich images, and related digitized...
resource materials are harvested from the World Wide Web and incorporated into classroom-ready instructional materials.

EDLTD 102 Historical & Legal Foundations of Special Education 1 cr

Chronicles the historical and sociological development of the field of special education with a focus on the legal foundations for educating students with diverse learning and behavior needs. Inclusive educational practice as it relates to the principle of least restrictive environment will be introduced and students will identify a variety of school/community resources and services available for individuals with disabilities.

EDLTD 192 Field Experience 1 cr

Provides an opportunity for students to reflect critically on their developing knowledge base and their practical experiences. This experience is designed to foster personal as well as professional growth. Emphasis of this first field experience is an urban context.

EDLTD 201W Ed Psych I Learning, Development & Motivation 3 cr

Provides opportunities to reveal and examine assumptions underlying the teaching-learning process. Key theoretical principles in human development, learning, and motivation are studied in an effort to evaluate theory for its relevance to, and operation in, classroom practice. Writing is used extensively to enhance learning and, therefore, quality of writing is assessed throughout the course.

EDLTD 201 Characteristics of Persons with Disabilities 1 cr

Provides opportunities to examine the types and nature of disabilities from the perspective of normal growth and development and the impact on designing instruction and therapeutic support. Students will be introduced to the process of selecting appropriate adaptive strategies for including students with diverse learning needs in general education programs.

EDLTD 291, 292 Field Experience 1 cr

Provides additional opportunity for students to reflect critically on their developing knowledge base and practical experiences. This seminar fosters personal and professional growth to prepare students for admission to the Professional Educator Certification Track.

EDLTD 202W Ed Psych II Classroom Leadership, Assessment & Evaluation 3 cr

This course is a continuation of the learning opportunities from EDLTD 201W. The assumptions underlying the teaching-learning process remain a focus of study. Key theoretical principles in classroom leadership, assessment, and evaluation are examined to determine how relevant theory operates in effective practice. Writing is used extensively to enhance learning and, therefore, quality of writing is assessed throughout the course. (EDLTD 201W is a prerequisite for EDLTD 202W.)

EDLTD 202 Critical Issues in Special Ed 1 cr

Investigates the skills required for collaboration in the team decision-making process with parents, teachers, administrators, and community agencies. Focuses on building family partnerships, effective communication, and developing instructional and behavioral supports for students with diverse learning and behavior needs based on individualized assessments.

Professional Educator Certification Track Students must apply for acceptance to the Professional Educator Certification Track before scheduling coursework. Specialized courses provide preparation in teaching techniques and methods required for specific concentrations — early childhood, elementary, or secondary education. To provide students with the most relevant professional training, curriculum requirements and/or prerequisite requirements are subject to change by the Pennsylvania Department of Education or the faculty at any time. Changes may affect students’ programs of study.

CERTIFICATION TRACKS IN THE LEADING TEACHER PROGRAM

EARLY CHILDHOOD EDUCATION The Leading Teacher Program (LTP) in Early Childhood Education is designed to prepare leading teachers for early childhood education. Students will focus on adaptations in literacy assessment and teaching methodologies. Through the program, students will have the opportunity to develop professional and personal competencies through experiences that are both theoretical and applied in our nation’s schools.

The Early Childhood Education Program is guided by Pennsylvania state standards and by standards of national professional organizations. Students will address national and state standards in each of the early childhood school curriculum areas through course projects and will implement the standards in their fieldwork. All of the experiences in the Early Childhood Education program reflect the themes of leadership, diversity, and technology and are based on the five domains of the Leading Teacher Program.

The Early Childhood Education Program is a 130-credit program that consists of courses and experiences organized into four major areas of study: General Education - 39 credits, Academic Cognate - 15 credits, Foundations of Education - 19 credits, Professional Preparation - 51 credits, and Electives - 6 credits. Students in the Early Childhood Certificate Program concentrate studies in the General Education Core, Foundations of the LTP and Cognate Studies during the first four semesters.

Details are provided in the description of the Foundations of The Leading Teacher Program.

Course Descriptions — Early Childhood Education

Early Childhood majors will work with Elementary Education majors, but will focus on grades N-3. Each cohort will rotate through a sequence of the focused semesters.

EDLTD 201 Orientation to Early Childhood Education 3 cr

This course provides an overview of early childhood education and explores the ways teachers can nurture and challenge the whole child (physically, socially, emotionally, and cognitively) by providing developmentally appropriate practices.

EDLTD 202 Child Development Birth-8 3 cr

In-depth examination of the development of the child from birth through eight years of age in physical, social, emotional and cognitive years of growth. Emphasis is given to application of theoretical principles, as well as techniques for observing and assessing growth and development.

EDLTD 301W Literacy 7 cr

The Literacy semester merges the areas of reading instruction, language arts education, and children's literature for grades N-3. Students will participate in three instructional modules and will be assigned to a local school to do field work focusing on literacy. Writing is used extensively to enhance learning and, therefore, quality of writing is assessed throughout the course.

Module 1 focuses on N-3 student learning outcomes and the knowledge base that beginning leading teachers must have in order to facilitate learning in N-3 classrooms.

Module 2 is delivered in school settings, or in similar organizations, such as local literacy support agencies, the School of Education Reading Clinic, and the Saturday tutorial services offered through the University Learning Skills Center for urban students.

In this module, students compare local instructional practices in literacy with regional and national initiatives and, teach individuals, small groups, or whole classes. The focus is on instructional planning, instructional practice, and formative evaluation.

Module 3 addresses the service of reading, language arts, and related curriculum to all aspects of pre-school and primary years education including the relationship of literacy to other areas of the school curriculum. Thematic instruction, projects, and interdisciplinary activities are referenced to scholarly research. Students will be linked through technology to regional, national and international schools and to expert practitioners found in local school districts.

EDLTD 391 Literacy Field Work 1 cr

Students complete local instructional practices in literacy with regional and national initiatives, and teach individuals, small groups, or whole classes.

EDLTD 330 Academic Cognate 9 cr

The focus is on instructional planning, instructional practice, and formative evaluation.

EDLTD 330 Literacy Academic Adaptations 1 cr

Students complete local instructional practices in literacy with regional and national initiatives, and teach individuals, small groups, or whole classes.

The focus is on instructional planning, instructional practice, and formative evaluation.

EDLTD 391 Literacy Field Work 1 cr

Students complete local instructional practices in literacy with regional and national initiatives, and teach individuals, small groups, or whole classes.

The focus is on instructional planning, instructional practice, and formative evaluation.

EDLTD 330 Academic Adaptations 1 cr

Students complete local instructional practices in literacy with regional and national initiatives, and teach individuals, small groups, or whole classes.

The focus is on instructional planning, instructional practice, and formative evaluation.
Knowing Students as Learners of Mathematics

Students will develop knowledge of:
- research on how children learn mathematics,
- the effects of children's age, abilities, interests, and experience on learning mathematics,
- the influence of linguistic, ethnic, racial, and socioeconomic backgrounds and gender on learning mathematics,
- ways to affirm and support full participation and continued study of mathematics by all children.

EDLTE 393 Mathematical Pedagogy

Students will develop knowledge and ability to use:
- instructional materials and resources,
- ways to represent mathematics concepts and procedures,
- instructional strategies and classroom organization models,
- ways to promote discourse and foster a sense of mathematical community,
- means for assessing student understanding of mathematics.

EDLTE 392 Numeracy Field Work

Students will apply knowledge of mathematics, school mathematics, and mathematics pedagogy in an N-3 school setting.

EDLTE 335 Numeracy Academic Adaptations

Students will focus on adaptations in numeracy assessment, curriculum, and instructional strategies for students with learning differences.

EDLTE 401 Educated Citizensry

The Educated Citizensry semester will focus on educational study and experiences integrating science, social studies, and the performing arts in grades N-3 and their impact on individuals and communities. The first third of the semester will concentrate on developing inquiry skills. The second third of the semester will concentrate on doing an investigation with emphasis on integrated content. The last third of the semester will concentrate on classroom teaching.

EDLTE 491 Educated Citizensry Field Work

Students will demonstrate the application of inquiry skills, planning, and implementation of integrated investigations, and classroom teaching skills in schools, museums, and other educational facilities.

EDLTE 430 Educated Citizensry

Adaptations

Students will focus on adaptations in science, social studies, and the performing arts, specifically in assessment, curriculum, and instructional strategies for students with learning differences.

EDLTE 402 Senior Seminar

Senior Seminar is an opportunity for Leading Teacher candidates to review issues in teaching in early childhood settings and to present their Leading Teacher platforms.

EDLTE 492 Student Teaching — Early Childhood

Student teaching is a fifteen-week experience shared between an approved primary elementary (K-3) classroom setting and a NAYC (National Association for Young Children) supervised private school under the direct supervision of a cooperating teacher and a University supervisor.

EDLTE 493 Student Teaching — Early Childhood

Student teaching is a ten-week experience in Early Childhood and a ten-week experience in Elementary or Secondary Education or International. This course is for students who will complete the requirements in two certification areas. Registration is concurrent with 493 in another program.

ELEMENTARY EDUCATION

The Leading Teacher Program (LTP) in Elementary Education is designed to prepare leading teachers for elementary schools, classrooms in their own school's systems. Throughout the program, students will have the opportunity to develop professional and personal competence by participating in experiences that are both theoretical and applied in local, national, and international settings. All students will complete a core of experiences in teaching methodology and will participate in guided fieldwork. Students have options to distinguish themselves through independent research and/or international study and teaching opportunities.

The Elementary Education program is guided by Pennsylvania state standards and by standards of national professional organizations. Students will address professional standards in each of the elementary school curriculum areas through course projects and will implement the standards in their fieldwork. All of the experiences in the elementary education program reflect the themes of leadership, diversity, and technology and are based on the five domains of the Leading Teacher Program.

The Elementary Education program is a 130 credit program that consists of courses and experiences organized into four major areas of study: General Education - 30 credits, Academic Cognate - 15 credits, Foundations of Education - 19 credits, Professional Preparation - 51 credits, and Electives - 6 credits. Students in the elementary certification program concentrate studies in the General Education Core, Foundations of the LTP and Cognate Studies during the first four semesters. Details are provided in the description of the Foundations of the Leading Teacher Program.

Course | Course Title | Credits
--------|--------------|--------
EDLTE 393 | Numeracy Academic Adaptations | 1
EDLTE 401 | Educated Citizensry | 10
EDLTE 491 | Educated Citizensry Field Work | 1
EDLTE 430 | Educated Citizensry Academic Adaptations | 1
EDLTE 335 | Numeracy | 10
EDLTE 392 | Numeracy Field Work | 1

Semester 8

Professional Preparation

EDLTE 492 | Student Teaching | 12
EDLTE 402 | Senior Seminar | 3

Electives 6 credits

Students may register for 6 credits from the following areas: International Studies, Instructional Technology, Cognate Studies, Leadership Studies, or Independent Research. Students can complete electives during semesters 5-7 or summer sessions.

Course Descriptions — Elementary Education

Elementary Education majors will be divided into three cohorts. Each cohort will rotate through a sequence of the focused semesters.

EDLTE 301W Literacy

The Literacy semester merges the areas of reading instruction, language arts education, and children's literature for grades N-8. Students will participate in three instructional modules and will be assigned to a local school to do field work focusing on literacy. Writing is used extensively to enhance learning and, therefore, delivery of writing is assessed throughout the course.

Module 1 focuses on N-8 student learning outcomes and the knowledge base that beginning leading teachers must have in order to facilitate learning in N-8 classrooms.

Module 2 is delivered in school settings, or in similar organizations such as local literacy support agencies, the School of Education Reading Clinic, and the Saturday Tutorial Service offered through the University Learning Skills Center for urban students. In this module, students compare local instructional practices in literacy with regional and national initiatives, and teach individuals, small groups, or whole classes. The focus is on instructional planning, instructional practice, and formative evaluation.

Module 3 addresses the service of reading, language arts and related literature to all aspects of pre-school, elementary, and middle years education including the relationship of literacy to other areas of the school curriculum,Thematic instruction, projects, and interdisciplinary activities are referenced to scholarly research. Students will be linked through technology to regional, national, and international organizations, or summer sessions.

EDLTE 391 Literacy Field Work

Students will focus on adaptations in numeracy assessment, curriculum, and instructional strategies for students with learning differences.
The Educated Citizenry semester will focus on communities. The first third of the semester will be dedicated to educational studies and experiences integrating classroom teaching. The last third of the semester will concentrate on investigation with emphasis on integrated content, studies, and the performing arts, specifically in schools, museums, and other educational facilities.

EDLTD 430 Educated Citizenry
Academic Adaptations 1 cr
Students will focus on adaptations in science, social studies, and the performing arts, specifically in assessment, curriculum, and instructional strategies for students with learning differences.

EDLTD 402 Senior Seminar
Senior Seminar is an opportunity for Leading Teacher candidates to review issues in teaching in the elementary school and to present their Leading Teacher platforms.

EDLTD 491 Educated Citizenry — Elementary 12 cr
Student teaching is a fifteen-week experience in an approved elementary school or middle school under the direct supervision of a cooperating teacher and a University supervisor.

EDLTD 493 Student Teaching — Elementary 6 cr
Student teaching is a ten-week experience in Elementary and a ten-week experience in Early Childhood, Secondary Education or International. This course is for students who will complete the requirements in two certification areas. Registration is concurrent with 493 in another program.

SECONDARY EDUCATION
The Secondary Education major prepares students to teach in the middle schools, junior high schools and high schools of Pennsylvania. It combines professional education with an academic major in English, English/Communications, Foreign Language (Spanish or Latin), Mathematics, Social Studies (History or Political Science) and Science. Students interested in a science major will participate in an integrated program that will result in a bachelor's degree in one of the sciences and a Master's of Science Degree in Education. This program will typically take five academic years and a summer to complete.

Course Descriptions — Secondary Education
EDLTS 336 Teaching Mathematics Gr. 5-8 3 cr
Examines mathematical concepts and skills taught in grades 5-8, teaching strategies and methods that foster reasoning and mathematical thinking.

EDLTS 341 Teaching Secondary Mathematics 3 cr
Explores methods, strategies, and content of secondary mathematics with emphasis on problem solving and technology.

EDLTS 342 Teaching Secondary Science 3 cr
Explores methods, strategies, and content of secondary science, with emphasis on discovery, inquiry, and technology.

EDLTS 343 Teaching Secondary English and Communication 3 cr
Examines various ways to teach grammar, language, and composition, provides opportunity for students to review the basics of grammar and composition and to develop lessons for teaching at the secondary level and in special education.

EDLTS 345 Teaching Secondary Foreign Languages 3 cr
Explores a variety of approaches for teaching foreign languages, expanding the range of services needed for students with learning and behavior challenges in secondary schools, and the development of technology competencies with and without learning differences.

EDLTS 347 Teaching Secondary Social Studies 3 cr
This is a competency-based experience for social studies/history majors that develops evaluation skills, knowledge of curricula, media and technological tools, and methods, expands planning and questioning skills.

EDLTS 348 Adaptive Strategies for Secondary Inclusive Programs 3 cr
Explores the range of services needed for students with learning and behavior challenges in secondary education programs. Students will develop skills in the process of selecting adaptations in content area instruction, and in teaching effective study skills and learning strategies across the curriculum. The process of planning for transition to adult life will be investigated, as well as strategies for facilitating effective social skills development. Applications of computer and assistive technology for students with challenges will be addressed.

EDLTS 391, 392, 491 Field Experience 1 cr
Continues the opportunities for students to reflect critically on their developing knowledge base and practical experiences. These seminars are designed to foster personal and professional growth in preparation for student teaching and entry into the teaching profession.

EDLTS 480 Senior Leadership Seminar 3 cr
An elective experience in which seniors engage in an in-depth investigation or pursue a special project related to their leadership development. Requires sponsorship by an instructor and approval of the Chairman.

EDLTS 493 Student Teaching — Secondary 6 cr
Student teaching is a fifteen-week experience in an approved secondary school under the direct supervision of a cooperating teacher and a University supervisor.

EDLTS 495 Student Teaching — Secondary 12 cr
Student teaching in secondary education for students who wish to complete requirements in two certification areas. The student teaching experience is two, ten-week assignments. Registration is concurrent with EDLTS 493, EDLTS 493 or International Study.

EDLTS 301 Instructional Technology III Text-Based Instruction 3 cr
Examines the design, integration and evaluation of text-based printed and graphics materials including content-specific handouts, student workbooks, and lesson study guides. In addition, students prepare comprehensive curriculum-based lessons using a variety of commonly accepted instructional technologies, including digitized resources found on the most acknowledged educational sites on the Internet. These resources will be firmly grounded in accepted academic standards and assessed. Upon completion of the course, approved materials are uploaded to the School of Education server for access by practicing teachers.

EDLTS 302 Instructional Technology IV Visual-Based Instruction 3 cr
Increases the level of technology competencies with an examination of visual-based instructional materials including age-appropriate classroom presentations, interactive instructional media, and professional development portfolios. Students complete a visual-based unit of instruction and present their results in a typical classroom environment. Upon completion of the course, approved presentations are uploaded to the School of Education server for access by practicing teachers. They also create a computer-based portfolio depicting notable educational achievements, suitable for presentation during formal interviews.

EDLTS 303 Instructional Technology V Web-Based Instruction (Elective) 3 cr
Completes the journey into Instructional Technology with an examination of the design and implementation of Web-Based Instruction. Students compose a personal home page and several phototype course web pages supporting different academic disciplines Internal (student-made) and external (Internet-ready) links to the Web are incorporated into the pages after considerable research of content material. Upon completion of the course, approved web pages are uploaded to the School of Education server for access by practicing teachers.
INTERNATIONAL STUDY IN EDUCATION

The School of Education offers opportunities for students to earn credits toward a degree while traveling and studying in international settings. There are three categories of international study: 1-6 week summer courses, 10 week student teaching placements, and semesters abroad. Summer courses are held in England and Europe, China, Costa Rico, Israel, Belize and Italy. Ten weeks of student teaching can be completed in Ireland, England, Puerto Rico, and Spain. Semesters abroad can be arranged in Ireland. For the most up-to-date information on opportunities to study abroad, contact the Office of International Studies in the School of Education.

