DePaul University Bulletin

College of Liberal Arts and Sciences
Graduate Programs
1984-85

Dedicated to the Memory of
Rev. William T. Cortelyou, S.T.D.
Teacher, Administrator, Vincentian

Dean, Graduate School
DePaul University
(1960-1979)

Frank J. Lewis Center
25 East Jackson Boulevard
Room 1603
Chicago, Illinois 60604
341-8870


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Editor: David A. White
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*The Department of Religious Studies has terminated its Graduate Program. All graduate students remaining in the program will be bound by the conditions listed in the Bulletin for their entry year.
1984-85 Academic Calendar
for Graduate Students

AUTUMN QUARTER

August 30     Th   In-person registration for Autumn Quarter.
September 3   M    Labor Day.
September 15  W    Autumn Quarter begins. Late registration for Autumn Quarter.

October 5       F    Last day to apply for pass/fail or auditor status.
October 8       M    St. Vincent DePaul holiday. No classes.
November 5      M    Last date to withdraw from class.
November 21-24  W-Sat Thanksgiving holidays.
November 26 -
December 1      M-Sat Final examinations for the Autumn Quarter.
December 1      Sat   Autumn Quarter ends.

WINTER QUARTER

December 1      T    In-person registration for Winter Quarter.
January 3       Th   Winter Quarter begins. Late registration for Winter Quarter.
January 21      M    Last date to apply for pass/fail or auditor status.
February 15     F    Final date for filing for June convocation.
February 18     M    Last date to withdraw from class.
March 8-14      F-Th  Final examinations for the Winter Quarter.
March 14        Th    Winter Quarter ends.
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
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<tbody>
<tr>
<td>March 15</td>
<td>F</td>
<td>In-person registration for Spring Quarter.</td>
</tr>
<tr>
<td>March 23</td>
<td>Sat</td>
<td>Spring Quarter begins. Late registration for Spring Quarter.</td>
</tr>
<tr>
<td>April 5-7</td>
<td>F-Sun</td>
<td>Easter holidays.</td>
</tr>
<tr>
<td>April 15</td>
<td>M</td>
<td>Last date to apply for pass/fail or auditor status.</td>
</tr>
<tr>
<td>May 3</td>
<td>F</td>
<td>Final date for submitting completed grade changes and examination scores for June convocation.</td>
</tr>
<tr>
<td>May 13</td>
<td>M</td>
<td>Last date to withdraw from class.</td>
</tr>
<tr>
<td>May 17</td>
<td>F</td>
<td>Final date for submitting theses and dissertations for June convocation.</td>
</tr>
<tr>
<td>May 27</td>
<td>M</td>
<td>Memorial Day. No classes.</td>
</tr>
<tr>
<td>June 1-7</td>
<td>Sat-F</td>
<td>Final examinations for Spring Quarter.</td>
</tr>
<tr>
<td>June 7</td>
<td>F</td>
<td>Spring Quarter ends.</td>
</tr>
<tr>
<td>June 9</td>
<td>Sun</td>
<td>Convocation</td>
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Dear Graduate Student:

A warm welcome to the Graduate School of DePaul University!

This Bulletin is your guide through the program of studies you have chosen. It is also a guide through the policies and regulations of the University designed with an eye to both your needs as a graduate student and the integrity of your graduate degree.

There is another message I would like to convey. As a Catholic and Vincentian institution DePaul stands for religious personalism. You as a person are deeply respected for your God-given dignity. We ask our faculty and staff to accord you this respect on all occasions.

We invite you to make full use of the resources the University offers graduate students, especially those that outside of the class sessions enrich your academic and personal life; for example, faculty advisement, libraries, laboratories, career planning and placement, and spiritual counseling.

You are following thousands of men and women who in their graduate studies at DePaul have found the meaning of scholarship, the paths to career advancements, and the challenge of mind-expanding experiences. May your own studies be successful in all these ways.

Sincerely,

John T. Richardson, C.M.
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Liberal Arts and Sciences

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David A. White, Ph.D. .................................................. Administrative Assistant, Graduation

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Charles R. Strain, Ph.D. .................................................. Liberal Studies
F. Bruce Vawter, C.M., S.T.L., S.S.D. ....................................... Religious Studies
Liberal Arts and Sciences –
General Information
PHILOSOPHY

DePaul University, founded on Judeo-Christian principles, continues to assert the relevance of these principles through higher education to modern man and woman. The University expresses these principles especially by passing on the heritage of St. Vincent de Paul: individual perfection manifested through purposeful involvement with other persons, communities and institutions.

The College of Liberal Arts and Sciences assumes as its direct educational task to foster in its students those traditions of scholarliness central to advanced studies and research. The programs for the master's and doctoral degrees are designed to develop in graduate students a broad and deep knowledge of their chosen discipline, the research methodology of the discipline and the development of those competencies necessary for their personal advancement in their scholarly, professional or creative careers.

Through the steady flow of its graduates into the community, the College strives to assist contemporary society meet its need for educated individuals willing to be of service to others.
ACCREDITATIONS

Depaul University is accredited by:
The American Assembly of Collegiate Schools of Business
The American Bar Association
The American Chemical Society
The American Medical Association Council on Medical Education
The American Psychological Association
The Committee on Allied Health Education
The National Association of Schools of Music
The National Council for Accreditation of Teacher Education
The National League for Nursing
The North Central Association of Colleges and Secondary Schools

Depaul University is on the approved list of:
The Association of American Law Schools
The Illinois Department of Registration and Education
The Illinois Office of Education, State Teacher Certification Board
The National Association for Music Therapy
The State Approved Agency for Veterans Training

Depaul University is a member of:
The American Association of Colleges for Teacher Education
The Association of American Colleges
The Association of Urban Universities

LOCATIONS

DePaul University has two major locations: the Lincoln Park Campus (LPC) and the Loop Campus (LC).

Lincoln Park Campus, located approximately four miles north of the Chicago Loop, on the near north side of the city, is bounded by Fullerton, Webster, Racine and Halsted Avenues. The campus is easily accessible by public transportation.

Located here are the academic buildings and libraries for the Liberal Arts and Sciences, Education, Music, and Goodman School of Drama; the residential, social and athletic buildings for students; the residences for clerical faculty, and the Church of St. Vincent de Paul.

The Loop Campus includes the Frank J. Lewis Center, the Comerford J. O'Malley Place, the Administration Center and the 28 East Jackson Boulevard Building. These buildings are located at the intersection of Jackson Boulevard and Wabash Avenue in the heart of Chicago's Loop.

In addition to the The College of Liberal Arts and Sciences (LAS) Loop Campus Graduate Office, the buildings contain the offices of the general administration, the College of Law, the College of Commerce, and the School for New Learning, as well as classrooms, library, theater, bookstore and chapel.
LIBRARIES

The DePaul University Libraries are divided into three different units: the Lincoln Park Campus Library, the Lewis Center Library, and the Law Library. The combined collection consists of over 470,000 volumes, 3,500 periodical titles as well as media such as filmstrips, cassettes, films, microforms, videocassettes, and a music record library. Library handbooks, describing the various services and the physical arrangement of the libraries and explaining library rules and regulations, are available throughout the library system.

Library Computer System

The Libraries of DePaul University have their circulation records in computerized form and have 33 terminals in operation for an on-line circulation system. The Library Computer System allows DePaul's libraries at Lewis Center, Lincoln Park, and the Law Library to have on-line access to each other's collections. In addition, DePaul's students now have computer access to the library collections of twenty-one other Illinois colleges and universities including the University of Illinois at both Urbana-Champaign and Chicago. The DePaul libraries belong to other cooperative groups including the Center for Research Libraries, the Chicago Academic Library Council, the Library of International Relations, and the Illinois Library Information Network, thus making vast resources in the Chicago and Midwest available to graduate students.

CRT terminals and printers provide access to the huge data base of OCLC, Inc. and produce subject computer searches from a number of data bases (indexing services in computerized form). A daily shuttle allows students to request a book from the other campus library with 24-hour delivery service of DePaul materials.

Lewis Center Library

The Lewis Center Library's collection contains over 131,000 volumes and 946 periodical subscriptions. It supports many of the undergraduate and graduate programs of the University and has special strength in business holdings. The reference department on the second floor houses the current periodicals, abstracts and indexes, as well as the reference collection. Services provided by the reference staff include interlibrary loans, reference assistance and subject computer searches. The lower level of the Lewis Center contains the Audio-Visual Department and the bound periodical collection. General circulating books, media center, and reserve materials are located on the third floor.
Lincoln Park Library

The Lincoln Park Library, located in the Schmitt Academic Center (SAC), serves students in Liberal Arts and Sciences, Education, Music and Drama, as well as some graduate departments of the University. There are over 200,000 volumes presently in the collection. The periodicals collection includes over 1500 current subscriptions. The Reference Department and periodical collection are located on the third floor of SAC. The Circulation Department and reserve materials are located on the fourth floor. The art slide collection, Education Resource Center, music record collection and other media collections are also located on the fourth floor. Other audio-visual services of the campus are located on the second floor.

Special Collections

The Department of Special Collections is located on the Lincoln Park Campus. The special collections include a facsimile of the Book of Kells; a Dickens Collection; an extensive Napoleonic Collection; a Horace collection; a Sports Collection; the Yerrona Williams Derr Collection of Afro-American Studies; and various rare books, including ten incunabula.

SERVICES

Alumni Association

Upon graduation, all students become members of the Alumni Association. The activities and services of the Association, varied and many, are designed to meet the professional and social needs of DePaul graduates. Communication with the Alumni Office on changes of address, marital status, etc., will assure continual notification on current university activities. For more information, contact the Alumni Relations Office, Lewis Center, 25 East Jackson Boulevard, Chicago, Illinois 60604 or call (312) 341-8584.

Campus Ministry

Campus Ministry is committed to the ongoing process of clarifying the God-given dignity and potentiality for the growth and development of the human person. Listening to your life experiences, hopes, dreams, fears, and questions, Campus Ministry can support you in your education at DePaul. Offices on the Lincoln Park Campus are located on the second floor of the Harold L. Stuart Center in Lincoln Park and at the Lewis Center in Room 1630. Daily and Sunday Masses are offered on both campuses. For information call 341-8162 or 341-6970.
Career Planning and Placement

The University has two offices offering career planning and placement services to students and graduates of the Graduate School. Those seeking either counsel and/or leads regarding part-time or full-time employment in business or government should register with the Office of Career Planning and Placement in Room 1176 of the Lewis Center. Those who wish counsel and/or employment in teaching and other positions in education should apply to the Teacher Placement Office in Room 182 of the Schmitt Academic Center, Lincoln Park Campus.

To assist students in making career decisions, the following services are available: (1) career seminars; (2) career libraries (on both campuses) containing hundreds of publications describing careers, organizations, industries, and projections of the demand for college graduates by types of careers; (3) individual counsel; and (4) interpretation of vocational interest inventories.

To assist graduating students in obtaining career employment, the following services are available: (1) group workshops for guidance in job search techniques; (2) instruction on how to prepare personal resumes and letters of application; (3) "mock" interviews and instruction by university staff in preparation for actual interviews; (4) on-campus interviews with prospective employers; and (5) daily listing of job leads.

Community Mental Health Center

The DePaul University Community Mental Health Center is an agency funded by the Illinois Department of Mental Health and DePaul University. In addition to its services to the community and to DePaul students, it is also a training facility, providing practicum experience for graduate students, both in psychology and social work.

To qualify for service, a student must be currently enrolled in the University full-time, part-time or evening. Program focus is on behavioral, emotional or adjustment problems, rather than tutorial or learning difficulties. Confidentiality is a high priority and no information is released to any individual without client consent.

The Mental Health Center is located on the third floor of the Peter F. Byrne Hall, Lincoln Park Campus. For further information, call 341-6292; and ask for an intake worker or Frank A. Dinello, Ph.D., Director.

Health Insurance

Accident and health group insurance is offered on a voluntary basis to graduate students. The application forms may be secured from the offices of the Student Health Service on the Lincoln Park Campus or the Dean of Students Office in the Lewis Center.
Housing

The Off-Campus Housing Office provides a referral service of available apartments and rooms in the Lincoln Park area and other areas accessible to both campuses. The service maintains listings of apartments, rooms, work-exchanges and people seeking roommates. The service is strictly a referral and provides necessary information to allow students to contact landlords. The office is located in the lobby of Corcoran Hall, 910 W. Belden during the academic year (312-341-8620). During the summer the office is located at Clifton Hall, 2312 N. Clifton (312-341-8020/8621).

Recreation

Alumni Hall houses a swimming pool and a gymnasium. Hours are scheduled for student and faculty uses throughout the academic year. Monthly scheduling may be obtained through the Athletic Department.
Degree Programs:
General Policies

MASTER'S PROGRAMS

For the master's degree, all programs involve one or more of the following: 1) Credit Hours, 2) Degree Candidacy, 3) Language/Research Tool, 4) Thesis, 5) Paper on Approved Topic, 6) Integrating Critique or Examination, 7) Final Examination, and 8) Program Time Limitation.

Credit Hours. For the master's degree, most programs for graduate students require forty-eight quarter hours of course work. When the program includes a thesis, no more than eight quarter hours of registration in Thesis Research will be counted toward the degree.

Specific degree requirements are listed in the departmental and program sections of this Bulletin.

Degree Candidacy. Admission to candidacy implies the faculty is satisfied that the master's candidate is knowledgeable in his or her area of specialization, and is competent in the use of any required research tools.

Language/Research Tool. A department or program director, with the approval of the Dean, can require language/research tool requirements as the student's program and research may demand.

Thesis. The University offers the master's degree both with and without the thesis; however, the thesis is required by some departments. The thesis is limited to the student's field of specialization and should offer satisfactory evidence of the candidate's potential for scholarly research.

After degree candidacy has been granted and graduate research courses completed, the candidate must present the topic to the Graduate Committee of his or her department or program of specialization for approval. At the time of presentation, the candidate should have a clear concept of the nature of the thesis problem, the possibilities for making the investigation, and the technique to be used. The Graduate Committee may require the candidate to present the results of some preliminary investigation before granting approval.

The student is advised to consult the College Office for information regarding the required form and type of paper to be used for the thesis. Responsibility for fulfilling these requirements lies with the student, not the typist.

The student, after completing the thesis, will submit it to the director of his or her Thesis Committee for consideration. Whatever changes or additions are necessary must be made by the final date of acceptance, or the student will not be permitted to graduate until a subsequent convocation. When the thesis is accepted, the student must file the designated number of typewritten copies in the College Office. The date for filing is published in the current Bulletin and the class schedule or may be obtained directly from the College Office. The responsibility for meeting this deadline lies with the student.
Paper on Approved Topic. The type and length of the paper is determined by the department or program that lists it as a requirement for the master’s degree. The purpose of the paper is to give evidence of the student’s ability to find, select, organize and interpret material in a manner consistent with the standards and practices of the discipline involved.

The student’s choice of a paper topic is to be approved by his or her department or program. The paper is to follow the form approved for a thesis, and must be submitted within two months after the approval of the topic. Only one copy of the paper need be presented to the student’s major department or program advisor.

Integrating Critique or Examination. Procedures for such a critique or examination are set in advance in each specific case through consultation between the student and the department or program advisor.

Final Examination. A student is eligible for the final examination only after all the other degree requirements have been completed. The type and the subject matter of the examination follow the regulations established in the various departments and programs. If the student does not pass the examination, the Dean may grant permission for another examination upon the written recommendation of the department or program advisor of the student’s major field. The examination may not be repeated until after the next convocation nor may the examination be taken more than twice.

Program Time Limitation. Graduate students in master’s programs are expected to complete their program degree requirements within a six-year period. When a graduate student fails to finish before the end of the sixth year, the department or program director may recommend, on receipt of the student’s petition, in writing, to the Dean, an extension of time with or without additional courses, examinations, or other conditions.

DOCTORAL PROGRAMS

The Doctor of Philosophy, the highest academic degree that DePaul University confers, is offered in the departments of the Biological Sciences, Philosophy and Psychology. The degree shows that the recipient has demonstrated proficiency in a broad area of learning, as well as the potential to explore and advance that field of knowledge by independent research.

Following are the minimum general requirements for all candidates for the Doctor of Philosophy degree in the areas of 1) Credit Hours, 2) Related Field of Study, 3) Academic Achievement, 4) Residence, 5) Language and Allied Requirements, 6) Examinations, 7) Admission to Candidacy, 8) Dissertation, and 9) Program Time Limitations. Additional requirements set by the departments are stated in the departmental sections of this Bulletin.

Credit Hours. For the doctoral degree the graduate student will complete a minimum of 108 quarter hours of post-baccalaureate credit of which a maximum of 36 quarter hours of credit is applicable to the dissertation. At the department’s discretion, a student holding a Master’s degree from an accredited institution may be accorded advanced standing. In such cases, the department will specify remaining program requirements, which must involve no less than 60 quarter hours of credit.
Related Field of Study and Language Requirements. The program of graduate studies chosen for the doctoral degree may include study in related fields and language requirements as determined by the student's Graduate Advisory Committee.

Academic Achievement. A student will be advised to withdraw from the doctoral program when the Graduate Advisory Committee judges that he or she is not maintaining satisfactory progress toward the degree. Students are required to maintain at least a 'B' average. A course grade below 'C' is unsatisfactory and will not be counted toward completing degree requirements. The determination of satisfactory progress is not limited to grades and grade point average, but includes all factors in the student's performance.

Residence. At least three consecutive quarters beyond the master's level must be spent in full-time study at DePaul University. Full-time study is defined as registration for a minimum of eight quarter hours in a quarter. With prior approval of the departmental Graduate Advisory Committee, the student may satisfy residency by course work, by participation in seminars, or by research performed off campus.

To reflect the diversity of graduate study for the Ph.D. degree at stages other than the residency stage, doctoral candidates are full-time students who are registered for Reading and Research (four quarter hours); for Thesis Research (four quarter hours); or for Candidacy Continuation (zero hours credit).

Examinations. Two examinations are required for all doctoral candidates: the Comprehensive (or Doctoral Candidacy) Examination; and the Final Examination on the dissertation. A department may, in addition, require an initial or preliminary examination.

Toward the end of the year of residency and with the language and related fields requirements satisfied, the doctoral student may petition the department for the Comprehensive (or Doctoral Candidacy) Examination. The department will notify the Graduate Office of all approved petitions, and, as soon as the examinations have been graded, will notify the College Office of the results. The examination may be written and/or oral. A student is not allowed to take it more than twice.

The Final Examination is on the doctoral dissertation. A doctoral candidate may not petition for his or her final examination prior to eight months after admission to candidacy. The chairperson of the Examination Committee will prepare a report of the results of the Final Examination, signed by all members, and send it to the College Office.

Admission to Candidacy. Admission to candidacy implies that the faculty is satisfied the doctoral candidate is sufficiently knowledgeable in his or her area of specialization and in the use of research tools to be able to prepare an acceptable dissertation.

For Admission to Candidacy the doctoral candidate shall complete a) three consecutive quarters of full-time study beyond the master's level; b) departmental language or allied requirements; c) and Comprehensive (or Doctoral Candidacy) Examination.
The College Office will issue to each doctoral candidate a letter to authenticate admission to candidacy. Admission to Candidacy will be entered on the doctoral candidate's scholastic record.

There is a time limit of four years between admission to the College of Liberal Arts and Sciences and admission to candidacy. Once admitted to candidacy, the doctoral candidate must maintain registration in the University in each of the quarters of the academic year until the degree requirements have been completed. Among other courses, the following are appropriate to maintain registration: Independent Study (four quarter hours); Residency Candidacy Continuation (non-credit); or Non-Resident Candidacy Continuation (non-credit). Failure to comply with this requirement for one or more quarters invalidates the candidacy. Candidacy status may be reinstated only after the student has applied for readmission (see Readmission Procedures).

Dissertation. The doctoral candidate will prepare a dissertation based on his or her research. The purpose of the dissertation is to evidence both one's scholarship and ability to carry on such independent research as definitely contributes to the advancement of knowledge. The topic of the dissertation should be submitted to the head of the department of specialization who will appoint a Dissertation Committee to approve the topic and to assist the doctoral candidate through all stages of the preparation of the dissertation. The chairperson of this committee is the dissertation director.

The dissertation is the principal basis of the Final Examination. When the doctoral candidate files the petition for the Final Examination, the College Office is to be notified by the department chairperson, of the date, time, and place of the examination, and of the names of the members of the examining committee.

All doctoral dissertations are to be microfilmed. After the Final Examination has been passed, the doctoral candidate submits to the College Office the designated number of typewritten, unbound, final copies of the dissertation. (The first copy is to be in satisfactory condition for microfilming.) The candidate also prepares and submits a 350-word abstract of the dissertation. The abstract will be published in Dissertation Abstracts and will include an announcement that the dissertation is available in film form. One microfilm copy will be deposited in the University Library and will be available for inter-library loan.

To defray the costs of microfilming and publication, a fee of $40.00 is assessed.

Microfilming is considered by the University to be a form of publication. Publication by microfilm, however, does not preclude the printing of the dissertation in whole or in part in a journal or monograph.

When these steps have been completed, the doctoral candidate becomes eligible for degree conferment at the next convocation.

Program Time Limitations. For graduate students in a doctoral program, the time limits to complete the requirements for the Doctor of Philosophy degree are 1) between admission to the doctoral program and admission to candidacy: not more than four years; and 2) between admission to candidacy and the final examination: not less than eight months, and not more than five years.
Admission Classifications

Applicants are admitted to the College of Liberal Arts and Sciences on the basis of their ability to complete programs of study and research prescribed for the master’s and doctoral degrees. Specifically, admission qualifications are measured by academic criteria.

In accord with these criteria, applicants are admitted in one of three major categories: degree seeking, non-degree seeking, and student-at-large.

DEGREE-SEEKING STUDENTS

Applicants are admitted as degree-seeking students in either of two ways: full or conditional.

Degree-Seeking Status, Full:

The minimum requirements for this status are:
Bachelor’s degree conferred by an accredited institution,
Scholastic achievement in undergraduate studies satisfying all requirements for entering a specific graduate program,
Unconditional approval by the department or program director of the applicant’s proposed course of graduate study, and
Submission to the LAS Graduate Office of all required supporting credentials.

Please note these are minimum requirements for full admission. The departmental and program sections of this Bulletin provide additional, more specific and selective, criteria for admission to specific programs.

Degree-Seeking Status, Conditional:

The minimum requirements for this status are:
Bachelor’s degree conferred by an accredited institution,
Scholastic achievement in undergraduate studies indicating a capacity to pursue successfully a specific program of graduate study,
Conditional approval by the department or program director of the applicant’s proposed course of graduate study, and
Submission to the LAS Office of all required supporting credentials.

A conditionally admitted applicant is eligible for re-classification to full, degree-seeking status when the conditions of his or her admission have been satisfied.
NON-DEGREE SEEKING STUDENTS

The Dean, at his discretion, may admit as students those applicants who do not wish to pursue an advanced degree. Non-degree seeking students may, at some future date, make application for re-classification to degree-seeking status.

Non-Degree Seeking Status:

The minimum requirements for this status are
Bachelor's degree conferred by an accredited institution,
Scholastic achievement in undergraduate studies indicating a capacity to pursue successfully graduate course work,
Approval by the Dean, and
Submission to the LaS Office of all required supporting credentials

When such students file for re-classification, the departmental or program director of their specific graduate course of studies may recommend, in writing, to the Dean that a maximum of three courses (12 quarter hours) completed by the student under the non-degree seeking status be counted toward fulfillment of the advanced degree requirements.

STUDENT-AT-LARGE

The College of Liberal Arts and Sciences may admit as a student-at-large a graduate student currently enrolled in a graduate program in another accredited institution upon the recommendation, in writing, of his or her own Graduate Dean.

A student-at-large must complete the form for admission to the College Office. The only supporting credential required is a letter from the Dean of the Graduate School where the student is in good standing. This letter should state in general terms the course or courses the student is authorized to take.

Under no circumstances does this classification constitute admission to a degree-seeking program at DePaul University.

DEPAUL SENIORS

Seniors in any of the undergraduate colleges or schools of DePaul University are eligible to apply for admission to the College of Liberal Arts and Sciences while completing their undergraduate program.
Admission Procedures

GENERAL PROCEDURES

Procedures for admission to the College of Liberal Arts and Sciences involve a completed application form, supporting credentials, admission fee, deadlines, and the Dean's admission letter.

Application Form: You can obtain a graduate application form either by mailing your request to the LA&S Loop Office, Room 1603, DePaul University, 25 East Jackson, Chicago, Illinois 60604 or by calling (312) 341-8870. Please include your proposed field of study in your request because the composition of the “application packet” varies from department to department and from program to program.

Note: An undergraduate DePaul senior is eligible to submit an application to the LAS Graduate Program before completing his or her undergraduate program.

Supporting Credentials: OFFICIAL TRANSCRIPTS, IN DUPLICATE, of your academic records at all universities, colleges, and junior colleges attended are required. Please direct the registrar(s) to mail these official transcripts directly to the LA&S Loop Office, DePaul University. Since there is frequently a delay in the forwarding of transcripts, you are advised to make your request as early as possible.

Note: Several departments and divisional programs require additional supporting credentials. Please consult the specific departments or divisional program directors listed in this Bulletin to determine what additional materials are required for admission to the specific course of graduate study, and to determine deadlines for the completion of all application materials.

An undergraduate DePaul senior making an application should request the Registrar to forward two official transcripts to the LA&S Loop Office, a written recommendation for admission from the appropriate chairperson or program director, and written certification by the appropriate Undergraduate Dean of the senior's completed and uncompleted requirements for the bachelor's degree.

Admission Fee: A check or money order payable to DePaul University in the amount of $20.00 must accompany the completed application form. Any application form received in the LA&S Office without the fee will be returned unprocessed. The fee is non-refundable.

Dean's Admission Letter: The Dean will notify you by letter of your admission status.

It is the policy not to review, evaluate or act upon any application for admission without having the completed application form, all the supporting credentials, and the application fee.

If you do not enroll at the University within one year of the date of your letter of admission, your admission will be cancelled.
INTERNATIONAL STUDENTS

Initially, all students educated outside the United States and its possessions should request general admission information and application forms from the University’s

International Advisor
Admissions Office, First Floor
25 East Jackson Boulevard
Chicago, Illinois 60604
USA

After receiving general admission information, as an international student, your procedure for admission will involve 1) a completed application, 2) supporting credentials, 3) admission fee, 4) deadlines and, 5) letter of admission and/or Form I-20.

Application Form: You can obtain a graduate application form either by mailing your request to the LA&S Loop Office, Room 1603, DePaul University, 25 East Jackson Boulevard, Chicago, Illinois 60604 or by calling (312) 341-8870. Please include your proposed field of study in your request because the composition of the “application packet” varies from department to department and from program to program.

Supporting Credentials: OFFICIAL TRANSCRIPTS, IN DUPLICATE, of academic records at ALL universities, colleges, and junior colleges attended are required. Please direct the registrar(s) to mail these official transcripts directly to the LA&S Loop Office, DePaul University.

English Proficiency is required for admission. Evidence of adequate financial support is required of applicants who request student visas, as scholarships are not available.

Admission Fee: A non-refundable fee of $20.00 (check or money order payable to DePaul University in U.S. dollars) must accompany the completed application form. The application will not be processed if this fee is not paid.

Deadlines: Application deadlines for international students are

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<thead>
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<th>Initial Enrollment</th>
<th>Deadline</th>
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<tr>
<td>Autumn Quarter</td>
<td>June 4</td>
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<td>Winter Quarter</td>
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<td>Spring Quarter</td>
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<td>Summer Quarter</td>
<td>March 4</td>
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As an international student, you are strongly urged to make application as early as possible. Usually there are long delays in the forwarding of all supporting credentials.

Letter of Admission and/or Form I-20: The Dean’s formal letter of admission and/or the issuance by the International Advisor of Form I-20 will occur after all admission requirements have been fulfilled.
READMISSION PROCEDURES

If you were previously enrolled in a graduate program in the College of Liberal Arts and Sciences but have not been in attendance for a period of one calendar year or longer, you must file a readmission form with the LA&S Office. The form must be submitted at least four to six weeks prior to the day of registration for the term in which you expect to resume your studies. There is a $5.00 service fee for processing a readmission form.

Two official copies of any transcript recording scholastic work taken while not enrolled at DePaul University must be submitted. As a general rule, students are held to the degree requirements that are in force at the time of readmission.

RE-CLASSIFICATION PROCEDURES

Should you desire a change in your major or admission status, you must file a "Request for Re-classification" form with the LA&S Office.

STUDENT RESPONSIBILITY

As a graduate student you assume the responsibility to know and meet both the general and particular regulations, procedures, and deadlines set forth in this Bulletin.

Every effort has been made to provide you with final and accurate information. The University, however, does reserve the right to revise its bulletins and schedules of classes, and to change any policies, procedures, regulations, programs, requirements, courses or schedules of tuition and fees.

ACCESS TO EDUCATIONAL RECORDS

The University follows the requirements of the Family Educational Rights and Privacy Act of 1974 which permits all students to review their educational records. The procedures for such review and the rights of students in this regard are set forth in detail in the annual publication of the Signpost.
Registration Procedures

GENERAL INFORMATION

Social Security Number. Your social security number will be required for registration. If you do not have such a number, you should apply for one at your local Social Security office. International students who do not have a social security number should contact in person the Registrar's Office for an identification number assignment.