DUAL DEGREE PROGRAMS

B.S. Education and B.S./B.A. Mathematics

The School of Education and the College of Liberal Arts (Department of Mathematics) have approved a program of studies leading to a B.S. in Education and a B.A. in Mathematics. The program provides an option for students seeking to be certified on the secondary level in mathematics while completing a Bachelor's degree in mathematics. It is a rigorous program, which requires that the student maintain a minimum grade point average of 3.0 in general education courses, 3.0 in mathematics courses, and a 3.0 in Foundations of The Leading Teacher Program and the Professional Educator Certification Track. The program can be completed in 4 academic years and one summer session. Students wishing to graduate with two Bachelor's degrees (B.S. in Education and B.A. in Mathematics) would register simultaneously in the School of Education and the College of Liberal Arts and would be assigned an advisor from each school. Requirements for teacher certification in Pennsylvania as specified in the catalog must be met to receive a School recommendation for state certification. Similar programs with dual Bachelor degrees include:

B.S. Education and B.A. English
B.S. Education and B.A. Communications
B.S. Education and B.A. Spanish
B.S. Education and B.A. Latin

Similar dual degree programs with Bachelor and Master degrees include:

B.S. Science and M.S. Education
B.S. Athletic Training and M.S. Education
B.S. Physical Therapy and M.S. Education

MUSIC EDUCATION

The School of Music determines general and professional coursework and professional education courses required for this program.

SPEECH AND LANGUAGE PATHOLOGY IN EDUCATION

The School of Education, in cooperation with the Rangos School of Health Sciences, provides coursework for students majoring in speech-language pathology to obtain Pennsylvania state certification as teachers of Speech and Language Impaired.

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 settings for a full semester in the senior year. Students must make application and satisfy specific requirements for student teaching as outlined in the School of Education Handbook.

TEACHER CERTIFICATION

The School of Education has been approved by the Pennsylvania Department of Education to offer coursework 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 the State of Pennsylvania. In order for a student to be eligible for certification, the following requirements must be met:

1. Completion of all course work with a cumulative grade point average of 3.0
2. Successful completion of student teaching
3. Completion of all requirements for the Bachelor of Science in Education degree
4. Completion of the application for certification
5. Recommendation of the Dean of the School of Education
6. Successful completion of Praxis tests as required by the Pennsylvania Department of Education

Note: Praxis scores are valid for a period of five years; however, the Pennsylvania Department of Education may choose to increase the passing scores. Students must meet the criterion score in effect on the date of application for certification.

The requirements for certification are established by the Pennsylvania Department of Education. Students must meet the requirements established by the state at the time of application for certification.

DUAL CERTIFICATION

Through advisement, a student may complete requirements in two certification areas, such as Elementary/Early Childhood or Elementary/Secondary. Such programs require additional coursework to meet standards promulgated by the Pennsylvania Department of Education. Ten weeks of student teaching in both areas is required after all coursework is completed.
MARY PAPPERT SCHOOL OF MUSIC

PHILOSOPHY AND OBJECTIVES

The Mary Pappert School of Music offers a comprehensive musical education in tune with the realities of the times. Overlooking the City of Pittsburgh with its unique blend of old and new, with its thriving cultural life, the campus itself symbolizes the goal development of a well rounded professional musician who is well equipped to contribute to the contemporary musical world.

To meet that goal, the Mary Pappert School of Music aims to develop in each student the highest abilities of individual performance informed by current music scholarship. Music studies at Duquesne are enriched by the core curriculum, a sequence of courses which place music studies within a broader cultural context.

Duquesne maintains a commitment to the new and innovative — to the proposition that music is ever alive and always changing, that the musician of the future must be versatile and adaptable. This philosophy is evidenced in the various programs and offerings available to students, from traditional studies in music to focus on contemporary music and the role of current technology in the life of a twenty-first century musician.

To that end, the Mary Pappert School of Music offers students an education for the 21st century rooted in the traditions of historical thought.

ADMISSION

Students who wish to major in music should apply through the Office of Admissions. Following this, 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 individualural test. Students requesting scholarship assistance should apply through Financial Aid. 

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 aural skills prior to entrance. If deficiencies exist in any of these areas, prerequisite courses may be required at the discretion of the audition committee. Visit to classes and personal interviews with the applied music staff are encouraged strongly and may be arranged by calling (412) 396-5064.

DEGREES

Undergraduate music students enroll in one of four degree programs: the Bachelor of Music degree, the Bachelor of Music in Music Technology 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, or opera, enroll in the Bachelor of Music degree program. Students interested in teaching in a private studio situation or at the college level, as well as preparing for careers in music ministry, also enroll in this program. Students planning music technology careers, whether in sound recording, electronic composition, or electronic performance enroll in the Bachelor of Music in Music Technology 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 in Music Technology degree program major in piano, organ, voice, orchestral instruments, guitar, sound recording or music 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 Music Technology Center
A multipurpose learning facility containing ten Power Mac workstations A/V and CD ROM, Macromind Director, Multimedia capabilities with scanners and digital audio stations, eighteen Korg Trinity workstations, Korg GEC-16 stereo communication system, Moog Rogue, Mark of The Unicorn's MIDI express, Performer, Coda's Finale, G-Vox guitar software, Fender guitars/amps/basses and PA equipment student sign-out, Fender Heartfield six-string bass

STUDENT ORGANIZATIONS
A chapter of the national music organization Mu Phi Epsilon contributes substantially to the students' professional and social development. The Music Education National, the Audio Engineering Society, the National Association for Music Therapy, and the American Choral Directors Association. A chapter of Phi Kappa Lambda, the national music honor society, was installed in March, 1988

HONOR AWARDS
The Seibert Medal is presented to a senior for excellence in violin or piano upon recommendation of department committee
Andre Martzhal 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. Cornelius Piano Performance Award is presented annually to an 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, Richard Gray Award for Outstanding Service are presented by the Music Technology department to graduating senior students

MUSIC EDUCATION
Admission and Retention in the Music Ed Program Students are admitted to the school through the formal application and audition process, but are admitted provisionally to the certification program After the first year, students who earn a 2.7 cumulative GPA, with minimum B- grades in all music classes, pass the Communications and General Knowledge parts of the standardized Praxis Exam and complete a favorable interview with department staff may be admitted formally into the program Additional evaluations and proficiency exams are administered over the next several semesters Those who are successful may apply for student teaching. The remaining Praxis exams must be completed prior to recommendation for certification

Certification
Students who successfully complete the entire battery of preparatory and achieve satisfactory scores on the Praxis Exam may apply for Pennsylvania teachers certification, Instructional Level I, Music, K-12. The teacher training curriculum offered by Duquesne prepares students to teach both vocal and instrumental music at all age levels. Permanent certification is awarded after completion of 24 postgraduate credits and three successful years of teaching within a six year period

Curriculum
Students complete 132 credits distributed in the areas of music, professional education, and general education. These include 28 credits of core music majors, 12 credits of core music classes, 12 credits of core music education classes, 12 credits of core music general education classes, and 90 credits of electives. Students may request the applied music teacher of their choice. All students learn the use of the up-to-date technology in state-of-the-art computers and music labs

Professional education classes include five sequential semesters of methods classes based on the National Standards for Music Education and educational psychology. These provide an introduction to several specialized methodologies, including Kodaly Orff Dalcroze and Music Learning Theory as well as more traditional approaches to teaching Clincial experiences begin during the first year and continue throughout the program, culminating in a full semester of student teaching spanning grades K-12 and encompassing both vocal and instrumental music. Core education courses are designed to develop well-rounded teachers who are able to relate to their society and culture These include the 27 credits of the university core curriculum

Exceptional gifted students may apply for admission to the B S in M Ed with a performance emphasis, a 5 year program which incorporates the requirements of the B M in Performance degree It is also possible to double major with Theater and Music Technology

MUSIC EDUCATION/MUSIC THERAPY CERTIFICATION
Students completing the course work in music education receive the B S in M Ed and may be recommended for certification to the PA Department of Education Upon successful completion of the Praxis Exam, graduates may receive the Instructional Level I — Music, K-12 certificate

Selection of students for this program depends upon completion of admissions and audition procedures and an interview with a department member. Candidates are expected to demonstrate good performance skills, critical thinking, and analytical abilities, and a genuine interest in a service-oriented profession. Postgraduate certification course work in music education is available to those with B M degrees in Education, Education Audition and/or course requirements are available upon request

In order to become certified as a Music Therapist or to earn the Bachelor of Science in Music Therapy Degree, Music Therapy candidates are required to complete a structured sequence of Music Therapy courses as prescribed by the American Music Therapy Association. Upon completion of the academic requirements, a six month internship consisting of 1000 hours of clinical work under the direct supervision of a Music Therapist at an approved site is required. Completion of both the academic and the internship requirements culminates in eligibility to sit for the board certification examination.

COURSE DESCRIPTIONS

PERFORMANCE

Applied Music 1-3 cr
Private study of voice, piano, harpsichord, organ, guitar or orchestral instruments

107 Piano Accompanying 1-2 cr
This course is designed for the undergraduate with an interest in a service-oriented profession. Proper preparation of material and practice techniques are based on an understanding of human anatomy, which promotes ease and freedom of movement, balance, flexibility, and coordination

115 Alexander Technique 2 cr
This course is an introduction to the Alexander Technique, a physical technique in which students examine bodily movement patterns and identify those which are destructive or interfere with musical performance. The technique emphasizes alignment and posture, balance, flexibility, and coordination

117, 118, 119

Diction and Repertoire 2 cr each
Italian, German, French and English are offered on a rotating basis, each Spring Semester. All except English preceded by an introductory course in the fall, in the appropriate language

118 Business of Music 2 cr
This course focuses on the details of making a living in the music world. Topics include creating and maintaining a professional resume, negotiating business matters and marketing

155 Beginning Piano for Performance Majors I 2 cr
Class piano instruction in basic techniques of piano performance including scales, keyboard harmonization, and introductory score reading. MIDI piano lab equipped with music workstations, synthesizer modules, and six track recorders are used

156 Beginning Piano for Performance Majors II 2 cr
Class piano instruction in intermediate techniques of piano performance including two octave scales, keyboard harmonization of secondary chords, transposition, and score reading. Upper elementary piano literature is studied

217 Piano Ensemble 1-2 cr
This course focuses on the study and performance of literature written for various piano ensemble combinations. Works for one or two pianos will be performed

218 Performance Development for Guitar 2 cr
This course is designed for the performing musical artist, in which the emphasis is on developing the spontaneity and composure of one's self in a performing setting. Proper preparation of material and practice techniques for performance are studied. Through weekly in-class performances each student gains experience in proper recital procedure, mental focus for minimizing errors and successful artistic performances

253, 254, 255, 256
Orchestral Repertoire and Chamber Music 2 cr
An intensive study of orchestral excerpts with emphasis on style, performance practice, and audition preparation. The course includes performance of selected chamber music for various combinations of instruments

313 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 recommended

314 Piano Pedagogy II 2 cr
A survey of techniques concentrating on the techniques and materials for teaching piano at the intermediate and advanced levels

315 Pedagogy for Performance Majors 2 cr
The course is designed to provide an introduction to the elements of studio teaching. Topics will include learning theory, business considerations, pedagogical/technical approaches, and materials
321 Guitar Pedagogy 2 cr
To prepare the guitar performance student to teach individual and classroom guitar successfully.

Primary focus is the classic and jazz styles of playing, more specifically finger style and spectrum style. Concepts of anatomy and how to properly utilize our bodies with the guitar are the foundation.

Students will be exposed to available materials for teaching the guitar and proper curriculum techniques will be discussed for ensembles, development of graded musical items and the business of guitar instruction.

396 Student Recital 0 cr
This course is designed for students giving non-degree recitals.

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.

420 Performance Internship 0-12 cr
A rigorous occupational and academic opportunity for highly-qualified students to combine career goals in an individually-designed work environment. Skills in performance, research, analysis, and communication are developed under the supervision of an on-site supervisor in cooperation with a faculty member who may require an academic project.

ENSEMBLE/CHAMBER MUSIC

Required for all students as laboratory work, during most semesters of full-time enrollment. Non-music majors are invited to register for ensemble with permission of instructor.

Large Ensembles 0-1 cr each
The Large Ensembles include Wind Symphony, Orchestra, Concert Choir, Chamber Singers, and Jazz Band.

Small Ensembles 0-1 cr each
The Small Ensembles include Trombone Choir, Brass Ensemble, Guitar Ensemble, Percussion Ensemble, Jazz Ensemble, various woodwind ensembles, and Electronic Ensemble.

144 Opera Workshop 0-1 cr
A performing class in which students learn standard and other opera repertoire in the original languages.

Chamber Music 2 cr
Study and performance of all types of chamber music for various instrumental combinations including electronic.

MUSICIANSHIP

110, 112 Musicianship I and II 4 cr each
These two courses comprise the first two semesters of the seven-semester Musicianship sequence. This sequence integrates many areas of learning within music, including history and literature, solfège, aural comprehension, harmony and counterpoint, analysis and interpretation, arranging and composition, keyboard skills, and improvisation. All of these areas of music are tied together in an integrated fashion, highlighting interrelationships between the various aspects of music. Students learn about a wide variety of musical styles, including jazz, world music, and the European tradition from the Middle Ages until the present day. In these two semesters, students utilize tonal materials up to the level of the secondary dominant. Students also learn basic contrapuntal and formal techniques. The first semester includes a brief survey of music history, and the second focuses on the music of the Medieval through the mid-Baroque eras. Prerequisites: passing the entrance examinations to the Mary Pappert School of Music.

113, 114 Musicianship III and IV 4 cr each
These courses continue work in all areas started in Musicianship I and II. These semesters focus on the music of the late Baroque, Classical, and Romantic eras. Work in harmony, counterpoint, form, solfège, aural comprehension, composition, keyboard skills, and improvisation is tied to the structures encountered in the covered historical eras. Students acquire sufficient skills to analyze, interpret, sight-read, compose, arrange, and perform music in styles and forms which evolved during those eras. Prerequisites: Musicianship I.

115, 116 Musicianship V and VI 4 cr each
These courses continue work in all areas started in Musicianship I through IV. The first semester focuses on jazz, and the second semester examines music from the first half of the 20th Century. Work in harmony, form, solfège, aural comprehension, composition, keyboard skills, and improvisation is tied to the structures encountered in the covered historical eras. In the first semester, students study jazz forms, styles, arranging, and history, and acquire a working improvisational vocabulary. In the second semester, students acquire skills related to the analysis, interpretation, composition, sight-singing, and performance of music from the first half of the 20th Century. Prerequisites: Musicianship I through IV.

121, 122 Dalcroze Eurhythmics I & II 2 cr each
Experiencing, analyzing, and creatively manipulating the metric/structural and the expressive/interpretive components of music through rhythmic movement, ear-training, and improvisation.

CONDUCTING

370 Conducting I 2 cr/
An introduction to basic instrumental and choral conducting techniques with emphasis on proper conducting posture, the preparatory gesture, the release, basic beat 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 literature. Class time will be divided equally between lecture-demonstrations and practical conducting experience in a laboratory setting.

371 Conducting II 2 cr/
Instruction and application of intermediate and advanced instrumental and choral conducting techniques with emphasis on subdivision, accent and syncopation, subito dynamic change, tempo alteration, tenuto and fermata, asymmetrical meters, superimpositions, and specialized techniques for conducting contemporary, contemporary music, and musical theater. Course will include score analysis and preparation, as well as courses and methods while focusing on the standard literature. Class time will be divided equally between lecture-demonstrations and practical conducting experience in a laboratory setting.

MUSIC EDUCATION

091, 092 Fundamentals of Piano I, II 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 I but is also open to non-music majors.

101 Introduction to Music Education 1 cr
This course for music education majors is an overview of the primary facets of the profession components of music teaching, professional preparation, relation between music in the school and the community, curriculum development, performance, musicology and teaching, discipline, multicultural resources, assessment, field observation skills, inclusion and studying skills.

105, 106 Voice for Music Education I, II 1 cr each
This course teaches fundamental techniques of singing, including posture, breathing, tone, diction, expression and style. Repertoire includes folksongs, art songs and multicultural songs sung in solo, unison, duets and small ensembles. Students learn standard voice classifications taught through opera, oratorio and art song.

111W, 112W Piano for Music Education I, II 2 cr each
This course provides piano instruction in harmonic structures, improvisation, and transposition using a MIDI piano lab equipped with music workstations that consist of electronic keyboards, synthesizer modules and six-track recorders.

173 Woodwind Techniques 2 cr
This course focuses on playing skills and pedagogical applications of clarinet, flute, saxophone, oboe and bassoon. Students are expected to play each instrument and to be knowledgeable of appropriate teaching materials for each.

251 Music Ed Methods I 2 cr
This course presents an introduction to a sequence in music teacher training based upon the National Standards for Arts Education, Music Advocacy and Leadership in Arts Education. Content emphasizes early childhood development in music from pre-K to grade 2. The structure of the course is based on the Kodaly concept of music education, with singing and movement as the primary means of building a foundation for further musical learning. Students learn the basic components of effective lessons, and begin the creation of an anthology of folk songs and materials suitable for this age group. Advocacy projects in the schools comprise the field experience.

253 Music Ed Methods II 2 cr
A continuation of MEM I, with emphasis on the general music class from grades 2-4. Music learning theory is introduced as an additional pedagogy.
Traditional instruments, international folk dancing and games are included with the instructional techniques. The song anthology is expanded 15 hours of clinical experience in a school system emphasizes grades 2-4. Students begin a portfolio which will document their experiences during the entire MEM sequence.

254 Music Ed Methods III 2 cr
This course advances the sequence of the National Standards, developing tracks in general, choral, instrumental and orchestral methods for grades 5-8. Study of inclusion and assessment techniques appropriate for these grades are included. The anthology is expanded. They continue the advocacy projects, which are incorporated into the portfolio documenting the second 15 hours of clinical experiences.

256 Music Ed Methods IV 3 cr
This course focuses on grades 7-8. Emphasis is on the development of performing ensembles as well as non-performance classes and appropriate means of assessment. Students complete a third clinical experience of 15 hours. The anthology and portfolios are expanded.

258 Music Ed Methods V 3 cr
This is the final course in the MEM sequence. It structure parallels that of previous semesters, and continues the study of grades 9-12. It includes the fourth 15 hour clinical experience.

282, 283 Brass Techniques I, II 1 cr each
This course focuses on playing skills and pedagogical applications of trumpet, french horn, euphonium, trombone and tuba. Students are expected to play each instrument and to be knowledgeable of appropriate teaching materials for each.

290 Guitar Class 1 cr
An introductory course in guitar techniques for the music educator. Content includes playing skills as well as pedagogical applications for elementary, middle and high school levels, all of which align to the National Standards.

295 Classroom Instruments 1 cr
An introductory course which develops skills in recorder playing. Orff instruments, standard and non-traditional classroom instruments.

325 Marching Band Methods 1 cr
An overview of band methods with an emphasis on marching band styles.

330 Choral Materials Lab 1 cr
This lab is an appendix to the conducting class. It emphasizes the selection, analysis, score preparation and laboratory conducting of choral repertoire appropriate for various grade and proficiency levels of students.

331 Instrumental Materials Lab 1 cr
This lab is an appendix to the conducting class. It emphasizes the selection, analysis, score preparation and laboratory conducting of instrumental and orchestral materials appropriate for various grades and proficiency levels of students.

381 String techniques 2 cr
This course focuses on playing skills and pedagogical applications of violin, viola, cello and bass. Students are expected to play each instrument to be knowledgeable of appropriate teaching materials for each.

386W Children's Choir Lab 1 cr
This course provides field and clinical experiences in conjunction with three training levels of the Children's Festival Chorus, in residence at Duquesne. Students will study rehearsal techniques, group motivation, repertoire and concert production.

481 Percussion Techniques 2 cr
This course is designed to develop an introductory understanding of percussion pedagogy with special emphasis on the musical growth of elementary school age students. Secondary considerations will include percussion related information, and ideas needed to successfully conduct and train junior high and high school students in individual and Orff ensembles.

486 Clinical Experience 1 cr
This experience occurs in the senior year, opposite the student teaching semester. Students work a minimum of 15 hours in the instructional area of their choice in an approved school setting.

492 Student Teaching - Instrumental 6 cr
For the senior music education student who has completed all required music and professional education classes satisfactorily and has been recommended for student teaching. Placement is with the grade 4-12 instrumental music program in a selected school with a qualified cooperating teacher. Daily, 7 weeks.

493 Student Teaching - Choral 6 cr
For the senior music education student who has completed all required music and professional education classes satisfactorily and has been recommended for student teaching. Placement is with the grade K-12 vocal or choral music program in a selected school with a qualified cooperating teacher. Daily, 7 weeks.

MUSIC THERAPY

107W Music Therapy Orientation 3 cr

109W Music Therapy in Context 3 cr
Focus on Music Therapy methods utilized in a variety of music therapy settings. Includes assessment, planning, implementation and evaluation of sessions designed for a variety of populations.

124W Practicum 1-7 2 cr
Field placement in a clinical setting for a minimum of 15 hours per semester. Certified Music Therapists and other specially trained clinicians assist in the educational training and professional developmental growth of the student.

300W Psychology of Music Teaching and Learning 3 cr
A study of the physiological, psychological, and sociological aspects of music teaching and learning with emphasis placed on current research.

306W Influence of Music on Wellness and Healing 3 cr
An examination of the impact of music and its effects on the mind, body, and spirit healing from a holistic point of view.

309W Directed Study 2 cr
Capstone Seminar in Music Therapy research. Student selects Music Therapy topic.

315 Piano Improvisation I 2 cr
Piano Improvisation I is an open to all Music Education and Music Therapy majors. In this course students will learn basic improvisational skills and how to utilize improvisation in today’s classroom and therapeutic settings. Course Perequisite Piano for students and 2 or years of Applied Piano instruction.

317 Guitar for Music Therapy I 2 cr
The scope of this course is designed to focus on developing an introduction to the skills needed for playing the guitar in a clinical setting. Special emphasis will be placed on performance and accompanying, right and left hand techniques, fingerboard visualization, sight reading, basic improvisational tools, introduction to chord voicing rhythmic studies and an increased awareness of music interpretation.

318 Guitar for Music Therapy II 2 cr
This course continues to expand the Guitar competencies completed in Guitar I with the addition of bar chord voicing. Emphasis will also be placed on the building of clinical repertoire.

374W Music and Movement for the Exceptional Person 3 cr
This course is experiential and didactic in its approach. The rationale of using music and movement as therapeutic teaching tools to meet the developmental needs of special persons will be explored.

SACRED MUSIC

201 Sacred Choral and Solo Literature 2 cr
A survey of choral and vocal literature for the church with emphasis on practical materials for church choirs, solos, and congregations.

103 Service Playing 1-2 cr
The objective of this course is to develop the service playing skills necessary to play for church services of all denominations through a study of applied harmony, counterpoint, hymnody, anthem accompaniments, and conducting from the console. Students unable to enroll for this course will study this material in their applied music lesson.

112 Church Music Practicum 1 cr
Seminar in practical aspects of church music, establishing the music program in a church, graded choir systems, children's choirs, instruments in workshops, contracts, cantor systems, worship commissions, etc.
420 Hymnody 2 cr
A study of the church's heritage of song, the Psalms, the great hymns of the Medieval Church, the heritage of Luther, Calvin and their followers, English hymnody, American contributions, twentieth-century hymnody with special emphasis on the theological framework for each major development in the history of hymns.

421 Gregorian Chant 2 cr
The history, notation, and modal system of Gregorian chant. Class participation in the singing of chant. Chant as prayer and current liturgical application.

431, 432 Organ Improvisation 2 cr each
A practical application of the basic tools of improvisation including harmonization of melodies at the organ, two and three part counterpoint, short ABA forms, and chorale preludes with emphasis on their liturgical application.

451, 452 Organ Literature 2 cr each
A survey of organ literature and organ buildings as it relates to organ registration. First semester study of the basic concepts of organ construction both acoustically and electrically. Mathematics for Sound. subsequent Introduction to Audio and software used in the recording process. Prerequisite: Introductory course in audio and basic knowledge of music theory. Lab required. Prerequisite: Introduction to Audio II.

102 Introduction to Audio Il 2 cr
An intensive study of the commercial recording process. Intensive hands-on and production projects. Lab required. Prerequisite: Audio I.

105 Music Technology 2 cr
A continuation of the study of music technology. Foundation of the digital recording process. Covered are all aspects of the recording chain and basic procedures for the multitrack and multi-track production. Lab required. Prerequisite: Introduction to Audio II.

120 Audio Production 2 cr
Students gain experience in CEDAR (Computer Enhanced Digital Audio Restoration) techniques for the purpose of soundtrack restoration. Advanced digital audio processing and digital signal processing are covered. Prerequisite: Audio III.

200 Advanced Audio Production 2 cr
This course is designed to give hands-on experience with various audio production and mastering tools. Proper procedures in formatting and preparing projects for recording and CD production are covered. Sony 1630 operation and mastering are covered. Prerequisite: Audio IV.

311 MIDI Controller Techniques 1 cr
Students will be provided an opportunity to work as an assistant at a corporation related to the field of music technology. Prerequisite: Audio IV.

115 Computers for Musicians 2 cr
An introductory music technology course. Includes basic MIDI theory, computer notation, sequencing, Internet explorations, computer assisted instruction and computer software uses for musicians. Prerequisite: Audio Technology Internship 1-4 cr

313 Electronic Orchestration 2 cr
The study and application of unique performance techniques with electronic instruments. Through analysis of the performance of electronic instruments as well as research in the history of electronic music, students will learn to control the nuance of performance on electronic instruments and master their own instruments. Prerequisite: Computers for Musicians.
In the Fall of 1982, a new baccalaureate 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. A second degree option was initiated in August 1991. This program is designed for students who hold a baccalaureate degree in a discipline other than nursing.

In 1986, the Graduate Nursing Program was opened to offer the Master of Science in Nursing. The areas of specialization offered are Nursing Administration, with business options including the dual MSN/MBA degree, Nursing Education, and Advanced Practice Nurse-Family Nurse Practitioner. In Fall, 1994, the Graduate Nursing Program expanded to include study for the Doctor of Philosophy (Ph D) in Nursing.

To date, more than 3000 students have graduated from Duquesne's School of Nursing.

SCHOOL OF NURSING MISSION

Mission Statement

The Duquesne University School of Nursing will educate students in the art and science of nursing for the provision of ethical, holistic, culturally competent, and population-based care through a full range of course offerings and learning opportunities in collaboration with a variety of health care systems.

Vision Statement

The faculty of the School of Nursing will serve as professional role models for students through their own pursuit of excellence as teachers, scholars, and clinicians. The faculty will instill in students a sense of professional empowerment, a desire for lifelong learning, and a commitment to social justice through community service. A commitment to providing innovative curricula based on the changing needs of the students, the community, and society is shared by the faculty. The faculty values human diversity and global health care which will enable students to develop a sense of openness and a desire to serve members of other cultures both locally and internationally.

CONCEPTUAL MODEL

The person, as the central core of the conceptual framework, is the focus of the professional nurse and is viewed as a unique creation, holding values and beliefs reflective of the person's culture and life experiences, values, and beliefs. The faculty of the School of Nursing believe that nursing is a human science profession and academic discipline focusing on the diagnosis and treatment of human responses of the person to actual or potential health problems and their outcomes within a caring environment. Underlying the nurse's ability to provide, design, manage, and coordinate care are certain core competencies which include critical thinking, assessment, communication, and technical and information technology skills. These skills are delicately balanced with intelligence, confidence, understanding, caring, and compassion.

Various interdisciplinary and nursing theories and research provide the basis for professional nursing practice. The nurse collaborates with the person, interdisciplinary health care team, and health care agencies focusing on the promotion of health and prevention of illness. This takes place in an external dynamic environment which encompasses diverse populations in both local and global communities. As advocates for high quality care and social justice, the professional nurse will assume responsibility for lifelong learning, practice within an ethical framework, participate in political and regulatory processes, and ultimately, in the shaping of the health care delivery system.
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 responsibilities 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 organizing framework of the professional nursing program. Professional nursing courses, which constitute the nursing major, include theory and practice in the nursing care of individuals, families, and aggregates. Learning opportunities are provided in hospitals, homes, schools, health agencies and a variety of community settings. The Heyson Nursing Resource Center in the School provides students with access to computerized learning, media review, and simulations used in learning nursing skills. The School's Center for International Nursing, Center for Health Care Diversity and Collaborative Center for Nursing Research, with Allegheny General Hospital offer students an environment of cultural exchange and inquiry research in nursing.

The faculty of the School of Nursing conducts all professional nursing programs and also guides and directs the practicum (clinical) learning experiences. Nursing students are assigned faculty mentors for career and professional development. A variety of hospitals and agencies collaborate 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 take the NCLEX-RN examination for licensure. Prior to graduation, students are required to successfully complete program requirements designed to prepare them for taking the NCLEX-RN exam.

While completing their BSN, students have an opportunity to pursue a minor in select areas such as Spanish, Business, Psychology, Sociology, and Computer Science. One additional year is also required in science or math, e.g., Physics, Algebra, Chemistry, or Computers.

2 A candidate must have graduated from an approved secondary school in the upper two-fifths of the class, and must have demonstrated exemplary personal conduct in the institution. Students whose class rank is below the upper two-fifths are evaluated individually by the University Admissions Committee according to their overall academic achievement (i.e., high school quality point average and testing results are reviewed).

3 The primary consideration for admission is the secondary school academic record.

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 may be required prior to admission.

6 Letters of reference may be requested.

7 Students enrolled in this program must maintain a C average in the natural sciences, the liberal arts and science base. The course offerings for Accelerated BSN include required science courses during the first semester of attendance at Duquesne University.

The Accelerated BSN enables high school students to complete the BSN in 3 years including 2 summers. The curriculum is identical to the 4-year BSN program except for the accelerated pace. Once accepted, students will work closely with their advisor to develop an individualized program of study. Students enrolled in this program must maintain a 3.5 GPA. Advantages of the Accelerated BSN include earlier graduation and entry into nursing practice.

Admission Requirements for Accelerated BSN Students

Applicants to the Accelerated BSN program must have an SAT score of 1100 or greater and a high school GPA of 3.5 or greater. Students must be accepted into the BSN Program through the Office of Admissions. Accepted students who meet the admission criteria for the accelerated track will receive a letter of invitation from the Dean of Nursing and will be interviewed by the School of Nursing.

TRANSFER STUDENT

See the section on Admissions for further University requirements.

Admission Requirements for Transfer Students

4 A cumulative QPA of 2.5 from the transferring institution.

1 A transfer student cannot be accepted into nursing clinical practicum courses during the first semester of attendance at Duquesne University.

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 offers the registered nurse (RN) an opportunity to obtain a baccalaureate and master's nursing degree. Part-time or full-time enrollment is available to allow an RN to continue to be employed while undertaking the course of study. Select courses in the RN/BSN/MSN Option are also available online. Through the acceptance of transfer credits, CLEP testing, and challenge examinations, the School of Nursing strives to apply the RN'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 coordinator of the RN/BSN/MSN Option within the School of Nursing.

Admission Criteria for RN/BSN/MSN Students

Students who are interested in applying for admission to the RN/BSN/MSN Option should request an application from the Office of Admissions or the School of Nursing, Duquesne University, Pittsburgh, PA 15282.

- High school diploma or equivalent
- Graduation from an accredited associate degree or diploma nursing program (2.5 QPA minimum)
- Verification of current licensure as a registered professional nurse
- Associate degree or diploma transcript
- Current or past clinical experience in nursing
- Verification of active required malpractice insurance prior to clinical practicum
- Personal interview with the RN/BSN/MSN coordinator in the School of Nursing
- Compliance with the Standards of Personal Conduct Policy
- Evidence of physical and emotional health adequate to meet the demands of the program as indicated above

SECOND DEGREE STUDENTS

This option is available to college graduates who earned a baccalaureate degree in another discipline and who wish to earn a bachelor's degree in nursing at Duquesne University. A possible 58 credits may be transferred into the program. Other possible opportunities such as challenge examinations and CLEP testing for University credit affirm a commit-
ment to the adult learner. The 68 credit accelerated portion of the curriculum comprising the nursing major courses is offered over a 18 month consecutive period beginning in July of each year. Specific information about this option can be obtained by contacting the coordinator of the Second Degree option within the School of Nursing

Admission Requirements for Second Degree Students

Students who are interested in applying for admission to the Second Degree in Nursing Option should request an application from the Office of Admissions, School of Nursing, Duquesne University, Pittsburgh, PA 15282.

- Graduation from a baccalaureate program in another discipline
- Personal interview with the coordinator of the Second Degree option within the School of Nursing
- Compliance with the Standards of Personal Conduct Policy
- Evidence of physical and emotional health adequate to meet the demands of the program

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. Students wishing to do this will become a temporary transfer student, provided they receive the necessary clearance from both institutions.

1. Students must submit to the appropriate advisor in the School of Nursing, Undergraduate Program, the catalog description of course(s) they wish to take and the summer session schedule. This request will be evaluated for course equivalency and appropriateness.

2. Ordinarily, a student who has acquired 60 or more credits may not receive advanced standing for courses taken at accredited community or two-year colleges. Students desiring waiver of this policy must obtain the permission of the undergraduate Student Standing Committee of the School of Nursing.

3. A candidate for the Bachelor's degree must complete a minimum of 30 credits (exclusive of challenge credits) toward the degree at Duquesne University.

4. Students are responsible for earning a minimum of a C grade, or its equivalent if they expect to receive advanced standing. Students must arrange to have an official copy of the transcript of grades earned at the institution in which they are a temporary transfer sent to the appropriate advisor in the School of Nursing in order to receive advanced standing. This transcript must be sent immediately upon completion of the course. Credit can only be given once for courses that are repeated.

ADDITIONAL EXPENSES* AND REQUIREMENTS

Student Liability Insurance (Professional) (annually) $12.00
Uniforms, identification pin, shoes $150.00
Transportation to and from clinical agencies (weekly) $10.00
School of Nursing pin, upon graduation (if desired) cost varies
Physical examinations, diagnostic procedures, and immunizations 1st year $200.00
2nd-4th year $150.00
NCLEX Diagnostic Examination $30.00-60.00
All expenses are subject to change.

Training in Cardiopulmonary Resuscitation (CPR) is a prerequisite for all nursing clinical courses. Students must show evidence of current CPR training prior to entering the clinical area and annually thereafter.

Preadmission and periodic physical examinations, immunizations, and laboratory tests are required for all students in the School of Nursing. Students must complete these health requirements by the designated deadline date in order to register for the following semester or before proceeding to the clinical practicum. 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 amount of $1,000,000/6,000,000 professional coverage.

Each student is responsible for transportation to and from hospitals 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 during the senior year.

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 in the School of Nursing with a cumulative quality point average of 2.5.

Kappa Alpha Beta, an undergraduate nursing sorority of Chi Eta Phi, Inc., was established in 1936. The purpose of this organization is to increase minority students in nursing and to foster continuing education.

While membership is predominantly African-American, individuals from other ethnic/racial groups, male nursing students, and others are invited to join.

Sigma Theta Tau International, Inc. is the international honor society of nursing. The Duquesne University Nursing Chapter was officially chartered as Epsilon Phi Chapter in March 1982. Membership is open to upper level students and community leaders who meet the international criteria.

Student Nurses Association of Pennsylvania (SNAP) is a constituent of the National Student Nurses Association, Inc. (NSNA). The purpose of SNAP is to foster responsibility for contributing to the nursing profession, to provide programs representative of student interests, and to foster the development of the whole person. Active membership is open to undergraduate students enrolled in state approved programs leading to licensure as a registered nurse and registered nurses enrolled in undergraduate programs of nursing.

Class Organizations: Each class is an officially recognized organization in the School of Nursing. As such, each class elects its own representative and conducts such programs and affairs as its members deem desirable toward achieving its goals.

Nursing Alumni Association: Upon graduation, each graduate is cordially invited to join this organization as a School of Nursing Alumnus.

HONOR AWARDS

In addition to graduation honors, the following awards and scholarships are available to eligible undergraduate students. Specific criteria for awards are available in the School of Nursing.