Academic Counseling. Your graduate study differs significantly from your undergraduate study in the amount of individual attention faculty members will give to you. As a graduate student, you are expected to make appointments with your professors to insure that you receive individual attention in an orderly and unhurried manner.

If you are a degree-seeking graduate student, you must contact your faculty advisor prior to registration for signed approval of your registration form. If you are a non-degree-seeking student or a student-at-large, you should contact either the LA&S Loop Office or the appropriate department or program director prior to registration. (Note: All graduate registration forms require the signature of an authorized member of the College of Liberal Arts and Sciences.)

Course Credit. Credit is accumulated on the basis of quarter hours. Courses carry four quarter hours credit unless otherwise noted. For comparative purposes, 1 quarter hour equals 1/2 semester hour; 4 1/2 quarter hours equal 3 semester hours.

Graduate credit is not granted for advanced undergraduate courses (300 level) if the recorded grade is below "B." No credit will be given for any graduate level courses (400 and over) with a grade below "C."

Course Revisions. The University reserves the right to add or cancel courses, revise subject matter content, or make any other changes it deems necessary.
SPECIFIC INFORMATION

Mail Registration. Schedules for current course offerings may be picked up in the LA&S offices on either campus. To eliminate waiting in registration lines and to avoid the possible closing of desired classes, the following students will be mailed pre-printed registration forms: (1) graduate students enrolled during the previous quarter. (This includes Spring Quarter students for the following Autumn Quarter); (2) formally admitted new graduate students; (3) readmitted graduate students.

Graduate students who have attended the University within one year prior to the quarter for which they wish to register, but who are not scheduled to receive pre-printed forms, may pick up mail registration materials at the LA&S Loop Office.

In-Person Registration. Students who do not register by mail must register in-person on the date and at the location designated in the academic calendar.

Registration in Courses in Other Colleges of Schools. Graduate students are able to register for courses offered in other colleges or schools of the University. This registration requires the written permission of both their advisor and the College in which the course(s) will be taken. The registration forms, however, must always be returned directly to the LA&S Loop Office for the necessary approval to process the forms.

Residence Registration. Whether in residence or not, all admitted graduate students, master's and doctoral levels who will use the facilities of the University (library, laboratory, etc.) or who will consult with faculty members regarding theses, dissertations, or examinations, must be registered in each quarter.

Course Load. A full course load consists of eight or more quarter hours per quarter. Graduate students are advised to undertake no more employment than is reasonably compatible with their proposed graduate studies in any given term. For students fully employed, registration for two courses in a term is the suggested maximum.
Grades, Credits, and Course Policies

Grades

The key to the system of grading used in the College of Liberal Arts and Sciences is as follows:

Faculty Grading

A  Exceptional achievement  
B  Superior achievement (minimum expected of graduate students in advanced undergraduate courses)
C  Basic achievement
D  Achievement unacceptable for graduate credit
F  Failure
FX  Failure because of excessive absences
IN  All requirements for given course not completed at end of term
R  Thesis and other continuing research not completed at end of the term

Note: A grade of "D" from another college or school of the University is not acceptable for graduate credit in the College of Liberal Arts and Sciences.

Administrative Grading

W  Authorized withdrawal
FW  Failure because of unauthorized withdrawal
AU  Not for credit
M  Final grade missing at time grades were processed

Note: Graduate students are expected to maintain a higher level of academic achievement than undergraduate students. A basic "C" grade will be acceptable in no more than half of the graduate courses, those numbered 400 and above, completed in the major and the minor sequences.
CREDITS

All courses carry four quarter hours of credit unless otherwise specified.

Credit Transfer: Credit transfer in degree programs leading to the master's or doctoral degree ordinarily is not allowed. However, the Dean may authorize an exception to this policy when, in the judgment of the Dean and the department chairperson or program director, the circumstances justify the exception.

COURSE POLICIES

Course Numbering: Courses numbered 300 to 399 inclusive are advanced undergraduate courses normally taken in the junior and senior years. If listed in this Bulletin, they may be accepted for graduate credit within the limitations stipulated by the specific departmental chairpersons or program directors.

Advanced undergraduate courses: students must have a grade of at least "B" if they are to receive graduate credit.

Graduate courses (those numbered 400 and above): A "C" grade is acceptable in no more than half the graduate courses completed by the students in their major and minor sequences.

Course Attendance: No one is permitted to attend a class for which he or she has not been properly registered. Should a student's name not appear on the class sheet, it is the student's responsibility, not the faculty member's, to resolve the problem. An instructor cannot enter a student's name on a class sheet nor give such a student a grade without first seeing the student's copy of a properly authorized enrollment change form.

No registration is complete or valid until all financial arrangements have been completed. Any student owing money to the University from a previous term will not be registered until such an obligation has been paid.

Graduation Procedures

Procedures for graduation involve the graduation application, degree requirements, requirements for graduation with distinction, graduation fee, deadlines, Dean's confirmation letter, convocation ceremony and receipt of the diploma.

Application Form: You can obtain a graduation application either by mailing your request to the LA&S Loop Office, Room 1603, DePaul University, 25 East Jackson Boulevard, Chicago, Illinois 60604, or by phoning (312) 341-8882.
Degree Requirements: You must have successfully completed all of the general and specific degree requirements as listed in the appropriate departmental or program sections of the College of Liberal Arts and Sciences Bulletin under which admission was granted.

Completed degree requirements can include the submitting of the dissertation or the thesis or the research paper; examination scores; and, if necessary, grade changes.

Graduation with distinction: Graduation "with distinction" is conferred when a student a) receives the grade of "A" in at least 75% of the courses in the degree program and no grade lower than a "B" in the remainder of the degree courses, and b) passes the final oral or written examination "with distinction."

Graduation Fee: You will be billed for a $25.00 graduation fee, payable to DePaul University.

You will automatically be billed a binding fee for the minimum number of thesis, dissertation or research paper copies required by your department or program director.

Deadlines: Specific dates are established for submission to the College Office of the completed graduation application and for completion of degree requirements.

Application for Graduation
June Convocation ................................. Deadline
February 13

Completed Grade Changes and Examination Scores
June Convocation ................................. Deadline
May 3

Note: If you are applying for the June Convocation, you may register in the Spring Quarter for courses required in your degree program.

Completed Thesis and Dissertation
June Convocation ................................. Deadline
May 17

Application for Graduation is made for a specific convocation. If you cancel or are ineligible to graduate, you must re-apply for the next convocation.

The College Office will notify you by letter of your confirmation for graduation and will provide you with details concerning the convocation.

Convocation: The Graduation ceremonies are held in February and June of each academic year.

To graduate "in absentia," you must request permission in writing from the Dean.

Diploma: The convocation ceremonies are symbolic. The diploma is mailed shortly after the convocation ceremony.
Graduate Financial Policies and Procedures
Tuition and Fees

DePaul University is a not for profit corporation. No student pays the actual cost of his or her education. Tuition and fees are held at their present level through gifts of alumni, foundations, corporations, the Vincentian priests and brothers and friends of the University. All policies are under continual review. Therefore, the Board of Trustees reserves the right to change its charges as conditions require.

Tuition and fees for services and materials are for the academic year 1984-85 and are applicable only to graduate students.

GRADUATE STUDENT TUITION

Tuition for Liberal Arts and Sciences:
Courses in the 100-200 series, per quarter hour ............... $ 107.00
Courses in the 300-600 series, per quarter hour ............... 132.00

GENERAL FEES

Fees are not refundable
Graduate Application Fee ....................................... $ 20.00
Readmission Fee .................................................. 5.00
Registration Fee .................................................. 10.00
Late Registration Fee .............................................. 25.00a
Delinquency Fee .................................................... 50.00
Deferred Examination Fee
  On Designated Dates ............................................. 10.00
  At Time Not Designated ........................................ 20.00
Graduation Fee-Master’s Degree ................................ 25.00
Graduation Fee-Doctoral Degree .............................. 46.00
Thesis Binding (Per Copy) ...................................... 10.00
Each Transcript of Credits Fee ................................. 2.00
Each Returned Check Service Fee .............................. 12.00b
Computer User Fee .............................................. 20.00c

a. In addition to the regular registration fee.
b. If a student gives the University a check that is returned by the bank upon which it was drawn, marked “Not Sufficient Funds,” “Payment Stopped,” or “Account Closed,” a $12.00 charge will be assessed for each such occurrence.
c. Fees may vary according to specific courses affected. See individual course descriptions.
MATERIAL FEES

See individual course descriptions for specific material fees.

PAYMENT

All charges are due DePaul University at the time of registration, but not later than the end of (Saturday, 1 p.m.) the first full week of the term. The University does not accept responsibility for delays in the U.S. Postal System. Payment must be received in the Cashier's office or one of its depositories by the due date. Visa and Mastercard are accepted.

Students with any unpaid balance at the end of the first full week of the term will be assessed a $50.00 Delinquency Fee, will be prohibited from future registration, and will be prohibited from receiving transcripts.

REFUNDS

SIMPLY CEASING TO ATTEND OR NOTIFYING THE INSTRUCTOR DOES NOT CONSTITUTE A WITHDRAWAL OF RECORD AND WILL RESULT IN ACADEMIC AS WELL AS FINANCIAL PENALTIES.

Charges for courses are based on the period of a student's enrollment beginning with the opening day of the Quarter until the student initiates an Enrollment Change Form to withdraw.

Withdrawals must be processed in the College Office either in person or by mail. The University does not accept responsibility for delays in the U.S. Postal System.

Upon processing the Enrollment Change Form the tuition charge will be reduced according to the following schedule:

Through the end of the first full week of classes .......................... 100%
During the second full week of classes ................................. 75%
During the third full week of classes ................................. 50%
During the fourth full week of classes ................................. 25%
After the fourth full week of classes ................................. 0%

During the summer sessions an accelerated proration of tuition charges will apply.

Registration and certain course fees are not refundable. Refunds are initiated by the Cashier’s Office upon the student’s request.

NOTE: Students receiving financial aid are advised to contact a Financial Aid Counselor to discuss the consequences of a withdrawal affecting academic progress and eligibility at DePaul University or any other school to which they may transfer.
Financial Assistance

Several types of financial aid are available to graduate students through awards funded by foundations or corporations, University graduate assistantships, traineeships, grants, student loans, and part-time employment.

GENERAL PROCEDURES
The following programs are awarded by the Financial Aid Office:

Loans

National Direct Student Loan (NDSL). The National Direct Student Loan program is for students enrolled at least half-time who need a loan to meet their educational expenses, and who meet the general eligibility requirements to qualify for this loan.

Repayment begins six months after graduation or withdrawal from school. Students may be allowed up to ten years to repay based on the amount they have borrowed. This repayment period may be extended an additional ten years for low-income borrowers with repayment related to the borrower's income. During the repayment period 5% interest will be charged on the unpaid balance of the loan principal.

Loan payments can be deferred when the borrower is (a) a student; (b) a member serving in the Armed Forces, the Peace Corps, or VISTA; (c) an officer in the Commissioned Corps of the Public Health Service; (d) a volunteer for nonprofit organizations doing work similar to VISTA or Peace Corps, or a full-time volunteer for an organization which is exempt from taxation under Section 501(c)(3) of the Internal Revenue Code of 1954; or (e) an individual temporarily totally disabled or unable to secure employment by reason of care required by a spouse who is so disabled.

Guaranteed Student Loan (GSL). The Guaranteed Student Loan program enables an eligible student to borrow directly from a bank, credit union, savings and loan association or other participating lender willing to make the loan. The loan is guaranteed by a State or a private nonprofit agency. Students must undergo a needs test if their income (independent) and parents' income (dependent) is greater than $30,000. Forms are available in the Financial Aid Office which must be completed by the students before their loans can be processed.

The maximum annual amount that can be borrowed is $5,000 for graduate and professional students. In some States the amount may be less. The interest rate is nine percent on the unpaid balance of the loan principal for previous borrowers, 8 percent for first-time borrowers, and the Federal government will pay to the lender the total interest due prior to the beginning of the repayment period and during authorized deferment periods.

The aggregate loan maximum is $25,000 for undergraduate and graduate borrowing.
The loan must be repaid. Repayments begin six months after the student graduates or leaves school, and up to ten years may be allowed to repay the loan. The amount of the student's payments depends upon the size of the debt and the student's ability to pay. Lenders are authorized to charge student borrowers an origination fee of five percent of the principal of the loan. The State of Illinois is charging one percent per annum premium based on the student's expected date of graduation.

**Nursing Student Loans.** Students pursuing a course of study, either full-time or half-time, in Nursing and who want to request financial assistance are required to borrow under this program rather than to request a National Direct Student Loan. Loans up to a maximum of $1,000 per year, depending on need and funds available, may be granted for any academic year. The maximum amount for all years of study is $10,000. Repayment of loans begins nine months after the borrower ceases to be a half-time student and is payable over a ten year period. The rate of interest is 6%.

Deferment of payments may be obtained for up to three years, for active duty in the armed forces or as a volunteer in the Peace Corps. Deferment may also be granted for a period of up to five years, for further study in nursing or at least a half-time basis.

**DePaul Parent Student Loan.** DePaul University offers a low interest loan to students and/or their parents to assist them in meeting educational costs. Students are considered eligible to apply for the loan if their cost of attendance has not been met by a combination of their expected family contribution plus other financial aid. In most cases, parents can borrow a loan which would replace the expected family contribution. Students must apply for all available financial aid before being considered for the DePaul Parent/Student Loan. The Financial Aid Office determines which students are eligible to apply for the DePaul Parent/Student Loan.

Approval of the loan is made by the Student Loan Office on the basis of creditworthiness. Students or parents may borrow a maximum of the student's tuition charges. Repayment of the loan begins 30 days after disbursement. A nonrefundable application fee of $40 is required to cover the cost of processing the loan application. For more information regarding the DePaul Parent/Student Loan, contact the Student Loan Office at 341-8445 or the Financial Aid Office at 341-8097.

**NOTE:** Please be advised that changes are pending on many of these programs. You should contact the Financial Aid Office or your lender for the correct regulations for these programs.

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**Part-Time Employment**

**Work Study Program.** This is a special program which provides jobs both on and off campus to students who can provide proof of need for such employment in order to continue their education. It is subsidized by the federal government and the University.

**Student Service.** Other part-time positions, on and off campus, are available through the services of the Office of Career Planning and Placement. No proof of need is necessary to qualify for this program.
How to Apply

Applicants for loan and part-time employment programs should contact the Office of Financial Aid, DePaul University, 25 East Jackson Boulevard, Chicago, Illinois 60604 either by mail or by phone (312)341-8091 and application packet.

In order to receive priority consideration for aid awarded by the Financial Aid Office, NEW students must complete their financial aid files as soon after January 1 as possible. New students will be evaluated and packaged on a first come first to be served basis as long as funds remain available. RETURNING students will be considered for financial aid if they have completed the filing requirements by April 15, 1984.

The following programs are by the individual departments:

University Financial Aid. Applicants seeking any other form of financial aid should make preliminary application by letter to the chairperson of their proposed major department or the program director of their particular graduate study.

Deadlines. New applicants for financial aid must have all their credentials (completed admission form, admission fee, duplicate copies of transcripts, and letters of recommendation — if required) in the LA&Ś Graduate Office by February 15 prior to their Autumn Quarter admission.

DEPAUL UNIVERSITY GRADUATE ASSISTANTSHIPS

The University provides a number of teaching, research, and administrative assistantships to applicants accepted as degree-seeking, fully admitted, graduate students. Last year over 60 assistantships were awarded (both full and partial). The stipends for such assistantships range from $3,200 to $3,500, and include a full tuition waiver.

Recipients will be assigned by their respective departments or program directors to activities appropriate for a teaching, research, or administrative assistant.

Application for an assistantship should be made, in writing, directly to the chairperson of the department or the program director in which the applicant plans his or her graduate study.

Announcement of graduate assistantships is normally made by during the Spring Quarter of the previous academic year. The assistantships must be accepted or declined, in writing, by the end of that quarter.
CORPORATE AND FOUNDATION AWARDS

Arthur J. Schmitt Graduate Assistants Awards. Fifteen awards for exceptionally outstanding candidates are allocated to the University's three doctorate-granting departments: biological sciences, philosophy, and psychology. Each award, up to a maximum of a $4,600 stipend, is supplemented by the University with a full tuition grant. Students receiving the awards are eligible upon the positive recommendation of the department to have the awards renewed. During the period of the award, the recipients must be admitted full-time degree seeking students. They will be assigned by the department to activities appropriate for teaching and/or research assistants.

Howard V. Phalin Foundation Award. This award is a gift of $1,800 made by the Howard V. Phalin Foundation for Graduate Study for the support of an exceptionally outstanding graduate student. The University adds to this gift a $2,200 stipend. In addition, the University supplements the award with a full tuition grant. During the period of the award the recipient must be an admitted full-time degree seeking student. He or she will be assigned by the department to activities appropriate for teaching and/or research assistants.

Searle Foundation Awards. These awards are made to support students identified as having high academic potential but not able to afford the expenses, who intend to major on the graduate level in one of the following fields of study: accountancy, biological sciences, business administration, chemistry, computer science, economics, finance, general business, management, marketing, and mathematical sciences. Each award, up to a maximum of a $4,000 stipend, is supplemented with a full tuition waiver by the University. Recipients of the awards must be admitted full-time degree seeking students. They will be assigned by the department or the program director to such activities appropriate for their development in teaching, research, or administration.

IBM Corporation Awards. These awards are made to support two outstanding graduate students: one in computer science, the other in marketing. Each award consists of a $4,000 stipend and a tuition payment up to $1,000. Whenever necessary, the University supplements each award with a full-time tuition waiver. Recipients must be admitted as full-time, degree seeking students. They will be assigned by their respective departments to activities appropriate for a teaching and/or research assistant.
TRAINEESHIPS

Mental Health Traineeships. Students in clinical psychology are eligible to apply for one of these traineeships. The traineeships are awarded to students who have completed at least three quarters of graduate work and are full-time degree seeking students. As trainees, the students are assigned to the University Mental Health Center on a half-time basis.

Application for a Mental Health Traineeship should be made to the Director of the Mental Health Center.

Public Health Service Traineeships. A number of such traineeships are available. The Department of Nursing offers traineeships which provide monthly stipends and a tuition allowance for each quarter the student is registered as an admitted, full-time degree seeking student. Applicants should apply, in writing, directly to the Chairperson of the Nursing Department.
Employment Opportunities

COLLEGE WORK STUDY PROGRAM

Full-time and half-time graduate students who can demonstrate financial need may apply for part-time and/or summer employment under this program. The program is co-sponsored by the Federal Government and DePaul University. Students may work (mostly on campus) up to 20 hours weekly while attending classes, and up to 40 hours weekly when no classes are scheduled. The basic pay range is from $3.35 to $10.00 or more per hour for Graduate School students, depending upon their job classification. The student's earnings cannot exceed his or her need. Application should be made to the Office of Career Planning and Placement.

Room 1716
25 East Jackson Boulevard
Chicago, Illinois 60604
Telephone: (312) 341-8437.

PART-TIME EMPLOYMENT

The location of the University in a metropolitan area contributes greatly to the number and variety of opportunities for employment. Part-time and summer jobs, both on and off campus, are available for students through the services of the Office of Career Planning and Placement. Rates of pay for graduate students are from $3.35 to $5.00 or more per hour.

In addition, the University itself can offer positions to students. After students have registered for their classes, the Office of Career Planning and Placement will assist them in finding jobs. No proof of need is necessary to qualify for this service.

GENERAL NOTES

Registration. Registration will not be accepted from a student with an unpaid balance from a prior term. Registration attempted under these circumstances is subject to cancellation.

Audited Courses. Audit courses receive no credit. Tuition and fees for courses audited are charged at the regular tuition rates, must be paid at the time of registration, and are not refundable. Students may not change from the status of credit student to that of an auditor, or vice versa, after the third week of class.
Students on Financial Aid. Students receiving financial aid in the form of scholarships, tuition grants, or loans — from Federal Programs, the State Government, or DePaul University — must determine that the amount of aid received (total amount of awards divided by three quarters, normally) at least equals the total tuition and fees for each term. In the event such proration leaves a balance due from the student, this balance must be paid not later than the end of the first full week of the term in order to avoid a Delinquency Fee.

Returned Check. If a student gives the University a check that is returned by the bank upon which it was drawn, marked “Not Sufficient Funds,” “Payment Stopped,” or “Account Closed,” a $12.00 charge will be assessed for each such occurrence.

Foreign Checks. Foreign checks must be made payable in United States dollars or will not be accepted by the University.

Undergraduate Day Students. Undergraduate day students combining undergraduate and graduate courses will pay the appropriate rate for each class.
Robert A. Griesbach, Ph.D., Chairperson

FACULTY

Professors
John R. Cortelyou, C.M., Ph.D. ............... Northwestern University
Robert C. Thommes, Ph.D. .................... Northwestern University
James E. Woods, Ph.D. ....................... Stritch School of Medicine, Loyola University

Associate Professors
Daniel Gibbs, Ph.D. ............................. Stanford University
Robert A. Griesbach, Ph.D. ..................... University of Chicago
Danute S. Juras, Ph.D. ......................... Marquette University
Delores J. McWhinnie, Ph.D. ................... Marquette University
Daniel G. Oldfield, Ph.D. ....................... University of Chicago

Assistant Professor
Robert A. Anderson, Ph.D. ..................... University of Arkansas

Emeriti
Mary A. Murray, Ph.D. ......................... University of Chicago
Joseph E. Semrad, Ph.D. ....................... Northwestern University
PURPOSES

The Department offers programs of advanced study which will enable qualified students to earn degrees at the master's and doctoral levels. More specifically, the Department provides

- assistance in planning a specific program or sub-concentration of studies which will enable the student to advance toward his or her career goal,
- a series of lecture, laboratory, and seminar courses appropriate to the specific degree programs offered,
- opportunities for research leading to the thesis or dissertation in accord with the student's degree program and the faculty's research interests, and
- continuing opportunities for interaction between faculty and students through formal and informal learning situations in order to further promote the existence of a scholarly environment.

The learning objectives of the Department are

- acquisition and understanding of knowledge to the extent expected at the master's and doctoral levels,
- improvement in ability to synthesize, interpret and conceptualize biological information consistent with achievement of the master's and doctoral degrees,
- development of laboratory skills and methodologies at a level that enables the student to acquire, independently, new knowledge relating to life and the principles of living systems,
- achievement of the ability to communicate biological knowledge effectively to others in both an oral and a written fashion, and
- achievement of the habit of objective observations and evaluation as well as attitudinal values, in keeping with the expectations of Science and professional biologists.

DEGREE PROGRAMS

Master of Science

A program of study leading to the Master of Science degree in Biology is designed for students who

- have a strong desire to increase their scope and understanding of the life sciences,
- plan additional education at the master's level for increased proficiency in teaching and/or research, or
- plan to continue study toward the Ph.D. degree.

The master's program provides lecture, laboratory and seminar courses—along with learning experiences in research and undergraduate laboratory assisting—to aid students in achieving their stated goals. Students develop a particular concentration of studies in consultation with their academic advisor.
Doctor of Philosophy

The doctoral program is intended for mature persons who have clearly defined objectives, and who possess the background necessary for a concentrated program of research and independent study. Examples of competencies required of candidates for the Ph.D. degree are

- critical evaluation of scientific literature,
- originality in research, and
- competence in written and oral presentation of data and their interpretation.

The doctoral program provides counseling, instruction, seminars and research to aid the students in achieving high scholarship in broad aspects of biology and in-depth understanding in regulatory biology; and, to engage them effectively in a full professional life of independent research and continued learning.

MASTER OF SCIENCE: BIOLOGICAL SCIENCES

Admission Requirements

For full admission, students must have the following:
- Bachelor's degree: major in biological sciences or its equivalent
- Chemistry: minimum two academic years, including one year of organic
- General Physics: one year
- Calculus: one course
- Prerequisite course work: completion by the end of the first year of graduate study
- Transcript of credits
- Graduate Record Examination Scores
- Three letters of recommendation from science professors, preferably biology
- Grade point average of at least 2.5 on a scale of 4

Degree Requirements

Courses: a minimum of 56 quarter hours of graduate credit, including ten graduate core courses (40 hrs.), BIO 400 Discussion of Selected Topics in Biology, BIO 495 Practicum in Teaching Biology, one four-hour Biology or Biochemistry elective, and 8 hours of Research, of which at least four hours must be BIO 498 Research for Master's Thesis. Note: Students are required to have at least one course in each of the six core areas of study.
Master of Science Core Areas of Study

Immunology (BIO 425, BIO 471)
Cell Biology (BIO 450, BIO 469)
Aquatic Biology/Ecology (BIO 416, BIO 417)
Neurobiology (BIO 446, BIO 472)
Endocrinology (BIO 443, BIO 486)
Mineral Metabolism (BIO 410, BIO 412)

Advancement to Candidacy: based upon the results of a colloquium between the departmental faculty and the student taken near the end of the second quarter of the student's first full year.

Participation in undergraduate laboratory instruction and/or research assisting: minimum of three courses and/or two quarters.

Thesis: results based upon an independent laboratory investigation.

Departmental Seminar: presentation of the M.S. thesis research.

Final examination: contents covering all areas of graduate study, including coursework, basic biological concepts and thesis.

DOCTOR OF PHILOSOPHY OF BIOLOGICAL SCIENCES

Admission Requirements

For full admission, students must have the following:
Master's degree: major in biological sciences or its equivalent.
General Physics: one year.
Calculus: one year.
Chemistry: two years, including one year in organic.
Transcript of credits.

Graduate Record Examination Scores

Three letters of recommendation from science professors, preferably biology.

Degree Requirements

Courses: minimum of 108 quarter hours of study beyond the baccalaureate degree (maximum of 48 quarter hours of a master's program applicable toward doctoral degree requirements).

Selection of a Graduate Concentration: concentration developed in consultation with the Departmental Graduate Committee within the first quarter of admission.

Preliminary Comprehensive Examination: satisfactory completion of examination within the first year of the Ph.D. program.

Written Ph.D. Dissertation Research Proposal: approval by the Departmental Graduate Committee.
Written and Oral Doctoral Candidacy Examination: successful completion of
the examination, with the consequent advancement to candidacy for the
degree, one year prior to the expected date of convocation

Advancement to Doctoral Candidacy: approval by the Dean based upon the
results of a colloquium between the student and the departmental fac-
culty

Modern Language: evidence of at least a two-year level of competence

Dissertation: results of an original investigation acceptable for publication

Formal (Public) Seminar

Final Oral Examination: contents on the dissertation and related information

Time Limitations: 1) between admission to the doctoral program and ad-
mission to doctoral candidacy: not more than four years; and 2) between
admission to candidacy and the final examination: not less than eight
months, and not more than five years

Note: Students in the doctoral concentrations are strongly urged to study
one academic term at a biological station or research institute to be selected in
consultation with the Graduate Advisory Committee.

Courses

All courses are offered in Michael J. O'Connell Center, Lincoln Park Campus
(1036 W. Belden Avenue).

ADVANCED UNDERGRADUATE COURSES

300 Psychobiology and Behavior. Fundamental concepts of the structure and
function of the nervous and endocrine systems, and their interplay with
genetics, nutrition and the external environment in the expression of overt
behavior. Lecture-Laboratory (4). Laboratory Fee $20.00.

309 Plant Physiology. Functional and developmental aspects of plants, espe-
sially of vascular autotrophs. Lecture-Laboratory (4). Laboratory Fee

310 Vertebrate Physiology. Organ system physiology of vertebrates. Lecture-
Laboratory (4). Laboratory Fee $20.00.

311 Histology. Microscopic study of vertebrate tissues and organs. Lecture-

315 Ecology. Study of organismal interactions; and responses of individuals,
populations and natural communities to their external environment.
Lecture Only (4) or Lecture-Laboratory (4). Laboratory Fee $20.00.

318 Insect Physiology and Development. Introduction to the physiology and
development of insects, including embryogenesis, hormonal control of
molting, metamorphosis and reproduction. Lecture Only (4) or Lecture-
Developmental Biology. Developmental phenomena of animals including gametogenesis, fertilization, cleavage, organogenesis, metamorphosis and regeneration. Lecture-Laboratory (4). Laboratory Fee $20.00.


GRADUATE COURSES

Discussions of Selected Topics in Biology. (2).

Independent Study. Experimental and/or Library study of selected topics in the life sciences, A-Cell Biology, B-Immunobiology, C-Developmental Biology, D-Physiology, E-Endocrinology, F-Genetics, G-Structural Biology, H-Ecology. Offered in the Autumn, Winter, Spring and Summer quarters (2 or 4). Laboratory Fee $15.00 per credit hour.

Hormonal Regulation of Mineral Metabolism I. Analysis of structure and biochemistry, and cell function in hard tissues of invertebrate and vertebrate organisms (4).

Hormonal Regulation of Mineral Metabolism II. (Prerequisite: Biology 410.) Analysis of the regulation of structure, function and biochemistry of vertebrate hard tissues by vitamins and hormones. Lecture-Seminar (4).


Experimental Immunology. Laboratory (2). Laboratory Fee $25.00. Not offered in 1984/85.


Physiology of the Endocrine System. Laboratory (2). Laboratory Fee $25.00. Not offered in 1984/85.


Selected Aspects of Fetal and Adult Endocrinology. Lecture/discussion on topics dealing with current views regarding the development and function of the Hypothalamo-Adenohypophyseal-Thyroid and Hypothalamo-Adenohypophyseal-Gonadal axes in embryonic, fetal and adult vertebrate organisms. Lecture-Laboratory (4). Laboratory Fee $25.00.


446 Neurobiology. Introduction to the structure and function of vertebrate and invertebrate nervous systems. Lecture (4).


469 Cell Physiology and Toxicology. Analysis of organelle enzyme systems, unit structures, and physiology relating to cellular metabolism, transport, and energy conversion processes in the presence of toxic substances. Lecture-Laboratory (4). Laboratory Fee $20.00. Not offered in 1984/85.


486 Introduction to Endocrinology. Study of hormonal regulation in animals. Lecture-Laboratory (4). Laboratory Fee $20.00.
Special Course for Graduate Laboratory Teaching Assistants

495 **Practicum in Teaching Biology.** Discussion of such topics as laboratory safety, handling of radioactive chemicals, instrument and equipment use as well as care, feeding, etc. of living organisms. (2).

Research

496 **Research.** (Prerequisite: Approval of the Department) Experimental work in selected areas of biology. These studies do not necessarily relate to a thesis or dissertation. Autumn, Winter, Spring, Summer. Laboratory (2,4). Laboratory fee $15.00 per credit hour.

498 **Research for Master’s Thesis.** (Prerequisite: Approval of the Department) Original study of a specific biological problem leading to a thesis. Autumn, Winter, Spring, Summer. Laboratory (2,4). Laboratory fee $15.00 per credit hour.

598 **Research for Doctoral Dissertation.** (Prerequisite: Approval of the Ph.D. Dissertation Proposal) Original investigation of a specific biological research problem leading to the dissertation. Autumn, Winter, Spring, Summer. Laboratory (2,4,or 6). Laboratory fee $15.00 per credit hour.

599 **Doctoral Candidate Research.** (Prerequisite: Approval of the Department Graduate Committee and the Dean of the Graduate School) Open to doctoral candidates who have fulfilled language and residency requirements for the degree and who are devoting full time to dissertation research and study. Autumn, Winter, Spring, Summer. (No credit, tuition equal to one 4-hour course). Laboratory (0). Laboratory fee $50.00.

701 **Resident Candidacy Continuation.** (Prerequisite: Admission to candidacy) Students admitted to candidacy for the doctoral degree who have completed all course and dissertation registration requirements but who are regularly using the facilities of the University for study and research are required to be registered each quarter of the academic year until the dissertation and final examination have been completed. Non-credit, $388.00 per quarter.

702 **Non-Resident Candidacy Continuation.** (Prerequisite: Admission to candidacy) This registration provides for doctoral candidates who have been admitted to candidacy who are not in residence and need only occasional use of University facilities, including the libraries. Non-credit, $30 per quarter.
Jurgis A. Anysas, Ph.D., Chairperson

FACULTY

Professors
Avrom A. Blumberg, Ph.D. ........................................ Yale University
Fred W. Breitbeil III, Ph.D. ................................. University of Cincinnati
Sanat K. Dhar, Ph.D. ................................................... Wayne State University
Edwin F. Meyer, Ph.D. ........................................ Northwestern University
Thomas J. Murphy, Ph.D. ........................................ Iowa State University
William R. Pasterczyk, Ph.D. ................ Loyola University, Stritch School of Medicine
Franklin S. Prout, Ph.D. ........................................ Vanderbilt University

Associate Professors
Jurgis A. Anysas, Ph.D. .............................. Illinois Institute of Technology
Sara Sieck Melford, Ph.D. .............................. Northwestern University
Robert L. Novak, Ph.D. ....................................... University of Delaware

PURPOSE
The degree of Master of Science in Chemistry is designed to prepare students for advanced work in the profession of Chemistry or Biochemistry and for further graduate study.
MASTER OF SCIENCE: CHEMISTRY

Admission Requirements
For full admission, students must have the following:
Bachelor's degree: Chemistry
Calculus: one year
Physics, with laboratory: one year
General Chemistry: one year
Quantitative Analysis: one year, including one course in instrumental analysis
Organic Chemistry: one year, including spectral analysis
Physical Chemistry: one year

Degree Requirements

Chemistry: Thesis
Courses: a minimum of 44 quarter hours, including
CHE 422, 424  Advanced Inorganic Chemistry I, II
CHE 430 or 476  Polymer Synthesis or Polymer Science
CHE 450, 452  Advanced Organic Chemistry I, II
CHE 470, 472  Advanced Physical Chemistry I, II
CHE 490  Statistical Analysis of Data

twelve quarter hours of research credit

Satisfactory thesis
Oral examination: in two parts. The first part is the thesis presentation and defense; the second part, an oral examination concerning the candidate's general knowledge of chemistry.

Chemistry: Non-Thesis:
Courses: a minimum of 44 quarter hours, including
CHE 430 or 476  Polymer Synthesis or Polymer Science
CHE 422, 424  Advanced Inorganic Chemistry I, II
CHE 450, 452  Advanced Organic Chemistry I, II
CHE 470, 472  Advanced Physical Chemistry I, II
CHE 480  Special Topics in Analytical Chemistry
CHE 490  Statistical Analysis of Data

two elective courses
Biochemistry: Thesis

Courses: a minimum of 44 quarter hours, including

CHE 340, 342, 440  Biochemistry I, II, III
CHE 341, 343  Experimental Biochemistry I, II

one set of two courses from:

CHE 422, 424  Advanced Inorganic Chemistry I, II
CHE 450, 452  Advanced Organic Chemistry I, II
CHE 470, 472  Advanced Physical Chemistry I, II

two elective courses (eight quarter hours)
twelve quarter hours of research credit

Satisfactory thesis

Oral examination: in two parts. The first part is the thesis presentation and
defense: the second part, an oral examination concerning the candidate’s
general knowledge of chemistry.

Chemistry as a Minor Field

Six quarters of chemistry and three quarters each of physics and calculus,
must be completed before a minor sequence can be started. The 200-level
courses listed below can be used for graduate credit only by chemistry
minors.

210 Physical Chemistry I. (Prerequisite: CHE 133) Offered: Autumn.
211 Physical Chemistry II. (Prerequisite: CHE 196) Offered: Winter.
215 Physical Chemistry III. (Prerequisite: CHE 211) Offered: Spring.
261 Instrumental Analysis. (Prerequisite: CHE 215) Offered: Winter.
265 Air Chemistry. (Prerequisite: CHE 127 or 147) Offered: Spring quarter of
even-numbered years.
267 Aqueous Chemistry. (Prerequisite: CHE 127 or 147) Offered: Autumn
quarter of even-numbered years.
269 Industrial Chemical Hazards. (Prerequisite: CHE 127 or 147 and CHE 125
or 175) Offered: Spring quarter of odd-numbered years.
Courses

All of the following courses are held in the Michael J. O'Connell Center, 1036 West Belden Avenue or the Arthur J. Schmitt Academic Center on the Lincoln Park Campus. Courses with laboratory are odd numbered. All courses carry four quarter hours of credit unless otherwise noted.

ADVANCED UNDERGRADUATE COURSES:

312 Quantum Chemistry. (Prerequisite: CHE 211) Offered: Autumn.
321 Intermediate Inorganic Chemistry. (Prerequisite: CHE 125 or 175; 210 or consent; and 312 strongly recommended.) Offered: Autumn.
325 Solid Waste Chemistry. (Prerequisite: CHE 210) Offered: Spring of odd-numbered years.
340 Biochemistry I. (Prerequisite: CHE 125 or 175) Offered: Autumn.
342 Biochemistry II. (Prerequisite: CHE 340) Offered: Winter.
343 Experimental Biochemistry II. (Prerequisite: CHE 341; 261 or consent) Offered: Winter (2).
356 Spectral Interpretation. (Prerequisite: CHE 125 or 175; 261 or consent) Offered: Spring.
374 Selected Topics in Physical Chemistry. (Prerequisite: Permission of Instructor.) Offered by arrangement. This course may be repeated for credit if topic is different (2). This course may be any topic in the field of polymers, phenonemaz, etc.
385 Advanced Chemical Techniques. (Prerequisite: Permission of Chairman) This is a laboratory course which may be in the fields of analytical, biochemistry, inorganic, organic or physical chemistry. This course may be repeated for credit if topic is different. (2)
399 Independent Study.
GRADUATE COURSES

422 Advanced Inorganic Chemistry I. (Prerequisite: CHE 312 and 321 or Consent of Instructor) Offered: Winter of even-numbered years.

424 Advanced Inorganic Chemistry II. (Prerequisite: CHE 422) Offered: Spring of even-numbered years.

426 Bioinorganic Chemistry. (Prerequisite: CHE 422) Offered: Spring of even-numbered years.

430 Polymer Synthesis. (Prerequisite: CHE 125 or 175) Offered: Spring of odd-numbered years.

448 Biochemistry III. (Prerequisite: CHE 342) Offered: Spring.

450 Advanced Organic Chemistry I. (Prerequisites: CHE 175 and 210) Offered: Autumn.

452 Advanced Organic Chemistry II. (Prerequisite: CHE 450) Offered: Winter.

470 Advanced Physical Chemistry I. (Prerequisite: CHE 215. Offered: Autumn of even-numbered years.

472 Advanced Physical Chemistry II. (Prerequisite: CHE 215. Offered: Winter of odd-numbered years.

476 Polymer Science. (Prerequisite: CHE 215 or Consent of Instructor) Offered: Spring of even-numbered years.

478 Advanced Topic in Physical Chemistry. (Prerequisite: Permission of Chairman) By arrangement. This course may be repeated for credit if the topic is different.

480 Special Topic in Analytical Chemistry. (Prerequisite: CHE 261) This course may be any topic related to chemical analysis, such as mass spectroscopy, electrochemical analysis, principles of chromatography, etc. This course may be repeated if the topics are different.

498 Statistical Analysis of Data. (Prerequisite: ability to program in BASIC) Offered: Spring of odd-numbered years.

497 Research. (Prerequisite: Permission of Advisor) Students doing laboratory research must register for this course. This course may be repeated for credit. Offered every quarter, variable credit (1-4 quarter hours).

500 Independent Study. Variable credit. (Prerequisite: Permission of Chairman) Offered by arrangement. This course may be repeated for credit.
Computer Science
(CSC)

Helmut Epp, Ph.D., Chairperson

Director of Graduate Studies
Martin G. Kalin, Ph.D.

FACULTY

Professor
Richard J. Johnsonbaugh, Ph.D. .............. University of Oregon

Associate Professors
Gary F. Andrus, Ph.D. .......................... Wayne State University
Wade Bartlett, Ph.D. ............................ Stevens Institute of Technology
Helmut Epp, Ph.D. ............................... Northwestern University
Robert Fisher, Ph.D. ............................ Harvard University
Gerald Gordon, Ph.D. ........................... University of California, Berkeley
Martin G. Kalin, Ph.D. .......................... Northwestern University
George J. Knafl, Ph.D. .......................... Northwestern University
Glenn Lancaster, Ph.D. ........................ University of California, Irvine

Assistant Professors
Kam-Chan Lo, Ph.D. ............................. University of Nice
David Miller, Ph.D. ............................. University of Chicago

Adjunct Professor
Ronald Benjamin, M.S. ......................... DePaul University
Instructors
Espiridion Celis, M.S. ................................................. DePaul University
Henry Harr, M.S. .................................................. DePaul University
Thomas Shendian, M.S. ........................................ DePaul University

Lecturers
Richard Courtheoux, M.S. ........................................ Weizmann Institute
Michael Danziger, M.B.A. ........................................ Boston University
Carl Entemann, M.A. ............................................. Wake Forest University
Richard Ezop, M.S. ................................................ DePaul University
James Janossy, M.S. .............................................. California State University
Girish Parikh, B.E. ................................................ Gujarat University
Edward Wegryn, J.D. ............................................. Loyola University
Boris Zibitsker, Ph.D. ............................................ Radio Engineering Institute

PURPOSE
The Department of Computer Science and Information Systems offers graduate level professional training in these areas: information systems, artificial intelligence, computer science, data communications, scientific/statistical computing, and telecommunications management. Students choose from a broad collection of courses to develop, in depth, the research habits and practical skills needed for the workplace or for further academic study. The department's programs are designed to provide its graduates with the technical competence and flexibility necessary to respond to both present and future opportunities in the computing professions.

PROGRAMS
The graduate division offers degree programs in Computer Science and Information Systems and a non-degree program in Professional Development. Both degree programs offer advanced, comprehensive training in various computing fields; both curricula cover theoretical foundations, state-of-the-art techniques and skills, and major trends. The non-degree program in Professional Development offers flexible, intensive training for practitioners in the computing professions, and can be adapted easily to fit specific interests and needs. Courses taken as part of the Professional Development program generally transfer to the degree programs; for specifics, students should consult a graduate advisor.
MASTER OF SCIENCE: COMPUTER SCIENCE

The masters degree program consists of three phases:

- Prerequisite Phase
- Core Knowledge Phase
- Advanced Phase

The Prerequisite Phase guarantees that all students have a common background. The Core Knowledge Phase, which varies with concentration, prepares students for their chosen concentration. In the Advanced Phase, students specialize in their concentration area. The concentration requirements are tailored to meet individual student needs. The student must pass an examination to move from one phase to another.

Prerequisite Phase

All applicants who satisfy general graduate college admission requirements initially receive conditional admittance and may then pursue either a degree program or the Professional Development program.

For full admission to a degree program, students must have the following:
Bachelor’s degree (not necessarily in computer science)
Counselling session with a graduate counselor
A passing score on the Graduate Assessment Examination or a grade of “B” or better in corresponding undergraduate level courses.
A course in assembly language (with a grade of B or better) or equivalent work experience

For Admission as a Professional Development student, students must have the following:
Bachelor’s Degree
Approval by a departmental counselor of a program of Professional Development. The student must have a background equivalent to the prerequisites of any course before enrolling in it.

A Professional Development student who completes the Admission Phase may be fully admitted to the degree program and may apply Professional Development courses taken to the degree requirements.

Graduate Assessment Examination

The departmental Graduate Assessment Examination (GAE) is administered to assure a common background of knowledge. A passing score on this examination is required to move from the Prerequisite Phase to the Core Knowledge Phase. The examination covers the following topics:

Programming Skills in Two Languages. A knowledge of two languages is required. At least one must be chosen from ADA, PASCAL or PL/I. The other language must be selected from ADA, C, COBOL, FORTRAN 77, PASCAL or PL/I. (Note that a reading knowledge of PL/I will be assumed in many graduate courses).

Suggested courses are:

CSC 203  COBOL Programming
CSC 205 FORTRAN
CSC 210 PL/I Programming
CSC 220 Programming in PASCAL
CSC 225 Programming in C
CSC 230 Programming in ADA

Principles of Computer Science. Suggested courses are either the undergraduate two quarter sequence:
CSC 310-311 Computer Science I-II

or a one quarter equivalent restricted to graduate students with programming experience:
CSC 410 Principles of Computer Science

File Structures and File Processing. Suggested courses are either:
CSC 204 Advanced Topics in COBOL (prerequisite CSC 203)

or

CSC 342 Introduction to File Processing (uses PL/I and has a prerequisite of CSC311 or CSC410)

Discrete Mathematics. A suggested course is
MAT 140 Discrete Mathematics

A detailed study guide for the Graduate Assessment Examination and further information is available from the department (phone (312) 341-8381).

Other Prerequisites
The following competencies are required as part of the Prerequisite Phase, but are not included on the Graduate Assessment Examination:

Assembly Language. Either documented work experience in an assembly language or documented course work in assembly language programming (with a grade of “B” or better) will be accepted as fulfilling this requirement.

A suggested course is
CSC 312 Assembly Language and Machine Organization

Quantitative Methods. The quantitative methods requirements are met by having taken courses equivalent to the following:
MAT 150-151 Calculus
CSC 323 Statistics

Degree Requirements
The requirements for the Core Knowledge and Advanced Phases are presented below:
Core Knowledge Phase

Successful completion of the Core Knowledge Phase consists of completion of Core Knowledge Phase courses and passing the Core Knowledge Examination.

Completion of Core Knowledge Phase courses. These depend on the student's chosen concentration in Computer Science. Waiver of these courses is possible in individual cases but requires approval by the Director of Graduate Studies. The course requirements by concentration are:

**Artificial Intelligence Concentration**
- CSC 442 Data Structures
- CSC 445 Computer Architecture
- CSC 446 Computer Operating Systems
- CSC 480 Artificial Intelligence
- CSC 491 Design and Analysis of Algorithms

**Standard Computer Science Concentration**
- CSC 420 Discrete Structures
- CSC 442 Data Structures
- CSC 445 Computer Architecture
- CSC 446 Computer Operating Systems
- CSC 491 Design and Analysis of Algorithms

**Data Communications Concentration**
- CSC 442 Data Structures
- CSC 445 Computer Architecture
- CSC 446 Computer Operating Systems
- CSC 462 Data Communications
- CSC 491 Design and Analysis of Algorithms

**Scientific/Statistical Computing**
- MAT 220 Linear Algebra with Applications I (does not apply for graduate credit)
- CSC 423 Data Analysis and Regression
- CSC 442 Data Structures
- CSC 446 Computer Operating Systems
- CSC 491 Design and Analysis of Algorithms
- CSC 573 Data Bases and Data Management

Passing the Core Knowledge Examination. The examination covers the subject matter of the Core Knowledge Phase courses required for the student's chosen concentration. Students take this examination as soon as they successfully complete their Core Knowledge Phase course requirements.

Students are allowed at most two attempts at this examination. If they fail it a second time, they will be dismissed. Call the department at (312) 341-8381 for further details on this examination.

**Deadline:** The student must submit a written application the quarter before taking the Core Knowledge Phase examination.
ADVANCED PHASE

Students must fulfill the course requirements of their concentration. Consult the Advanced Phase Courses section below for details. Waiver of some of these courses is possible in individual cases but requires approval by the Director of Graduate Studies.

Conditionally admitted students will not receive credit for any Advanced Phase courses completed prior to passing the Graduate Assessment Examination. Fully admitted students will receive credit for at most three courses completed prior to passing the Core Knowledge Phase examination.

Minimal Course Requirement

Students must complete at least 12 courses (48 hours) beyond the Prerequisite Phase and after receiving conditional admission. However, most students will need to complete 13 courses (52 hours). Students who receive a waiver of Core Knowledge courses and pass the Core Knowledge examination do not need to replace the first waiver with an elective course (unless that course was applied to another degree), but will need to replace all other waivers with elective courses. Additional elective courses are subject to the same restrictions as elective Advanced Phase courses.

Advanced Phase Course Requirements

Students must complete the Advanced Phase courses required for their chosen concentration.

The course requirements by concentration are:

Artificial Intelligence Concentration

CSC 580  Artificial Intelligence Programming
CSC 698  Master's Project/Thesis

Three of the following:

CSC 481  Pattern Recognition and Machine Perception
CSC 581  Knowledge-based Systems
CSC 582  Robotics
CSC 583  Natural Language Understanding
CSC 584  Computer Vision

Three elective courses (see the Elective Course Restrictions Section below).

Standard Computer Science Concentration

Four of the following courses including at least one 506 level course:

CSC 432  Computer and Information Systems Modeling
CSC 447  Concepts of Programming Languages
CSC 448  Compiler Design
CSC 480  Artificial Intelligence
CSC 490  Theory of Computation
CSC 492  Advanced Topics in Algorithms
CSC 493  Formal Grammars and Automata Theory
CSC 535  Formal Semantics of Programming Languages
CSC 545  Advanced Computer Organization
CSC 546  Operating Systems Design
CSC 548  Advanced Compiler Design
CSC 698  Master's Project/Thesis

Four elective courses (see the Elective Course Restrictions Section below).

Data Communications Concentration
Four of the following including at least one 500 level course.
CSC 432  Computer and Information Systems Modeling
CSC 463  Computer Networks
CSC 485  Queueing Theory with Computer Applications
CSC 560  On-line Systems and Telecommunications
CSC 581  Distributed Processing
CSC 562  Computer Communications Network Design and Analysis
CSC 563  Protocols and Techniques for Data Networks
CSC 698  Master's Project/Thesis

Four elective courses (see the Elective Course Restrictions Section below).

Scientific/Statistical Computing Concentration
Four of the following:
CSC 424  Advanced Data Analysis
CSC 432  Computer and Information Systems Modeling
CSC 445  Computer Architecture
CSC 465  Software Engineering
CSC 469  Computer Graphics
CSC 480  Artificial Intelligence
CSC 481  Pattern Recognition and Machine Perception
CSC 485  Numerical Analysis
CSC 489  Queueing Theory with Computer Applications
CSC 492  Advanced Topics in Algorithms
CSC 498  Digital Signal Processing
CSC 586  Computational Methods in Data Analysis
CSC 698  Master's Project/Thesis
ECO 512  Applied Time Series and Forecasting
MAT 454  Multivariate Statistics
MAT 457  Nonparametric Statistics

Four elective courses (see the Elective Course Restrictions Section below).
Personalized Concentration.

Students with superior results on the Core Knowledge Phase examination for one of the above concentrations may be allowed to personalize their Advanced Phase requirements. After planning their personalized concentration with their advisor, they must submit the plan to the Director of Graduate Studies for approval. Permission for the personalized concentration must be obtained prior to completion of most of the concentration courses.

Elective Course Restrictions

Elective courses must be numbered in the 400-599 range. Students take at most two courses from other departments at DePaul or at some other institution (elective or otherwise). Students must obtain written approval from the Director of Graduate Studies before taking courses from other departments at DePaul and must justify the inclusion of these courses in their program.

Credit will be given for courses taken at other institutions only if they are approved by both the Associate Dean of the College of Liberal Arts and Sciences for the Loop Campus (consult the appropriate section on the transfer credit policies of the College) and the Director of Graduate Studies.

Courses suggested for the Prerequisite Phase never count for elective credit. Courses required for the Core Knowledge Phase only count for elective credit if they are not required for the student's own concentration.

Any course required for the student's concentration but taken as part of the requirements of another degree earned by the student may be waived but cannot be used for elective credit. Conditionally admitted students may not receive elective credit for courses taken prior to passing the Graduate Assessment Examination. Fully admitted students will receive elective credit for courses taken before passing the Core Knowledge Examination only if the total number of advanced courses taken does not exceed three.

Grade Requirements

Fully admitted students must maintain an average of at least 2.50 (out of a maximum of 4.00). Students who do not maintain this average are dismissed from the program. The department will notify such students as soon as possible. However, students who take courses after their average falls below 2.50 but before departmental notification will not receive any special tuition refunds.

In order to graduate, students must have an overall grade point average no less than 2.75 (out of a maximum of 4.00).

Incomplete grades are only given if the course instructor considers them justified and if the student obtains the departmental chairman's permission. The departmental secretary will provide the appropriate permission form. Incompletes must be completed within one quarter or else they will change to grades of F which will not be changed later.
MASTER OF SCIENCE: INFORMATION SYSTEMS

The masters degree program consists of three phases:
- Prerequisite Phase
- Core Knowledge Phase
- Advanced Phase

The Prerequisite Phase guarantees that all students have a common background. The Core Knowledge Phase, which varies with concentration, prepares students for their chosen concentration. In the Advanced Phase, students specialize in their concentration area. The concentration requirements are tailored to meet individual student needs. The student must pass an examination to move from one phase to another.

Prerequisite Phase

All applicants who satisfy general graduate college admission requirements initially receive conditional admission and may then pursue either a degree program or the Professional Development program.

For full admission to a degree program, students must have the following:
- Bachelor's degree (not necessarily in computer science)
- Counselling session with a graduate counselor
- A passing score on the Graduate Assessment Examination or a grade of "B" or better in corresponding undergraduate level courses.
- A course in assembly language (with a grade of "B" or better) or equivalent work experience.

For admission as a Professional Development student, students must have the following:
- Bachelor's Degree
- Approval by a departmental counselor of a program of Professional Development. The student must have a background equivalent to the prerequisites of any course before enrolling in it.

A Professional Development student who completes the Prerequisite Phase may be fully admitted to the degree program and may apply Professional Development courses taken to the degree requirements.

Graduate Assessment Examination

The departmental Graduate Assessment Examination (GAE) is administered to ensure a common background of knowledge. A passing score on this examination is required to move from the Prerequisite Phase to the Qualification Knowledge Phase. The examination covers the following topics:

Programming Skills in Two Languages. A knowledge of two languages is required. At least one must be chosen from ADA, PASCAL or PL/I. The other language must be COBOL. (Note that a reading knowledge of PL/I will be assumed in many graduate courses.)

Suggested courses are:
- CSC 203  COBOL Programming
- CSC 210  PL/I Programming
CSC 220  Programming in PASCAL
CSC 230  Programming in ADA

**Principles of Computer Science.** Suggested courses are either the undergraduate two quarter sequence:

CSC 310-311  Computer Science I-II

or a one quarter equivalent restricted to graduate students with programming experience:

CSC 410  Principles of Computer Science

**File Structures and File Processing.** A suggested course is:

CSC 204  Advanced Topics in COBOL (prerequisite CSC 203)

**Discrete Mathematics.** A suggested course is:

MAT 140  Discrete Mathematics

A detailed study guide for the Graduate Assessment Examination and further information is available from the department (phone (312) 341-8381).

**Other Prerequisites**

The following competencies are also required as part of the Prerequisite Phase, but are not included on the Graduate Assessment Examination:

**Assembly Language.** Either documented work experience in an assembly language or documented course work in assembly language programming (with a grade of “B” or better) will be accepted as fulfilling this requirement.

A suggested course is:

CSC 312  Assembly Language and Machine Organization

**Quantitative Methods.** The quantitative methods requirements are met by having taken courses equivalent to the following:

MAT 150-151 or BMS 126  Calculus
CSC 323  Statistics

**Organizational Psychology.** A suggested course is:

PST 380  Industrial and Organizational Psychology

**Accounting.** A suggested course is:

GSB 504  Financial Accounting (Alternatively, students may complete ACC 101 and ACC 103)

**Degree Requirements:**

The requirements for the Core Knowledge and Advanced Phases are presented below:

**CORE KNOWLEDGE PHASE**

Successful completion of the Core Knowledge Phase consists of:

- Completion of Core Knowledge Phase Course
- Passing the Core Knowledge Examination
The examination covers the subject matter of the Core Knowledge Phase courses required for the Information Systems degree. Students take this examination as soon as they successfully complete their Core Knowledge Phase course requirements. Students are allowed at most two attempts at this examination. If they fail it a second time, they will be dismissed. Call the department at (312) 341-8381 for further details on this examination.

Deadline: The student must submit a written application the quarter before taking the Core Knowledge Phase examination.

Waiver of some of the Core Knowledge Phase courses is possible in individual cases but requires the approval of the student's advisor.

Core Knowledge Phase Courses

Students complete the following Core Knowledge Phase course requirements:

- CSC 442 Data Structures
- CSC 446 Computer Operating Systems
- CSC 473 Information Systems for Management
- CSC 474 Decision Support Systems
- CSC 573 Data Bases and Data Management

ADVANCED PHASE

These requirements pertain only to the Information Systems degree program. See above for the Computer Science degree program.

Students must fulfill the course requirements of the Information Systems degree program. Consult the Advanced Phase Courses section below for details. Waiver of some of these courses is possible in individual cases but requires the approval of the student’s advisor.

Conditionally admitted students will not receive credit for any Advanced Phase courses completed prior to passing the Graduate Assessment Examination. Fully admitted students will receive credit for at most three courses completed prior to passing the Core Knowledge Phase examination.

Minimal Course Requirement

Students must complete at least 12 courses (48 hours) beyond the Prerequisite Phase and after receiving conditional admission. However, most students will need to complete 13 courses (52 hours). Students who receive a waiver of Core Knowledge courses and pass the Core Knowledge examination do not need to replace the first waiver with an elective course (unless that course was applied to another degree), but will need to replace all other waivers with elective courses. Additional elective courses are subject to the same restrictions as elective Advanced Phase courses.

Advanced Phase Course Requirements

Students must complete the following Advanced Phase courses:

- Information System Concentration:
  - CSC 432 Computer and Information Systems Modeling
  - SOC 415 Information Systems and Society
Three of the following including at least one at the 500 level.
CSC 445 Computer Architecture
CSC 450 Office Systems
CSC 465 Software Engineering
CSC 475 Information Systems Analysis and Design
CSC 480 Artificial Intelligence
CSC 483 Information Processing Management
CSC 484 Computerized Accounting Systems
CSC 491 Design and Analysis of Algorithms
CSC 494 Software Methodologies
CSC 560 On-Line Systems and Telecommunications
CSC 565 Voice Telecommunication
CSC 566 Integrated Telecommunication Systems
CSC 571 Software Maintenance
CSC 572 Computer Security
CSC 574 Advanced Topics in Database
CSC 678 Master's Project/Thesis
SOC 467 Organizations
PSY 443 Psychology of Human Performance

Three elective courses (see the Elective Course Restrictions Section below).

Telecommunications Management Concentration
CSC 462 Data Communications
CSC 560 On-Line Systems and Telecommunications
CSC 565 Voice Telecommunications
SOC 415 Information Systems and Society

Two of the following:
CSC 432 Computer and Information Systems
CSC 450 Office Systems
CSC 463 Computer Networks
CSC 561 Distributed Processing
CSC 566 Integrated Telecommunications
CSC 596 Topics in Information Systems

Two elective courses (see the Elective Course Restrictions section below).
**Elective Course Restrictions**

Elective courses must be numbered in the 400-599 range. Students take at most two courses from other departments at DePaul or at some other institution (elective or otherwise). Students must obtain written approval of the Director of Graduate Studies before taking courses from other departments at DePaul and must justify the inclusion of these courses in their program.