- Richard J. Behan Award
- Mary Tobin Gold Medal for General Excellence in Nursing
- Ruth Johnson Gold Medal for General Excellence in Nursing
- Faculty Award
- Beyer, Inc. Award for Excellence in Nursing Practice in the Home Health Care Setting
- Lanza Award for Excellence in Nursing Practice in the Home Health Care Setting
- Air Force Leadership Award
- Community Health Education Project Award
- Sigma Theta Tau International, Epsilon Phi Chapter Award
- Sigma Theta Tau International, Epsilon Phi Chapter Award
- Connie Miller Endowed Scholarship
- Richard J. Behan Memorial Scholarship
- Spirit of Healing Award
- Army Nurse Corps Spirit of Nursing Award

GRADUATION REQUIREMENTS

General University requirements for graduation are in the Academic Policies section of this catalog. In addition, specific School of Nursing requirements are:

1. Successful completion of 126 credits and all clinical practicum courses
2. A minimum cumulative overall quality point average of 2.5
3. Completion of the required curriculum plan
4. Removal of 1 and F grades in all required courses
5. A candidate for the Bachelor's degree must complete a minimum of 30 credits toward the degree at Duquesne University. Challenge credits are not included in this 30-credit requirement
6. The student must submit an application form provided by the Registrar for the degree
7. Successful completion of NCLEX-RN Diagnostic Exams(s) and formal and informal coursework designed to prepare students to take the licensing exam

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 and the student is advised of any additional requirements for graduation based on curriculum changes. The responsibility for fulfilling degree requirements rests with the student.
RECOMMENDED COURSE SEQUENCE

FALL

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<th>Courses</th>
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<td>N253 Nutrition for Health Promotion</td>
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<td>N220 Transcultural Nursing and Health Care</td>
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<td>N304 Junior Synthesis Seminar</td>
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<td>125 Fundamentals of Statistics</td>
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<td>N315 Research Process</td>
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<td>N404 Concepts and Issues of Professional Nursing</td>
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<td>N402 Human Response and Health Promotion in Children’s Health &amp; Illness</td>
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<td>N405 Clinical Integration in Complex Settings</td>
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TOTAL = 126 credits

*SUniversity Core Courses

SCHOOL OF NURSING

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 faculty member involved, followed by the course facilitator. If the matter is not satisfactorily resolved, the Associate Chair should be consulted. If the problem persists, the Chairman/Chair of the Undergraduate Program should be contacted. If the problem is not satisfactorily resolved, consultation with the Dean of the School of Nursing should be arranged, and an Appeals Committee in the School may be convened. Should the problem still remain unresolved, a “Request of Hearing” form should be filed with the Provost within 20 days of the Appeals Committee decision. If the Provost determines that a legitimate grievance exists, the Provost convenes an 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, the Provost will inform the student within 30 days of the 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 faculty's discretion.

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 appropriate faculty member.

Curriculum Standards
To progress to and remain in the upper division nursing practice courses, a minimum cumulative GPA of 2.5 is required. A minimum C grade is also required in all nursing and non-nursing courses in the plan of studies.

Students are ordinarily permitted to repeat courses in which D and F grades were received. All grades are retained on the permanent academic record. The result of the final attempt in a repeated course is, however, the student's status in the course with regard to attempted credits, earned credits, and the completion of requirements.

Students will not be allowed to repeat any nursing courses in which D or F grades were received or to progress in the School of Nursing without the approval of the Undergraduate Student Standing Committee.

Students must repeat both the theory and clinical components of any nursing course that is repeated, regardless of their final theory or clinical grade for the original course.
The students are encouraged to seek regular advice from their comprehensive academic advisor and to keep a record of credits earned and the calculated averages. The School assumes no responsibility for such errors appearing in students' records which may prevent the student from graduating. The School of Nursing faculty reserves the right to withdraw any student from the nursing major who, in their opinion, has not progressed satisfactorily in nursing practice even though the quality point average required for graduation is maintained. The faculty of the School of Nursing also reserves the right to make any changes in curriculum that seem necessary or desirable.

NURSING COURSE DESCRIPTIONS

N201 Professional Development Seminar 1 cr
This course introduces the student to nursing as an academic discipline and human science profession according to the philosophy and conceptual framework of the School of Nursing. Students explore the assumptions about person, environment, health, and nursing. The concepts of health promotion and illness prevention are introduced, as are the philosophical and professional Health care delivery systems and processes are introduced. Professional nursing is explored from a historical perspective as it relates to present and emerging roles. The role of the nurse is examined in the context of a profession. Professional nursing practice is explored from everyday and legal perspectives. Effective study skills and test-taking strategies are examined that are helpful to the student's progression through the nursing program. Career development exploration is initiated and strategies are identified to enable the student to work toward career goals.

N102 Nurses' Ways of Knowing 2 cr
This course introduces the student to the different ways that nurses come to know. Included is an assessment and further development of intellectual capacities of the student as nurses as independent critical thinkers through the use of critical thinking exercises and other instructional strategies. Students will describe how they think and utilize concepts of logic in preparation for the critical thinking process and its components, and the basic research process. Through the movement of critical thinking, the course provides a foundation that promotes open inquiry into assumptions, beliefs, goals, and values that characterize nursing. Nursing theory is introduced as a guide for ways of knowing. The course will provide a survey of nursing theories and their impact on nursing. The concept of nursing as an academic discipline and human science profession according to the philosophy and conceptual framework of the School of Nursing will be reinforced. Students are expected to have basic computer literacy skills and will learn how to utilize information retrieval systems, such as nursing and medical data bases, and informational Internet resources for accuracy and appropriateness will be included.

N204 Lifespan Issues 4 cr
This course builds upon the major concepts of person, environment, health, and nursing. The student will explore human development from conception through death. Emphasis is placed on an individual's psychological, cognitive, psychosocial, and spiritual development within the context of the family, society, and culture. This course provides the basis for students to assess and therapeutically interact with persons of various developmental stages. Health promotion and illness prevention practices are implemented in the clinical health age group throughout the life continuum. Students will participate in a variety of community experiences with persons of varying developmental stages.

N208 Conceptual Foundations of Nursing Practice 4 cr
This course introduces the student to specific concepts as they apply to the practice of professional nursing. Concepts specific to the promotion of health and prevention of illness in all clients requiring nursing care will be presented. Specific needs of and strategies for caring for the older adult will be closely examined. Students will study the nursing process which promotes critical thinking as a competency and allows nurses to make judgments and take actions based on reason. Health care in the clinical setting and the client's acceptance of health care are explored. Emphasis is placed on self-reflection and cultural rooting in preparation for assessment and analysis of personal, cultural, and social factors. Health and wellness needs and appropriate interventions are integrated throughout the course. Students explore ways to promote health through the referral and utilization of community resources. Prevalent and more advanced concepts will be integrated to provide holistic nursing care to adults experiencing acute illness.

N215 Basic Pharmacology 3 cr
This course will cover the basic principles of pharmacology and drug therapy necessary for general nursing practice. Concepts of drug effectiveness, pharmacokinetics, mechanism of action, and drug interaction will be examined. In most cases, the emphasis will be on the pharmacological action of drugs on specific organ systems. Periodically, drugs will be discussed in relation to their clinical use in the treatment of specific disease conditions.

N220 Transcultural Nursing and Health Care 3 cr
This course builds on the basic concepts of personal, health, nursing, and the cultural environment, and the interrelationships as developed in previous sciences, humanities, and nursing courses. Emphasis is placed on the development of a transcultural approach to nursing care. The opportunity is provided to apply the concepts of transcultural nursing care, therapeutic nutrition, ethics, and professional practice will be integrated throughout the course. Students explore ways to promote health through the referral and utilization of community resources. Prevalent and more advanced concepts will be integrated to provide holistic nursing care to adults experiencing acute illness.

N253 Nutrition for Health Promotion 3 cr
This course focuses on nutrition and the nursing role in health promotion for well 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.

N301 Human Response and Health Promotion in Chronic Illness 6 cr
This course builds on previously learned knowledge of natural and human sciences, health assessment, conceptual foundations of nursing practice, and the nurses' role in the care of adult health settings. Increasingly complex concepts related to the integrity of physical, psychosocial, spiritual, and environmental health are presented. Concepts of cultural care, therapeutic nutrition, ethics, critical thinking and professional practice will be integrated throughout the course. Students explore ways to promote health through the referral and utilization of community resources. Prevalent and more advanced concepts will be integrated to provide holistic nursing care to adults experiencing chronic illness.

N302 Human Response and Health Promotion in Acute Illness 7 cr
This course builds on previously learned knowledge of natural and human sciences, health assessment, conceptual foundations of nursing practice and skills and technologies required to practice professional nursing. The opportunity is provided to apply the nursing process to the care of adult health settings. Increasingly complex concepts related to the integrity of physical, psychosocial, spiritual, and environmental health are presented. Concepts of cultural care, therapeutic nutrition, ethics, critical thinking and professional practice will be integrated throughout the course. Students explore ways to promote health through the referral and utilization of community resources. Prevalent and more advanced concepts will be integrated to provide holistic nursing care to adults experiencing acute illness.

N303 Human Response and Health Promotion in Mental Health Nursing 5 cr
This course builds on the concepts of person in relationship with the multifacted environments of culture, family, community, and nursing as they interrelate with the variety of settings in the promotion of health and well-being. Emphasis is placed on understanding and treating individuals, families, communities, and aggregates who may be experiencing human responses related to psychosocial alterations. Methods utilized in transcultural nursing research that foster culture-specific nursing and health care are included in the course.
N402 Human Response and Health Promotion in Children’s Health and Illness 5 cr
This course incorporates physiological and developmental concepts in the care of the child and family. Concepts related to health promotion for children and newborns include nutrition, ethics, critical thinking, and professional practice will be integrated throughout the course. Norms and alterations in health patterns will provide the basis for discussion as they relate to children of various developmental levels. Therapeutic communication skills will be integrated into the care of children and families. The student will utilize specific nursing strategies as they apply to nursing care of the child and family. The nurse’s role in the promotion of health and prevention of illness is identified as a major focus of the course.

N403 Human Response and Health Promotion in the Aggregate 4 cr
This course builds on previous learning and synthesizes that knowledge with a focus on the promotion of health and prevention of illness for various groups and aggregates in community settings. The student will be introduced to the concepts of population-based community health nursing. This course will examine groups and aggregates within a variety of community settings. The student will investigate the multidimensional health needs of culturally diverse population groups and seek to identify high-risk aggregates. Concepts of health education will be 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 as health educator. Concepts of epidemiology as a means of gathering pertinent data about the health of groups and aggregates will be explored. The concepts of health promotion and illness prevention are examined in relation to groups and aggregates within the community.

N404 Concepts and Issues of Professional Nursing 4 cr
This course provides students the opportunity to synthesize previous learning and develop knowledge and skill relevant to leadership, management, and the professional role of the nurse. Concepts of power, change, decision-making, and delegation form the foundation for exploring leadership styles and functions. The course considers current issues in nursing and health care, including political, legal, and ethical aspects of the client-nurse relationship and their interrelationship are explored in order to assist the student to assume professional responsibility and involvement in issues affecting nursing and the delivery of health care.

N405 Clinical Integration in Complex Settings 4 cr
This course, preceptor course will be conducted in a variety of complex settings. The student will evaluate the skills relevant to the leadership and management roles of the professional nurse, such as delegation of duties, priority setting, and time management when caring for multiple patients. Clinical knowledge, judgement, and technical skill development encourages an environment in which the student performs as a beginning professional nurse.

N406 Senior Synthesis Seminar 2 cr
This capstone course synthesizes all previously learned knowledge and integrates concepts of cultural care, therapeutic nutrition, ethics, critical thinking, leadership/management, and professional practice. The focus of the course is on the application of these concepts through the use of case studies with a grand rounds format reflecting the uniqueness of the person’s human response to health experiences.

N412 Role Preparation 1 cr
This course serves as an NCLEX-RN/CAT examination preparation course. Students will work individually as well as in cooperative learning groups. Content will focus on test-taking strategies, test anxiety, and NCLEX-RN preparation. The course assignments will include NCLEX items and computer-assisted instruction. The course will not re-teach nursing content. Students will be given a comprehensive practice examination based on the results of the comprehensive assessment, students will be given an individualized prescriptive study plan. All students must pass this examination with an 85% or higher in order to pass the course. Each student will have three opportunities to achieve this score on the examination. Achievement of an 85% or higher is required for course completion and graduation.

COSC 300 Computer and Information Literacy 1 cr
Computer and Information Literacy will be offered online with supervised labs. This course offers an introduction to fundamental computer skills needed for the Windows operating system, word processing, spreadsheet, database, and e-mail software. In addition you will learn the skills associated with information literacy — the ability to locate, evaluate, and use information for independent learning. The goal of this course is to help you develop the computer and information handling skills you will need to succeed at Duquesne University. The course will focus on basic skills needed by every student regardless of major, and will examine selected ethical issues surrounding computing.

NURSING ELECTIVES
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 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.

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, focusing on the spirituality 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 of the spirituality that comes when spiritual needs are recognized and shared with the client.

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 present 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 historical and nursing perspective and provides them with the knowledge of health resources available to meet the specific needs of women. Prerequisite: Human Response and Health Promotion in Chronic Illness.

399 Patient/Consumer Health Education 2-3 cr
Today's health care professional is required to be more than an expert clinician. This course is designed to be a consumer of health care. Students will be taught the intracacies 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 practice of health education. This course, utilizing an interdisciplinary approach, introduces the student preparing for a health care career to the role of educator through identification, analysis, synthesis and application of the teaching-learning process. Students from various disciplines have an
2) Minimum cumulative grade point average of 2.50 and no grade lower than "C" in each of the required courses in the preprofessional curriculum.
3) Completion of the Pharmacy College Admissions Test (PCAT) with a minimum composite scaled score of 180.

Non-academic requirements include a written essay, three letters of recommendation, and an interview with the pharmacy faculty. Evidence of participation in community service is strongly encouraged. Prospective transfer students from other colleges and universities must apply to the Professional Program Admissions Coordinator, Mylan School of Pharmacy, Duquesne University, Pittsburgh, PA 15262. Phone (412) 396-6393.

ACCREDITATION
The Doctor of Pharmacy (Pharm D) degree program is accredited by the American Council on Pharmaceutical Education (ACPE), 311 West Superior Street, Suite 512, Chicago, IL 60610, 312-664-3575 or 800-533-3606, FAX 312-664-4652. The Pharm D degree program is accredited by the Pennsylvania State Board of Pharmacy. The University is accredited by the Middle States Association of Colleges and Secondary Schools.

DOCTOR OF PHARMACY
PREPROFESSIONAL PHARMACY CURRICULUM

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<tr>
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<tr>
<td>General Chemistry with Laboratory</td>
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<tr>
<td>Organic Chemistry with Laboratory</td>
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<td>Calculus (for science or math majors)</td>
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<tr>
<td>General Physics with Laboratory</td>
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<td>English Composition and Literature</td>
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<td>English Literature</td>
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<tr>
<td>Religious Studies</td>
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<td>Computer Literacy (Applications)</td>
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PROFESSIONAL PHARMACY CURRICULUM

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<td>Human Physiology and Pathology I and II and Lab</td>
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<td>Immunology and Clinical Microbiology</td>
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<td>Pharmaceutical Principles and Drug Delivery Systems I and II</td>
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<td>Drug Literature Evaluation</td>
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<td>Pharmaceutical Formulation and Development and Lab</td>
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<td>Veterinary Pharmacy</td>
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SCHOOL OF HEALTH SCIENCES

PHILOSOPHY
The RSHS was founded in concert with the educational philosophy and objectives of Duquesne University. Students in the RSHS are exposed to a broad liberal arts education with emphasis on understanding the scientific, theoretical, and aesthetic constructs of the world. The academic programs focus on the scientific theories, which support the ethical practice of the various professions, coupled with a strong appreciation and understanding of spiritual values.

In recent years, health care in the United States has seen a transition to massive, complex health care delivery systems, which offer society choices to receive health care. A mixture of generalists and specialists practice in this sophisticated system to meet the growing health service demands of society. To integrate our graduates into this system, the academic programs in the RSHS instill in-depth scientific and theoretical knowledge of health care practice, enhanced by a rich infusion of moral and spiritual values, necessary to prepare our graduates to be competent health care professionals. Through this preparation, students are encouraged to become cognizant of the needs of their patients/clients, their colleagues, and the health care systems in which they practice. Students are also required to develop an understanding of the necessity for on-going research and are prepared to advance the body of knowledge in their respective professions through their research efforts.

All aspects of the students’ education are coupled with an awareness and sensitivity of the human response to the functional limitations in various social and health care delivery contexts. The ultimate goal of the educational programs within the RSHS at Duquesne University is to educate truly outstanding health care professionals and citizens capable of explaining, investigating, and delivering the highest level of quality care with kindness, dignity, responsibility, and respect.

ACADEMIC PROGRAMS AND DEGREES

GENERAL INFORMATION
Bachelor’s Degree Programs
The RSHS offers four-year bachelor’s degree programs in athletic training (B.S. in Athletic Training) and health management systems (B.S. in Health Management Systems) which follow a traditional curricular design. The academic model for these programs is two years of liberal arts and science requirements followed by two years of professional education. In the case of the Health Management Systems program, students may also opt to stay for an additional year and pursue a Master of Health Management Systems degree.

Entry-Level Master’s Degree Programs
The RSHS offers five-year entry-level master’s degree programs in occupational therapy (M.O.T.), physical therapy (M.P.T.), physician assistant (M.P.A.) and speech-language pathology (M.S.L.P.). Health management systems students may opt to complete a five-year, entry-level master’s degree program. The academic model for occupational therapy, physician assistant, and speech-language therapy is three years of liberal arts and science requirements followed by two years of professional education. The academic model for professional education is two years of liberal arts and science requirements followed by three years of professional education. Students in the speech-language pathology program have the option of completing a master’s thesis. Typically, a professional-level education occurs on a year-round basis during the fall, spring, and summer semesters. These models are unique for these professions and provide the RSHS faculty the opportunity to maximize the utilization of the excellent core curriculum and science offerings at Duquesne as the basis for creative, professional curricula. All of the five-year entry-level master’s degree programs, with the exception of health management systems, award a Bachelor of Science in Health Sciences at the end of the fourth year and a professional master’s degree at the end of the fifth year. Students in behavioral health systems receive a Bachelor of Science in Health Management Systems at the end of four years and a Master of Health Management Systems at the end of the fifth year. Students who have completed Duquesne University’s four-year, pre-professional education will not be awarded a B.S. in Health Sciences, but will work directly toward the appropriate master’s degree.

Master Degree Programs
The Master of Health Management Systems program is a 36-credit, project-oriented, problem-based curriculum. A joint MHM/MA option is available to those who hold a Bachelor of Science in Business Administration or those who have completed Duquesne University’s graduate business core, who have sought and been granted admission into the MBA program as well. For further information, please contact the Department of Health Management Systems at 396-4772.

A Master of Science in Rehabilitation Science is also available. See “Ph.D. Degree Program” below.

Ph.D. Degree Program
The John G. Rangos, Sr. School of Health Sciences offers an accelerated Ph.D. program by granting approval from the Pennsylvania Department of Education, the Ph.D. (60 credits) and M.S. (36 credits) degree in rehabilitation science. The graduate program prepares students to be successful faculty in professional education programs typically housed in schools of health sciences. Students receive a background in research methods, foundations of rehabilitation science, and the pedagogy of professional, clinical education, followed by courses and research experiences that develop a specific area of content expertise. Dissertation and thesis topics are diverse and consistent with faculty expertise.

For further information, please contact David L Somers, Ph.D., P.T., Department of Physical Therapy at (412) 396-4772 or somers@duq.edu.