Credit will be given for courses taken at other institutions only if they are approved by both the Associate Dean of the College of Liberal Arts and Sciences for the Loop Campus (consult the appropriate section on the transfer credit policies of the College) and the Director of Graduate Studies.

Courses suggested for the Prerequisite Phase never count for elective credit. Courses required for the Core Knowledge Phase only count for elective credit if they are not required for the student’s own concentration.

Any course required for the student's concentration but taken as part of the requirements of another degree earned by the student may be waived but cannot be used for elective credit. Conditionally admitted students may not receive elective credit for courses taken prior to passing the Graduate Assessment Examination. Fully admitted students will receive elective credit for courses taken before passing the Core Knowledge Examination only if the total number of advanced courses taken does not exceed three.

**Grade Requirements**

Fully admitted students must maintain an average of at least 2.50 (out of a maximum of 4.00). Students who do not maintain this average are dismissed from the program. The department will notify such students as soon as possible. However, students who take courses after their average falls below 2.50 but before departmental notification will not receive any special tuition refunds.

In order to graduate, students must have an overall grade point average no less than 2.75 (out of a maximum of 4.00).

Incomplete grades are given only if the course instructor considers them justified and if the student obtains the departmental chairman's permission. The departmental secretary will provide the appropriate permission form. Incompletes must be completed within one quarter or else they will change to grades of F which will not be changed later.
Courses

All courses carry 4 hours of credit unless otherwise indicated.

UNDERGRADUATE COURSES – PHASE I

These courses count only for Admission Phase requirements.

**ACC 101** Principles of Accounting I. An introduction to accounting as the means of recording, storing, and summarizing economic events of the business enterprise. Emphasis is placed on financial statements and other financial reports to management and the public based on the accounting equation, accrual accounting concepts, and data gathering techniques.

**ACC 103** Principles of Accounting II. A companion and sequel course to Accounting 101. This course continues the exploration of basic accounting fundamentals and concepts as well as financial statements and their use in the business world. An overview of management accounting concepts is also provided. (Prerequisite: ACC 101.)

**GSB 504** Financial Accounting. An introduction to financial accounting; provides both a theoretical foundation and an opportunity to apply accounting logic in increasingly complex situations. The Accounting Model and information processing cycle are developed. The content of the Income Statement, Balance Sheet, and Statement of Changes in Financial Position are studied in detail and analyzed. Prerequisite: Graduate Standing.

**BMS 126** Calculus with Applications to Business. Elements of differential and integral calculus with business applications. Partial differentiation. (Prerequisite: MAT 140.)

**CSC 203** COBOL Programming. An introduction to programming in the business oriented language COBOL. The emphasis will be on business problems involving the processing of large quantities of data.

**CSC 204** Advanced Topics in COBOL. File management, tape and direct access devices. Indexed sequential, relative, and direct files. Access methods. Subprograms, sort/merge feature. Database applications. (Prerequisite: CSC 203.)

**CSC 205** FORTRAN Programming. An introduction to programming in the scientific language FORTRAN. Input and output, branching, looping, subscripted variables, functions, subroutines, non-numerical procedures, algorithm construction and problem solving. (Prerequisite: Math 101 or equivalent.) Laboratory fee.

**CSC 210** Programming with PL/I. An introduction to structured computer programming using the language PL/I. Topics include simple data types, control structures, character string processing, array processing, procedures and functions.
CSC 230 Programming with Pascal. An introduction to structured computer
programming using the language Pascal. Topics include: elementary
data types, program control structures, character strings, array pro-
cessing, procedures and functions and an introduction to user
defined data types.

CSC 310 Principles of Computer Science I. Conceptual models of a comput-
er, machine and assembly language. Internal data representation,
programming methods, recursion. (Prerequisite: CSC 210.)

CSC 311 Principles of Computer Science II. Basic data structures, stacks,
queues, linked lists. Trees, tree searches and string processing.
(Prerequisite: CSC 310.)

CSC 312 Assembly Language and Computer Organization. Data representa-
tion, addressing schemes, and instruction charts for the
VAX/MACRO assembly language. A comparative study of past and
present computers. Introduction to computer organization.
(Prerequisite: CSC 311 or consent of counselor.)

CSC 323 Data Analysis and Statistical Software I. Introduction to data analy-
sis. Elementary statistical inference. Regression and correlation anal-
ysis. These topics will be supported by a thorough introduction to
one of the computer packages SAS or SPSSX. The emphasis will be on
actual experience with selected packages. (Prerequisite: CSC 310.)

CSC 342 Introduction to File Processing. File processing environment and file
manipulation techniques. Algorithms for manipulating, and tech-
niques for implementing, inverted lists, multilists, indexed sequential,
and hierarchical structures. ISAM and VSAM will be discussed.
Programming projects in PL/I will be assigned. (Prerequisite: CSC
410.)

MAT 140 Discrete Mathematics I. Boolean Algebra, graph theory, and combi-
natorial analysis with computer applications. (Prerequisite: 131 or
three years of high school mathematics.)

MAT 150 Calculus I. Limits and derivatives, extrema, curve sketching, convexi-
ty, inverse functions, continuity. (Prerequisite: MAT 131 or three
years of high school mathematics.)

MAT 151 Calculus II. Definite and indefinite integral; volume; arc length;
trigonometric functions; logarithmic and exponential functions.
(Prerequisite: MAT 150)

MAT 220 Linear Algebra with Applications I. Vectors; equations of lines and
planes; matrices; linear independence; linear transformations;
determinants. (Prerequisite: MAT 151)

PSY 380 Industrial and Organizational Psychology. Application of theories
and methods of psychology to the study of human behavior in busi-
ness, industrial, and other organizations. Analysis of organizations
from a systems perspective. Students will learn and be able to use the
concepts and terminology of Industrial/Organizational Psychology,
will apply those concepts to their personal experiences with organi-
zations, and will learn the techniques of studying organizations from
a psychological perspective. (Prerequisite: an introductory statistics
course.)
GRADUATE COURSES

CSC 410 Principles of Computer Science. Conceptual models of a computer, machine and assembly language. Internal data representations, programming methods, recursion. Stacks, queues, linked lists, Trees, tree searches and string processing. This course applies only for Prerequisite Phase Credit. Restricted to students with programming experience; other students should enroll in CSC 310-311. (Prerequisite: CSC 210)

CSC 420 Discrete Structures. Basic set theoretic and finite algebraic structures with their applications to computer science, graph theory, switching circuits, finite state machines, and other topics.

CSC 423 Data Analysis and Regression. Multiple regression and correlation, residual analysis, analysis of variance, and robustness. These topics will be studied from a data analytic perspective, supported by a thorough investigation of available statistical software. (Prerequisite: CSC 323 or consent)

CSC 424 Advanced Data Analysis. Topics chosen from among multivariate statistical methods, discriminant analysis, principal components analysis, factor analysis, discrete multivariate analysis, and non-parametric statistics. (Prerequisite: CSC 423 or consent)


CSC 442 Data Structures. Representation and management of data in a computer. String and numeric representation, string manipulation, arrays, stacks, queues, linked lists, trees, graphs, sorting and searching. (Prerequisite: CSC 410.)


CSC 446 Computer Operating Systems. A conceptual introduction to operating systems. Multiprogramming, timesharing, concurrent and cooperating processes, scheduling policies, storage management and file management.

CSC 447 Concepts of Programming Languages. A comparative study of computer languages such as ALGOL, PL/I, FORTRAN, APL, COBOL, LISP, and SNOBOL. Information binding, semantics, context free grammars.

CSC 448 Compiler Design. Design and structure of high level languages. Lexical scan, top down and bottom up syntactic analysis. Syntax directed translation and LR(k) grammars. (Prerequisite: CSC 447 or consent.)

CSC 450 Office Systems. Basic technology for information retrieval, analytic tools, communication, text preparation, support tools. Productivity analysis. Distributed network design and network integration systems.

CSC 460 Topics in Operating Systems. A survey of topics of current interest. (Prerequisite: CSC 446.)

CSC 462 Data Communications. Theory and components of data communication systems, modes, codes, and error detection techniques for data transmission, network protocols and line control procedures, communication carrier facilities and system planning. (Prerequisite: CSC 445.)

CSC 463 Computer Networks. A detailed discussion of the seven layers of the ISO reference model. Network topology. Introduction to ARPANET, SNA, DECENT and public networks. (Prerequisite: CSC 462 or consent.)


CSC 472 Metamathematics, Logical Deduction and Computers. Deduction in formal theories; decidability, consistency and completeness; the limits of formal reasoning; Gödel's Theorem; the halting problem for Turing machines; other undecidable problems; elementary recursion theory. (Prerequisite: Some familiarity with formal mathematical reasoning.)

CSC 473 Information Systems for Management. Teleprocessing and data base fundamentals. Overview of business information systems. Information systems planning, development, and maintenance. Behavioral aspects of information systems. The systems approach. Organization, management, and control of information systems. (Prerequisite: CSC 203 or equivalent experience)

CSC 474 Decision Support Systems. Analysis, design and implementation of decision support systems, structured decision systems and strategic planning systems. Database and model base management aspects of DSS. Formal logic and artificial intelligence aspects of DSS. Case studies. (Prerequisite: CSC 473)

CSC 475 Information Systems Analysis and Design. Performance evaluation of large and small scale computer systems. User needs analysis and determination of performance specifications. (Prerequisite: CSC 573 or consent.)

CSC 480 Artificial Intelligence. Introduction to machine simulation of human intelligence. Topics covered include problem solving, game playing, learning. The LISP programming language will be used.

CSC 482 Legal Aspects of Data Processing. Practical legal considerations arising in a data processing environment are discussed. Areas include: legislation, contracts, copyrights, patents and fraud.


CSC 485 Numerical Analysis. Use of a digital computer for numerical computation. Error analysis, Gaussian elimination and Gauss-Seidel method, solution of non-linear equations, function evaluation, approximation of integrals and derivatives, Monte Carlo methods. (Prerequisite: MAT 220 and a programming course)


CSC 487 Operations Research I. Linear Programming. The Linear Programming problem and its dual; the simplex method; transportation and warehouse problems; computer algorithms and applications to various fields. (Prerequisite: MAT 220 and any introductory programming course)

CSC 488 Operations Research II. Optimization Theory. Integer programming; non-linear programming; dynamic programming; game theory. (Prerequisite: CSC 487)

CSC 489 Queueing Theory with Computer Applications. An overview of queueing theory. Queueing systems, related random processes, classification of queues, Priority queueing, Computer time sharing and multi-access systems. (Prerequisite: CSC 432 or consent)

CSC 490 Theory of Computation. An introduction to the mathematical foundations of computation. Random access and Turing machines, recursive functions, algorithms, computability and computational complexity. (Prerequisite: CSC 491 or consent)

CSC 491 Design and Analysis of Algorithms. Consideration of interesting and efficient algorithms for sorting, graph theory, matrix operations and integer arithmetic. Emphasis on measuring the complexity of algorithms and on methods of designing algorithms. (Prerequisite: CSC 442)
CSC 492 Advanced Topics in Algorithms. An in-depth discussion of one or more of the following topics: algorithms for integer operations, polynomial arithmetic including applications of the fast Fourier transform, matrix operations, pattern matching algorithms, proving lower bounds on the complexity of algorithms. (Prerequisite: CSC 491.)

CSC 493 Automata Theory and Formal Grammars. An introduction to the most important abstract models of computation and their applications. Finite state machines, pushdown automata, Turing machines, intractable problems, NP-complete problems. The relationship between formal grammars and automata. (Prerequisite: CSC 420.)

CSC 494 Software Methodologies. A survey of recent techniques for software development and software management. Problem specification, software design and testing; evaluation and documentation. Students will participate in a class project which will be integrated with the lectures.

CSC 496 Microprocessors. An introduction to the hardware and software aspects of microprocessors. Digital electronics, microprocessors, programming, interfacing. Laboratory work will involve hands-on work with microprocessor systems.

CSC 497 Information Theory. An introduction to the basic concepts of information theory and coding theory. Measure of information, the fundamental theorem, Hamming, BCH, and other cyclic codes. (Prerequisite: CSC 420 and MAT 348 or consent.)


CSC 510 Introduction to Systems Programming. Introduction to macroassembly systems and general macroprocessors. Input and output control systems. Debugging tools. (Prerequisites: CSC 445, CSC 446 or consent.)


CSC 545 Advanced Computer Organization. Parallel, array and pipeline processors and other topics of current interest. As a class project, students will design and microprogram a CPU using bit-slice techniques. (Prerequisite: CSC 445)

CSC 546 Operating Systems Design. An algorithmic approach to the design of an operating system. Topics are I/O programming; procedure and data sharing in main storage; process and resource control; deadlocks; file systems. (Prerequisite: CSC 446)

CSC 548 Advanced Compiler Design. Emphasis on practical problems in implementing compilers, data flow analysis, code optimization, error analysis. Discussion of compiler generators. As a class project students will write a compiler. (Prerequisite: CSC 448)
CSC 560 On-Line Systems and Telecommunications. On-line system design and development; technical design control; network topology; telecommunications (voice and data) hardware and software; telecommunications systems; network architecture; telecommunications deregulation; technology forecast. Study of large scale on-line systems. (Prerequisite: CSC 446)

CSC 562 Computer-Communication Network Design and Analysis. Quantitative approaches to the design of data communications networks. Practical examples of networks. Statistical multiplexing and buffering at communication concentrators. Topics in overall network design. (Prerequisites: CSC 432, 462, or consent.)

CSC 563 Protocols and Techniques for Data Networks. Packet communications; transport protocols; terminal, file transfer, and remote job protocols; packet broadcast protocols; coding theory; synchronization; security; data base management in distributed networks. (Prerequisite: CSC 453 or consent.)


CSC 572 Computer Security. Security issues and problems specific to the computer environment. Software and hardware protection mechanisms including encryption and authorization schemes. Special security problems in distributed and teleprocessing environments. (Prerequisite: CSC 446 or consent.)

CSC 573 Data Bases and Data Management. Integrated data bases, architecture of data base systems, storage structures, integrated management systems, on-line file organizations.

CSC 574 Advanced Topics in Data Base. Study and comparison of relational, hierarchical and network data base systems. Problems of implementation of data base management systems. Critical evaluation of commercial data base systems. (Prerequisite: CSC 573.)

CSC 575 Information Retrieval. Introduction to the design and analysis of computer based information storage and retrieval systems. Retrieval systems using natural language, question-answering techniques. Storage and retrieval of unstructured and well-structured data. On-line inventory systems and bibliographic search systems. (Prerequisite: CSC 459 or consent.)
CSC 580 Artificial Intelligence Programming. LISP programming techniques: review of basic LISP, advanced data types, flow of control functions, advanced I/O, editing, compilation, data-driven programming. Artificial intelligence system implementation: semantic networks, slot and filler data bases, deductive information retrieval, procedural knowledge representation, pattern-directed procedure invocation, agenda control structures, augmented transition networks.

CSC 581 Knowledge-based Systems. A survey of knowledge representation techniques including procedural representations, semantic networks, production systems and frames. Detailed study of existing expert systems such as MYCIN, TEIRESIAS, AM. Current and future practical applications of expert systems.

CSC 582 Introduction to Robotics Systems. Analysis of methods of the design and operation of robotic systems. Arm control: coordinate transformations, feedback control systems, hardware components. Application of distributed microcomputer systems to robotic control. Discussion of command languages and planning of job assignments. Prerequisites: CSC 488 and CSC 445 or consent of instructor.

CSC 583 Understanding Natural Language. Introduction to natural language understanding. Including representation schemes, grammars, parsers, text generation, and machine translation. An overview of some natural language processing systems. Prerequisites: CSC 480. CSC 580 is highly recommended.

CSC 584 Computer Vision. Introduction to computer vision, including two- and three-dimensional geometry, knowledge representation, computational and stereo vision, and color and texture perception. With applications to robotics, medicine, and industrial processes. Prerequisites: CSC 480, CSC 481.

CSC 586 Computational Methods for Data Analysis. Data management and manipulation, simulation of random processes, computational graphics, numerical computations, linear and non-linear models.

CSC 594 Topics in Artificial Intelligence. (Prerequisite: Consent of instructor)

CSC 595 Computer Logic Design. Combinational logic design. Sequential logic design. Fault detection and fault tolerant design. Multi-valued logic. (Prerequisite: CSC 445.)

CSC 596 Topics in Information Systems. (Prerequisite: Consent of instructor.)

CSC 597 Topics in Data Communications. (Prerequisite: Consent of instructor.)

CSC 598 Topics in Scientific/Statistical Computing. (Prerequisite: Consent of instructor.)

CSC 599 Topics in Computer Science. (Prerequisite: Consent of instructor.)

CSC 603 COBOL Programming. An introduction to programming in the business oriented language COBOL. The emphasis will be on business problems involving processing large amounts of data. (Prerequisites: three years high school math, MAT 101, or equivalent.)

CSC 604 Advanced Topics in COBOL. Tape and direct access programming, Job Control Language. Utilities and File management. (Prerequisite: CSC 603)

CSC 630 Microcomputers in the Classroom. Introduction to microcomputer based instruction systems. Restricted to educators.

CSC 698 Master's Project/Thesis. Students may register for this course only after their advisor has approved a written proposal for their project and thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. (2 hours of credit; Prerequisite: consent of advisor.)

COURSES FROM OTHER DEPARTMENTS

PSY 443 Psychology of Human Performance. Consult the Department of Psychology Section of this bulletin for the description of this course.

SOC 415 Information Systems and Society. Consult the Department of Sociology Section of this bulletin for the description of this course.

SOC 467 Organizations. Consult the Department of Sociology Section of this bulletin for a description of this course.
Economics
(ECO)

Bala Batavia, Ph.D., Chairperson

FACULTY

Professors
Bala Batavia, Ph.D. ........................................ North Carolina State University
James E. Ciecka, Ph.D. ....................................... Purdue University
James I. Diamond, Ph.D. ................................. Northwestern University
William M. Dugger, Ph.D. ............................... University of Texas
Robert W. Fauthaber, Ph.D. .............................. University of Texas
William A. Hayes, Ph.D. ................................. Catholic University of America
William R. Waters, Ph.D. ............................... Georgetown University

Associate Professors
Animesh Ghoshal, Ph.D. ................................. University of Michigan
Adolph E. Mark, Ph.D. ...................................... University of Illinois
Margaret E. Oppenheimer, Ph.D. ....................... Northwestern University
William H. Sander III, Ph.D. ......................... Cornell University
Richard M. Thornton, Ph.D. ............................ Northern Illinois University
Richard J. Wiltgen, Ph.D. ................................ University of Illinois

Assistant Professors
Floyd R. Dill, Ph.D. ........................................ Cornell University
Michael S. Miller, Ph.D. ................................. University of Pittsburgh

Emeriti
Frank J. Brown, Ph.D. ...................................... Catholic University of America
Joseph S. Giganti, Ph.D. ................................. University of Rome
PURPOSE

The purpose of the graduate program of the Economics Department is to provide extensive knowledge and intensive analysis of economic theories and institutions. The program provides wide acquaintance with the basic sources in the field and initiates the student to habits of economic research. The degree in economics prepares the graduate, as a professional economist, to teach economics in high school and college, and to work as a business or a government economist doing forecasting and other tasks associated with that profession.

MASTER OF ARTS: ECONOMICS

Admission Requirements

For full admission, students must have the following:
Bachelor's Degree
Nine courses in the social sciences. At least five of these courses are to be economics or finance. The economics courses are to include ECO 305 Pricing and Distribution Analysis and ECO 306 National Income Analysis or equivalent. The remaining courses may be in political science, sociology, psychology, statistics, history, or geography.
Note: Often the number of required courses is reduced when the analytic background and the maturity of the student are taken into consideration.

Degree Requirements

Thesis

Courses: Eleven (44 quarter hours)

Core Courses: Five (20 quarter hours)
ECO 375 Introduction to Econometrics or equivalent
ECO 505 Advanced Microeconomics
ECO 506 Advanced Macroeconomics
ECO 530 History of Economic Thought
ECO 580 Topics in Quantitative Economics
ECO 599 Seminar in Economics

Thesis Research: ECO 600 Thesis Research (8 quarter hours)

Additional Courses: Four (16 quarter hours)
The additional courses, to be chosen from economics and/or allied fields, require the student to have the written permission of his or her advisor. Two of the four additional courses must be chosen from the 500 levels.
Thesis: The student must seek the approval of a faculty member in the department to write the thesis under his/her direction. Essential to this approval is acceptance of the thesis topic by the professor.

If the thesis is evaluated as "excellent" and the student's grade point is above average, the chairperson may dispense with the oral examination requirement that follows.

Oral Comprehensive Examination: This examination covers the thesis and the Area of Economics Concentration of the thesis. The specific areas a student may wish to concentrate in are listed below. The examination is taken after submission of the approved final draft of the thesis.

Non-Thesis

Courses: Eleven (44 quarter hours)

Core Courses: Five (20 quarter hours)

ECO 375 Introduction to Econometrics I or equivalent
ECO 505 Advanced Microeconomics
ECO 506 Advanced Macroeconomics
ECO 530 History of Economic Thought
ECO 580 Topics in Quantitative Economics
ECO 599 Seminar in Economics

Additional Courses: Six (24 quarter hours) The additional courses, to be chosen from economics and/or allied fields, require the student to have the written permission of his or her advisor. Four of the six additional courses must be chosen from the 500 levels.

Written Comprehensive Examination: The comprehensive examination includes questions from the core courses (ECO 505, 506, 530, and 580 or 599) and in addition, either (a) a minimum of two questions from the student's Area of Economic concentration, or (b) if the student has not chosen a concentration, questions from two courses chosen by the student with the approval of the chairperson or student's advisor.

The examinations are given in the last half of November and the last half of April. Students must notify the chairperson in the last week of October or March of their intention to sit for the examination.

Areas of Economic Concentration Courses

While not required, a student may acquire an Area of Concentration by completing four courses in one of the areas listed below.

Business Economics

ECO 512 Applied Time Series and Forecasting
ECO 514 Industrial Organization
ECO 515 Business and Public Policy
ECO 516 Economics of Taxation
ECO 518  Labor Economics and Labor Relations
ECO 576  Econometric Methods
ECO 580  Topics in Quantitative Economics

Development and International Economics
ECO 360  Economics of Underdeveloped Countries
ECO 361  International Trade
ECO 539  Comparative Economic Systems
ECO 557  International Economics
ECO 560  Development of American Economy
ECO 561  Economics of Underdeveloped Countries
FIN 557  International Finance

Economics of Money and Finance
ECO 557  International Economics
FIN 510  Advanced Monetary Theory and Banking
FIN 557  International Finance
FIN 599  Graduate Seminar in Finance

Social Economics
ECO 320  Economics and the Common Good
ECO 325  Economics of Poverty
ECO 515  Business and Public Policy
ECO 518  Labor Economics and Labor Relations
ECO 539  Comparative Economic Systems
ECO 560  Development of the American Economy
ECO 561  Economics of Underdeveloped Countries

Urban and Manpower
ECO 325  Economics of Poverty
GEO 333  City Problems and Planning
MGT 333  Labor Law and Legislation
ECO 335  Resource, Energy, and Environmental Economics
ECO 368  Industrial and Commercial Location
ECO 518  Labor Economics and Labor Relations
ECO 550  Regional and Urban Economics

Quantitative Economics
ECO 380  Mathematics for Economics and Business I
ECO 512  Applied Time Series and Forecasting
ECO 576  Econometric Methods
ECO 580  Topics in Quantitative Economics
ECO 581  Mathematics for Economics and Business II
Economics as a Minor Field

Economics may be combined as a minor field only with those departments whose chairman permit such a minor. The undergraduate prerequisites for taking graduate-level economics courses are eight courses in the social sciences. Six of these must be in economics or finance; the remaining two courses may be in political science, sociology, history, or geography.

Courses

All courses carry four quarter hours of credit unless otherwise noted.

ADVANCED UNDERGRADUATE COURSES

320 Economics and the Common Good. Economic theories, systems, and problems will be studied and analyzed in reference to the economic common good as defined in key modern documents, particularly the social encyclicals. Stress will be placed on both theory and practice.

325 The Economics of Poverty. Material and cultural, absolute and relative forms of poverty will be investigated insofar as they derive systematically, directly, and indirectly, from the American economy. Taking elimination of poverty as an appropriate objective, existing private, institutional and governmental activities will be analyzed, including economic activity itself. Personal, social, demographic, technological, and political background factors will also be brought to bear in the consideration of more successful antipoverty economic programs and policy.

335 Resource, Energy, and Environmental Economics. Introduction to the fundamental problems of resource depletion and environmental deterioration; trade-offs between the use of natural resources, environmental pollution, and population growth; alternative methods to achieve an optimal ecological system. Economic analysis of cost-benefit techniques, the role of effluent fees, government subsidies, and legislative action.

360 Economics of Underdeveloped Countries. Application of the analytic skills of the economist to the special problems of underdeveloped countries. The view that development requires authoritarian control by the state is contrasted with the position that it may be accomplished by private economic decision-making.

361 International Trade. A study of international trade theory and policy. It examines the fundamental basis for trade and the question of equilibrium and disequilibrium in the world economy. It includes analyses of the Balance of Payments, international investment flows, and the position of the dollar in foreign exchange transactions. Modern international institutions are studied.
368 **Industrial and Commercial Location.** Analysis of the factors involved in selecting locations for the development of commercial and industrial facilities. (Cross-listed with GEO 368 and MKT 368.)

375 **Introduction to Econometrics.** This course introduces the student to the application of statistical methods to empirical testing of theoretical models of economic behavior. It proceeds from a discussion of mathematical models to probability theory and the methodology of statistical inference relevant to econometric work. Simple and multiple regression and correlation analysis will be emphasized along with a brief consideration of some problems raised by these methods of estimation.

380 **Mathematics for Economics and Business I.** This and the succeeding course are designed to provide a basic competency in the use of mathematics in Economics and Business. More and more, traditional as well as new concepts are discussed in the language of mathematics. In addition, successful study in the area of quantitative methods is greatly facilitated if the student has prior knowledge of the required mathematical tools. This first course consists of a general and elementary survey of three areas: the nature of a mathematical model, matrix algebra, and an introduction to calculus. All tools will be developed within the framework of problems common to Economics and Business. The student is assumed to have only a high school background.

**GRADUATE COURSES**

505 **Advanced Microeconomics.** (Prerequisite: Graduate Standing) An advanced course in micro-economic theory. Extensive reading in the field is required and recent developments are examined. Emphasis is on those modern contributions which have made economic theory more realistic and applicable to the world of business.

506 **Advanced Macroeconomics.** (Prerequisite: Graduate Standing) An advanced course in macroeconomic theory that examines the determination of income, employment, and prices, and their interrelations. Covers traditional Keynesian as well as alternative models of output, consumption, investment, money demand, inflation, and unemployment. The dynamic character of income determination is emphasized, along with the effects of government policy, economic institutions, and social goals.

509 **Business Conditions Analysis.** (Prerequisite: Graduate Standing) Examines the economist's measurement, analysis, and forecasts of the economy and relates various macroeconomic topics to the needs of the business sector. Topics include economic methodology and method; National Income and Product Accounts; the simple and advanced models of macroeconomic activity; analysis of consumption, investment, and government spending and finance; business cycles; international economics; macroeconomic problems and policies; and macroeconomic forecasting.
511 Business and Economic Forecasting. (Prerequisite: Graduate Standing. Cross listed with MAT 511) This course will be primarily concerned with macroeconomic data, variables, and predictions. Emphasis will be on the need for accurate predictions of economic activity and the importance of accurate predictions in implementing national economic policy and in making intelligent business decisions.

512 Applied Time Series and Forecasting. (Prerequisite: Graduate Standing.) Theory and computer implementation of the Box-Jenkins Techniques with emphasis on forecasting business and industrial activity. (Cross-listed with MAT 512.)

514 Industrial Organization. (Prerequisite: Graduate Standing) A course designed to supplement price theory by investigating the structure of markets and real-world pricing behavior. The focus is on observed industrial practices. In addition to the main concepts of economic theory needed to understand the problem of oligopoly pricing, the institutions in which large firms operate and analyzed. The links between market structure, conduct, and performance are explored. Primary emphasis is placed on the manufacturing sector of the U.S. economy, although the concepts can be applied to other industrialized economies as well.

515 Business and Public Policy. (Prerequisite: Graduate Standing.) A critical examination of the modern business economy in terms of the public purposes of the American people leading to consideration and development of major issues of public policy.

516 Economics of Taxation. (Prerequisite: Graduate Standing.) The economic effects of taxation and the objectives of taxation which include the collection of revenue for public sector projects, macro-economic stabilization and growth, and the attainment of social goals. Taxation is viewed as a pervading market distortion with corresponding effect on prices and resource allocation. The course also addresses the issue of the optimal tax system in light of the diverse goals of taxation.

518 Labor Economics and Labor Relations. (Prerequisite: Graduate Standing) A study of the American labor force; measurement, characteristics, behavior under changing income, employment, and technology. An examination of recent trends in real and money earnings and the distribution of the national income provides the basis for a critical economic analysis and appraisal of contemporary wage theory.

530 History of Economic Thought. (Prerequisite: Graduate Standing) A study of the evolution of the science of economics. Emphasis is on the important contributions made to the field by the great thinkers, starting with the Physiocrats and extending to the work of contemporary institutional and Post-Keynesian economists.

539 Comparative Economic Systems. (Prerequisite: Graduate Standing) A study of the theory and practice of modern economic systems. Attention will be devoted to the United States, the Soviet Union and other major nations.

550 Regional and Urban Economics. (Prerequisite: Graduate Standing) An analysis of the following topics: (a) the economics of urbanization and regional economic growth; (b) the economics of housing, land use, pollution, education, poverty, discrimination, and transportation; and (c) the elements of state and local finance.
556 The Global Economy. (Prerequisite: Graduate Standing) This course is designed to be an introduction to the economic environment in which international business operates. With the increasing interdependence of the global economy and the growing role of multinational enterprise, an understanding of international economic integration is vital to decision makers. The material covered will include both economic and financial aspects and cultural aspects of international business.

557 International Economics. (Prerequisite: Graduate Standing: ECO 361 or equivalent) Modern theories of international trade: Classical theory of comparative advantage, factor proportion of theory, factor price equalization, application to international trade of welfare economics, including regional economic integration, commercial policy and tariff problems.

560 Development of the American Economy. (Prerequisite: Graduate Standing) This course describes the economic development of the United States by tracing the effects of the significant innovations. Consideration is divided among the various American metropolitan economies.

561 Economics of Underdeveloped Countries (Prerequisite: Graduate Standing) An introduction to the analytic skills of the economist applied to the special problems of underdeveloped countries. The following topics are covered: the economic theory of development; development policy; and decision making in the developing world. In addition several case studies are examined.

576 Econometric Methods. (Prerequisite: ECO 375) The various fundamental problems in the application of statistical procedures to econometric estimation will be studied; multicollinearity, identification, serial correlation, and nonhomogeneity of error variance. In addition, more sophisticated estimation techniques will be studied, e.g., reduced form and multi-stage regression techniques.

580 Topics in Quantitative Economics (Prerequisites: Graduate Standing, ECO 305 or CSB 512, and ECO 380 or equivalent) This course is designed to expose students to the applications of quantitative and mathematical economics. Exact topics will be chosen by the instructor.

581 Mathematics for Economics and Business II. (Prerequisites: Graduate Standing and ECO 380) This course is a continuation of ECO 380. Areas of concentration will include: a survey of the relevant concepts of both differential and integral calculus, differential equations, difference equations, and the mathematics of statistical inference.

598 Independent Study. (See Chairman for details.)

599 Seminar in Economics. (Prerequisite: Graduate Standing.) The course content depends upon the choice of the instructor. In recent years, the material chosen was literature explaining the nature of the science of economics, including the competing paradigms of the Austrian School, Schumpeter, Solidarism, Max Weber, Institutionalism, and Post-Keynesianism.

600 Thesis Research. (Prerequisite: Permission of the Department Chairman) The student writing his thesis for the Master of Arts degree must register for this course. He will pursue his research under the direction and guidance of the graduate faculty. Eight quarter hours of credit is given upon the successful completion of the thesis.
Courses cross-listed with CDG (not available for M.A. students in economics.)

417 **Introduction to Economics.** (Cross-listed with CDG 417.) A basic survey for educators who have not studied college-level economics. The course explains ways to introduce major economic concepts into the curriculum at all grade levels.

429 **Teaching Economics in U.S. History.** (Cross-listed with CDG 429.) The use of economic concepts to interpret and analyze American history. The course traces the development of the United States economy and provides models for introducing economic development into junior and senior high school courses.

430 **Teaching Consumer Education.** (Cross-listed with CDG 430.) An approach to consumer education that provides a basis for interpreting consumer choices as part of a larger system: the urban economy and the American economy. The course uses the Chicago area sites as well as current consumer education resources to deal with consumer economics issues. Meets the certification requirements for teachers of consumer economics in Illinois.

431 **Teaching the American Economic System.** (Cross-listed with CDG 431.) The course explains basic economic concepts and provides tools of analysis that teachers can use to give students a clear understanding of the American economy and contemporary economic problems.

432 **Introduction to Labor and Industry.** (Cross-listed with CDG 432.) An examination of the basic economic concepts and tools of analysis necessary to comprehend and communicate the worker's role in the contemporary economy. The course uses Chicago area situations to focus on the factors of production and trends in technology, capital, and human capital development.

433 **Development of Economic Education Programs.** (Cross-listed with CDG 433.) The course emphasizes essential economic concepts and introduces ways to plan and develop programs and materials to communicate those concepts in a range of educational settings, including schools, community groups, and formal and informal adult education projects.

434 **Implementing Economic Education Programs.** (Cross-listed with Education 434.) This course deals with the practical issues that affect the successful introduction of economic education in an ongoing program. Participants will consider specific materials and methods for teaching economics and will identify the approaches that are most appropriate for different educational situations.

435 **Teaching Money and Banking.** (Cross-listed with CDG 435.) This course explains the financial system in the United States and considers essential concepts of inflation, credit creation, monetary policy, and investment. By using Chicago area financial institutions to focus on economic concepts, the course prepares educators to teach money and banking to junior high school students, high school students, and adults.
440 Social Economic Development. An examination of theories of economic development, including the role of the market, the enterprise system, and economic intermediaries. By considering the implications of major economic theories for Chicago's economic development, the course will prepare educators not only to teach about economic development but also to link these theories to the Chicago community.

441 Introduction to American Economic Development. (Cross-listed with CDG 441.) The course will trace the economic development of the United States with an emphasis on the Midwest in the 19th century, focusing on the impact of innovation and the role of the city, the course will provide a framework for teaching Chicago's economic development.

442 Introduction to Business and Public Policy. (Cross-listed with CDG 442.) A history of government and business relations that emphasizes major issues that have affected the American economy, including property rights, labor, and welfare. The course will compare different kinds of economies: the market system with laissez faire; the market system with antitrust; administrative regulation; socialism.

443 Teaching Economics: Applied Basic Concepts. (Cross-listed with CDG 443.) This course will involve educators in economic education through actual instruction. As concepts are presented in the course, the participants will teach these concepts themselves to their students, using materials and methods organized for this course.

444 Chicago's Current and Future Economy. (Cross-listed with CDG 444.) Beginning with a survey of Chicago's development in the 19th century, the course examines contemporary Chicago and considers patterns and predictions of future development. By emphasizing the concepts of economic development and the trends in technology and human capital, the course provides a basis for interpreting Chicago's current economy and planning for its future.

445 Integrating Economics in the High School Curriculum. (Cross-listed with CDG 445.) The course presents a system for planning the integration of economic education in Chicago area high school curricula. The course will provide models for introducing economic development concepts into the curriculum in social studies, English, math, and other subject areas. Participants also will consider the organizational requirements for curricular innovation.
English

(ENG)

James S. Malek, Ph.D., Chairperson

FACULTY

Professors
Bernard A. Brunner, Ph.D. ........................................ University of Chicago
Patricia Ewers, Ph.D. ........................................ Loyola University
William J. Feeney, Ph.D. ......................................... University of Oregon
Ellin M. Kelly, Ph.D. ........................................ University of Wisconsin
James S. Malek, Ph.D. ........................................ University of Chicago

Associate Professors
Hugh J. Ingrasci, Ph.D. ........................................ University of Michigan
Zahava McKeon, Ph.D. ......................................... University of Chicago
John E. Price, Ph.D. ........................................ Loyola University
Lavon Rasco, Ph.D. ........................................ Northwestern University
Frank Sherman, Ph.D. ............................................... University of California at Berkeley

Assistant Professors
William Fahrenbach, Ph.D. ........................................ University of Toronto
Kristine Garrigan, Ph.D. ........................................ University of Wisconsin
Helen L. Marlborough, Ph.D. .................................... Brown University
Patricia Murray, Ph.D. ............................................... University of Southern California

Emeriti
Rev. James Larkin, C.S.V., Ph.D. .................................. Illinois University
Rev. Jeremiah Lehane, C.M., Ph.D. ................................. St. Louis University
Margaret M. Neville, Ph.D. ....................................... Loyola University
Rev. John Smith, C.M., M.A. ...................................... DePaul University
Frederick I. Tietze, Ph.D. ........................................ University of Wisconsin
PURPOSES

The purposes of the graduate program in English are to provide knowledge of English and American language and literature; to foster scholarly habits in bibliography, literary and cultural history, literary criticism, and the study of language; to cultivate independent critical ability, that is, the ability to read literary texts flexibly and comprehensively.

The Master of Arts program in English achieves these purposes through graduate courses (a required core, a series in English and American literature, and electives in writing and linguistics, literary criticism, and special studies), options for independent study and thesis research, and a written Master's examination.

MASTER OF ARTS: ENGLISH

Admissions Requirement

For full admission, students must have at least:
A bachelor's degree in English or the equivalent, or a bachelor's degree in another major with clear evidence of the ability to succeed in an advanced program in English and American language and literature.

Degree Requirements

A) 48 hours of graduate credit in English
B) Achievement of candidacy: A "B" average in four courses completed within two years of admission. Two of these courses must be ENG 400: Bibliography and Literary Research and ENG 470: Studies in Literary Criticism. Failure to meet these candidacy requirements will result in dismissal.
C) Completion of three core courses:
   ENG 400  Bibliography and Literary Research
   ENG 481  History of the English Language
   ENG 470  Studies in Literary Criticism
D) Six courses in literature, one each from these sections: Medieval, Renaissance, Restoration and Eighteenth Century, Nineteenth Century, Modern, and American Literature.
   NOTE: Students may take no more than three literature courses in any one of the areas listed under d) above.
E) Three electives drawn from English and American period courses, Writing and Language, Literary Criticism, Special Studies, Independent Study (maximum of four hours), or Thesis Research (maximum of four hours; available for students exercising the Thesis Option.)
F) A passing grade on a written Master's examination, taken after course work is completed. The examination is based on a reading list drawn up by a department committee. The list is posted six months before the examination date.
Thesis Option

A Thesis Option is available to students who have a promising idea for a scholarly or creative project. Proposals must earn the approval of an English Department graduate faculty member, who will serve as project director. Credit is earned through ENG 499 Thesis Research.

Courses

Courses carry four hours of credit unless otherwise noted.

Writing and Language

400 Bibliography and Literary Research. A general course for the guidance of students in methods of literary research.

401 History of the English Language. A systematic study of the nature, history, and usage of the English language. The course traces the language from its origin to its present status in England and America.

403 The Twentieth Century English Language. Survey of major theories of grammar.

405 The Process of Composition.

407 Problems in Editing and Publishing. Theory, skills, and practice in writing and editing for various kinds of publications.

409 Topics in Writing. See schedule for current offerings.

Medieval


412 Studies in Middle English Verse Romances. Emphasis on non-Arthurian matter.

417 Studies in Comparative Literature: Medieval. Alternating areas of emphasis, including the romance tradition, Dante, Chaucer, and Boccaccio.

419 Topics in Medieval Literature. See schedule for current offerings.

Renaissance

421 Studies in English Renaissance Prose. Major prose works, including More's Utopia, Sidney's Defence of Poesie, Bacon's Essays, and Milton's Areopagitica.

423 Studies in English Renaissance Drama. Renaissance drama, excluding Shakespeare, including works by Kyd, Marlowe, Jonson, Webster, and Ford.


428 Studies in Shakespeare. Study of selected plays through various critical and scholarly perspectives.

429 Topics in Renaissance Literature See schedule for current offerings.

Restoration and Eighteenth Century

430 Studies in Restoration and Eighteenth Century Literature. Alternating areas of emphasis include the Augustan Age, the Age of Dryden, and the Age of Johnson.


432 Studies in Restoration and Eighteenth Century Drama. Studies in the comedy of manners, sentimental comedy, heroic drama, and bourgeois tragedy.


439 Topics in Restoration and Eighteenth Century Literature. See schedule for current offerings.

Nineteenth Century


444 Studies in Victorian Poetry. Major Victorian poets, including Tennyson, Browning, Housman, and Arnold.

445 Studies in Nineteenth Century British Fiction. Alternating emphasis on Austen, Scott, Dickens, Thackeray, the Brontes, Hardy, Eliot, Meredith, and Trollope.


449 Nineteenth Century Topics. See schedule for current offerings.

Modern

451 Studies in the Modern British Novel. Alternating areas of emphasis, including Woolf, Joyce, Lawrence, and Huxley.
452 Studies in Modern British Poetry. Alternating areas of emphasis, including Yeats, Auden, Lawrence, Dylan Thomas, and Hopkins.

457 Studies in Comparative Literature: Modern. Alternating areas of emphasis, including the twentieth-century novel, Symbolist poetry, and developments in form in modern literature.

459 Topics in Modern British Literature. See schedule for current offerings.

American Literature


461 Studies in American Literature: 1820-1870. Studies in the American renaissance, including Hawthorne and Melville, Irving, Cooper, Poe, the Transcendentalists, Whitman, and Dickinson.

462 Studies in American Literature: 1870-1920. Studies in American Realism and Naturalism, including Twain, James, the development of modern poetry, the colloquial style, and Naturalism.


466 Studies in Modern American Poetry. Alternating areas of emphasis, including Imagism, Eliot, Frost, and contemporary poets.


469 Topics in American Literature. See schedule for current offerings.

Literary Criticism


475 Studies in Literary Analysis. Theoretical and practical instruction in literary analysis for college teachers.

476 Stylistics. The study of style as conveyed in literary texts, with emphasis on contemporary methods of stylistics.

479 Topics in Literary Theory. See schedule for current offering.

481 Studies in Comparative Literature: Ancient. Greek, Roman, and Biblical traditions that underlie Western literature.
486 **Studies in the Novel.** Comparative studies in English, Continental, and American novelists, including Faulkner, Dostoevsky, Dickens, Tolstoy, Mann, Gide, and others.

487 **Studies in Drama.** Comparative studies in English, Continental, and American dramatic literature. Alternating areas of emphasis including tragedy, comedy, English and Irish drama, and modern drama.

489 **Topics in Comparative Literature.** See schedules for current offerings.

498 **Independent Study.** Written permission of supervising faculty member and of departmental chairperson is necessary before registration. Variable credit.

499 **Thesis Research.** Written permission of supervising faculty member and of departmental chairperson is necessary before registration (4).
History
(HST)

Albert Erlebacher, Ph.D., Chairperson

FACULTY

Professors
Albert Erlebacher, Ph.D. .......................... University of Wisconsin-Madison
Joseph J. Lehmann, Ph.D. ......................... Northwestern University
Arthur Thurner, Ph.D. ............................. University of Chicago

Associate Professors
Donald Abramske, Ph.D. .......................... University of Chicago
Robert Garfield, Ph.D. ............................ Northwestern University
Susan E. Ramirez, Ph.D. ........................ University of Wisconsin-Madison
Sholom Singer, Ph.D. ............................. University of Chicago
Cornelius Sippel, Ph.D. ........................ University of Michigan

Assistant Professors
Thomas Croak, C.M., D.A. ........................ Carnegie-Mellon University
Bruce L. Fenner, Ph.D. ........................... Cornell University
Gregory C. Kozlowski, Ph.D. .................... University of Minnesota
James P. Krokar, Ph.D. ........................... Indiana University
Sandra F. McGee, Ph.D. ........................... University of Florida

Emeriti
Robert F. Fries, Ph.D. ............................ University of Wisconsin-Madison
Ralph J. Mailliard, Ph.D. ......................... Loyola University
PURPOSE

The purpose of all courses offered by the Department of History is to provide a broad and critical acquaintance with the past experience of human society. Graduate courses involve wide contact with historical literature, including source materials; some practice in collecting, interpreting, and presenting data according to acceptable standards of method and style; and intensive discussion of the nature and problems of the discipline.

The degree program is intended to prepare the student for further advanced study, as well as to give him or her a disciplinary background adequate for those professions, in which a master’s degree is ordinarily considered adequate, such as secondary school teaching and archival work.

MASTER OF ARTS: HISTORY

Admissions Requirement

For full admission, students must have the following:

Bachelor’s degree: 48 quarter hours in the social sciences. At least 36 of the hours must be in history and include both European and United States History. Remaining 12 hours are to be in other fields of the social sciences.

Note: In special cases the Department may accept applicants who have not completed the minimum number of credit hours in history.

Degree Requirements

Thesis

Courses: minimum of 48 quarter hours, including

HST 401 Historical Method and Bibliography
HST 499 Thesis Research

Four 400-level history courses

Six 300-level history courses, including
one in American (if not previously taken in undergraduate program)
one in European (if not previously taken in undergraduate program)
one in Latin America
one in East Asia
one in Islam

Note: In an exceptional case a 300-level course may be substituted for a 400-level course in the same field with the written consent of the student’s advisor and the chairperson.
Reading knowledge of one foreign language, preferably French, German or Spanish. The department will accept as evidence of reading knowledge of a foreign language 18 quarter hours (12 semester hours) of college study successfully completed, or four years of high school study. Students who have earned less than 18 quarter hours or the equivalent in the study of a single foreign language must have evidence of reading knowledge by passing an examination set by the department. Examinations are available only in languages taught at the University.

Thesis

Written or Oral Comprehensive Examination: Type to be chosen by student. Examination covers two of the following fields of history:
- African
- Medieval Europe 400-1500
- Modern Europe to 1850
- Modern Europe since 1850
- England to 1750
- Great Britain since 1700
- Islamic
- Latin America
- United States to 1860
- United States since 1860

Non-Thesis

Courses: minimum of 48 quarter hours, including

**HST 401** Historical Method and Bibliography

Five 400-level courses

Six 300-level history courses, including
one in American (if not previously taken in undergraduate program)
one in European (if not previously taken in undergraduate program)
one in Latin America
one in East Asia
one in Islam

Note: in an exceptional case a 300-level course may be substituted for a 400-level course in the same field with the written consent of the student's advisor and the chairperson.

Written or Oral Comprehensive Examination: Type to be chosen by student. Examination covers two of the following fields of history:
- African
- Medieval Europe 400-1500
- Modern Europe to 1850
- Modern Europe since 1850
- England to 1750
- Great Britain since 1700
History as a Minor Field

History may be combined as a minor with Education, English, Economics, Geography, and Philosophy. The prerequisites in history are 24 quarter hours, of which at least four must be in United States and four in European history.

Courses

All courses carry four quarter hours of credit unless otherwise noted.

ADVANCED UNDERGRADUATE COURSES

322 History of Medieval Europe. The breakup of the Roman Empire, growth and development of Christianity and Islam, feudalism and the feudal states, the medieval papacy, the Slavic world, rise of urban life, transition to the modern age, decline of the influence of the church.

328 English Constitutional History. A study of Anglo-Saxon institutions; feudalism after the Norman conquest; growth of the common law; foundations of Parliament and the development of central administrative systems.

330 The Renaissance and the Reformation. A detailed consideration of the significant political, economic, intellectual, religious, and artistic developments of the early modern period.

332 French Revolution and Napoleon. Political and economic failure of the Old Regime, influence of the philosophers, the rise and fall of revolutionary idealism, the spread of revolutionary principles, the development of imperialism and dictatorship under Napoleon, the settlement of Europe and the Congress of Vienna.

333 Europe from Metternich to Bismarck. The decline of the aristocratic-clerical order, the emergency of capitalism, the appearance of liberal states, and the rise of nationalism in Italy and Germany.

334 Europe in the Age of German Ascendancy. Continental culture, development of imperial rivalries, failure of internationalism and the coming of World War I.

335 Europe Since 1914. A study of the main currents of international affairs during the period, and domestic problems of the leading states, with emphasis upon the dynamic of power politics.

336 Expansion of Europe I: The Age of Discovery. A survey of the political, intellectual and scientific roots of the expansion of Europe and of the main voyages of discovery between 1400 and 1825.
337 Expansion of Europe II: The Age of Empires. Causes of the establishment of European empires in the 19th and 20th centuries, the nature and effect of empires, the reasons for their disappearance and their legacy for Europe and the non-Western world.

338 Modern Britain Since 1715. (formerly 346) Development of Parliamentary sovereignty; social, political, and economic reforms; political parties and the rise of the labor movement; British foreign policy during the period.

339 Traditional East Asia. Examines developments in the history and civilization of China and Japan approximately to 1800.

340 Revolutionary China and Modern Japan. Problems of Modernization, the two World Wars and post-war developments.

341 Islam in World History: the Foundations. A study of Islam as a religious faith, a civilizing tradition and a political system from the time of the Prophet to the 19th century.

342 Islam and the West in the Modern World. An examination of the economic, cultural and political interaction of Europe and the Islamic world.

343 The Origins of the Afro-Americans: Afro-American History to 1750. Europeans in West Africa, the middle passage, slavery in the West Indies, development of the Slave trade, introduction of slavery into the American colonies.

344 From Slavery to Freedom: Afro-American History, 1750-1865. Black participation in frontier life, in the War of 1812, in the growth of the cotton industry, in the Civil War and Reconstruction.


346 The Black Mind in America. Black contributions in the areas of philosophy, theology, politics, literature, and art from 1619 to the present.

348 Themes in Afro-American History Presents the historical roots of the conflict of the Black and White races in America and considers means proposed for resolving it.

349 Africa: The Age of Empires, African History to 1800 A study of African history from earliest times, concentrating on the political, social, and religious aspects of major African States and empires.

350 Africa: The Age of Conquest, African History 1750-1900 The focus is on the origins of Afro-European relations and the political, economic, and military causes of the European partition and occupation of the content.

351 Africa: The Age of Revolution; African History 1900 to the Present. The workings of the colonial system, the rise and course of independence movements, and the history of individual African states since independence.

352 Themes in the History of Africa. In-depth studies in the political, religious, cultural, and economic aspects of African history; relates past development to present-day problems in the area.

355 Russia Under Khans and Tsars. The Kievan period, the Mongol Invasions, Ivan the Terrible. the emergence of modern Russia, 19th century tsarist autocracy and the formation of the radical tradition.
356 Soviet Russia, 1905 to the Present. The Bolshevik revolution, Stalin’s rise to power, the Five Year Plans, the Second World War and Russia’s place in the modern world.

357 History of Spain and Portugal. An analysis of the social, economic, political, and intellectual development of the Iberian Peninsula from the time of Ferdinand and Isabella.

358 Eastern Europe to 1800. A survey of the area’s settlement by Slavic and non-Slavic peoples. The establishment of medieval states, the East European renaissance and reformation, and the growth and structure of multi-national empires.

361 Colonialism and Independence in Latin America. A thorough analysis of Spanish and Portuguese colonizing techniques and comparative development of institutions under the Hapsburgs and Bourbons.

362 Independence and Neo-colonialism in Latin America. A survey of 19th century Latin America, emphasizing the independence wars, nation building, ideological struggle and the rise of export economies.

363 Latin America: Struggle Between Left and Right. A survey of 20th century Latin America from the Mexican Revolution to the present, emphasizing populism, revolution and counterrevolution.

364 Dictatorships and Militarism in Latin America. A study of causes, characteristics, and effects of dictatorships in Latin America, emphasizing the role of the military.


366 United States–Latin American Relations. A survey of political relationships between the United States and the Latin American nations.

367 The Caribbean. The history of the Caribbean from colonial times to the present, with special emphasis upon the role of the United States in the development of this region.

368 Hispanics in the United States. A study of Spanish speaking people in the United States and their relations with other Americans. The course will concentrate on Mexican Americans since the Mexican-American War, Puerto Ricans since 1898 and Cuban Americans since Castro.

370 The Beginnings of American Civilization to 1760. The discovery, exploration, and settlement of the eastern seaboard, with discussion of significant political, economic, and social consequences.

371 The Age of the American Revolution. The establishment of American independence, adoption of the Constitution; the first years of the republic considered in analytical detail.

372 Jefferson, Jackson, and the Coming of the Civil War. The historical forces that shaped the early growth and development of the republic.

373 Civil War and Reconstruction, 1860-1877. The causes of the war, its development, and major problems of the peace.

374 The Emergence of Modern America, 1877-1914. New cultural patterns, political party battles, growth of big business and organized labor, Populism and the Progressive period.
375 America in the Age of World War, 1914-1945. A consideration of World War I, the Twenties, the Great Depression, the New Deal, World War II.

376 The United States Since 1945. Significant developments in American life during the period after World War II.

378 America in the Nineteenth Century: The Development of the Pragmatic Tradition. A study of the social development of the American people and of patterns of thought, religion, and art.


384 Topics in American Studies. (Cross-listed with ENG 367) Taught in cooperation with the English Department. May carry credit in English or History.

385 United States Constitutional History to 1865. Examines the English colonial charters, the constitutional aspects of the American Revolution and the federal constitution; explores the concepts of federalism and separation of powers with reference to major supreme court decisions.

386 United States Constitutional History since 1865. Problems of industrial regulation, civil liberties, constitutional issues of the New Deal and controversies arising during and after World War II, including the major decisions of the Warren court.

393 Teaching History and the Social Sciences. Introduces methods, techniques, and basic problems encountered in the teaching of history and the social sciences.

394 The Law, the State, and Freedom in America. A pre-law discussion course dealing with major ideas of the law, government, and civil liberties in the United States from 1620-1896.

395 Historical Sources and Evidence: Nuremberg to MyLai. Designed to develop in the pre-law student analytic and adversary skills useful in the practice of law and to confront controversial issues dealing with values of the lawyer and the citizen.

396 History of American Legislation. A study of the nature of American laws and the reciprocal influences of law and society upon each other in the context of national legislation in the 19th and 20th centuries.

399 Independent Study. Prerequisites: Junior standing, approval of instructor and chairman.
GRADUATE COURSES

401 Historical Method and Bibliography.

402 Colloquium in Latin American History. (Prerequisite: one 300-level course in Latin-American History or consent of the instructor)

403 Colloquium in African History. (Prerequisite: one 300-level course in African History or consent of the instructor)

404 Colloquium in American History. (Prerequisite: one 300-level course in American History or consent of the instructor)

405 Colloquium in European History. (Prerequisite: one 300-level course in European History or consent of the instructor)

406 Colloquium in Islamic History. (Prerequisite: one 300-level course in Islamic History or consent of the instructor)

492 Extramural Internship. Internships in alternative careers for history majors. Students are placed in work-study positions under faculty supervision to help prepare themselves for non-teaching careers which require background in historical technique. Credit variable.

499 Thesis Research. (Prerequisite: Consent of Chairman.) Variable credit.
Interdisciplinary
Studies
(ISP)

Robert E. Brewer, Ph.D., Program Director

COLLEGE COORDINATORS
Tom Dolan, Administrative Assistant to the Dean . . . . College of Commerce
Joan M. Lakebrink, Ph.D., Director of Graduate Programs . . . . School of Education

PURPOSE

The Interdisciplinary Studies Program (ISP) at DePaul University offers a unique and flexible opportunity for the student to build a master’s program around his or her individual interests.

The program transcends traditional departmental boundaries by allowing the student, with the advice and support of an appointed academic committee, to design a series of courses in a variety of substantive fields.

For example: an urbanologist interested in communications management can design a sequence of interrelated courses in the Departments of Management, English, Political Science and Public Services. Likewise, someone interested in Arts and Management may tailor a program of courses selected from Arts and Sciences and the College of Commerce.

With proper planning virtually any combination of courses is open to the self-guided master’s degree candidate.
MASTER OF ARTS OR MASTER OF SCIENCE: INTERDISCIPLINARY STUDIES

Admission Requirements

For full admission, applicants must have the following:
Bachelor's degree: adequate background in the appropriate fields required as preparation for the successful completion of the student's proposed program of study.
Written rationale for a proposed program of study: rationale to include both a statement of educational and/or vocational objectives and a proposed listing of courses to make up that program.
Evaluation and approval of proposed program.
Foreign Language or Research Tool: need to be determined as part of the proposed program evaluation and approval.

Degree Requirements

Thesis

Courses: 48 quarter hours of graduate credit, including
1) ISP 499 Thesis Research (4 to 8 quarter hours),
2) maximum of 16 quarter hours of credit in 300-level courses, and
3) remainder of credit hours from 400/500 level courses.

Foreign Language or Research Tool: provided need for specific proficiencies in a foreign language, in computer science, or in statistics was determined initially as part of the student's proposed program of study.

Thesis

Final Oral Examination: conducted by the Thesis Advisory Committee members appointed by the Director of the Interdisciplinary Studies Program.

Non-Thesis

Courses: 48 quarter hours of graduate credit, including maximum of 16 quarter hours of credit in 300-level courses, and remainder of credit hours from 400/500 level courses.

Foreign Language or Research Tool: provided need for specific proficiencies in a foreign language, in computer science, or in statistics was determined initially as part of the student's proposed program of study.

Course

ISP 499 Thesis Research. Registration for either four or eight quarter hours credit. Student must have written approval, before registering, of his/her thesis director.
Liberal Studies

(MLS)

Charles R. Strain, Ph.D., Program Director

FACULTY

Professors
Avrom A. Blumberg, Ph.D. ........................................ Yale University
Robert W. Faulhaber, Ph.D. ........................................... Université de Paris
Richard J. Meister, Ph.D. ........................................ University of Notre Dame
Arthur W. Thurner, Ph.D. ........................................ University of Chicago

Associate Professors
John E. Price, Ph.D. ........................................ Loyola University
Sheila C. Ribordy, Ph.D. ........................................ University of Kansas
Charles R. Strain, Ph.D. ........................................ University of Chicago
J. Harry Wray, Ph.D. ........................................ University of North Carolina at Chapel Hill

Assistant Professors
Stanley J. Damberger, M.A. ........................................ Saint Louis University
Robert Rotenberg, Ph.D. ........................................ University of Massachusetts at Amherst
Simone Zurawski, Ph.D. ........................................ Brown University
PURPOSE

The Masters of Arts in Liberal Studies (MALS) program is a multidisciplinary approach to graduate education which emphasizes liberal education rather than the preparation for a specific profession or career. It is particularly designed for mature learners established in a career or profession who wish to enrich their personal lives, to explore areas of knowledge that were bypassed in the earlier rush to prepare for a career and/or to pursue an avocation in a disciplined fashion.