Joint Degree Programs
The RSHS offers some joint degree programs to currently enrolled RSHS students. Students must formally apply for these programs. These joint degree programs are not offered to students seeking initial admission into the RSHS.

 Majors in athletic training also have the opportunity to complement their degree with a Master of Science in Education. With this joint degree opportunity students may be eligible for permanent teaching certification in the areas of Mentally and Physically Handicapped, Secondary General Science, Secondary Biology, or Elementary Education.

In addition, on a very limited basis, athletic training students may apply for the joint degree program with the Department of Physical Therapy, and physical therapy majors may apply for the joint degree program with the Department of Athletic Training. An application to this joint degree program will automatically be sent to all first semester freshmen in both athletic training and physical therapy.

There is also a joint degree opportunity for athletic training students to pursue physician assistant education. Applications for this joint program will automatically be sent to all second semester sophomore athletic training students.

The Master of Health Management Systems also offers a joint HMC/Pre-Health (Pre-Med) program.

Inter-School Majors and Minors
Should students decide to pursue an inter-school major or minor, they should carefully investigate the implications of an increased course and credit load, as well as ensure they will be able to complete all RSHS program requirements in time for entry into the professional phase of their respective program.

Inter-School Majors
At this time, there are no inter-school majors available to RSHS students.

Inter-School Minors
Students interested in pursuing an inter-school minor must contact the McAulany College and Graduate School of Liberal Arts or the Bayer School of Natural and Environmental Sciences could work with a RSHS academic advisor to discuss minor requirements and the minor declaration process. While the academic advisor will assist in identifying the appropriate course work for the minor, it is the student’s responsibility to verify the courses with the appropriate department within the McAulany College and Graduate School of Liberal Arts or
Bayer School of Natural and Environmental Sciences

Academic and Program Requirements for Entry into the Professional Phase

IMPORTANT NOTE: The material contained herein is subject to change from time to time and this publication cannot be considered an agreement or contract between individual students and the School. The Rangos School of Health Sciences reserves the right to alter or amend the terms, conditions, and requirements herein, and to eliminate programs or courses as necessary. Final approval for entrance into the professional phase will be predicated on satisfactory completion of all academic and program requirements. Students who do not meet the minimum academic or program requirements set forth by their respective department will be delayed entrance into the professional phase or will be dismissed.

For academic and program requirements, please contact the Office of the Dean at (412) 396-6652

ADMISSIONS POLICIES

Please note that admissions policies are subject to change at the discretion of the RSHS and the Offices of Domestic Admissions and International Affairs.

Students will only be considered for admission into one specific program, students are not able to apply to the RSHS as undecided.

New Students

All new incoming freshmen, transfer and second degree candidates (includes any student who is NOT currently enrolled at Duquesne or who had ALREADY graduated from Duquesne University) must apply through the Office of Admissions. These students can request information and an application by writing to the Offices of Domestic Admissions and International Affairs, Duquesne University, Pittsburgh, PA 15282 or by calling (412) 396-5000 or (800) 456-0590.

Interviews and appointments for the unofficial evaluation of transfer credits may be arranged through the Offices of Domestic Admissions and International Affairs, but are not required for most programs.

Internal Transfer Students

All internal transfer students must apply through the RSHS. The RSHS considers an internal transfer student to be:

1. Any student seeking to transfer into the RSHS from another School or the Division of Continuing Education at Duquesne University.
2. Any student within the RSHS who seeks to transfer to another program within the RSHS itself.

All prospective internal transfer students must schedule an appointment with a RSHS academic advisor by stopping in the Office of the Dean, Room 302, Health Sciences Building, or by calling (412) 396-6652

Students with Disabilities

The University and the RSHS do not discriminate on the basis of nonperformance-related handicaps or disabilities. All students seeking admission to the RSHS will be expected to perform certain physical, mental and emotional tasks in order to complete graduation and professional requirements as measured by state and national certification, licensure and registration processes.

It is the student's responsibility to notify the Office of Special Student Services if a physical or mental impairment will require accommodations to enable the student to complete academic and professional performance requirements or skills. Further, in limited cases, the student may be required to demonstrate the ability to perform certain "essential" tasks or techniques such as lifting equivalent to human body weight to the satisfaction of the faculty, prior to professional study.

Waitlist Process

Once spaces have been filled in a particular program, qualified students will be selected for placement on a waitlist in the event that positions do become available at a later date. Should a student accept a waitlist position, he/she should complete any required course work, continue to update his/her file with any additional transcripts or other materials, and apply for financial assistance in the event he/she will later be offered a space. Waitlisted students may be contacted as late as the start of the academic year. Waitlist students who cannot be offered positions for the current academic year will be notified after the start of classes to provide them an opportunity to reactivate their applications for another year.

Changes in Admissions/Enrollment Status

An offer of acceptance into a particular RSHS program (i.e., athletic training), class level (i.e., as a third year student), or academic year (i.e., Fall 2022) is only valid for that respective program, class level or academic year.

STUDENTS SHOULD BE AWARE THAT THE POSSIBILITY OF A CHANGE IN PROGRAM, CLASS LEVEL OR ACADEMIC YEAR WILL BE EXTREMELY LIMITED DUE TO SEVERE SPACE LIMITATIONS IN ALL PROGRAMS. Students who are granted approval to change programs, class levels or academic years must meet the academic and program requirements dictated by their new status. Any student who is granted a change in class level after matriculation will not be able to request any subsequent change in class level.

ADMISSIONS OF FRESHMEN

Admissions Deadlines for Freshmen

1. All early action applications to the physical therapy and physician assistant programs must be completed and postmarked by December 1. This is the only deadline for these programs.
2. Admission to the athletic training, health management systems, occupational therapy, and speech-language pathology programs is by EITHER Early Decision or Regular Decision. Early Decision applications must be completed and postmarked by November 1.
3. Regular Decision applications must be completed and postmarked by July 1.
4. All qualified students whose applications are submitted by January 10 of their senior year will be considered for scholarship consideration.

Admissions Criteria for Freshmen

Freshmen admissions will be on a selective basis as long as space permits. Prospective freshmen should have graduated from an approved secondary school 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.

The Offices of Domestic Admissions and International Affairs will review all freshmen applications based on the following guidelines established by the RSHS:

Candidates should have:

a. Seven units of math and science, including Algebra I, Algebra II, Geometry and Trigonometry (with Calculus recommended but not required) and General Science, Biology and Chemistry (with Physics or Advanced Sciences strongly recommended). All RSHS programs have intensive science component, students who feel they do not have a strong background in Algebra, Trigonometry and Chemistry should seriously consider taking college preparatory courses, particularly in College Algebra and Trigonometry.

b. A class rank in the top two-fifths of their graduating class.

c. A QPA of at least 2.75 for Physical Therapy, Physician Assistant, and Speech-Language Pathology candidates. A Q PA of at least 3.0. A total SAT score of at least 1100 or a composite ACT score of at least 24.

Although volunteer experience in the field to which they are applying is not required for the admission of freshmen applicants, it is highly recommended.

Please note that once enrolled, RSHS students may be required to participate in volunteer experiences prior to entering the professional phase of their respective program.

Credit by Examination/Challenge Examinations

Under NO circumstances may any clinical education course be taken through credit by examination, and in general, the courses within the RSHS professional phase are not available through these examinations. Each Department will determine any courses which can be challenged, and each Department is responsible for administering its own examinations.

It is the student's responsibility to contact the Department involved to determine the availability of these examinations.

University-Level Courses Taken While in High School

University-level courses taken 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 education.
2. The grades are "C" or better.

Advanced Standing Freshmen

Any student who indicates any past or current college history (excluding advanced placement, CLEP credits or University-level courses taken while in high school) who will have earned 12 or fewer non-science transferable credits at the point of matriculation will be required to attend as a potential advanced standing freshman.

Students admitted as advanced standing freshmen may not exceed these credit restrictions prior to matriculation, failure to comply with this policy may result in rescinding the student's acceptance.

ADMISSION OF INTERNAL TRANSFER, TRANSFER AND SECOND DEGREE CANDIDATES

Admissions Deadlines for Internal Transfer, Transfer and Second Degree Candidates

1. All applications to the physical therapy and physician assistant programs must be completed and postmarked by December 1.
2. All applications to the athletic training, health management systems, occupational therapy, and speech-language pathology programs must be completed and postmarked by July 1.

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.

Prospective internal transfer, transfer and second degree candidates should carefully investigate the
SCHOOL OF HEALTH SCIENCES

FINANCIAL IMPLICATIONS OF ENTERING ANY RSHS PROGRAM

ADMISSIONS CRITERIA FOR INTERNAL TRANSFER, TRANSFER AND SECOND DEGREE CANDIDATES

In order for applications to be considered "complete," all applicants must submit the following by the application deadline:

1. The application form
   a. Internal Transfers - Must contact a RSHS academic advisor in the RSHS Office of the Dean for an Internal Transfer Application
   b. Transfers and Second Degrees - Must contact the Offices of Domestic Admissions and International Affairs for the standard undergraduate admissions application (excluding the personal statement on the back of the application and the initial letter of reference). Applicants to the master's program in Health Management Systems should contact the Department of Health Management Systems at (412) 396-6772

2. The addendum:
   a. A minimum cumulative QPA of at least a 2.5 for athletic training and health management systems programs, and a minimum cumulative QPA of at least a 3.0 for occupational therapy, physical therapy, physician assistant, and speech-language pathology
   b. A "C" or better in all courses
   c. GREs are not required for admission

Please keep in mind that the above criteria refer to the minimum criteria required for consideration for the RSHS due to severe space limitations. Highly competitive applicants generally carry a 3.5 QPA or well above, have "A" and "B" grades in course work and have extensive volunteer/professional experience.

READMISSION

Students who are no longer enrolled, but who had previously attended or graduated from Duquesne University, must fill out the "Application for Readmission" available through the Offices of Domestic Admissions and International Affairs.

Students who have completed 12 credits or less at another institution(s) since leaving Duquesne, are handled by the Offices of Domestic Admissions and International Affairs.

Students who have completed more than 12 credits at another institution(s) since leaving Duquesne, are handled by the Offices of Domestic Admissions and International Affairs.

STUDENTS SHOULD REALIZE THAT THE POSSIBILITIES FOR READMISSION TO THE RSHS ARE VERY RESTRICTED DUE TO EXTREME COMPETITIVENESS AND SEVERE SPACE LIMITATIONS IN ALL PROGRAMS

EDUCATIONAL EXPENSES AND FINANCIAL AID

ADDITIONAL EDUCATIONAL EXPENSES FOR RSHS STUDENTS

PRE-PROFESSIONAL PHASE

Students in their final year within the preprofessional phase will also need to meet the program requirements for entry into the professional phase (e.g., CPR, physical examination and immunizations).

PROFESSIONAL PHASE

Expenditures for all programs may include the purchase of a lab coat/clothes, medical instruments for laboratory work or professional practice, clinical education costs (e.g., travel and living expenses), and fees for certification, licensure and registration. Information on required supplies will be provided to all students during their professional orientation program(s).

FINANCIAL IMPLICATIONS OF STUDENT CLASSIFICATION AND ACADEMIC LOAD

Students who are interested in financial aid and scholarship assistance through the various sources offered at the University and elsewhere, should be aware that the financial aid and scholarship opportunities and athletic eligibility requirements require students to carry and earn specific credit loads and QPA's. It is the student's responsibility to investigate these requirements and work with their academic advisor to meet them. In particular, students should carefully investigate how their credit loads each semester/term, each academic year, and overall, will affect financial aid and athletic eligibility not only for the current year, but also for the fall and spring semesters. Students should carefully investigate any financial implications resulting from required or elected summer course work.

Internal Transfer, Transfer and Second Degree Students

All transfer and second degree candidates should carefully investigate the financial implications of matriculating into the RSHS. These students enter any of the RSHS programs as undergraduates. If permitted by the instructor, they may not qualify for standard undergraduate financial aid.

GRADUATE STUDENTS

Students enrolled in any of the five-year, entry-level master's degree programs should be aware that, for financial reasons, the RSHS considers students to be graduate students upon completion of the spring semester of their fourth year. Students are strongly advised to consult with the Office of Financial Aid regarding their eligibility for aid as graduate students, particularly in light of the high credit loads and summer course work involved in the final year of the professional phase.

PROGRAM AND CURRICULUM INFORMATION

IMPORTANT NOTE: The material contained herein is subject to change from time to time and this publication cannot be used as the basis for any guarantee or contract between individual students and the School. The Rangos School of Health Sciences reserves the right to alter or amend the terms, conditions, and requirements herein at any time, to eliminate programs or courses as necessary. Once enrolled students should refer to the RSHS Academic Student Handbook for specific information regarding academic policies pertaining to their respective programs.

The following interdisciplinary courses may be required by some of the programs:

- HLTSC 320/320L Anatomy I 5 crs
- HLTSC 321/321L Anatomy II 5 crs

This course is designed to build on basic information that the student has been exposed to in other science courses. It is necessary for the student to have a working knowledge of basic anatomical terminology, including the basic anatomical terms and nomenclature pertinent to the human organism from the start of this course. The activities in this course will present a relatively detailed description of peripheral systems, the musculo-skeletal, peripheral nervous, and peripheral circulatory systems found in the upper and lower extremities and deep back region of the human body. In addition to the peripheral systems, a detailed account of the contents of the major cavities of the human body will be presented. The course will utilize the information presented in both lecture and laboratory sessions to solve clinically relevant questions. Prerequisites: BIOL 111/113 and BIOL 112/114, or permission of the instructor.
begins with an overview of neuroanatomy, moves to functional systems within the nervous system, and concludes current publications Corequisite HLTSC 430

HLTSC 431W Medical Sciences I 3 crs
An overview of common medical diagnoses is conducted utilizing various disease images and incorporating discussion of current events in medicine Prerequisites Permission of the instructor

DEPARTMENT OF ATHLETIC TRAINING (AT)

Chair
Paula Sammarone Turocy, Ed D, ATC

ATHTR 201 Essential Concepts & Techniques in Athletic Training 3 crs
An introduction to the basic and essential elements of athletic training, including prevention, 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 related to athletic injury prevention are discussed as they relate to prevention and management Corequisites BIOL 207/208

ATHTR 302 Art & Science of Athletic Training 1 3 crs
This course provides students with opportunities to learn evaluation techniques, recognize common pathologies associated with the lower extremities and internal organs, as well as information on tissue types, medical imaging, palpation, and notation. Use of evaluative technology, manual muscle techniques, and neurophysiological function assessment. Prerequisites ATHTR 201, Corequisite HLTSC 320/320L

ATHTR 303 Art & Science of Athletic Training 2 3 crs
This course teaches students to recognize common pathologies and initial management procedures associated with the upper extremity, head and spine. Skills learned in ATHTR 302 will be reinforced during this course Prerequisites ATHTR 302, HLTSC 320/320L

ATHTR 305W Health & Medicine 3 crs
This course presents common medical pathologies and current personal and community health information on topics germane to the physically active population. Students are taught to recognize specific pathologies, provide emergency care in appropriate situations, and to make proper referral of conditions outside the scope of practice of athletic training. Implications for physical activity are discussed with each condition Prerequisites BIOL 111/113, HLTSC 320/320L

ATHTR 306 Therapeutic Exercise & Reconditioning in Athletic Training 4 crs
This course provides students with opportunities to pursue clinical experiences at the college, secondary, professional, and athletic environments. Students are provided with opportunities to learn about the prevention and management of athletic injuries. Prerequisites Permission of the instructor

ATHTR 315 Clinical Practicum in Athletic Training I 2 crs
This practicum incorporates “hands-on” work in an athletic training room setting where students will be responsible for the health care of the athletes during practice, games, and in the rehabilitation setting of the athletic training room. Psychomotor skills and class discussions also are included in this course Prerequisites All Pre-Professional requirements, ATHTR 201

ATHTR 316 Clinical Practicum in Athletic Training II 3 crs
This is a continuation of the previous practicum, however, students now apply knowledge gained from previous course work and experiences to the care of the athletes Comprehensive emergency medical techniques, as well as preparation for future endeavors in sports medicine, are discussed in this course Prerequisites ATHTR 302, 305W, HLTSC 330, 320/320L

ATHTR 402W Nutrition & Weight Management in Sport 3 crs
This course covers the essential nutrients, their physiologic effects on the body, and the methods by which these nutrients may influence the performance of a physically active individual. Information on eating disorders, weight management, special dietary considerations, and ergogenic aids also are discussed. Prerequisites CHEM 131, ATHTR 307W

The CAHelP-accredited (Commission on Accreditation of Allied Health Education Programs) athletic training education program at Duquesne University provides students with a comprehensive basic science background, a general liberal arts core of classes, and specific comprehensive core work in athletic training. In this four-year bachelor’s degree program, students are prepared with opportunities to pursue clinical experiences at the college, secondary, professional, and athletic settings. As such, students work with athletes and physically active individuals of the opposite gender and with varying levels of skill A student enrolled in this program also has the option to complete the bachelor’s degree with a Master of Science in Education Through this joint degree opportunity, students may become eligible for teaching certification in the areas of Mental Health and Physically Handicapped, Elementary Education, Secondary General Science, and/or Secondary Biology. Also, on a very limited basis, athletic training students may be considered for the joint degree program with the Department of Physical Therapy, leading to a Bachelor of Science in Athletic Training and Master of Physical Therapy or with the Department of Physician Assistant leading to a Master of Physician Assistant

ATHLETIC TRAINING CURRICULUM

A sample course plan for the pre-professional and professional phase can be obtained from the RSHS at (412) 396-6652

The prerequisites include foundational knowledge and skills that are essential for success in this field. Students are encouraged to consult with an academic advisor to plan their course of study and ensure that they meet the prerequisites and requirements for admission to the program.
ATHTR 404W Psychology of Sport 3 crs
This course incorporates basic and applied psychological principles to discuss topics such as mental imagery, psychology of injury, self-esteem, self-efficacy, stress management and burnout, pain tolerance, and role stress. Students will undertake a project involving two parts: the interrelationships between coaches, athletes, parents, and the medical community. Prerequisites: PSYC 103, ATHTR 315, 316

ATHTR 407W Physiology of Exercise 3 crs
This course prepares students to understand, assess, and manipulate the physiological components of metabolism, muscular activity, and cardiorespiratory function to enhance performance. Students are required to develop a year-round physical conditioning program to maximally enhance the performance in a specific active population. Students also are introduced to standard physiological evaluation equipment. Prerequisites: BIOL 111/113, HLTSC 320/320L, CHEM 131

ATHTR 410W Clinical Practicum in Athletic Training III 4 crs
Building on past 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 design and implementation of rehabilitation and conditioning programs. Advanced psychomotor skills and preparation for employment and graduate education are discussed. Prerequisites: ATHTR 303, 306, 316, HLTSC 425

ATHTR 411 Advanced Clinical Practicum in Athletic Training 3 crs
During this practicum, students may receive experiences in either a traditional or non-traditional athletic training setting. Preparations for the National Athletic Trainers' Association Exam - Board of Certification eligibility will take place during this semester. Advanced psychomotor skill, job interview techniques, and a mock comprehensive examination are required in this course. Prerequisites: ATHTR 303, 306, 316, HLTSC 425

ATHTR 412 Organization & Administration in Athletic Training 3 crs
This course provides students with information to enhance his/her ability to function effectively as a certified Athletic Trainer in regard to administrative, professional, organizational, and legal issues pertaining to Athletic Training. Topics include budget management, facility design, record keeping, professional organization, and liability. Professional, multi-media presentations and computer-assisted project development are essential components of this course. Prerequisites: ATHTR 316

ATHTR 414W Medical Perspectives in Athletic Training 2 crs
This course is designed to expose students to a variety of medical topics to include orthopedics, OB/GYN, dental, family practice medicine, podiatry, physical therapy, dermatology, and radiology. Professionals from each of the respective areas provide information to enhance the interdisciplinary approach of the responsibilities of an athletic trainer.