The program is grounded in a set of four, team-designed core courses. These courses establish the aims and themes of the program, orient the student to a multidisciplinary approach to graduate education, and develop in the student advanced learning skills. They are organized around the theme “Sense of Person/Sense of Place.”

The other components of the program are colloquia, electives, and the integrating project. Colloquia are four-week topical studies that employ various approaches to one particular theme. Colloquia use various formats — guest lectures, panels, films, field experiences — to provide an intensive examination of an issue.

Electives are graduate courses chosen from traditional departmental offerings in the College of Liberal Arts and Sciences. Students select these courses with the aid of an advisor to build a program of study tailored to individual goals and interests. Included under electives are MALS special topics courses. These courses are drawn from existing course offerings in our departments, but they have been redesigned particularly for MALS students. Special Topics courses frequently build upon certain aspects of the core program.

Finally, students complete an integrating project. The integrating project consists of an independent, creative work that refines and pulls together learning experiences and skills developed throughout the student’s course of study in the MALS program. Integrating projects may take the form of a research paper, an original work of prose or poetry, an exhibition or performance, or the like.

MASTER OF ARTS: LIBERAL STUDIES

Admissions Requirements

For full admission, students must have the following:

Bachelor’s degree from an accredited institution

Admission essay: this essay describes why the student is considering the MALS program, how it fits into a process of personal and intellectual development, and what the student hopes to accomplish by enrolling in the program.

Degree Requirements

Courses: completion of 48 quarter hours of graduate credit which must include

Core Courses

MLS 401  Visions of Self
MLS 402  Perceptions of Reality
MALS 403  The American Experience
MALS 404  The City

All students will be expected to complete the required core courses with a cumulative average of 2.50. Students who do not achieve a 2.50 average in the core will be warned that they will probably experience serious difficulties in the elective portion of the program. They will be advised to consider withdrawing from the program.

Colloquia: two courses chosen from the MALS 410-430 series of colloquia. Topics vary from year to year. Unless otherwise indicated, all colloquia carry two hours of graduate credit. Students may take two additional colloquia in place of one elective as part of their program of study.

Electives: six courses chosen from existing departmental graduate courses with the aid of the student's advisor. Courses must be selected from at least two different departments in order to preserve the multi-disciplinary character of the program. MALS students may take no more than three 300-level courses as part of their program.

Integrating Project: a project committee chosen with the aid of the advisor approves the topic of the integrating project. Students preparing their Integrating Project should register for MALS 499: Integrating Project: Research and Preparation. When the project is completed, the project committee will conduct an oral review which will emphasize the student's own evaluation of the skills and ideas acquired in this culminating experience.

Courses

Core Courses

MALS 401  Visions of the Self. A study of the differing visions of the self as presented in significant documents from the history of ideas. Materials selected from classic texts of literature, philosophy, theology, psychology, and social science.

MALS 402  Perceptions of Reality. A survey, beginning with ancient Greece and ending with the modern world, of models of universal order as developed by natural scientists and artists. Team-taught by a scientist and a humanist.

MALS 403  The American Experience. A chronological and thematic study of the location of self within American culture. Readings chosen to reflect both dominant and dissenting ideas at specific points of American history.

MALS 404  The City. A topical examination of the urban experience using the methods and sources of both historians and social scientists. Topics include survey of various images of the city, utopian and dystopian visions, and the uniqueness of the modern city.
Special Topics Courses:

**MLS 450 Chicago: Architecture and Urban Development** (Cross-listed with Art 400). A study of urban architecture in Chicago from 1833 to 1984, including the role of planning, the purpose of open space, the place of tradition, the impact of modern design theories and evaluation of contemporary developments.

**MLS 451 The Making of the President, 1984** (Cross-listed with PSC 328). This course will examine the issues of 1984, consider how voters decide, assess campaign strategies, and place this election in the larger social and cultural context of contemporary American politics.

**MLS 452 Great Ideas, Business and Society** (Cross-listed with GSB 540). A study using primary sources of the basic ideas, aspirations and values which humanity strives to attain and which constitute the basis of fundamental demands on the world of business and its managers, their policies and decisions.

**MLS 453 Politics, Media and Everyday Life** (Cross-listed with PSC 321). An examination of various ways in which the mass media influence our perceptions of reality. Political, social and cultural implications of media processes are assessed.

**MLS 454 Parables and Imagination: The Literature of Subversion from Jesus to Borges** (Cross-listed with Rel. 331). The self's vision derives from narrative imagination. But parables are the genre that makes imagination self-conscious and narrative self critical.

**MLS 455 Community and The City** (Cross-listed with Soc. 346 and 423). The course explores the possibilities for community life within urban settings. It emphasizes the development of network relations and cross cutting ties.

Advanced Study

**MLS 498 Independent Study.** Written permission of the student's advisor and the program director is necessary before registration.

**MLS 499 Integrating Project: Research and Preparation.** Students may register for this course after the integrating project proposal has been approved by the project committee. This course carries four hours of credit.
Mathematical Sciences
(MAT)

Roger Iones, Ph.D., Chairperson

FACULTY

Professors
J. Marshall Ash, Ph.D. ........................................ University of Chicago
Jerry Goldman, Ph.D. ..................................... Illinois Institute of Technology
Walter Pranger, Ph.D. ...................................... Illinois Institute of Technology
Jacob Towber, Ph.D. ....................................... University of Chicago
Stephen Vagi, Ph.D. ....................................... University of Chicago
Yuen-Fat Wong, Ph.D. .................................... Cornell University

Associate Professors
Susanna Epp, Ph.D. .......................................... University of Chicago
Constantine Georgakis, Ph.D. ............................. Illinois Institute of Technology
Lawrence Gluck, Ph.D. ...................................... Illinois Institute of Technology
Sigrun Goes, Ph.D. ........................................ Northwestern University
Jeanne LaDuke, Ph.D. ....................................... University of Oregon
Ehfat Moussa-Hamouda, Ph.D. .............................. University of Iowa
Roger Jones, Ph.D. ........................................ Rutgers University
Carolyn Narasimhan, Ph.D. ................................. Northwestern University
Michael Wichman, Ph.D. ................................ Northwestern University

Assistant Professors
Jeffrey Bergen, Ph.D. ...................................... University of Chicago
Barbara Cortzen, Ph.D. .................................. University of California at San Diego
John Duddy, Ph.D. ........................................ Columbia University
PURPOSES

In the Pure and Applied Mathematics concentrations leading to the degree of Master of Science the purposes of the Department are to provide the student with the mathematical knowledge required for study and research in mathematics, for the teaching of secondary school mathematics, or for the attainment of career goals in other professions requiring a thorough mastery of pure and applied mathematics. The graduate student in the Master of Science program may choose one of four areas of concentration: 1) pure mathematics; 2) quantitative analysis and operations research; 3) applied statistics; and, 4) actuarial science. Each of these areas has its own concentration of courses and comprehensive examination.

The purpose of the program leading to the degree of Master of Arts in mathematics education is to offer a timely response to the problem of a critical shortage of secondary and upper elementary school mathematics teachers. The program is intended to improve the quality of mathematics education in schools within the greater Chicago areas by providing a demanding sequence of courses to individuals carefully chosen for their capacity to rapidly apply what they learn at DePaul to their own classroom settings.

MASTER OF SCIENCE: MATHEMATICAL SCIENCES

Admission Requirements
For full admission, students must have the following:
Bachelor’s degree
The pure mathematics concentration requires 40 quarter hours of undergraduate mathematics, including
two quarters of linear algebra
one quarter of real analysis
one quarter of complex analysis

The applied mathematics concentrations require
four quarters of calculus
a course in linear algebra
a course in statistics.

(Note: Students without this background may be required to enroll in appropriate mathematics undergraduate courses.)

Degree Requirements
Courses: 48 quarter hours of graduate level work in mathematics
Comprehensive Examination: content of specific courses selected from the student’s chosen areas of concentration.
Pure Mathematics Concentration

Courses

MAT 400, 401, 402 Advanced Algebra I, II, III
MAT 410, 411 Real Analysis I, II
MAT 437 Advanced Complex Analysis
MAT 480 Introduction to Topology

Five 400 and 500-level mathematics courses, with the exception of 500-level applied courses. (Note: With written approval of the Departmental chairperson a student may substitute two 300-level courses for two of the 400/500 level courses.)

Comprehensive Examination: contents include MAT 400, 401, 402, 410, 411, 437 and 480, in addition to the content of MAT 370 Linear Algebra II.

Quantitative Analysis and Operations Research Concentrations

Courses

MAT 451 Probability and Statistics I
MAT 487, 488 Operations Research I, II
MAT 489 Queueing Theory with Computer Applications
MAT 495 Dynamic Programming
MAT 525 Decision Theory
MAT 548, 549 Applied Statistical Methods and Theory I, II or MAT 452, 453 Probability and Statistics II, III

Two courses from the operations research area.

Two courses from either the statistics or operations research areas. One of these two courses may be taken outside of the Department. (Note: With written approval of the Departmental chairperson, a student may substitute two 300-level courses for two courses from the operations research or statistics areas.)

Comprehensive Examination: The examination covers the contents of MAT 451, 487, 488, 548, and 549.

Applied Statistics Concentration

Courses

MAT 451, 452, 453 Probability and Statistics I, II, III
MAT 456 Applied Regression Analysis
MAT 528 Design and Analysis of Experiments
MAT 548 Applied Statistical Methods and Theory I

Six additional 400 or 500-level courses in mathematics, at least three from the statistics areas.

(Note: With written approval of the Departmental Chairperson a student may take two 300-level courses among the six additional courses.)
Comprehensive Examination: The examination covers the contents of MAT 451, 452, 453, and 548.

**Actuarial Science Concentration**

Courses

- MAT 451, 452, 453 Probability and Statistics I, II, III
- MAT 461, 462, 463 Actuarial Science I, II, III
- MAT 464, 465, 466 Actuarial Mathematics I, II, III
- MAT 487 Operations Research I

Two additional 400 or 500-level courses from the applied areas. (Note: With written approval of the Departmental Chairperson, a student may take these two additional courses on the 300-level.)

Comprehensive Examination: The examination covers the contents of MAT 451, 452, 453, 461, 462, and 463.

**MASTER OF ARTS IN MATHEMATICS EDUCATION**

**Program Description**

This six quarter degree program will be offered on an accelerated basis during intensive weekend sessions and may be taken while in-service at the rate of two courses per quarter. The stress in the program is on mathematical content, but significant amounts of time will be spent on methods of incorporating new teaching strategies and technologies in the classroom. The program is directly tied to secondary and upper elementary curriculum needs and is directed toward previously or currently certified teachers with degrees in non-mathematics fields or to teachers with bachelor’s degrees in mathematics who wish to upgrade their command of the field. This program is administered by the Department of Mathematical Sciences in conjunction with the School of Education through the College of Liberal Arts and Sciences. Details regarding admission requirements, course schedules, etc. may be obtained from the Chairman of the Department of Mathematical Sciences.

**Courses**

**ADVANCED UNDERGRADUATE COURSES**

- 335 Advanced Calculus.
- 336 Calculus of Several Variables.
- 337 Complex Analysis.
- 370 Linear Algebra II.
GRADUATE COURSES

Actuarial Science

461 Actuarial Science I. (Prerequisite: MAT 152) Theory and applications of compound interest; annuities, amortization loans; sinking funds; bonds; and consumer loans.

462 Actuarial Science II. (Prerequisite: MAT 461) Theory and application of single-life contingencies; introduction to mortality tables; premiums for life annuities and insurance; analysis of reserves.

463 Actuarial Science III. (Prerequisite: MAT 462) Multi-life contingencies, multiple decrement mortality tables and pension mathematics.

464 Actuarial Mathematics I. (Prerequisite: MAT 152) Calculus of finite differences and graduation methods.

465 Actuarial Mathematics II. (Prerequisite: MAT 451 and 464 or consent) Risk theory and mortality table construction methods.

466 Mathematical Demography. (Prerequisite: MAT 451 or consent) Introduction to demography; Mortality table construction and methods of population and demographic analysis.

Algebra

400 Advanced Algebra I. Groups; isomorphism; theorems of LaGrange and Cayley; homomorphism.

401 Advanced Algebra II. (Prerequisite: MAT 400) Rings; ideals; fields; quotient and extension fields.

402 Advanced Algebra III. (Prerequisite: Consent) Linear Algebra.

504 Topics in Algebra. (Prerequisite: Consent)

Analysis

410 Real Analysis I. (Prerequisite: MAT 335 or its equivalent) Real numbers; continuous functions on metric spaces; convergence of infinite series and differentiation.

411 Real Analysis II. (Prerequisite: MAT 410) Sequences of functions; interchange of limits with differentiation and integration; improper integrals.

412 Real Analysis III. (Prerequisite: MAT 411) Lebesgue's theory of measure and integration; convergence theorems and differentiation; product measure and Fubini's theorem.

437 Advanced Complex Analysis. (Prerequisite: MAT 411 and 337 or consent) Complex integration and calculus of residues, maximum modulus principle; analytic continuation and the monodromy theorem; conformal mapping.

438 Complex Analysis II. (Prerequisite: MAT 437) Topics in complex analysis.

481 Fourier Analysis and Special Functions I. (Prerequisite: Graduate Standing)
Functional Analysis. (Prerequisite: MAT 412) Topics from Hilbert space theory, operator theory, spectral theory, and topological vector space theory.

Topics in Real Analysis. (Prerequisite: Consent)

Topics in Complex Analysis. (Prerequisite: Consent)

Geometry

Introduction to Algebraic Topology. Homotopy and the fundamental group, polyhedra, elementary homology and cohomology theory, covering space and fibrations.

Introduction to Topology. Definition of topological space; subspaces; continuity; separation axioms; axioms of countability; metric spaces; products and quotients; connectedness and compactness.

Geometry I. Incidence and separation properties of the plane; congruence; parallel postulate; area theory; rule and compass construction.

Geometry II. (Prerequisite: MAT 520) Riemannian and hyperbolic geometry; metric axioms; triangles and angle sums; consistency of hyperbolic postulates.


Introduction to Differentiable Manifolds. (Prerequisite: MAT 581) The elements of differentiable manifolds including vector bundles over manifolds.

Quantitative Methods and Operations Research


Operations Research I. (Prerequisites: MAT 220 and any introductory programming course) Linear Programming. The Linear Programming problem and its dual; the simplex method; transportation and warehouse problems; computer algorithms and applications to various fields.

Operations Research II. (Prerequisite: MAT 487) Optimization theory. Integer programming; non-linear programming.

Automata Theory. An introduction to the most important abstract models of computation and their applications. Finite state machines, pushdown automata. Turing machines, intractable problems, NP-complete problems. The relationship between formal grammars and automata. (Prerequisite: consent of instructor)


496 Game Theory. The minimax theorem for two-person zero-sum games. Two-person general sum games and non-cooperative person games; Nash equilibrium.

Statistics and Probability

451 Probability and Statistics I. Probability spaces; random variables and distributions; laws of large numbers and central limit theorem.

452 Probability and Statistics II. (Prerequisite: MAT 451) Joint probability distributions and correlation; sampling distributions; theory of estimation.

453 Probability and Statistics III. (Prerequisite: MAT 452) Testing of hypotheses; simple linear regression; one-way analysis of variance; nonparametric statistics.

454 Multivariate Statistics. (Prerequisite: MAT 453 or 549) The general linear model. Multivariate regression and analysis of variance; Discriminant Analysis principal components and factor analysis applications and use of Statistical Software.

455 Stochastic Processes. (Prerequisite: MAT 548 or 452) Markov chains; branching processes; Poisson process; queueing theory; telephone traffic problems; Brownian motion applications.

456 Applied Regression Analysis. (Prerequisite: MAT 548 or 452) Simple linear, multiple, polynomial regression models. Selection of best regression equation and examination of residuals for homoscedasticity and autocorrelation. Use of statistical software.

457 Nonparametric Statistics. (Prerequisite: MAT 548 or 452 or consent) Inference concerning location and scale parameters, goodness of fit tests, association analysis, and tests of randomness using distribution free tests.

458 Statistical Quality Control. (Prerequisite: MAT 548 or 451) Control charts for means, standard deviations and attributes; acceptance sampling and sampling inspection using one and multi-stage sampling methods. Emphasis on industrial quality control problems.

489 Queueing Theory with Computer Applications. (Prerequisite: MAT 548 or consent; cross listed with CSC489) An overview of queueing theory - queueing systems, related random processes, classification of queues. Priority queueing. Computer time sharing and multi-access systems.

511 Business and Economic Forecasting. (Cross-listed with Econ. 511) This course will be primarily concerned with macroeconomics data, variables, and predictions. Emphasis will be on the need for accurate predictions of economic activity and the importance of accurate predictions in implementing national economic policy and in making intelligent business decisions. (Prerequisite: MAT 353 or 349.)
512 Applied Time Series and Forecasting. (Prerequisite: MAT 549 or Consent) Development of the Box-Jenkins methodology for the identification, estimation, and fitting of ARIMA, and transfer-function stochastic models for the purpose of analyzing and forecasting stationary, non-stationary, and seasonal time series data. The course emphasizes practical time series data analysis using such computer packages as Sybil/Runner and BMD, and application to economic, business, and industrial forecasting.

525 Decision Theory. (Prerequisite: MAT 549 or 453) Structure of statistical decision problems, optimal decision rules, Bayes decision rules, invariance, hypothesis testing and estimation.

526 Sampling Theory and Methods. (Prerequisite: MAT 548 or 452) Simple random, stratified, systematic, and cluster sampling. Multistage and area sampling. Random response and capture-recapture models.

528 Design and Analysis of Experiments. (Prerequisite: MAT 549 or 453) Linear models and quadratic forms. Single, two and several factor experiments, incomplete designs, confounding and fractional factorial experiments. Response surfaces and partially balanced incomplete block designs.

548 Applied Statistical Methods and Theory I. (Prerequisite: MAT 150) The objective of the sequence, of which this is the first course, is to develop competence in the application and understanding of the theoretical foundations of statistical methods. Emphasis is given to both the application of such methods to real-life data and the underlying theoretical rationale of the application. Among the topics to be covered are elements of probability theory; discrete and continuous probability models; principles of estimation theory and hypothesizes tests with emphasis on large and small samples inference concerning means, variances and proportions.

549 Applied Statistical Methods and Theory II. (Prerequisite: MAT 548) A continuation of MAT 548. Emphasis is given to statistical methods of inference. Topics to be covered are sample survey methods; cross classifications and the \( \chi^2 \) tests; analysis of variance and some experimental designs; simple and multiple regression; non-parametric inference and time series.

559 Simulation-Models and the Monte Carlo Method. (Prerequisite MAT 348 or MAT 351) Techniques of computer simulation of the classical univariate and multivariate probability distribution models, and such random processes as random walk, Markov chains, and queues.

586 Computational Methods for Data Analysis. Data management and manipulations; simulation of random processes; computational graphics; numerical computations; linear and nonlinear models. (Prerequisite: MAT 348 or 352)

Foundations

472 Logical Deduction and Computers. (Prerequisite: Some familiarity with formal mathematical reasoning) Deduction in formal theories, decidability, consistency, and completeness; the limits of formal reasoning, Gödel's theorem, the halting problem for Turing machines, other undecidable problems, elementary recursion theory.
474 Set Theory. Naive set theory, ordinal and cardinal numbers, axiom of choice and Zorn's lemma, the Zermelo-Frankel axioms.

497 Information Theory. (Prerequisites: MAT 311 and 451 or Consent) An introduction to the basic concepts of information theory and coding theory. Measure of information, the fundamental theorem, systematic and cycle codes.

Mathematics Education


610 Calculus and Analysis for Mathematics Teachers, I. Real numbers, functions, limits, analytic geometry, the derivative and its applications. Introduction to LOGO computer language and study of some applications to classroom teaching using microcomputers.

611 Calculus and Analysis for Mathematics Teachers, II. Circular functions, the integral and its applications, exponential and logarithm. Study of important numerical algorithms and implementation using LOGO and microcomputers. (Prerequisite: MAT 610.)

612 Calculus and Analysis for Mathematics Teachers, III. Methods of integration, polar coordinates, conic sections, infinite sequences and series. Applications to numerical analysis and approximation with computer applications. (Prerequisite: MAT 611.)


621 Explorations in Turtle Geometry. (Prerequisite: MAT 620, Corequisite: MAT 611) Use of the LOGO language to investigate topics in Euclidean, analytic, and differential geometry, and in topology. Closed paths, space filling designs, mazes, the Jordan Curve Theorem, and spherical geometry are among the topics included. Emphasis is on understanding key concepts (symmetry, interior, invariants, curvature) as well as on the role computation and computers could play in enriching mathematics curricula.

638 History of Mathematics Through Problem Solving. I. Coverage of early classical problems and techniques in number theory, algebra, and geometry from an historical point of view. Stress on both evolutionary aspects of the subjects and the solution of concrete problems.
631 History of Mathematics Through Problem Solving, II. Continuation of
MAT 630. (Prerequisite: MAT 630.)

650 Probability and Statistics for Mathematics Teachers, I. Combinatorics,
sets, probability, random variables, distribution and density functions,
standard probability laws, jointly distributed random variables. Use of
computers to illustrate distributions.

651 Probability and Statistics for Mathematics Teachers, II. Central Limit
Theorem, point and interval estimation of parameters, hypothesis testing,
least squares and regression. Introduction to computer packages.
(Prerequisite: MAT 650.)

660 Discrete Structures for Mathematics Teachers. Mathematical induction,
modular arithmetic and number theory, graphs, matrices, fundamental
algebraic structures and their morphisms.

699 Topics in Mathematics for Teachers. Diverse topics in mathematical mod-
eling or mathematical appreciation germane to the secondary classroom.
(Prerequisite: Consent of instructor.)

Miscellaneous

599 Independent Study. Offered by arrangement. Approval by Department
Chairman required.

\[
\begin{align*}
\overline{x} &= \mu + \phi^1 u_{t-1} + \phi^2 u_{t-2} + \phi^3 u_{t-3} + \ldots \\
E[\overline{x}] &= \mu \\
Y_3 &= \sigma^2 \left( 1 + \phi + \phi^2 + \ldots \right) = \sigma^2 \left( \frac{1}{1 - \phi} \right) \\
Y_2 &= \sigma^2 \sum_{i=0}^{\infty} \phi^i \phi^2 + \sigma^2 \phi^2 = \sigma^2 \phi^2 + \sigma^2 = \sigma^2 \\
\end{align*}
\]
FACULTY

Associate Professors
Sally A. Ballenger, M.S. .................................. DePaul University
Donald A. Bille, Ph.D. ................................. University of Wisconsin-Madison
Mary Jeremy Buckman, R.S.M., Ph.D. .............. St. Louis University
Marilyn Kuzel, Ph.D. ............................... University of Illinois at the Medical Center
Grace G. Peterson, M.N.A. ........................ University of Minnesota

Assistant Professor
Jeanne Panuncialman, M.S. .......................... DePaul University

Adjunct Professor
Marcia McCaughey, M.S. .......................... DePaul University

PURPOSE

The purpose of the graduate program in nursing is to prepare qualified nurses for leadership roles in teaching, administration, or neurological clinical specialty. Provision is made for continued growth in clinical skills, as well as exploration and testing of various nursing theories.

The graduate program in nursing is based on the same philosophical principles as its undergraduate program. The conceptual framework of the graduate program articulates with and builds on the conceptual framework of the undergraduate program. Three vertical strands (nursing practice, research, and theory development) begun in the baccalaureate program, form the foundation of the graduate conceptual framework.
First year of graduate studies: six core roles of the master's graduate are introduced as organizing threads for the curriculum. The core roles (clinician in medical-surgical nursing, manager, charge agent, teacher, humanizer, and researcher) intertwine with and build upon the vertical strands of nursing practice, research, and theory development.

Second year of graduate studies: each student through specifically designed learning experiences pursues a functional role (either nursing education, nursing administration, or neurological nursing clinical specialization). Cognate courses are taken to support both advanced nursing practice and/or the functional role. A thesis completes the student's course of studies.

Students undertaking graduate study are expected to be self-directed adult learners.

MASTER OF SCIENCE: NURSING

Admission Requirements
Bachelor's degree from a National League for Nursing accredited program with an upper division in nursing
Acceptable baccalaureate and/or graduate grade point average
Satisfactory achievement on the Graduate Record Examination Aptitude Test, (verbal, quantitative and analytical) (GRE tests taken five years or more prior to entry into the program must be retaken.)
Basic statistics course or its equivalent
Physical assessment course or its equivalent
Current licensure as a registered professional nurse in Illinois
Physical examination and positive rubella titer within the year of clinical and practicum courses (Requirement of clinical agencies)
Professional liability insurance of $1,000,000 (one million dollars) during clinical and practicum courses. A requirement of clinical agencies. (Policy must be purchased through DePaul.)

Degree Requirements
Courses: minimum of 58 quarter hours.
Thesis
Comprehensive Oral Examination: qualification for this examination requires completion of a) all course requirements, b) completion of satisfactory thesis, and c) a professional portfolio.
## Curriculum

### FIRST YEAR

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Description</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autumn</td>
<td></td>
<td></td>
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<tr>
<td>Medical-Surgical</td>
<td>400 — Theoretical Components of Nursing</td>
<td>4</td>
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<tr>
<td>Nursing Core</td>
<td>410 — Advanced Statistics</td>
<td>4</td>
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<tr>
<td></td>
<td>Cognate</td>
<td>4</td>
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<tr>
<td>Winter</td>
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<tr>
<td>Medical-Surgical</td>
<td>401 — Research in Nursing I</td>
<td>4</td>
</tr>
<tr>
<td>Nursing Core</td>
<td>436 — Advanced Clinical Nursing I</td>
<td>6</td>
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<td></td>
<td>Cognate (Nursing)</td>
<td>4</td>
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<tr>
<td>Spring</td>
<td></td>
<td></td>
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<tr>
<td>Medical-Surgical</td>
<td>405 — Research in Nursing II</td>
<td>4</td>
</tr>
<tr>
<td>Nursing Core</td>
<td>437 — Advanced Clinical Nursing II</td>
<td>6</td>
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<td></td>
<td>438 — Perspectives in Nursing</td>
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### SECOND YEAR

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<td>Nursing Education</td>
<td>455 — Dynamics of Curriculum</td>
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<td>458 — Dynamics of Teaching</td>
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<td>Nursing</td>
<td>451 — Effective Organization and Administration of Nursing Service</td>
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<td>Administration</td>
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<td>Neurological</td>
<td>460 — Sensory-Perception-Motor Dysfunction</td>
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<td>Nursing Specialty</td>
<td>462 — Nursing Interventions in Neurological Problems</td>
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Courses

All courses are four quarter hours unless otherwise indicated.

COGNATES IN NURSING

NSG 421 Evaluation in Allied Health Education and Service.
NSG 422 Applied Physiology. (This course, or its equivalent, is required for students in the education and neurological functional role.)
NSG 423 Political, Economic, and Legal-Bioethical Issues in Health Care Management.
NSG 425 Fiscal Management: Nursing Administration and Nursing Education.

GRADUATE COURSES

400 Theoretical Components in Nursing. A seminar course designed to examine the nature, function and development of concepts, models and theories. The structure of a theory will be analyzed in reference to the relationship between its components and the type of theoretical statements utilized. Selected theories in nursing will be critiqued with emphasis on their implications for nursing practice, administration, education, and research.

401 Research in Nursing I. (Prerequisite: NSG 410) A seminar course emphasizing the concepts of the research process through presentation, discussion, and analysis of various research approaches, methodologies, research designs, instrumentation, and ethical issues. Critiques of published nursing research will enable the student to utilize concepts presented to evaluate current studies.

405 Research in Nursing II. (Prerequisite: NSG 401) This course will allow the student to identify a research problem, formulate a proposal, and conduct an original study terminating in a completed thesis. This study will be done under the guidance of a research advisor following a prescribed format. Computer laboratory fee.

406 Extended Research. This course will be required for students who do not complete their thesis during the quarter after all other course work is completed. (Zero credit. Fee will be equivalent to tuition for 2 credit hours per quarter.)

410 Advanced Statistics. This course will emphasize the applied statistical approach focusing on parametric and non-parametric formulae. Examples will be derived from the health science disciplines.
421 Evaluation in Allied Health Education and Service. (Prerequisite: Graduate standing or consent of instructor. This course is open to non-nurses.) This course explores evaluation systems used in the extant settings of multidisciplinary health professional education and service. These evaluation systems include: quality control for patient care, program evaluation, evaluation of curriculum and instruction, employee performance appraisal, evaluation of inservice education, and evaluation of educational or service administration. Focus is placed on the synthesis and critique of evaluation tools.

422 Applied Physiology. A seminar course focusing on physiological concepts examined within the context of current knowledge, research, and application to the clinical practice setting. Each body system will be explored and interrelated to provide a comprehensive base from which students will develop functional expertise.

423 Political, Economic, and Legal-Bioethical Issues in Health Care Management. (Prerequisites: Graduate student standing or consent of instructor.) This course focuses on the political and economic forces which determine the resources available for health care services, and the legal and ethical dimensions of health services. Political philosophy and financial bases of health service systems are examined. Legal issues are examined in relation to the role of government in health systems, and the effect of laws on patient care are discussed. Ethical issues associated with the administration of the nursing component of a health system are considered.