ATHTR 416 Applied Science of Physical Performance 3 crs
Expanding upon the basic principles learned in Physiology of Exercise, Kinesiology and Biomechanics, and Therapeutic Exercise and Reconditioning, students are expected to research and present, via peer teaching, information specific to sport skill training, biomechanical analysis of common chronic and acute injuries, and physiological requirements for the sports of football, volleyball, soccer, wrestling, basketball, lacrosse, baseball, track and field, swimming, tennis, ice hockey, and weight training. This class involves physical activity participation in all physical activities. Prerequisites: ATHTR 306, 407W, HLTSC 320/320L, 433/438

DEPARTMENT OF HEALTH MANAGEMENT SYSTEMS (HMS)
Chair: Joan M. Kiel, Ph D
Health Management Systems concerns itself with the two most evolving fields — healthcare and computers. The healthcare environment is challenged to provide cost effective quality care coupled with managed care. To meet this challenge, innovative business strategies, data analysis, and advanced technologies are being utilized.

This health professional possesses a unique blend of skills in health sciences, business administration, and information technology. Health sciences and communication with other medical professionals and in understanding the patient perspective. Business administration strategies are needed to manage and make decisions about data and information. Information technology is utilized to collect, manipulate, and transmit data to aid in the delivery of cost effective healthcare services. The combination of information analysis and computer technology will help professionals to meet the future healthcare challenges.

These integrated skills can be applied in a variety of healthcare and related settings that range from acute care health clinics, software development to companies, and health insurers.

The Bachelor of Science in Health Management Systems has the following tracks:

- **HEALTH MANAGEMENT SYSTEMS**
  - Small Town/ Rural Practice
  - Large Organization
  - School System

- **REGISTERED HEALTH INFORMATION ADMINISTRATOR**
  - Concentrates on administrative and technical positions to manage information, data, and medical records

- **HEALTH MANAGEMENT SYSTEMS/HEALTH**
  - Gives future physicians technology and business acumen

This is a freshman entry program. A Master's degree option is available. Students must apply for admission during their third year of study. This degree can be completed in one additional year after receiving the Bachelor of Science in Health Management Systems.

PROJECT EXPERIENCE

Undergraduate students will be required to complete two unpaid 300-hour experiences in the junior year and one in the senior year. Students are able to obtain experience in a variety of health management systems settings in the Pittsburgh area or throughout the country. It is intended that these experiences be suitable for inclusion in the student's portfolio or resume. Placement is on an individual basis given the student's needs and career goals.

HEALTH MANAGEMENT SYSTEMS CURRICULUM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (412) 396-6652.

**COURSE DESCRIPTIONS FOR THE PROFESSIONAL PHASE**

**HLTMS 305W/505W Healthcare Management** 3 crs
This course covers the management functions of planning, organizing, controlling, and decision making. In addition, organizational structures, leadership, motivation, and social responsibility in relation to the dynamic healthcare industry are examined. This writing-intensive course requires essay examinations, case studies, and a group project based on a real world situation.

**HLTMS 310/510 Elements of Health Information Science** 3 crs
Introduction to the creation of interactive healthcare applications on the World Wide Web. Topics include hyper-text markup language, scripting languages, methodologies for converting paper forms to electronic forms, and standard tools for accomplishing managing and World Wide Web content. Students will undertake Web-based projects.

**HLTMS 315/515 Clinical Processes I** 3 crs
This course builds on the previous anatomy and physiology experience, examines disease processes and their related procedures and tests. This course follows a review of systems and case study approach.

**HLTMS 316W/516W Clinical Processes II** 3 crs
This course builds on the material learned in Clinical Processes I. It will focus on further review of systems and various related components such as laboratory and pathology. This writing-intensive course requires essay examination and case studies.

**HLTMS 320/520 Healthcare Delivery & Organizations** 3 crs
The purpose of this course is to introduce students to the various organizations and entities that comprise the healthcare delivery system. Students will also address current healthcare trends, quality assessment, cost containment, the use of information technology, re-engineering efforts, and the purpose and role of regulatory and agencies in the healthcare environment.

**HLTMS 325/525 Healthcare Human Resource Management** 3 crs
This course reviews the human resource process from the planning phase through recruiting, interviewing, hiring, training, and to the separation phase. Ancillary topics such as compensation and benefits, unions, negotiations, and conflict will also be covered.

**HLTMS 330/530 Health Information Science** 3 crs
Introduction to event-driven object-oriented computer application creation using a visual development environment in the context of trends in the healthcare information systems industry. Topics include data analysis, control structures, objects, properties, values, and program debugging. Prerequisite: HLTMS 310/510

**HLTMS 340W/540W Health Policy** 3 crs
As the healthcare industry continues to evolve, one must understand how research, information, and data impact the policy process. This course covers the four steps of the policy process in relation to data and information — analysis, formulation, implementation, and evaluation. This writing-intensive course requires an essay examination, case studies, a policy position paper, and a group project. Prerequisite: HLTMS 320/520

**HLTMS 445 Health Management Systems Seminar** 1 crs
This forum will examine topics related to contemporary issues in healthcare and the impact of these forces on the management of healthcare enterprises.

**HLTMS 451/551 Data Base Design & Management** 3 crs
Becoming able to take raw data and create an organized data base to generate reports and manage an organization is a key skill with which the course focuses on. Students will learn Access and develop data bases for real world clients. Conceptual matters of data base design and management in relation to client needs will also be discussed. Prerequisite: QSMS 183
SCHOOL OF HEALTH SCIENCES

HLTMS 453/553 Managed Care & Integrated Delivery Networks 3 crs
This course examines the structures of managed care entities, the various perspectives (physicians, insurers, and consumers), and managed care operations (capitation, information technology, legalities, and marketing). Students will investigate the effect of managed care on local organizations and as a class, build a managed care network. Prerequisite HLTMS 320/320

HLTMS 455/456/501 Health Management Systems Project I/II 3-6 crs
This is the capstone experience of the program. Students are able to obtain real world experience in a clinical and technical setting. It is intended that this experience be suitable for inclusion in the student's resume or portfolio. Requirements will be discussed on an individual basis.

HLTMS 470/570 Healthcare Systems Analysis & Design 3 crs
The traditional systems development life cycle (SDLC) and the object-oriented approach to the analysis and design of healthcare information systems are compared. Cost/benefit studies, interviewing, data collection, data analysis, process and data flow models, report, screen, and database designs are covered. Prerequisite HLTMS 330/530

HLTMS 471/571 Networking for Health Professionals 3 crs
Client/server, Internet access, distributed computing, and multimedia delivery services are changing the way healthcare is provided. Telemedicine, distributed clinical databases, and local area network access are commonplace in today's ever more sophisticated healthcare systems. This course shows how to develop, deliver, and manage such diverse systems. Hands-on experience with the World Wide Web site management and local area networking prepare the student for tomorrow's environment. Prerequisite HLTMS 470/570

HLTMS 477/577 Health Law 3 crs
This course focuses on the laws and regulations of the healthcare industry and the impact of these on healthcare planning. Topics include confidentiality, anti-trust issues, rights, fraud, and abuse. This course requires in-depth reading.

HLTMS 480/580 Healthcare Finance 3 crs
This course focuses on the financing and reimbursement of healthcare and how they affect the availability and utilization of services. Various payment methods, budgets, and the insurance industry will also be examined. Students will be required to complete financial analyses based on case studies and in-depth reading.

SCHOOL OF HEALTH SCIENCES

OCCUPATIONAL THERAPY CURRICULUM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (301) 396-6652

OCCUPATIONAL THERAPY CURRICULUM

OCCUPATIONAL THERAPY (OT)

Chair
Patricia A. Crust, Ph.D., OTR/L, FAOTA

Occupational therapists treat and consult with persons to promote an individualized, self-determined balance of the three occupations throughout the life span. Occupational competence is 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 utilizing persons in choosing, performing, and transforming 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 includes not only the individual performance components but also, removal of environmental barriers that hinder performance, and provision of reasonable accommodations, such as rehabilitation technology or assistive living devices.

Occupational therapy direct and indirect service delivery contexts are exceedingly diverse. They include but are not limited to acute care, industrial rehabilitation, physical rehabilitation, mental health, long-term care, home care, case management, consultation, school systems, early intervention, community services, education, disease prevention and health promotion. Important related concepts such as quality of life, productive function, independent living, full access, social, political, integration, multiculturalism, spirituality and balanced lifestyles are central to occupational therapy practice. As a result, graduates of this program must be able to evaluate emerging information, anticipate new practice opportunities, develop new knowledge, participate in research, use critical thinking and problem solving to guide professional decisions, cooperate effectively with a variety of groups, and advocate for these competencies and the essence of occupational therapy service delivery and underscore the principles that guide this program.

The occupational therapy program at Duquesne University is an entry-level master's degree program offered in a traditional academic model. Graduates of this program are eligible to sit for the national certification examination administered by the National Board for Certification in Occupational Therapy (NBCOT) and apply for state licensure, if required.

This program is fully accredited by the Accreditation Council for Occupational Therapy Education (ACOTE). Information regarding the accreditation status of the program is available from the ACOTE, 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220 (301) 652-2682.

OCCUPATIONAL THERAPY PROGRAM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (412) 396-6652

COURSE DESCRIPTIONS FOR THE PROFESSIONAL PHASE

OCCTH 305 Foundations of Occupational Therapy 4 crs
Overview of the profession's history, philosophy, roles and functions, scholarship activities, current issues, and future directions. Prerequisite Junior in the pre-professional occupational therapy program.

OCCTH 400 Independent Study 1-3 crs
With the guidance of a faculty member, a student may pursue an in-depth study of a subject area or develop an individual project in an area of interest related to their professional goals. Prerequisites: Enrollment of the supervising faculty member and approval of the Department Chair.

OCCTH 410 Occupational Performance Throughout the Life Span 3 crs

OCCTH 420/420L Neuromotor & Sensory Function 4 crs
Application of sensory, motor learning, and development theories in practice. Prerequisites: OCCTH 445, 453, HLTSC 403.

OCCTH 425/425L Psychological Function 4 crs
Psychodynamic, behavioral, developmental, and volitional theories and intervention strategies for life span psychological conditions. Prerequisites: OCCTH 440, 445, 453, HLTSC 441, 460W.

OCCTH 430/430L Biomechanical Function 4 crs
Theories and intervention strategies related to strength, endurance, joint function, and voluntary control over movement. Orthotics, prosthetics, biofeedback, mobility equipment, ergonomics, and human factors are discussed. Prerequisites: OCCTH 410, 435, 445, HLTSC 320/320L.

OCCTH 432 Qualitative Research 2 crs
An introduction to the theoretical frameworks, research designs, and methods of data analysis that characterize qualitative research.

OCCTH 435/435L Occupational Performance Evaluation 3 crs
Introduction to measurement and interpretation of occupational performance areas and performance components. Prerequisite OCCTH 305.

OCCTH 440/440L Interpersonal Communication 3 crs
Analyzing and directing individual and group interaction activities for therapeutic and supervisory functions. Prerequisite: OCCTH 305.

OCCTH 445/445L Occupational Analysis & Adaptations 3 crs
Introduction to activity analysis and the teaching-learning process during occupational performance.
SCHOOL OF HEALTH SCIENCES

using a variety of therapeutic modalities specific to practice. Prerequisites: OCCTH 308, HLTSC 320/320L, 437/438

OCCTH 455/455L Clinical Reasoning 
2 crs 
Transformation of didactic learning into clinical reasoning with a focus on establishing therapeutic interactions, clinical observation, and case study methodology. Includes 40 hours of practicum. Prerequisites: HLTSC 403, 441, 460W

OCCTH 456/456L Clinical Reasoning 
2 crs 
Transformation of didactic learning into clinical reasoning with a focus on establishing therapeutic interactions, clinical observation, and case study methodology. Includes 40 hours of practicum. Prerequisites: HLTSC 403, 441, 440, 445

OCCTH 500 Independent Study 
1-3 crs 
With the guidance of a faculty member, a student may pursue an in-depth study of a subject area or develop an individual project in an area of interest related to their professional goals. Prerequisites: Endorsement of the supervising faculty member and approval of the Department Chair

OCCTH 541 Evidence Based Practice 
2 crs 
Students work with a faculty mentor to research the evidence for various occupational therapy and related interventions. Prerequisites: HLTSC 430, OCCTH 432

OCCTH 545/545L Occupational Performance Perspectives 
4 crs 
Synthesis of material from previous treatment courses. Emphasizes provision of service within various systems through case study methodology. Prerequisite: OCCTH 456

OCCTH 546 Cognition & Perceptual Function 
3 crs 
The influence of cognitive, perceptual rehabilitation, and motor learning theories and approaches on evaluation and treatment is discussed. Prerequisites: HLTSC 403, 441, 442

OCCTH 550/550L Environmental Adaptations & Rehabilitation Technology 
3 crs 
Assessment and modification of the physical environment to enhance occupational performance including computer resources, assistive technology, home health, environmental controls, and environmental accessibility. Prerequisites: OCCTH 420, 425, 430, 456

OCCTH 552 Clinical Seminar 
2 crs 
Guided discussions regarding Level II Fieldwork to integrate the relationship between the clinical experience with essential curriculum concepts. Advanced learning in several specialty areas will be included. Prerequisites: OCCTH 555, 556, 557

OCCTH 555, 556, & 557 Level II A, B, & C Fieldwork 
8 crs, 4 crs & 4 crs 
Clinical education including exposure to a wide range of diagnoses and treatment in a variety of settings supervised by a registered occupational therapist. Duration of each course a minimum of 40 hours per week for six or 12 weeks. Prerequisite: OCCTH 456

OCCTH 561 Occupational Therapy Administration 
3 crs 
Introduction to the basic principles of organization and management of occupational therapy programs. Prerequisites: OCCTH 456, 545

OCCTH 562 Leadership 
1 cr 
Analysis of leadership approaches in practice, management, and education. Prerequisites: OCCTH 555, 556, 557

OCCTH 564 Special Topics 
2 crs 
Small group discussions of contemporary interventions. Prerequisite: Permission of the instructor

OCCTH 565 Community & World Health Care Issues 
3 crs 
Focus will be on community resources, health promotion, disease prevention, and future directions in national and international health care. Prerequisites: OCCTH 456, 545, HLTSC 460W

OCCTH 570 Fieldwork Proposal 
1 cr 
Students develop a proposal for a research project while on Level II Fieldwork. Prerequisites: HLTSC 430, OCCTH 432, 541

OCCTH 580 Psychopathology 
2 crs 
Overview of psychopathology in terms of symptoms, diagnosis, pharmacology, behaviors, and prognosis

OCCTH 585 Human Motion & Movement 
4 crs 
Analysis of movement using motor learning, development, kinesiological theories, and applied principles that contribute to functional human motion

SCHOOL OF HEALTH SCIENCES

On a very limited basis, physical therapy students may enroll in the joint degree program with the Department of Athletic Training, leading to a Bachelor of Science in Athletic Training, and a Master of Physical Therapy.

There are two Clinical Education Matriculation Examinations that students must pass BEFORE they are permitted to enter into clinical education. These examinations are done in order to determine that students have reached a level of proficiency necessary to safely work with patients. The first examination is given prior to Clinical Education I, near the end of Spring Semester, fourth year. The second examination is given prior to Clinical Education IIA, near the end of Spring Semester, fifth year. Students who do not pass all parts of the examination will not be permitted to begin clinical education. This will result in students sitting out of the program for one year and re-taking the matriculation examination the following year. If all parts of the examination are not successfully completed the second year, students will be dismissed from the program.

PHYSICAL THERAPY CURRICULUM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (412) 396-6652

COURSE DESCRIPTIONS FOR THE PROFESSIONAL PHASE

PHYTH 201 Introduction to Physical Therapy 
1 cr
This course provides the physical therapy major with an opportunity to learn the expectations and what the actual practice of physical therapy entails. Students will be expected to become well versed in medical terminology and the 10 "generic abilities" of professional practice

PHYTH 411 Clinical Education 
2 crs 
This is an introductory clinical experience, which will broaden the student's perception and understanding of the physical therapist's professional role. Prerequisites: HLTSC 320/320L, 321/321L, 330, 331, 403, 425, 437/438, 441, 442. PHYTH 412W, 422, 430, 431, 432, 447, 448, 464, 490 and successful completion of all elements of the Clinical Education Matriculation Examination

PHYTH 412W PT Seminar 
1 cr
This course will be devoted to clinically-related discussions with special emphasis on state practice acts, delegation to and supervision of support personnel, and ethical practice. An introduction to documentation is also presented. Students are required to write several papers for this course

PHYTH 422 PT Seminar II 
1 cr
This course is a clinically-related seminar with an emphasis on documentation and the acute care patient. Prerequisite: PHYTH 421W

PHYTH 431 Evaluation Methods 
3 crs
This course is designed as an introduction to basic evaluation and documentation techniques, which can be used with any patient diagnosis. It will draw heavily on previous classes, especially anatomy and physiology. Topics to be included are the models of disability, bony and soft tissue palpation, vital signs, reflexes and sensation testing, basic balance and coordination testing, manual muscle testing, range of motion and goniometry, length and girth measurements, posture analysis. This course also addresses the special needs of patients with HIV or an oncological diagnosis. This includes, but is not limited to a general overview of the disease processes and progression, influence of medical interventions on physical therapy treatment plans, confidentiality issues, dealing with concerns when working with the patient who is immune supressed or terminally ill. Prerequisites: HLTSC 320/320L, 321/321L, 330 and 331

PHYTH 432 Evaluation Methods II 
3 crs
Special emphasis will be placed on learning the evaluation and treatment skills for musculoskeletal dysfunction of the upper quarter. Prerequisite: PHYTH 431

PHYTH 447 PT Science I 
4 crs
An introduction to basic procedures in physical therapy. Emphasis is placed on all aspects of patient care which will be given to body mechanics, gait training, functional activities, safety, basic manual techniques, wound care, and basic exercise programs. Prerequisites: HLTSC 320/320L, 321/321L, 330, 331

PHYTH 448 PT Science II 
4 crs
This second course in the PT Science sequence will cover the theories and management of musculoskeletal dysfunction with emphasis on upper quarter dysfunction. Prerequisite: PHYTH 447

PHYTH 464 Special Topics in Geriatrics 
2 crs
This course will focus on the normal changes which occur with aging and how the physical therapist should modify their approach to examination, assessment, and program planning based on those changes. Physical therapy issues with patients exhibiting common pathological changes of aging such as osteoporosis, dementia and Type II diabetes will be addressed as well as current topics in geriatric care, including reimbursement and psycho-social concerns.
SCHOOL OF HEALTH SCIENCES

PHYTH 490 Grand Rounds I 0 cr
Invited clinicians, faculty and selected students will present a weekly case study to the physical therapy students. An interactive format is planned with the objective to enhance the students' clinical problem solving capabilities.