425 Fiscal Management: Nursing Administration and Nursing Education. Fiscal management and budgetary practices in hospitals and higher education institutions are explored. Budget preparation for the division of nursing and for nursing education programs are emphasized. Cost-benefit, cost effectiveness, strategies of clinical nurse specialists and staff development programs as well as fee-setting for nursing services and tuition-setting for higher education programs are determined.

436 Advanced Clinical Nursing. (Prerequisite: NSG 400) A clinical and seminar course designed to provide the student with an opportunity to expand his/her scope of nursing practice in adult health. The student examines theories of nursing, as well as theories relevant to the core role of clinician, teacher, and humanizer and the application of these theories to clients in select clinical and other settings. The clinical focus is on the testing of specific theories of nursing and other disciplines, as students utilize physical assessment data to analyze current and potential health care problems of clients in the clinical setting. (6 hrs.)
437 **Advanced Clinical Practice.** (Prerequisite: NSG 436) A clinical and seminar course designed to provide the student with an introduction to his/her select functional role, and to further expand the scope of clinical practice. The focus is on the testing of specific theories of nursing and other disciplines as they apply to the role of nurse educator, nurse administrator, or clinical nurse specialist with an emphasis on the unit/organizational levels which promote quality patient care. The student analyzes the theoretical components and formulates, implements, and evaluates plans and/or decisions which are congruent with the proposed or modified theoretical framework. Theories relevant to the core roles of clinician, change agent, teacher, and manager, and the application of these theories to co-workers will be examined in select clinical and other settings.

438 **Perspectives in Nursing.** Emphasis is placed on major current issues confronting professional nursing. This includes bills requiring legislative action as well as problems in nursing administration and nursing education. The student will be expected to defend at least one topic in the course.

450 **Seminar in Selected Topics in Nursing.** This course is reserved for a) individual study at a graduate level; b) special seminars organized from time to time to accommodate the needs of groups in specialized subjects of topical interest.

451 **Effective Organization and Administration of the Division of Nursing.** (Prerequisite: NSG 437 or consent of the instructor.) Theoretical and philosophical concepts fundamental to administration of the division of nursing are examined. The framework of the environment with its culture, ethos, and values is used as the setting for exploration of the administrative functions of the system.

452 **Dimensions of Nursing Administration.** (Prerequisite: NSG 437 or consent of the instructor.) The framework of the environment with its culture, ethos, and values within which the division of nursing functions is examined for its impact on the division of nursing. The role of the nurse executive officer in this context is emphasized. Specific aspects are scrutinized such as the utilization of a professional standards board, staff development, labor relations, and management by objectives.

455 **Dynamics of Curriculum.** (Prerequisite: NSG 437 or consent of the instructor.) Theories, principles and methods for shaping and changing a nursing curriculum are examined. Sources and issues for curriculum decisions are analyzed, and curriculum evaluation strategies are discussed. A theory of nursing is utilized to construct a selected nursing curriculum.

457 **Practicum in Nursing Administration.** (Prerequisites: NSG 451 and NSG 452) Guided experience in appropriate activities in a dynamic hospital division of nursing. Needs and interests of the student are integrated into the experience. Behavior and actions of various administrative and staff personnel are evaluated in relation to applicable theory with emphasis on the activities of the nurse executive officer. (6 hrs.)
458 **Dynamics of Teaching.** (Prerequisite: NSG 437 or consent of the instructor) Theories, principles, and methods of teaching and learning (for application to nursing education) are examined. Emphasis is placed on how to arrange factors external to the learner in order to achieve the most efficient and effective learning. A philosophy of teaching-learning is synthesized and then integrated with a selected philosophy of nursing.

459 **Practicum in Teaching.** (Prerequisites: NSG 455 and 458) Observation, investigation and application of theories, principles and methods of teaching and learning is carried out in selected nursing education settings. The individual's objectives for the practicum are emphasized in the extant educational setting. (6 hrs.)

460 **Sensory-Perceptual-Motor Dysfunction.** (Prerequisites: NSG 437 or consent of the instructor) Emphasis on the concepts of neural and chemical regulation and imbalance. Normal physiology of the neuro-endocrine systems will be reviewed prior to the study of the pathophysiology of these systems.

462 **Nursing Interventions for Neurological Problems.** (Prerequisites: NSG 437, 460 or consent of the instructor) The student is familiarized with therapeutic nursing interventions for patients with neurological dysfunction. The nursing process is the operating framework for discussion, study, and practice. There is a limited clinical component which will assist the student to correlate concepts between classroom discussion and patient care.

463 **Practicum in Neurological Nursing.** (Prerequisites: NSG 462 or consent of the instructor) Observation and guided experience in the clinical area to further develop clinical expertise caring for patients with neurological dysfunction. The nursing process continues as the framework for practice. Students will be able to pace their own learning as well as evaluate the degree of achievement of pre-identified goals. The seminar portion of the course identifies the multiple roles of the clinical specialist. (6 hrs.)
Philosophy

(PHL)

Thomas N. Munson, S.T.L., Ph.D., Chairperson

FACULTY

Professors
L. Edward Allemand, Ph.D.  University of Louvain
Bernard J. Boelen, Ph.D.  University of Louvain
Farvis Emad, Ph.D.  University of Vienna
Manfred S. Frings, Ph.D.  University of Cologne
James Keating, Ph.D.  Catholic University of America
Gerald F. Kreyche, Ph.D.  University of Ottawa
Robert Lechner, C.P.P.S. Ph.D.  University of Fribourg
Rev. Thomas N. Munson, S.T.L., Ph.D.  University of Louvain

Associate Professor
Mary Jeanne Larrabee, Ph.D.  University of Toronto

Assistant Professor
Robert A. Cooke, Ph.D.  University of Chicago

Adjunct Associate Professor
David A. White, Ph.D.  University of Toronto

Emeritus
Rev. Bruno Switalski, S.T.D., Ph.D.  University of Toronto
PURPOSES

The purposes of the Department are: 1) to prepare those for teaching and research who have the scholarly competence to pursue academic work culminating in the master's or doctoral degree; and 2) to offer to the capable adult whose philosophical goals are non-vocational the opportunity to study seriously for personal enrichment the value orientation of the Department.

In keeping with the intercontinental interests of its faculty, and in serving the needs of philosophical relevance, the Department focuses its attention on phenomenology, life philosophy, philosophies of existence, and the historical sources of these movements.

Implementation

The Department offers directed research, courses, seminars, symposia, and colloquia that should guide and stimulate the student in an investigation of various philosophies and philosophical problems. It also stresses faculty counseling so that the program of each student can be tailored to his or her particular needs.

DEGREE PROGRAMS

Master of Arts

The Department offers both a thesis and a non-thesis program leading to the master's degree. Students advancing directly to the doctorate are strongly advised to enter the thesis program. Those looking immediately to teaching might more profitably enter the non-thesis program.

Master of Arts/Master of Business Administration

DePaul University's Graduate Division of Liberal Arts and Sciences and the Graduate School of Business have designed a program which combines study in philosophy (with specific emphasis on business ethics) with study in business leading to the Master of Arts and the Master of Business Administration degrees. The M.A./M.B.A. program recognizes the increasing concern of the public and the business community with ethical issues. The integrated curriculum combines the strengths of the two disciplines and enables the student to obtain the two degrees simultaneously at a considerable reduction in time.

Admittance into both the Graduate Division of Liberal Arts and Sciences and into the Graduate School of Business is required, and then the applicant must also be accepted by the joint committee which coordinates the M.A./M.B.A. curriculum. The program is restricted to highly qualified and motivated students.

Additional information may be obtained by requesting the brochure on this combined program from either college. For information on admission to the Graduate Division of Liberal Arts and Sciences, contact Rm. 1603 Lewis Center, 25 E. Jackson Blvd., Chicago, IL 60604; (312) 341-8870.
Doctor of Philosophy

The Department offers courses, seminars, independent studies and dissertation direction culminating in the award of a Ph.D. in philosophy. While the program touches diverse areas of philosophy, its chief orientation is toward continental phenomenology.

MASTER OF ARTS: PHILOSOPHY

Admission Requirements:
For full admission, students must have the following:
Bachelor's degree
Satisfactorily completed a minimum of 44 quarter hours (or its equivalent) in major sequence in philosophy

Degree Requirements

Thesis
Courses: 44 quarter hours of graduate study, including
28 quarter hours of philosophy courses numbered 400 and over
8 quarter hours in philosophy courses numbered 300 and over or, if the necessary prerequisites are met and the Department gives written approval, the 8 quarter hours may be taken in fields related to philosophy
8 quarter hours in PHL 699 Thesis Research

Written Qualifying Examination: Successful completion of an examination in the field of philosophy

Non-Thesis
Courses: 44 quarter hours of graduate study, including
32 quarter hours of philosophy courses numbered 400 and above
12 quarter hours in philosophy courses numbered 300 and above or, if the necessary prerequisites are met and the Department gives written approval, these hours may be taken in fields related to philosophy

Written Qualifying Examination: Successful completion of the departmental qualifying examination. For details, see the requirements for the doctoral examination listed below.
DOCTOR OF PHILOSOPHY: PHILOSOPHY

Admissions Requirement

For full admission, student must have

Master of Arts degree in Philosophy or its satisfactory equivalent. Academic work must be comparable to that offered at DePaul and must present clear evidence of the applicant's ability to pursue successfully the doctoral program.

Degree Requirements

Following are the minimal degree requirements. Additional study may be required depending on the student's academic background and his or her achievement in the program.

Courses: minimum of 108 quarter hours of post-baccalaureate credit including

48 quarter hours in philosophy offerings numbered 400 and above. These credit hours must include courses, seminars, and independent study.

Additional credits in PHL 699 Thesis Research to complete total of required hours in post-baccalaureate work.

Residency: three consecutive quarters of full-time residence, i.e., registration for eight quarter hours.

Qualifying Examination: These three-hour examinations are administered every year in Fall and Spring for a period of one week. They are to be taken before the student engages in thesis/dissertation research.

The Ph.D. qualifying examination consists of seven parts:

(a) Ancient/Medieval (two thinkers: Plato or Aristotle, Augustine or Aquinas).

(b) Modern (two thinkers from among Descartes, Hume, Kant and Hegel).

(c) Twentieth-century German (two thinkers from among Nietzsche, Husserl, Heidegger and Scheler).

(d) Twentieth-century French (two thinkers from among Sartre, Marcel, Merleau-Ponty, Ricoeur, Foucault, Derrida).

(e) Perennial philosophical issue.

(f) Symbolic Logic (course or examination)

(g) Foreign Language reading. The student is expected to exhibit facility with one foreign language, usually in the area of specialization. This examination need not be taken during the scheduled examination week.

The student seeking a terminal master's degree is required to take four of the examinations from among (a), (b), (c), (d), (e). The master's student who subsequently decides to enter the doctoral program must repeat these examinations because they must be completed within the scheduled examination week.
Admission to doctoral candidacy: approval of the Dean of Graduate School
given when the student has 1) successfully passed the Qualifying Examination,
the language requirement, all course requirements (excluding PHL 699 Thesis Research), and 2) completed the requirements for full-time residency.

Candidacy Continuation: registration in non-residency or resident candidacy
continuation required each quarter between admission to candidacy and
graduation.

Time Limitations:

between admission to the doctoral program and admission to doctoral
candidacy: not more than four years;

between admission to candidacy and the oral examination: not less than
eight months, and not more than five years.

Dissertation: Departmental Committee approval of topic and outline of disserta-
tion given only after admission to candidacy approved.

Oral examination: defense of the dissertation or a public lecture.

Dissertation Abstract: 350-word abstract of the dissertation filed with the
Graduate School Office.

NOTE: Detailed information on the above degree requirements is listed in a
separate departmental brochure. It may be obtained from the Chairperson of
the Department.

Courses

Courses listed in the 300 series are background, general orientation, and are
intended for advanced students in undergraduate philosophy or beginning
students in graduate philosophy. All courses carry four quarter hours of credit
unless otherwise noted.

Cognitive Skills

301 Basic Logic.
302 Symbolic Logic. (301 recommended, but not required.)
303 Critical Thinking.
305 Philosophy of Language.

History, Traditions, and Foundations

310 Greek Thought: The Roots of Western Culture.
311 Medieval Thought: Reason and Faith.
312 Modern Thought: Ideas in Revolution.
313 Contemporary Thought: The Human Condition.
314 Existentialism.

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315 American Philosophy: Political Ideals
320 Systems of Metaphysics.
321 Theories of Knowledge.
325 Basic Concepts of Phenomenology.

Value Studies
340 Philosophy of Religion.
341 Philosophy of the Arts.
342 Philosophy of Law.
343 Philosophy of Work and Play.

Topics and Controversies
350 Philosophy and the Natural Sciences.
361 Figures in Intellectual History.
362 Themes in Eastern Thought.
370 Existential Thinking.
382 Insights of Myth.
383 Philosophical Themes in Literature.
390 Selected Topics. (e.g., phenomenology of resentment, theory of interpretation, philosophy and technology, etc.).

GRADUATE COURSES

Courses in the 400-500 series are intended to be specific, dealing with individual philosophers, their backgrounds and subsequent influences. They are meant to be detailed both analytically and critically. Normally they are open only to students with graduate academic standing. All courses carry four quarter hours of credit unless otherwise noted.

Traditional Philosophers
410 Plato I. A study of Plato's life and early dialogues.
411 Plato II. A study of the middle and later dialogues.
420 Augustine. A study of Augustine's philosophy through an examination of his major writings.
425 Aquinas. A study of his philosophy, especially its relations to theology, through an examination of selected major works.
435 Descartes. An examination of Descartes' role as the father of modern philosophy; a study of the Regulae, the Discours, and the Meditationes.
440 Spinoza. A study of the Ethics and/or the Theologico-Political Treatise.
445 Hume. An examination of Hume's place in classical British empiricism; a study of *A Treatise of Human Nature*.

510 Kant I. An introduction to the Critical Philosophy of Kant by focusing on the *Critique of Pure Reason*.

511 Kant II. A study of the *Critique of Practical Reason* or the *Critique of Judgment*.

513 Theoretical Foundations of Normative Ethics I.

514 Theoretical Foundations of Normative Ethics II.

515 Hegel I. An introduction to Hegel, *The Phenomenology of Spirit*.

516 Hegel II. Readings in *Science of Logic* or the *Philosophy of Right*.

520 Marx. A study of selected topics and works from both Marx/Engels and their disciples.

**Anglo-American Philosophers**

451 Early American Philosophy. Selected readings in James, Dewey, Pierce, Santayana. (Replaces 453, 455, 457, 459)

452 Contemporary American Philosophy. Readings in selected topics and authors.

470 Wittgenstein. A study of Wittgenstein's works, either the *Tractatus Logico-Philosophicus* or the *Philosophical Investigations*.

495 Advanced Symbolic Logic. A study of modal logic, multi-valued logics, logical antinomies, the logic of relations, theory of computation, and the philosophical presuppositions of logical systems. (Prerequisite: Philosophy 362 Symbolic Logic or equivalent.)

**20th Century Philosophers**

**German Philosophers**

525 Nietzsche. An introduction to the philosophy of Nietzsche by focusing on *Beyond Good and Evil, Also Spoke Zarathustra*, and selected topics and works.

535 Husserl I. An introduction to Husserl through a study of selected topics and works.

536 Husserl II. Selected topics and works.

540 Scheler I. An introduction to Scheler, with emphasis on the phenomenology of value.

541 Scheler II. Selected topics and works (Resentment, etc.)

550 Heidegger I. An introduction to Heidegger through study of a major work and one of the Marburg-lectures.

551 Heidegger II. Selected topics and questions.
French Philosophers

560 Marcel. A study of Marcel's Philosophy of Existence with special attention given to his major work, The Mystery of Being.

565 Merleau-Ponty I. A study of The Phenomenology of Perception with consideration given to Merleau-Ponty's place in contemporary philosophy.

566 Merleau-Ponty II. A study of the themes of his social philosophy and final ontology.

570 Sartre I. A study of Being and Nothingness with attention given to Sartre's early phenomenological studies as background and to some of his literary works and criticism, such as Nausea and Saint-Genet.

571 Sartre II. The Social Thought of Jean-Paul Sartre. A study of A Critique of Dialectic Reason along with appropriate literary works and more recent political writings.

585 Ricoeur. A study of Ricoeur's philosophy and phenomenology of the will with stress on its background and its place in contemporary French phenomenology.

590 Trends in Contemporary French Philosophy. A look at the increasing importance of structuralism, philosophy of language, and hermeneutics in contemporary French thought.

600 Seminar on American Philosophy.

The above courses represent the core of the Department's graduate offerings. In addition, the Department regularly offers seminars, tutorials, and independent studies for specialized graduate work.

Special Studies Courses

699 Thesis Research. Independent investigation of a philosophical problem for the thesis/dissertation. The problem is assigned by the chairman or his designate after consultation with the student. Overall direction and advisement is given by the thesis director. Variable credit.

700 Independent Study.

701 Resident Candidacy Continuation. Students admitted to candidacy for the doctoral degree who have completed all course and dissertation registration requirements but who are regularly using the facilities of the University for study and research are required to be registered each quarter of the academic year until the dissertation and final examination have been completed. Non-credit. (Prerequisite: Admission to Candidacy.)

702 Non-Resident Candidacy Continuation. This registration provides for doctoral candidates who have been admitted to candidacy who are not in residence and need only occasional use of University facilities, including the libraries. Non-credit. (Prerequisite: Admission to Candidacy.)
Physics

(PHY)

Zuhair M. El Saffar, Ph.D., Chairperson

FACULTY

Professors
Mary L. Boas, Ph.D. .................. Massachusetts Institute of Technology
Zuhair M. El Saffar, Ph.D. ................. University of Wales, Great Britain
Edwin J. Schillerger, Ph.D. ............... University of Notre Dame
Thomas G. Stinchcomb, Ph.D. ............. University of Chicago
Donald O. Van Ostenburg, Ph.D. .... Michigan State University, Chairperson,
Graduate Committee

Associate Professors
Anthony F. Behof, Ph.D. .................. University of Notre Dame
Gerard P. Lietz, Ph.D. ................. University of Notre Dame
Margaret Stautberg Greenwood, Ph.D. .................. University of Colorado

Instructor
Martin J. Durbin, M.S. .................. DePaul University

Emeritus
Julius J. Hupert, Ph.D. .................. Northwestern University
PURPOSE

The purpose of the Graduate Physics Program is to develop professional competence in its students. To fulfill this purpose, the Department offers two degree programs: Master of Science in Physics, and the Master of Science in Teaching Physics. The latter degree program develops breadth in the fundamentals of physics for those interested in high school and junior high school teaching.

As a public service to the educational, scientific and technological communities of the Chicago area, the Department offers graduate and advanced undergraduate courses in the evenings for industrial scientists and engineers. The evening offerings emphasize the physics and the mathematical skills so necessary for the successful mastery of sophisticated and rapidly changing technologies.

DEGREE PROGRAMS

Master of Science: Physics

Master of Science: Teaching of Physics

Admission Requirement

For full admission, students must have the following:

Bachelor's degree: satisfactory completion of a suitable program in advanced physics beyond a general physics course. Candidates with less extensive backgrounds should consult with the chairperson of the Departmental Graduate Committee about course prerequisite(s) to graduate study.

Note: Strongly recommended that the student submit the results of the GRE Physics examination at the time of application.

MASTER OF SCIENCE: PHYSICS

Degree Requirements

Courses: a minimum of 44 quarter hours of graduate credit (11 courses), including:

- PHY 385 Methods of Theoretical Physics III
- PHY 410, 411, 412 Theoretical Physics I, II, III
- PHY 480 Thesis Research

Two of the following:

- PHY 420 Electrodynamics I
- PHY 440 Theoretical Mechanics I
- PHY 460 Quantum Mechanics I

Two 400-level physics courses
Additional courses from 300 or 400 level. Selection from courses in biological sciences, chemistry, mathematics, physics, or other minor field with the written approval of the Departmental Graduate Committee. The exact number of the additional courses required is dependent upon credit earned from PHY 480 Thesis Research.

Candidacy Examination: A three hour written examination based on student's general knowledge of physics.

Degree Candidacy: upon satisfactory completion of the candidacy examination and upon satisfactory completion of all course requirements, excluding PHY 480 Thesis Research, the student may make application for Degree Candidacy. Upon advancing to degree candidacy, the student is now eligible to enroll in PHY 480.

Thesis: based on independent research in theoretical or experimental physics is generally required. However, a review thesis reflecting study of a broad subject or development of an interdisciplinary, historical or educational theme is also acceptable.

As a rule, one course credit of 4 quarter hours in PHY 480 is applicable to the thesis research. An additional course credit (4 quarter hours) for thesis research may be allowed with the written approval of the student's Faculty Advisor. In no case will more than two thesis research course registrations be applied to the Master of Science degree. In special cases, and with the approval of the Graduate Committee of the Department, the thesis requirement may be replaced with two 400 level physics Courses.

An oral examination on the thesis.

MASTER OF SCIENCE: TEACHING OF PHYSICS

Admission Requirements:
The science requirements in the program are the following:
Complete sequence of courses in general physics
Complete sequence of courses in mathematics up to and including integral calculus

Degree Requirements
Eleven courses planned in individual consultation with a faculty member.
ADVANCED UNDERGRADUATE COURSES

The following list represents courses scheduled as undergraduate courses. To be used as graduate credit, a grade of B or better must be earned.

310 Mechanics.
320 Electricity and Magnetism.
322 Advanced Digital Electronics.
340 Thermal Physics.
350 Optics.
360 Twentieth Century Physics I.
361 Twentieth Century Physics II.
362 Twentieth Century Physics III.
380 Experimental Physics I.
381 Experimental Physics II.
382 Experimental Physics III.
393 Methods of Theoretical Physics I.
394 Methods of Theoretical Physics II.
395 Methods of Theoretical Physics III.
396 Microprocessors.
397 Computer Interfacing.

Graduate Courses

These courses carry, as a rule, four quarter hours of credit. When a deviation from this rule is justified, the applicable number of credit hours is shown in the specific schedule applicable to the academic quarter in question. Scheduling of courses is announced quarterly.

410 Theoretical Physics I. Lagrangian formalism; angular momentum; central forces and celestial mechanics; particle systems and rigid body rotation about fixed axis; accelerated coordinate systems.
411 Theoretical Physics II. Electrostatics and magnetostatics in vacuum and in media; Poisson's equations; Green's Theorem; use of Green's functions; electromagnetic induction; Maxwell's equations; the Poynting vector; electromagnetic wave propagation.
412 Theoretical Physics III. Schroedinger equation, operators, eigenvalues; series of eigenfunctions; physical interpretation; one and three-dimensional applications.
420 Electrodynamics I. (Prerequisite: PHY 411) Further studies of electromagnetic wave propagation; scattering; dispersion; bounded structures and guided waves; electromagnetic radiation, including multipole radiations and radiation from systems of radiators; special theory of relativity and four-vectors as applied to electrodynamic phenomena; field invariants.
Electrodynamics II. (Prerequisite: PHY 420) More problems in radiation, charged particle collisions, charged particle radiations, bremsstrahlung and Cerenkov radiation; multipole fields; radiation damping.

Electrodynamics of Plasma. (Prerequisite: PHY 411) Introduction to plasmas; single particle motions in electric and magnetic fields; treatment of plasmas as fluids; electrodynamic properties of plasmas.

Theoretical Mechanics I. (Prerequisite: PHY 410) Variational principles; Lagrangian mechanics; rigid body dynamics, small oscillations; and special relativity theory.

Theoretical Mechanics II. (Prerequisite: PHY 440) Hamilton's equations of motion; canonical transformations; Hamilton-Jacobi Theory; introduction to the Lagrangian and Hamiltonian formulations for continuous systems and fields.

Applied Mechanics. (Prerequisite: PHY 310) Mechanics of continuous media; strain and stress tensors; fluid dynamics; mechanical waves; applications to acoustics and geophysics.

Statistical Mechanics. Principles of statistical mechanics; applications to weekly interacting systems such as the classical plasma and Fermi gas; strongly interacting systems; transport theory; fluctuations and irreversible processes, phase transitions.

Modern Optics. An advanced optics course with emphasis on topics in coherence theory, polarization of light, Fourier transform spectroscopy, optical transfer functions and holography.

Quantum Mechanics I. (Prerequisite: PHY 412) Review of basic quantum theory; vector spaces; linear operators; observables; commutators; projection operators; representations.

Quantum Mechanics II. (Prerequisite: PHY 460) Angular momentum theory; rotations, spin, addition of angular momenta, Clebsch-Gordan coefficients, Wigner-Eckart Theorem; systems of identical particles; invariance.

Atomic and Molecular Physics. The experimental foundations for theories of atoms and molecules, with emphasis upon spectroscopy.

Nuclear Physics. (Prerequisite: PHY 412 or equivalent) Theoretical and phenomenological approaches to nuclear structure and strong, electromagnetic, and weak interactions of nuclei. Topics of study include the theory of scattering and decay of nuclei, resonances, nuclear models.

Radiation Physics. (Prerequisite: PHY 361 and 395 or equivalent) Interactions of X-rays, nuclear radiations, etc. with matter; radiation detectors; dosimetry; shielding; applications to medical physics.

Solid State Physics I. Periodicity and classification of crystal structure; X-ray diffraction; reciprocal lattice; crystal binding; phonons. Debye theory of heat capacity; inelastic scattering, anharmonic interactions and thermal conductivity.

Solid State Physics II. The free-electron gas model; energy band theory; theory of metals and alloys; intrinsic and impure semiconductors; transport phenomena; dia- and para-magnetism, ferromagnetism, and antiferromagnetism.
492 Solid State Device Physics. Physics background for the operation of such devices as the bipolar transistor; the junction field effect transistor (JFET); surface field-effect transistors (MOSFETS); charge coupled devices; Gunn oscillators, the solar cell, etc.

495 Mathematical Physics. (Prerequisite: PHY 395) Topics in mathematical physics more advanced than 395, such as group theory; tensor analysis; functional analysis (linear vector spaces, operators, generalized functions); Green's functions; differential and integral equations.

498 Digital Signal Processing. (Prerequisite: Graduate standing in mathematics, physics or computer science) Elements of circuit and signal theory, theory of modulation, mathematical basis sampling and coding, principles of digital filtering. Applications to communications, process control, image and voice recognition, voice synthesis.

Seminars and Independent Study Courses

478 Seminar in Selected Topics of Physics. This course number is reserved for individual study at the graduate level. Special seminars organized from time to time to accommodate the needs of groups of students in specialized subjects of topical interest.

480 Thesis Research. This course number designates research performed to gather thesis material. Up to two registrations are allowed.
Sheldon Cotler, Ph.D., Chairperson

FACULTY

Professors
Thomas S. Brown, Ph.D. ..................... Catholic University of America
Sheldon Cotler, Ph.D. ..................... Southern Illinois University
Frank A. Dinello, Ph.D. ..................... Loyola University
John M. Reisman, Ph.D. ..................... Michigan State University
Edwin S. Zolik, Ph.D. ..................... Catholic University of America

Associate Professors
Robert E. Brewer, Ph.D. ..................... Southern Illinois University
Mari J. K. Brown, Ph.D. ..................... Columbia University
Linda Camras, Ph.D. ..................... University of Pennsylvania
Ernest J. Doleys, Ph.D. ..................... University of Missouri
Louise Ferone, M.S.W. (Social Work) ..................... Loyola University
Frederick Hellizer, Ph.D. ..................... University of Rochester
Leonard A. Jason, Ph.D. ..................... University of Rochester
Sheila Ribordy, Ph.D. ..................... University of Kansas
William Terris, Ph.D. ..................... Illinois Institute of Technology
Robert J. Tracy, Ph.D. ..................... Texas Christian University

Assistant Professors
Joseph Orban, Ph.D. ..................... Virginia Polytechnic Institute and State University
LaVone Robinson, Ph.D. ..................... University of Georgia
Midge Wilson, Ph.D. ..................... University of North Carolina
Adjunct Faculty
Melany E. Baehr, Ph.D. ............. University of the Witwatersrand
Robert L. Davenport, Ph.D. ............... DePaul University
Kurt R. Elster, Ph.D. ............... Illinois Institute of Technology
Edward Michaels, Ph.D. ........ Northwestern University

PURPOSES

The general purpose of the graduate programs in psychology is to provide qualified students with the opportunity to become thoroughly acquainted with the methodology and content of scientific psychology and trained in the quantitative methods and scientific rigor necessary for the understanding of human behavior and personality.

A specific purpose is application: the utilization of psychology for the benefit of individuals and society. A major function of the graduate programs in psychology is to help the student develop an awareness of the unity of psychological study and practice. The student comes to appreciate that psychology is both a "pure" and "applied" science, and that these aspects are not mutually exclusive.

DEGREE PROGRAMS

The Department of Psychology offers graduate work leading to the degrees of Master of Arts and Doctor of Philosophy. Available programs leading to these degrees are as follows:

Master of Arts
Clinical Psychology
General Experimental Psychology
Industrial/Organizational Psychology

Doctor of Philosophy
Clinical Psychology
General Experimental Psychology
Industrial/Organizational Psychology

Additional information concerning graduate programs may be obtained by writing to the Chairperson, Department of Psychology.