PHYTH 502 Wellness & Nutrition 1 cr
This introductory course provides basic information on nutrition and weight management principles as they relate to the general patient population. General weight training, flexibility development, and cardiovascular improvement programs and techniques are also covered in this course.

PHYTH 505 Exercise I 3 cr
Health & Disease

This is an intermediate level clinical experience which will build on the skills attained in Clinical Education I Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 511 Clinical Education II 4 cr
This is an intermediate level clinical experience which will build on the skills attained in Clinical Education I. Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 514 Clinical Education IIIA 5 cr
This is an intermediate level clinical experience which will build on the skills attained in Clinical Education I. Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 515 Clinical Education IIB 5 cr
This course is an intermediate level clinical experience which will build on the skills attained in Clinical Education I. Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 523 PT Seminar III 1 cr
This is an intermediate level clinical experience which will build on the skills attained in Clinical Education I. Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 533 Evaluation Methods III 3 cr
This course is an intermediate level clinical experience which will build on the skills attained in Clinical Education I. Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 534 Evaluation Methods IV 3 cr
This course is an intermediate level clinical experience which will build on the skills attained in Clinical Education I. Prerequisites PHYTH 411, 502, 523, 533, 534, 549, 560, 561W, and 568.

PHYTH 549 Grand Rounds III 0 cr
Invited clinicians, faculty and selected students will present a weekly case study to the physical therapy students. An interactive format is planned with the objective to enhance the students' clinical problem solving capabilities.

DEPARTMENT OF PHYSICIAN ASSISTANT (PA)
Chair and Co-Medical Director
A J Pinevich, MD
Co-Medical Director
Michael J Essig, MD

Physician assistants (PA), are health professionals licensed to practice medicine in collaboration with physicians. Physician assistants are qualified by graduation from an accredited physician assistant educational program and certification by the National Commission on Certification of Physician Assistants.

The physician/PA relationship, physician assistants exercise autonomy in medical decision-making and provide a broad range of diagnostic and therapeutic services. The clinical role of physician assistants includes primary and specialty care in medical and surgical practice settings. Physician assistant practice is centered on patient care and may include educational, research and administrative activities.

 Upon successful completion of the fifth year, students will be awarded a Master of Physician Assistant (MPA) and will be eligible to sit for the Physician Assistant National Certifying Exam.

PHYSICIAN ASSISTANT CURRICULUM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (412) 396-6652.

PHYSICA 403 Clinical History Skills & Practice 2 cr
The skills of communicating with the patient and documenting data are explored in the context of the medical examination.

PHYSICA 406 Clinical Lab Methods 3 cr
Indications, technique, and interpretation of a variety of common clinical lab tests are discussed.

PHYSICA 409 Clinical Pharmacology 4 cr
The mechanisms of actions of medications are discussed in correlation to specific disease processes.

PHYSICA 410/411 Applied Clinical Methods I/II 3 cr (each)

Cognitive understanding and technical performance of medical procedures are emphasized (includes laboratory).

PHYSICA 413/505/506 Clinical Seminar I/II/III 3 cr (each)
The integration of didactic sciences with patient problems is accomplished in case-based discussions.

PHYSICA 415 Basic Pathology 4 cr
Principles of basic pathology and the mechanisms of physiologic responses associated with selected human disease processes are discussed.

PHYSICA 418 Fundamentals of Pediatrics 3 cr
Childhood diseases are discussed in-depth, including diagnosis, treatment, and prognosis (includes case-based laboratory).

PHYSICA 419 General Medical Topics 2 cr
An ongoing introduction to medical issues is combined with discussion of related aspects including genetics, human sexuality, public health and epidemiology, and medicolegal issues.

PHYSICA 420/521 History & Physical Examination I/II 3 cr (each)
A practical study of physical examination techniques of the adult patient including a systematic approach to history-taking, integration of examination systems, patient assessment, and documentation practices (includes laboratory).

PHYSICA 515 Fundamentals of Surgery 3 cr
Lecture series addresses preoperative, perioperative and postoperative patient care and management (includes case-based laboratory).

PHYSICA 524 Patient Counseling and Education 1 cr
Emphasizes basic considerations and techniques needed for effective communication with patients regarding their health problems, with emphasis on enhancing patient compliance with medical therapy.

PHYSICA 529-536 Clinical Externships I-VIII 24 cr (total)
A coordinated series of supervised clinical externship assignments in a wide variety of clinical areas.

PHYSICA 541 Master's Research 3 cr
An independent research project is completed with ongoing faculty support and recommendations.
DEPARTMENT OF SPEECH-LANGUAGE PATHOLOGY (SLP)

Chairs
Mikael D. Z. Kimelman, Ph D

Speech and language disorders affect the way people talk and understand. These disorders may range from simple sound substitutions to not being able to use speech and language at all. Speech-language pathologists are specialists in human communication, its development, and its disorders. They are professionally educated to evaluate and treat persons with communication problems.

The speech-language pathologist will have a master’s degree or doctoral degree in speech-language pathology and should hold a Certificate of Clinical Competence (CCC) from the American Speech-Language-Hearing Association (ASHA). Students must graduate from an accredited program or a program who are professionally educated to evaluate and treat persons with communication problems.

Speech-language pathologists provide many specialized professional services which include helping people with articulation disorders learn proper production of speech sound, assisting people with voice disorders to develop proper control for correct production of speech sounds, working with people who lose speech and language disorders and their families to understand their disorder and to achieve normal communication in education, social and vocational settings, and helping people understand the types and severity of communication disorders.

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF SPEECH-LANGUAGE PATHOLOGY CURRICULUM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (412) 396-6652. The Department currently holds accreditation Status from the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association (ASHA). Students must graduate from an accredited program or a program that holds Candidacy Status from the CAA to be eligible for clinical certification by ASHA.

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF SPEECH-LANGUAGE PATHOLOGY CURRICULUM

A sample course plan for the pre-professional and professional phase of the curriculum can be obtained from the RSHS at (412) 396-6652. The Department currently holds accreditation Status from the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association (ASHA). Students must graduate from an accredited program or a program that holds Candidacy Status from the CAA to be eligible for clinical certification by ASHA.

COURSE DESCRIPTIONS FOR THE PROFESSIONAL PHASE

SLP 101 Introduction to Communication Science & Disorders 3 crs

This course offers a survey of the field of human communication disorders. Students will learn about normal and disordered communication across the life span.

SLP 205 Normal Speech & Language Development 3 crs

This course will introduce students to the stages of speech and language development in normal infants and children through participation in lectures and observations. Theories about semantic, syntactic, phonological, and pragmatic development will be reviewed. Course content will prepare students to differentiate normal from disordered communication development. Prerequisite: SLP 101 or permission of the instructor.

SLP 250 Anatomy & Physiology of Speech & Hearing 4 crs

This course will examine the anatomy of those parts of the human body which are involved in speech and hearing. Anatomical structures will be studied, and their physiological and clinical reference pertinent to communication and its disorders. Prerequisites: BIOL 207/208, SLP 101, or permission of the instructor.

SLP 310 Speech Science 4 crs

This course will review the characteristics of sound as a physical phenomenon and speech as one type of sound, considering its generation, transmission, and perception. The scientific study of speech sounds will examine the acoustic characteristics and perceptual features of specific sounds and the feedback systems employed to monitor production of these sounds. Methodological procedures for studying speech, including instrumentation and research methods, will be reviewed. Prerequisite: SLP 250 or permission of the instructor.

SLP 320 Phonetics 3 crs

In this course, students will learn to transcribe normal and disordered speech using the International Phonetic Alphabet (IPA). This skill-based course combines traditional lecture with multiple listening, production, and experimental activities. Students will gain an appreciation for the role of transcription-based activities in the clinical management of clients of all ages. Prerequisite: SLP 101 or permission of the instructor.

SLP 350 Introduction to Observation & Clinical Procedures 3 crs

This course will introduce students to various aspects of working with clinical populations through lecture and guided community-based clinical observations. Students will also be introduced to basic clinical procedures in preparation for their first clinical practicum. Upon completing this course, students will have completed at least 25 hours of clinical observation. Prerequisites: SLP 101, 205, 250, 310 and 320 or permission of the instructor.

SLP 400 Independent Study 1-6 crs

Individually directed study in a special area of speech-language pathology. Prerequisite: Permission of the instructor.

SLP 410 Diagnostics 3 crs

This class will introduce principles of assessment for a wide variety of communication disorders encountered in educational, medical, and other settings. Students will develop a knowledge of norms and standardized testing techniques, interviewing and chart review procedures, informal diagnostic tools and techniques, as well as methods for interpreting and summarizing results. Case studies will be used to illustrate diagnostic concepts.

SLP 425 Voice Disorders 3 crs

This course includes the study of the processes and systems of normal voice production. Incidence, etiologies, and symptoms of voice disorders across the life span, including organic, behavioral, and psychogenic disorders, will be discussed. Instrumental and non-instrumental techniques for assessment of voice disorders and medical and non-medical management techniques for voice disorders will be reviewed.

SLP 435 Language Disorders I 3 crs

In this course, students will learn about language disorders affecting children, with an emphasis on differential diagnosis, assessment, and treatment. By the end of this course, students will have experience in the analysis of language samples, will be able to diagnose and treat multiple speech and language disorders in children ranging from typical to severe, and will be able to formulate competent treatment plans. Prerequisites: SLP 310, 320, 350, or permission of the instructor.

SLP 445 Introduction to Audiology 3 crs

This course will introduce students to clinical audiology. Theories of hearing, hearing impairment, hearing conservation, hearing assessment, and management will be presented. A range of audiometric procedures for the screening and measurement of hearing will be discussed. This course is focused on audiological issues related to the clinical practice of speech-language pathology.

SLP 450W Research in Speech-Language Pathology 3 crs

The purpose of this course is to stimulate an appreciation for and an interest in basic and clinical research in speech-language pathology. Students will learn how to design and conduct research that contributes to the knowledge of normal and disordered communication. Prerequisites: Consent of the instructor.

SLP 455 Fluency Disorders 3 crs

In this course, students will learn about stuttering and other disorders of fluency in children, adolescents, and adults. By the end of this course, students will have practical experience in the analysis of stuttering, will demonstrate competence in selecting and justifying treatment goals and procedures, and will engage in multiple clinical problem-solving activities.

SLP 460 Speech-Language Pathology in the Medical Setting 4 crs

This course will introduce students to principles and procedures in the clinical management of a variety of communication disorders encountered in the medical setting. Issues specific to the pediatric patient, the geriatric patient, and the complex medical patient will also be addressed.

SLP 500 Independent Study 1-6 crs

Individually directed study in a special area of speech-language pathology. Prerequisite: Permission of the instructor.

SLP 505 Articulation & Phonology 3 crs

The purpose of this course is to provide students with fundamental knowledge of normal and disordered patterns of phonological development, by focusing on analyzing phonological data, and clinical assessment and treatment of articulation and phonological disorders in children. By the end of the course, students will have practical experience in the organization and interpretation of complex speech data, will be competent in the administration of articulation assessment instruments, will demonstrate competence in selecting and justifying treatment goals and procedures, and will perform case staging and clinical problem-solving activities.

SLP 520 Aural Rehabilitation 3 crs

This course will discuss the effects of hearing impairment on speech and language in children and adults. Theoretical and methodological issues in the habilitation, rehabilitation, and counseling of hearing impaired individuals will be discussed. Prerequisite: SLP 445.

SLP 525 Motor Speech Disorders 3 crs

This course focuses on motor speech disorders in adulthood. Neuroanatomical and neurophysiological mechanisms underlying motor speech disorders will be addressed. Students will demonstrate knowledge of assessment, diagnosis, and treatment of motor speech disorders.

SLP 530 Aphasia 3 crs

This course will review the neurophysiology and clinical management of communication disorders that result from damage to the language-dominant hemisphere of the brain. Students will learn about theoretical approaches to the study of aphasia. They will also learn to differentiate diagnose and describe aspects of the aphasia syndrome. A variety of approaches to the management of aphasia will be presented.

SLP 535 Neurocognitive Disorders 3 crs

In this course, students will learn about the neurophysiology, neuropathology, and clinical management of the communication challenges associated with neurocognitive disorders including Alzheimer's disease, traumatic and non-traumatic brain injuries, and the dementia. Approaches specific to
the acute and long-term management of these disorders will be addressed. Prerequisites SLP 530 or permission of the instructor

SLP 536 Language Disorders II 3 crs
This course expands the foundational information presented in Language Disorders I. Additional topics in this course may include the relationship between language and literacy, multicultural considerations in the assessment and treatment of language disorders, and language disorders in special populations. Prerequisite SLP 435

SLP 550 Dysphagia 3 crs
This course is designed to provide students with basic information about the anatomy and physiology of the normal swallowing mechanism as well as the characteristics and physiology of the abnormal swallow (dysphagia). Information about medical conditions associated with dysphagia will be presented. Students will learn to identify symptoms of abnormal swallowing and nutritional intake using observation and specialized evaluation procedures. They will also learn a variety of treatment approaches for dysphagia. Functional issues related to integrating dysphagia management into clinical practice will be discussed.

SLP 555 Alternative & Augmentative Communication 3 crs
This course will introduce students to the history of Augmentative and Alternative Communication (AAC), models of AAC, intervention, assessment principles, and procedures, components of augmentative communication strategies, and technologies. Language, symbolization, cognitive, and literacy issues, team approaches to assessment and intervention will be discussed. Interventions across the age and disability spectrum will be presented. Outcomes measurement, funding, consumer rights, and service delivery issues will also be addressed. Students will be required to participate in technology lab activities.

SLP 556 Head, Neck & Craniofacial Disorders 3 crs
This course will review a number of related clinical problems including cleft lip and palate, laryngeal, tracheotomy and ventilator dependency in medical speech pathology issues, methods, and philosophies related to teaching esophageal speech, TEP voice, and use of mechanical instruments as means of providing voice to laryngectomized individuals who may be ventilator dependent. Principles and methods of assessment and treatment within an interdisciplinary rehabilitation framework will be reviewed. Prerequisite SLP 425 or permission of the instructor.

SLP 573 Speech-Language Pathology Seminars 3 crs
These seminars will present a range of topics specific to the practice of speech-language pathology. The topics will focus on the procedural management of communication disorders.

SLP 574 Speech-Language Pathology Seminar I 1 cr
SLP 575 Speech-Language Pathology Seminar II 1 cr

Clinical Seminars

SLP 470 Clinical Seminar I 1 cr
SLP 471 Clinical Seminar II 1 cr

These seminars will present a range of topics specific to the practice of speech-language pathology. The topics will focus on the procedural management of communication disorders.

Speech-Language Pathology Seminars

SLP 573 Speech-Language Pathology Seminar I 1 cr
SLP 574 Speech-Language Pathology Seminar II 1 cr

Pathology Seminar III 1 cr

These seminars will focus on a variety of professional and personal interest areas including the management of disorders not addressed in traditional courses.

The Army Reserve Officers’ Training Corps (ROTC)

DEPARTMENT OF MILITARY SCIENCE

The Army Reserve Officers’ Training Corps (ROTC) program supporting Duquesne University is located at the University of Pittsburgh. It exists to train the future officer leadership of the United States Army and offers opportunities and challenges that can put college students on the fast track to success in life. ROTC provides a combination of academics and important hands-on training, in addition to physical and mental challenges that will help students succeed in college and beyond. Through the training in ROTC, students will develop the confidence, self-esteem, motivation and leadership skills they will need regardless of their career plans.

THE FOUR-YEAR PROGRAM

The traditional Four-Year Program is divided into two parts. The Basic Course is taken in the freshmen and sophomore years. There is no commitment for non-scholarship students at this level. Upon successful completion of the Basic Course, students are eligible for the Advanced Course, taken in the junior and senior years. At the beginning of the Advanced Course, students must decide whether or not they wish to become officers in the Army and enter into a formal contract. During the summer between the junior and senior years, students are required to attend the Advanced Camp. A successful completion of this program allows students to become members of the United States Army as a Second Lieutenant.

THE TWO-YEAR PROGRAM

If the first two years of ROTC are not taken, students can attend Camp Challenge during the summer between the sophomore and junior year. This camp will qualify students to begin the Advanced Course in their junior year or in the first year of a two-year graduate program. If a student has served in the active duty military, attended a military academy for one year, or participated in JROTC for three years or belong to a Army National Guard or Army Reserve unit, they already qualify for entrance into the Advance course.

ARMY ROTC SCHOLARSHIPS

Army ROTC offers four, three and two-year scholarships of up to $16,000 per year with additional annual scholarships of $450 for books and $1,500 for spending. At Duquesne, this scholarship is increased with up to a $5,000 bonus for room and board if academic standards are met. High school, undergraduate and incoming two-year graduate students are eligible to apply. For application and information call ROTC at the University of Pittsburgh at (412) 624-619/6198/6199, or visit our web page at www.cmu.edu/rotc/armyrotc.
Air Force Reserve Officers Training Corps (AFROTC)

DEPARTMENT OF AEROSPACE STUDIES

The Air Force ROTC program is administered by the Department of Aerospace Studies at the University of Pittsburgh. This program is available to undergraduate and graduate students by cross-enrollment through agreement with the University of Pittsburgh. Completion of the four-year or two-year AFROTC program leads to a commission as a Second Lieutenant in the US Air Force. AFROTC courses are open to all students, regardless of whether they are enrolled in a commissioning program.

In the four-year commissioning program, a student takes the general military course (GMC) during the freshman and sophomore years, attends a four-week summer training program, and then takes the professional officer course (POC) in the junior and senior years. In the two-year commissioning program, a student begins attending a five-week summer training program prior to his or her junior year and then enters the POC. A student is under no contractual agreement to the Air Force until entering the POC or accepting an Air Force Scholarship. In addition to the academic portion of the curriculum, each student attends a one-hour leadership lab each week. This lab utilizes a student organization designed for the practice of leadership and management techniques. Two to three and a half-year scholarships are available on a competitive basis to qualified students. Many AFROTC scholarships may cover all costs of tuition, incidentals and lab fees, books, plus pay each recipient $200 per month.

GENERAL MILITARY COURSE (GMC)

The subject matter for the freshman and sophomore years is developed from a historical perspective and focuses on the scope, structure, and history of military power with emphasis on the development of air power. The freshman courses explore the role of U.S. military forces, and the Air Force in particular, through a study of the total force structure, strategic offensive and defensive forces, general-purpose forces, and support forces. The sophomore courses include an introduction to the history of air power with emphasis on the development of concepts and doctrine governing the employment of U.S. air power.

PROFESSIONAL OFFICER COURSE (POC)

The Professional Officer course, taken during the cadet’s junior and senior years, concentrates on three main themes, the concepts and practices of management, leadership, and national defense policy. During the first term of the junior year the course concentrates on a study of the management functions, planning, organizing, coordinating, directing and controlling. Basic and advanced management techniques, as found in the military and industrial environment, are explored. The second term deals with the application of general concepts of leadership to Air Force situations. As a basic study of human behavior, human relationships, and professional ethics, the course emphasizes the similarities and differences encountered in the military and civilian environment. The first term of the senior year concentrates on selected elements of the U.S. government and national security policy engaged in producing national strategy as well as various elements of U.S. military forces, doctrine, and employment capabilities. During the second term, the course concentrates on the strategic options available to the U.S. and on the manner in which policy choices are made. The course also includes a review of the military justice system. For details about the two programs as well as information on the courses, scholarship and flying programs, interested students are encouraged to contact the Air Force ROTC detachment at (412) 624-6396, or contact the Professor of Aerospace Studies, Air Force ROTC, University of Pittsburgh, 2925 Cathedral of Learning, Pittsburgh, PA 15260-0001. Alternatively, see our website at www.rotc.pitt.edu.

Naval Reserve Officers’ Training Corps (NROTC)

DEPARTMENT OF NAVAL SCIENCE

Colonel Wayne A. Clemmer, USMC
Office 4615 Forbes Ave
Phone (412) 268-5109

The Department of Naval Science was established 16 December 1980. Carnegie Mellon’s Naval Reserve Officers Training Corps (NROTC) is designed for young men and women who are seeking a challenging academic experience and who desire to serve their country as officers in the Navy or Marine Corps after graduation.

NROTC midshipmen lead the same campus life as other Carnegie Mellon students. They make their own arrangements for rooms and board, choose a preferred area of study and participate in extracurricular activities. Midshipmen wear civilian clothes to classes but wear uniforms one day of the week. NROTC students are active in all facets of university life, many are in positions of leadership in student government, on varsity and intramural sports teams, in campus clubs, and other student organizations. The NROTC program seeks students who are bright, ambitious, enthusiastic leaders whose lives are enriched by their education at Carnegie Mellon and by their involvement in NROTC.

FOUR-YEAR SCHOLARSHIP PROGRAM

The four-year scholarship program provides full tuition, fees, textbooks, uniforms, and a $200 per month tax-free subsistence allowance to students selected through nationwide competition. Midshipmen must complete the university approved curriculum of their choice, including courses in calculus and calculus-based physics, and specified courses in naval science subjects. Paid summer training periods are provided to all officer candidates for the first two years. Additionally, some candidates may be required to complete courses in American military affairs, national security policy, English, mathematics, and/or the physical sciences. Descriptions of the course requirements for each candidate are provided to scholarship/program students at the start of the freshman year. A limited number of full scholarships may be awarded by the NROTC midshipmen commissioned through the scholarship programs become officers in the Navy or Marine Corps and incur a four-year active duty obligation in a selected area of the naval service.

THREE-YEAR SCHOLARSHIPS

Three-year scholarships are available on a competitive basis to those qualifying college program (non-scholarship) NROTC students who have demonstrated leadership and academic excellence during their freshman year and are nominated for the scholarship by the Professor of Naval Service. Active duty obligation is four years upon commissioning.

TWO-YEAR SCHOLARSHIP PROGRAM

The two-year scholarship program provides the same benefits as the four-year program for a period of 20 months. Students must apply for this program no later than February of their sophomore year. Students selected for this program attend the Naval Science Institute during the summer prior to their junior year to complete required naval science course material. A paid summer training period is provided between the junior and senior years. Commissionees incur a four-year active duty obligation upon graduation.

COLLEGE (NON-SCHOLARSHIP) PROGRAMS IN NROTC

Qualified students may participate in NROTC as college program (non-scholarship) midshipmen and earn commissions in the Navy or Marine Corps Reserve upon graduation. The active duty obligation for this program is three years. Students receive all naval science textbooks, uniforms, and during their junior and senior years a tax-free subsistence allowance of $200 per month. A paid summer training period is provided between the junior and senior year. College program students may also compete for a limited number of merit scholarships.

CURRICULUM

The sequence of Naval Science courses is the same for all officer candidates for the two years midshipmen accepted into the Marine Corps option program will have curriculum variations starting with their third year. Additionally, some candidates may be required to complete courses in American military affairs, national security policy, English, mathematics, and/or the physical sciences. Descriptions of the course requirements for each candidate are provided to scholarship/college program students at the start of the freshman year. All scholarship and college program students are required to attend a weekly two-hour Naval Laboratory (32-100) where military drill, physical fitness, and leadership are emphasized. Naval Science courses are open to all students. Since these are required courses for NROTC students, they will be given priority in enrollment. Remaining spaces will be filled through the normal university registration process.
Continuing Education

Administration
Dean and Professor
Benjamin Hodes, Ph D
Assistant Professor of Leadership Studies
and Director of Credit Programs
Marie A. Com, Ph D
Director of Continuing Education —
Student and Alumni Services and Noncredit Programs
Marianne Lester, M A

MISSION STATEMENT
The mission of the Division of Continuing Education is to extend the resources of the University to advance lifelong learning.

SUMMARY STATEMENT OF PHILOSOPHY
Credit Programs
The Division of Continuing Education (412-396-5034) addresses the needs of adult learners. Through the Division, adult students have access to undergraduate courses offered within the University on Saturdays, online or in the evening. Entry requirements are that the individual be twenty-one (21) years of age or older and have a high school diploma or GED equivalency. The student population of the Division includes working adults and other non-traditional students whose preference is to pursue a degree through day, evening, weekend or online study, on either a full or part-time basis.

Professional Development Programs
With the Professional Development Programs, the Division of Continuing Education is committed to education for the changing workplace. A wide range of courses, workshops, certificate programs and seminars is offered to provide participants with the skills, knowledge, and techniques they need to develop in order to meet the demands of the changing world of work.

CREDIT PROGRAMS
I) Saturday Undergraduate Degrees
Adult students have the opportunity to earn a degree by attending classes only on Saturday. Five eight-week terms comprise the accelerated academic calendar. Students earn a Bachelor of Science in Professional Studies, or a Bachelor of Science in Business Administration.

The Division of Continuing Education recognizes that students enrolled on weekends demand the same intellectual integrity in their academic programs as those attending the University in a more traditional manner. Hence, the baccalaureate curriculum on Saturday requires the same level of achievement as that expected of students in a more traditional academic environment, but is in an intensive, challenging format appropriate only to the adult student. It is a rigorous program with a competitive and high admissions standard. Students are considered for admission according to one of the following sets of criteria:

a) Applicants with prior college course work must have a minimum cumulative GPA of 2.5 for full admission. Provisional admission is possible for students with a cumulative GPA less than 2.5, based upon the quality of the overall application.

b) Applicants with no prior college course work must take a series of placement tests to document the skills necessary for college level work.

Results of the placement tests determine whether remediation at the community college level is necessary, prior to entering the program.

Due to the challenging nature of this unique, accelerated degree program, all applicants are required to have a personal interview.

A) Bachelor of Science in Professional Studies Degree (4 Concentrations)
Students earn a Bachelor of Science in Professional Studies (BSPS). Professional Studies is the term that describes the four (4) interdisciplinary concentration areas Professional Communication, Organizational Leadership, Organizational Behavior, and Computer Technology. A minimum of 120 total credits is required to complete this degree. Components of the degree are as follows:

University Core Curriculum — 33 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. Students are not merely preparation for professional study but for lifelong learning.

General Core 27 Credits
101 Adult Transition Seminar 3 Cr
101 Thinking and Writing 3 Cr
101 Across the Curriculum 3 Cr
101 College Algebra 3 Cr
101 Survey of Sociology 3 Cr
102 Imaginative Literature and Critical Writing 3 Cr
112 Art History 3 Cr
125 Fundamentals of Statistics 3 Cr
132 Basic Philosophical Questions 3 Cr
151 Shaping of the Modern World 3 Cr

Science Core 3 Credits

171 Biology 3 Cr

Theology Core 3 Credits

182 Human Morality 3 Cr
186 Roman Catholic Heritage 3 Cr

Student and Alumni Services and Noncredit Programs
Marianne Lester, M A
D) Bachelor of Science in Business Administration-Accounting Degree

A Bachelor of Science in Business Administration with an Accounting Concentration is available on Saturdays. Please refer to the School of Business section of this catalog for a complete degree description. In addition to the listed curricula, the Adult Transition Seminar is required for the Saturday degree.

II) The Master of Arts in Leadership and Liberal Studies (Saturday and Online)

Duquesne University's Graduate School of Liberal Arts has partnered with the Division of Continuing Education to create this innovative and exciting program for individuals who wish to be or to become effective leaders. Rooted in the liberal arts, the Master of Arts in Leadership and Liberal Studies (MALLS) emphasizes the importance of integrity and social responsibility in leaders. This approach to leadership education focuses on the dimensions of human behavior and human nature as illuminated by some of the great thinkers of the past and present. The MALLS program also emphasizes the self-assessment and development of skills that are crucial to the leader's role, as well as an examination of the world in which today's leaders will function.

This award-winning program is designed for busy adults who wish to earn their master's degree without interrupting their careers. Courses are offered on alternating Saturdays in the morning and afternoon, or completely online. Students who take two courses per semester in the Fall, Spring and Summer semesters can complete their master's degree in two years.

Thirty-six (36) credits are required to earn a Master of Arts in Leadership and Liberal Studies. The curriculum has three components:

Liberal Studies Core — 12 Total Credits

701 Leadership and Liberal Studies: The Academic Perspective 3 Cr
702 Leadership and Liberal Studies: Social, Political & Economic Issues 3 Cr
703 Leadership and Liberal Studies: The Ethical and Spiritual Dimensions 3 Cr
709 Leadership and Liberal Studies: Colloquium 3 Cr

Leadership Core Curriculum — 15 Total Credits

710 Introduction to the Graduate Study of Leadership (required) 3 Cr
711 Organizational Communication 3 Cr
712 Decision Making and Problem Solving for Leaders 3 Cr
714 Conflict Resolution 3 Cr
715 Valuing a Diverse Workforce: The Leader's Role 3 Cr
716 Public Policy and Legal Issues for Leaders 3 Cr

Electives — 9 Total Credits

Select Three of the Following:
730 Science, Technology, and Society 3 Cr
731 The Shaping of the Contemporary World 3 Cr
732 Economics and the Modern World 3 Cr
733 Comparative Political Systems 3 Cr
734 Human and Financial Resources 3 Cr
735 Information Technologies for Modern Organizations 3 Cr

III) Evening Bachelors' Degrees

Several Bachelors' degrees are available in a convenient evening format. Options include a Bachelor of Science in Business Administration with concentrations in Accounting, Management, or Marketing or a Bachelor of Arts in Psychology. The School of Business offers evening courses that are integrated with other required courses. Students who take two courses per semester in the Fall, Spring and Summer semesters can complete their Bachelors degree in two years.

Thirty-six (36) credits are required to earn a Master of Arts in Leadership and Liberal Studies. The curriculum has three components:

Liberal Studies Core — 12 Total Credits

701 Leadership and Liberal Studies: The Academic Perspective 3 Cr
702 Leadership and Liberal Studies: Social, Political & Economic Issues 3 Cr
703 Leadership and Liberal Studies: The Ethical and Spiritual Dimensions 3 Cr
709 Leadership and Liberal Studies: Colloquium 3 Cr

Leadership Core Curriculum — 15 Total Credits

710 Introduction to the Graduate Study of Leadership (required) 3 Cr
711 Organizational Communication 3 Cr
712 Decision Making and Problem Solving for Leaders 3 Cr
714 Conflict Resolution 3 Cr
715 Valuing a Diverse Workforce: The Leader's Role 3 Cr
716 Public Policy and Legal Issues for Leaders 3 Cr

Electives — 9 Total Credits

Select Three of the Following:
730 Science, Technology, and Society 3 Cr
731 The Shaping of the Contemporary World 3 Cr
732 Economics and the Modern World 3 Cr
733 Comparative Political Systems 3 Cr
734 Human and Financial Resources 3 Cr
735 Information Technologies for Modern Organizations 3 Cr

Professional Core Curriculum — 24 Total Credits

The Professional Core Curriculum for the evening BPS is the same as that for the BPS in Saturday format, outlined above on page 178.

Accounting (Basic)

This certificate is a six-course, 18-credit program of the following courses:
214 Financial Accounting
215 Managerial Accounting
216 Accounting Practice and Systems
311 Intermediate Accounting I
312 Intermediate Accounting II

Select one (1) of the following:
315 Cost Accounting
411 Auditing

Accounting (Advanced)

This certificate is a nine-course, 24-credit program that satisfies the course work requirements for the Pennsylvania CPA examination. The candidate must also have a bachelor's degree to sit for the CPA exam.

The required curriculum includes 18 credits from the Basic Certificate program, plus nine (9) credits from the following:
251W Business Law
412 Intro Income Tax Accounting

Select one (1) of the following:
353 Contracts
354 Commercial Transactions
355 Law and Business Organizations
356 Legal Aspects of Human Resource Management
454 The Law of International Commercial Transactions

Multimedia Technology

Earning the Certificate in Multimedia Technology requires that you complete the four foundation courses and one additional multimedia tools course for a total of 15 credits. You may also register for these courses as a non-credit capacity. This certificate is available at the undergraduate and graduate level.

Required Courses
301 Multimedia Technology
303 Multimedia and Instructional Design Theory
305 Graphic Design Theory for Multimedia
330 Digital Imaging for Multimedia

Choose one of the following:
307 Animation Principles and Applications
579 Digital Video
535 Cross Platform Authoring

Information Technology

This certificate is an eight-course, 24-credit program of the following courses:
150 Computer Programming C++
182 Information Systems I
183 Information Systems II
362 Programming for Information Processing
Continuing Education

Information Technology (cont.)
385 Computer Systems
481 Systems Analysis and Design
482 Database Management
483 MIS Project
484 Networks and Telecommunications

Marketing
This certificate consists of seven undergraduate courses that comprise a focused area of professional knowledge. All courses are taught by faculty through the AACSB accredited School of Business Administration Required Courses
371 Introduction to Marketing 3 Cr
372 Sales Administration 3 Cr
379 Business Logistics 3 Cr
375 Consumer Behavior 3 Cr
376 Product Management 3 Cr
477 Strategic Marketing Planning 3 Cr
478 Industrial Marketing 3 Cr

V) Online
The Division offers a Master of Arts in Leadership and Liberal Studies entirely online. Please see section II above for complete details. Some undergraduate courses are also available online. Please call (412) 396-5600 for more information.

Professional Development Programs

The Paralegal Institute
A paralegal is a trained professional who works under the direction of an attorney. With the changing needs of the legal profession, it is one of the nation's fastest growing professions in America today. Paralegals are employed in private law firms, banks, corporations, public service organizations and in state and federal government. A paralegal's job responsibilities include client and witness interviews, legal research, drafting correspondence, pleadings and other legal documents, conducting real estate closings, summarizing depositions or interrogations and rendering direct assistance to lawyers, clients and the courts.

In response to the demand for highly trained, well qualified paralegals, the Division of Continuing Education at Duquesne University prepares professionals for career opportunities. The Institute is the only program in the Pittsburgh area with the American Bar Association approval. A certificate in Paralegal Studies is awarded upon successful completion of nine courses. These include five core courses Introduction to the Legal System and Paralegalism, Legal Research, Legal Writing and Case Analysis, Computer Assisted Legal Research and Professional Responsibility and Paralegal Practice. Students may choose an area of specialization in Corporate Law, Civil Litigation or Employee Benefit Plans. Classes are offered part-time in the evening or during an accelerated summer term.

A bachelor's degree is required for admission to the Paralegal Institute. Exceptions to this policy are reviewed by the program coordinator. Students must maintain a 2.5 grade point average in order to earn the certificate. To obtain more information regarding program requirements and admission call (412) 396-1643.

Center for Leadership Development
The Center for Leadership Development provides customized consulting and professional development through innovative and accessible delivery systems with a fundamental commitment to client success. For more information about the Center, please call (412) 396-1643.

Exam Preparation Courses
GMAT, GRE and LSAT review courses are offered for individuals interested in preparing to sit for examinations required for graduate school admittance. 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 professional local University faculty. Please call (412) 396-1643 for more information and a schedule of upcoming courses.

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Duquesne University is easily accessible by plane, bus, rail or car. The campus is a 10-minute walk from downtown, where both Greyhound and Trailways bus and Amtrak train stations are located. If you are arriving by plane, the Pittsburgh International Airport is located only 30 minutes from downtown Pittsburgh via bus, cab, rental car or limousine. For those arriving by car, major interstate and state routes lead to Duquesne from all points north, south, east and west. Interstate 79 runs north and south of the campus where it intersects with 279. From the east, the Pennsylvania Turnpike and state routes 22 and 30 intersect with 376. Both I-279 and 376 lead to downtown Pittsburgh.