Admission Requirements

The Department accepts as graduate students only those who show definite promise for completing the requirements for advanced degrees. Meeting the minimum admission standards or having extensive undergraduate course work in psychology does not guarantee acceptance, since the number of applicants who can be admitted is limited.
Preference is given to those applicants who have a well-balanced background of psychology courses, and some background in science and mathematics. Students who do not have an undergraduate major in psychology but who otherwise satisfy these requirements are encouraged to apply.

For consideration for admission, the applicant must have the following:

Bachelor’s degree

Satisfactory undergraduate scholastic average

Minimum of 32 quarter hours (i.e., 21 semester hours) in psychology. A three-hour elementary statistics course is to be included in this minimum.

The Departmental Graduate Admission Committee will determine, on the basis of a consideration of each student’s proposed program of study, whether the minimum 32 quarter hours in psychology is sufficient for advanced study. The student judged to be deficient in prerequisites or other respects will be required to take, without graduate credit, such courses as necessary to remedy any deficiencies upon entering Graduate School.

Graduate Record Examination results of the Verbal and Quantitative tests and of the Advanced Test in Psychology are required.

Three letters of recommendation.

Applicants must complete both a departmental application form and the general LA&5 Graduate Application.

Students considering application to the M.A.-Ph.D. programs in Clinical Psychology should be aware of the following:

In 1982-83, over 200 students applied to the doctoral program in clinical psychology. Of the applicants, about 90% were rejected and 10% were admitted in order to obtain the 16 students for the entering M.A.-Ph.D. program. Fifty percent of the successful applicants were female and fifty percent were male. The clinical faculty wishes applicants to know that the faculty carefully evaluate all the application materials and emphasize the following criteria:

Completeness of credentials: When important pieces of information, such as transcripts, are lacking, the faculty is compelled to reject the applicant. Last year about one applicant in seven was rejected on this basis. Your application materials should be complete by January 31. We begin the process of evaluating applications in February.

GRE scores and Grade Point Average: Combined Verbal and Quantitative GRE scores of about 1200 are expected of applicants to the doctoral program. The undergraduate grades of applicants are expected to average substantially higher than “B” in psychology courses. Typically, successful applicants to our program have an undergraduate GPA of at least 3.5 (B+) and combined GRE scores of over 1200. However, these criteria are not followed rigidly.

Undergraduate preparation: Students are expected to have had courses in statistics, experimental psychology, abnormal psychology, and other areas in psychology to enable advanced study in this field.

Prior graduate study: The department considers students with prior graduate study in clinical psychology or closely related fields, but almost all of our students enter the program without other advanced degrees.
Interests: The clinical programs emphasize training in clinical child psychology and clinical community psychology. Obviously those who have no special interest in those areas would be better served elsewhere. Further, we accept only those applicants who intend to work toward the doctorate and do not consider applicants for a terminal Master's degree for admission.

Minority status: The clinical faculty strongly encourages applications from minority students. About 1/3 of the graduate students in clinical psychology admitted in the last two years were members of minority groups.

MASTER OF ARTS: CLINICAL PSYCHOLOGY

Degree Requirements

Courses: minimum of 72 quarter hours including 4 hours thesis credit, but not including credit for pre-practicum or practicum courses. (Note: Students are expected to carry a minimum of 12 hours per quarter.)

Core Courses: four of the following:

PSY 402 Perceptual Processes or 404 Learning Processes
PSY 406 Physiological Processes
PSY 430 Advanced Social Psychology
PSY 437 Advanced Personality or 439 Advanced Developmental Psychology

NOTE: With the written consent of their advisor, students may waive one or two courses in the core sequence and replace them with graduate courses in Clinical Psychology.

Statistics Courses:

PSY 410, 411, 412 Advanced Statistics I, II, III

Additional Courses:

PSY 481 Intelligence Testing
PSY 482 Personality Assessment
PSY 484 Behavioral Assessment
PSY 486 Advanced Psychopathology
PSY 488 Principles of Psychotherapy
PSY 500 Professional Ethics and History of Clinical Psychology
PSY 574 Pre-practicum
PSY 577-583 Practicum
Degree Candidacy: during the Winter Quarter of the second year of graduate study, each student is evaluated for acceptance as a candidate for the doctoral degree. Only those students who have given evidence of satisfactory academic performance as graduate students, and have had a research proposal for the master's thesis approved, will be advanced. The Department reserves the right to require the student to take special or oral examinations to fulfill this requirement. Students denied candidacy will be required to withdraw from the doctoral program.

Research Thesis: complete a thesis on a topic approved by the Department.

Thesis Examination: the examination, in the field of the graduate student, may be, but is not necessarily, limited to a defense of the student's thesis.

MASTER OF ARTS: GENERAL EXPERIMENTAL PSYCHOLOGY

Degree Requirements

Courses: minimum of 48 quarter hours including 4 hours thesis credit. (Note: Students are expected to carry a minimum of 12 hours per quarter.)

Core Courses: four of the following:
- PSY 402 Perceptual Processes
- PSY 404 Learning Processes
- PSY 406 Physiological Processes
- PSY 430 Advanced Social Psychology
- PSY 437 Advanced Personality
- PSY 439 Advanced Developmental Psychology

Note: With the written consent of their advisor, students may waive one or two courses in the core sequence and replace them with graduate courses in experimental psychology.

Statistics Courses:

Three courses, including either PSY 410 Advanced Statistics I or PSY 411 Advanced Statistics II, and PSY 412 Advanced Statistics III

Degree Candidacy: upon completion of at least half of the graduate course requirements, each student is evaluated for acceptance as a candidate for the master's degree. Only those students who have given evidence of satisfactory academic performance as graduate students will be advanced. The Department reserves the right to require the student to take special or oral examinations to fulfill this requirement. Students denied candidacy will be advised to strengthen areas of scholastic weakness or to withdraw from the program.

Research Thesis: complete a thesis on a topic approved by the Department.

Thesis Examination, either written or oral: the examination, in the field of graduate study, may be, but is not necessarily, limited to a defense of the student's thesis.
MASTER OF ARTS: INDUSTRIAL PSYCHOLOGY

Degree Requirements
Courses: minimum of 72 quarter hours including 4 hours thesis credit. (Note: Students are expected to carry a minimum of 12 hours per quarter.)

Core Courses: four of the following:
- PSY 402 Perceptual Processes
- PSY 404 Learning Processes
- PSY 406 Physiological Processes
- PSY 430 Advanced Social Psychology
- PSY 437 Advanced Personality
- PSY 439 Advanced Developmental Psychology

Statistics Courses:

Current Issues Series: PSY 549, Current Issues in Industrial Psychology, is to be taken twice. The subject matter of the course changes with each offering. PSY 559 Seminar in Industrial/Organizational Psychology is to be taken once.

Core Courses in the Industrial Psychology Area: three are required
- PSY 440 Psychology of Work and Motivation
- PSY 441 Psychology of Leadership
- PSY 442 Personnel Psychology
- PSY 443 Psychology of Human Performance
- PSY 444 Job and Performance Evaluation
- PSY 445 Psychology of Organizational Training

Electives: Additional courses are required to attain the 72 hours, including PSY 500, Professional Ethics and PSY 590, Thesis Seminar. These courses should be taken with the consent of the student’s advisor.

Degree Candidacy: upon completion of at least half of the graduate course requirements, each student is evaluated for acceptance as a candidate for the master’s degree. Only those students who have given evidence of satisfactory academic performance as graduate students will be advanced. The Department reserves the right to require the student to take special or oral examinations in fulfilling this requirement. Students denied candidacy will be advised to strengthen areas of scholastic weakness or to withdraw from the program.

Research Thesis: complete a thesis on a topic approved by the Department. Thesis Examination, either written or oral: the examination, in the field of graduate study, may be, but is not necessarily, limited to a defense of the student’s thesis.
DOCTOR OF PHILOSOPHY: PSYCHOLOGY

The Department offers programs in Clinical, General Experimental, and Industrial/Organizational Psychology. The Clinical Program offers special emphasis in Clinical Community and Clinical Child Psychology. Within the General Experimental Program the student may specialize in learning, physiological, developmental, social and industrial psychology. Because of the nature of the requirements, the Industrial Program is described separately. All doctoral programs include a strong emphasis on research.

Admission Requirements

Students holding a bachelor’s degree are not admitted directly into doctoral programs. During the second week of the Winter Quarter of the student's second year, an evaluation of the student's progress in meeting course and degree requirements is made by the faculty. Assuming such progress is satisfactory, the student is formally admitted into the doctoral program.

DOCTOR OF PHILOSOPHY: CLINICAL PSYCHOLOGY

Degree Requirements

Courses: minimum of 120 quarter hours beyond the bachelor’s degree, including the following:

Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 361</td>
<td>History and Systems of Psychology or passing a special exam in this area</td>
</tr>
<tr>
<td>PSY 402</td>
<td>Perceptual Processes or 404 Learning Processes</td>
</tr>
<tr>
<td>PSY 406</td>
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<td>Advanced Social Psychology</td>
</tr>
<tr>
<td>PSY 437</td>
<td>Advanced Personality or 439 Advanced Developmental</td>
</tr>
<tr>
<td>PSY 486</td>
<td>Advanced Psychopathology</td>
</tr>
<tr>
<td>PSY 500</td>
<td>Professional Ethics and History of Clinical Psychology</td>
</tr>
<tr>
<td>PSY 481</td>
<td>Intelligence Testing</td>
</tr>
<tr>
<td>PSY 482</td>
<td>Personality Assessment</td>
</tr>
<tr>
<td>PSY 488</td>
<td>Principles of Psychotherapy</td>
</tr>
<tr>
<td>PSY 484</td>
<td>Behavioral Assessment</td>
</tr>
<tr>
<td>PSY 569</td>
<td>Seminar in Program Evaluation</td>
</tr>
<tr>
<td>PSY 597</td>
<td>Master's Thesis Research (4 hours)</td>
</tr>
<tr>
<td>PSY 599</td>
<td>Dissertation Research (12 hours)</td>
</tr>
</tbody>
</table>

*Note 1.* The minimum of 120 quarter hours excludes credit for practicum and practicum courses.

*Note 2.* The student is required to take additional courses consistent with an area of specialization in Clinical Child or Clinical Community Psychology.
Doctoral Candidacy Examination: designed to assess the student's knowledge of experimental psychology and the student's area of specialization. The examination is given in four sections. Two sections cover two minor areas of experimental psychology selected by the student from the areas of learning, perception, physiological psychology, personality, developmental psychology, industrial/organizational psychology, and social psychology. A third section for clinical students consists of an examination in the areas represented by the required courses in Clinical Psychology. A fourth section consists of an examination in the student's area of clinical-child or clinical community specialization.

Admission to Doctoral Candidacy: Formally given to the student who has successfully passed the Doctoral Candidacy Examination; the student has no more than five years from this date to complete requirements for the doctorate.

Candidacy Continuation: registration in course(s) or resident of non-resident candidacy continuation required each quarter between admission to candidacy and graduation.

Internship: one-year internship in facility approved by the Director of Clinical Training. Student's fourth year in program is usually the internship year.

Dissertation: Departmental Committee approval and acceptance of topic and outline of dissertation given only after admission to candidacy approved.

Oral Examination: student to defend his or her dissertation and to show competence in the general field of psychology and in the area of specialization.

Time Limitations: 1) between admission to the doctoral program and admission to doctoral candidacy: not more than four years; and 2) between admission to candidacy and the final examination: not less than eight months and not more than five years.

DOCTOR OF PHILOSOPHY: GENERAL EXPERIMENTAL PSYCHOLOGY

Degree Requirements

Courses: a minimum of 120 quarter hours beyond the bachelor's degree, including the following:

Core Courses:

PSY 361 History and Systems of Psychology or passing a special exam in this area
PSY 402 Perceptual Processes
PSY 404 Learning Processes
PSY 406 Physiological Processes
PSY 430 Advanced Social Psychology
PSY 437 Advanced Personality
PSY 439 Advanced Developmental Psychology
PSY 597 Master's Thesis Research (4 hours)
PSY 599 Dissertation Research (12 hours)
Description of Sample Program: Developmental Psychology.

Coursework for a student specializing in Developmental Psychology would include the Core Courses listed above plus the required sequence in Statistics. In addition, the student will supplement his training by taking additional courses chosen with the aid of his advisor. Choice of additional courses will depend upon the student’s particular research interests and career goals. For example, courses may be taken from the areas of industrial and/or child clinical psychology. Possible additional courses are Psychopathology of the Child (PSY 487), Personality Assessment (PSY 482), Behavior Modification (PSY 454), Seminar in Developmental Psychology (PSY 555), Psychology of Leadership (PSY 441), Psychology of Human Performance (PSY 443), and Job and Performance Evaluation (PSY 444). The Seminar in Developmental Psychology (PSY 555) focuses on current research in the area of development and may be taken during both the second and third years.

Research experience is considered an integral part of the student’s training and will begin in the first year. With the help of his advisor, the student will begin to plan his thesis project which usually will be conducted during this second year in the program. Research experience during the third year might involve a continuation of the line of research initiated in the thesis project. Alternatively, the student may begin to develop a new line of research in preparation for his dissertation. The dissertation project usually is conducted during the fourth year. Typically the graduate student will conduct at least two complete research studies and prepare them for publication in a professional journal.

Doctoral Candidacy Examination: designed to assess the student’s knowledge of experimental psychology and the student’s area of specialization. The examination is given in three sections. The first two sections cover two minor areas selected by the student from the areas of learning, perception, physiological, personality, developmental, industrial/organizational, and social psychology. The third section consists of an examination in the student’s area of specialization.

Admission to Doctoral Candidacy: Formally given to the student who has successfully passed the Doctoral Candidacy Examination; the student has no more than 5 years from that date to complete requirements for the doctorate.

Candidacy Continuation: registration in course(s) or for resident or non-resident candidacy continuation required each quarter between admission to candidacy and graduation.

Dissertation: Departmental Committee approval and acceptance of topic and outline of dissertation given only after admission to candidacy approval. Research for the dissertation should normally be completed during the student’s fourth year in the program.

Oral Examination: student to defend his or her dissertation and to show competence in the general field of psychology and in the area of specialization.
Time Limitations: 1) between admission to the doctoral program and admission to doctoral candidacy: not more than four years; and 2) between admission to candidacy and the final examination: not less than eight months and not more than five years.

Note: Detailed information on the above degree requirements is listed in a separate departmental brochure. It may be obtained from the Department.

DOCTOR OF PHILOSOPHY:
INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

Degree Requirements

Courses: a minimum of 48 hours beyond the master's requirements, including twelve dissertation hours and the following:

Core Courses: Two additional courses plus either a course in history and systems or passing a special exam in this area.


Industrial Psychology Courses: Two additional courses selected from core courses in the industrial area.

Current Issues Series: Psychology 549, Current Issues in Industrial Psychology, and PSY 559 Seminar in Industrial/Organizational Psychology each are to be taken one additional time. The subject matter changes with these courses.

Electives: Additional courses with consent of the student's advisor to attain the required 120 credit hours.

Doctoral Candidacy Examination: designed to assess the student's knowledge of psychology and the student's area of specialization. The examination is given in three sections. The first two sections cover two minor areas selected by the student from the areas of learning, perception, physiological, personality, developmental and social psychology. The third section consists of an examination in the student's areas of industrial specialization.

Admission to Doctoral Candidacy: Formally given to the student who has successfully passed the Doctoral Candidacy Examination; the student has no more than 5 years from that date to complete requirements for the doctorate.

Candidacy Continuation: Course(s) or registration in resident or non-resident candidacy continuation required each quarter between admission to candidacy and graduation.
Dissertation: Departmental Committee approval and acceptance of topic and outline of dissertation given only after admission to candidacy approval. Research for the dissertation should normally be completed during the student's fourth year in the program.

Oral Examination: student to defend his or her dissertation and to show competence in the general field of psychology and in the area of specialization.

Time Limitations: 1) between admission to the doctoral program and admission to doctoral candidacy: not more than four years; and 2) between admission to candidacy and the final examination: not less than eight months and not more than five years.

Note: Detailed information on the above degree requirements is listed in a separate departmental brochure. It may be obtained from the Department.

Courses

All courses carry four quarter hours of credit unless otherwise noted.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

333 Developmental Psychology I: Infancy and Childhood. (Prerequisite: PSY 105 or 106) Description and evaluation of principles and theories of development from conception through childhood.

334 Development Psychology II: Adolescence through Maturity. (Prerequisite: PSY 105 or 106) Continuation of 333 covering development, personality organization, and adjustment.

347 Social Psychiology. (Prerequisite: PSY 105 or 106) Survey of social psychological principles emphasizing individual behavior in a social context.

351 Theories of Personality. (Prerequisite: PSY 105 or 106) Survey of major personality theories with separate emphasis on clinically-derived and research-derived theories. Freudian psychoanalysis is especially emphasized in the clinical area. Personality research philosophy is presented separately and as part of the research-derived theories.

352 The Psychology of Prejudice. (Prerequisite: PSY 105 or 106)

353 Abnormal Psychology. (Prerequisite: PSY 105 or 106) Description of the nature, symptoms, and etiology of psychological disorders.

354 Ecosystems and Behavior. (Prerequisite: PSY 347) Environmental psychology dealing with environmental pollution, systems theory, crowding, deprivation, institutionalization and architecture, and their effect upon man.

355 Small Groups and Leadership. (Prerequisite: PSY 347)
356 Introduction of Psychological Measurement. (Prerequisites: PSY 105 or 106 and 240.) Measurement in psychology; emphasis on standardization, reliability, validity; test and scale development. Materials fee $5.00.

360 Theories of Learning. (Prerequisite: PSY 106) A survey of the classical and modern theories of learning.

361 History and Systems of Psychology. (Prerequisite: PSY 105 or consent) Historical development of psychology and its fields.

362 Cognitive Process. (Prerequisite: PSY 106) A survey of modern cognitive psychology with major emphasis on Information Processing theory.


367 Psychology of Exceptional Children. (Prerequisite: PSY 333)

368 Computer Programming. Laboratory fee $20.00. Introduction to word processing, writing computer programs in BASIC or FORTRAN, and use of Statistical Packages such as SPSS or BMDP. (Prerequisite: PSY 240 or consent) Cross-listed with Sociology 368.

370 Research Methods in Developmental Psychology. (Prerequisite: PSY 275)

372 Research Methods in Social Psychology. (Prerequisite: PSY 275) Laboratory fee $5.00.

375 Perception. (Prerequisite: PSY 105 or 106) Environmental and stimulus control of behavior; chemical control of perception.

377 Physiological Psychology. (Prerequisite: PSY 275) The nervous system and endocrine functions as related to behavior.

378 Comparative Psychology. (Prerequisite: PSY 105 or 106) Patterns of behavior shown by various animal species.

380 Industrial and Organizational Psychology. (Prerequisites: PSY 105 or consent of instructor) Application of theories and methods of psychology to the study of human behavior in business, industrial, and other organizations.

381 Personnel Psychology. (Prerequisite: PSY 380 or consent) Application of concepts from differential psychology and measurement to employee selection, counseling, placement and training in business and other organizations.

382 Organizational Behavior. (Prerequisite: PSY 380 or consent) Application of theories of leadership, work and motivation and job satisfaction to employee and management behavior. Applied social psychology in an organizational context.

383 Engineering Psychology. (Prerequisites: PSY 380 or consent) Application of experimental psychology and individual differences to the design of man-machine systems, work environments, and living environments.

384 Consumer Behavior and Advertising. (Prerequisite: PSY 380 or consent) Application of psychological principles and methods to advertising, marketing, product development, sales, and propaganda.

385 Applied Behavioral Research Methods. (Prerequisite: PSY 240 or equivalent)
390 Statistics for the Behavioral Sciences. (Prerequisite: PSY 240 or equivalent) Applied inferential statistics.

392 Psychology of Alienation. (Prerequisites: PSY 105 or 106) Causes of individual and group alienation, and the resultant behavior.

393 Psychology of Language. (Prerequisite: PSY 105 and 106) Development of language in children, and effects of language on thinking.

394 Advanced Topics in Psychology. (Prerequisites: Senior standing and consent of Chairman)

395 Field Work and Study. (Prerequisite: Junior standing and consent of Chairman) Supervised experience in selected off-campus settings and associated readings.

398 Reading and Research. (Prerequisites: Senior standing and consent of Chairman)

GRADUATE COURSES

When prerequisites are stated in numbers below 400, an equivalent course taken elsewhere is acceptable. Where no prerequisite is listed, students not majoring in psychology must obtain the consent of the instructor. Psychology majors who do not meet the prerequisites for a given course must obtain the consent of the instructor.

402 Perceptual Processes. (Prerequisite: Twelve hours in psychology) Analysis of the variables involved in the determination of perception with particular attention to the problems of space, motion, distance, size, form, the after effects and the constancies.

404 Learning Processes. Survey of classical and instrumental conditioning, biological constraints, attention, memory, and practical applications. Major theoretical approaches include stimulus-response, early cognitive theories and information processing theory.

406 Physiological Processes. (Prerequisite: PSY 377 or equivalent) The functional role of neural systems important for the processes of motivation, emotion, sleep, memory, and cognition.


410 Advanced Statistics I. (Prerequisite: PSY 240 or equivalent) An introduction to sample spaces, random variables, distributions and parametric statistics. Sampling, the concept of sampling distributions of statistics.

411 Advanced Statistics II. (Prerequisite: PSY 410) Point estimation procedures are compared for a variety of parameters. Analyses of variance; planned and post-hoc contrasts; orthogonal polynomials.

412 Advanced Statistics III. (Prerequisite: PSY 411) Linear and non-linear regression and correlation.

416 Methods in Behavioral Research. (Prerequisite: PSY 411) Principles and techniques of research design in behavioral, social and clinical research; questionnaires, interview schedules, rating scales involving multivariable analysis. Application of parametric and non-parametric tests. Application of research findings to professional practice.
418 Multivariate Analysis. (Prerequisite: PSY 411) Theory and statistical techniques underlying the analysis of multiple measurements.

419 Factor Analysis. (Prerequisite: PSY 418) Theoretical foundations, methods of analysis, and comparison of various factor analytic models.

420 Advanced Research Methodology. (Prerequisite: PSY 411) Design, analysis, and execution of basic and applied psychological research.

421 Advanced Experimental Design. (Prerequisite: PSY 412)

423 Instrumentation. Design, construction and use of instrumentation in the behavioral sciences. (Variable credit)

425 Cognitive Processes. Seminar course on student-selected topics. Some past topics have dealt with imagery, memory, hypnosis, the use of conditioning principles in human communication, belief systems, and the use of metaphor in stories.

427 Sensory Processes. (Prerequisites: PSY 402 and 406) Receptor system processes and their relations to psychological phenomena, with attention to similarities and differences among sensory systems and to general principles of sensory integration and orientation.

430 Advanced Social Psychology. Contemporary theory and research in social behavior, emphasizing the behavior of the individual in a social context.

432 Attitude Analysis. (Prerequisite: PSY 430) Theory and research in attitude formation and organization, communication and persuasion, resistance to persuasion, and measurement techniques.

433 Social Judgement. (Prerequisite: PSY 430) Theory and research in judgement of social stimuli, perceiving and evaluating persons, and social comparison processes.

434 Small Group Behavior. (Prerequisite: PSY 430) Theory and research in goal formation, conformity, power and communication structures, cohesion, and task performance. The emphasis is on the behavior of persons within groups.

437 Advanced Personality. Critical analysis of research in personality with emphasis on the development and testability of major constructs in contemporary research.

439 Advanced Developmental Psychology. (Prerequisite: PSY or EDU 333 or 334) Current research and theories in child development relating to the preschool child, elementary school child, and adolescent. Emphasis on cognitive, language, and social/emotional development.


441 Psychology of Leadership. Current research and theories in organizational psychology relating to leadership, supervision, job performance, and managerial training. Emphasis is on theoretical development and empirical evaluation of constructs in contemporary research.

442 Personnel Psychology. Contemporary methods in the testing, selection, placement, and appraisal of persons in an organizational setting. Emphasis on methodological techniques and legal ramifications on personnel practices.
Psychology of Human Performance. Survey of research and theory on basic psychological processes relevant to the study of man-machine interaction. Topics include human factors design for computer systems, evaluation, and software psychology. Emphasis is on the use of course content in practical settings through projects on the design and evaluation of man-machine systems.


Psychology of Organizational Training. (Prerequisite: PSY 442) Critical analysis of techniques and research pertaining to training and development. Emphasis on traditional training programs and innovations to train the information and service employee.

Psychological Measurement. (Prerequisite: PSY 412) Logical and mathematical principles underlying test construction with emphasis on evaluating the reliability and validity of scores.

Applied Statistical Prediction. (Prerequisite: PSY 412) Applications of statistics and psychological measurement to the problems of predicting human performance. Several computer programs will be used to analyze data.

Behavior Modification. (Prerequisite: PSY 404) Analysis of principles, practices, and research related to the modification of human behavior.

Research Issues in Assessment. Analysis of research and current issues concerning intellectual and personality assessment. (2)

Individual Intelligence Testing I. (Prerequisite: PSY 356) Theories of intelligence and cognitive development. Introduction to the administration of verbal and various non-verbal tests including the Stanford Binet, Wechsler Intelligence Scale for Children and Wechsler Adult Intelligence Scale and the clinical use of these instruments. Materials fee $10.00.

Personality Assessment. (Prerequisite: PSY 481) Administration and scoring of the Rorschach and Thematic Aperception Test and other tests. Evaluation of tests and needed areas of research and development.

Advanced Psychodiagnosics. (Prerequisite: PSY 482) Advanced study of projective techniques and other assessment methods, with emphasis on analysis, interpretation and integration of all pertinent clinical data, and report writing.

Behavioral Assessment. (Prerequisite: PSY 356 or equivalent) Behavioral observation and recording. Self-report measures. Physiological measurement. Evaluation of behavioral measures and areas of research.


Principles of Psychotherapy. (Prerequisites: PSY 476 and 486) Analysis of theoretical approaches to psychotherapy.
489 **Group Psychotherapy.** (Prerequisite: PSY 488) Principles, theories and techniques of in-group psychotherapy. Problems of selection of group members and evaluation of progress. (2 hours)

490 **Understanding and Helping Troubled Children.** Integration of developmental theory, psychopathology, and treatment methods with regard to working with troubled children. This special course is designed to benefit professionals already in child-related fields.

491 **Treatment Methods with Children.** (Prerequisite: PSY 487) Consideration of a variety of treatment approaches used to help alleviate the psychological problems of children with emphasis on play psychotherapy.

492 **Principles of Consultation.** (Prerequisite: PSY 493) The principles and dynamics involved in the various types of consultative relationships. Techniques of consultation with parents, teachers, agencies, physicians and others in regard to problems and deviancy, methods of management and treatment. (2)

493 **Clinical Community Psychology.**

495 **Evaluation and Research in Community Mental Health.**

500 **Professional Ethics and History of Clinical Psychology.** (2)

520 **Minority Issue.** Consideration of minorities as related to clinical psychology. (4)

Seminars numbered 549 through 570 may be taken for credit more than once with the consent of the instructor. Variable credit of one to four quarter hours of credit unless otherwise noted.

549 **Current Issues in Industrial Psychology.** Review and evaluation of current professional and research literature relating to Industrial Psychology. (4)

550 **Seminar in Teaching Psychology.**

551 **Seminar in Experimental Psychology.**

552 **Seminar in Neuropsychology.**

553 **Seminar in Personality Research.**

555 **Seminar in Developmental Psychology.**

556 **Seminar in Social Psychology.**

557 **Seminar in Learning and Cognitive Processes.** (Prerequisite: PSY 404)

558 **Seminar in Advanced Statistics.** (Prerequisite: PSY 412.)

559 **Seminar in Industrial/Organizational Psychology.**

562 **Seminar in Family Therapy.** (Prerequisite: PSY 574.) (4 hours)

564 **Seminar in Clinical Research.** (Prerequisites: PSY 476 and 488.)

566 **Seminar in Psychopathology.**

568 **Seminar in Community Psychology.** Analysis of theories of community and human behaviors from the standpoint of general systems principles. (4 hours)

569 **Seminar in Program Evaluation.** (Prerequisite: PSY 493) Analysis of major research programs dealing with social and mental health problems with emphasis on epidemiological and socio-clinical research methods. (4 hours)
570 Seminar in Psychotherapy Research.

All practicum courses numbered 574 through 583 require the consent of the Director of Clinical Training. Six practica courses must be taken for graduation. Pre-practica should be taken Fall, Winter and Spring Quarters of the student's first year. All practica carry 0 credit hours.

574 Pre-Practicum in Clinical Psychology. May be repeated three times.

577 Practicum in Clinical Assessment. Supervised experience in intake interviewing, psychological evaluation and case conference presentation in a clinic, hospital or community agency setting.

578 Practicum in Clinical Psychology. Supervised experience in diagnostic assessment, intervention planning, psychotherapy and report writing through varied assignments to campus or community agencies.

579 Practicum in Child Clinical Procedures. Supervised practice in the diagnosis and treatment process of the problems of children and adolescents. May be repeated twice.

582 Advanced Practicum in Clinical Psychology.

583 Practicum in Community Mental Health.

584 Practicum in Special Areas in Psychology.

SPECIAL STUDIES

590 Thesis Seminar. (0)


594 Psychological Research. A course involving intensive readings in contemporary psychological literature. (Arranged by prior consultation with the Chairman.)

595 Colloquium. Required of all graduate students. Lectures by psychologists and members of the staff. (No credit.)

596 Internship in Clinical Psychology. (Arranged with consent of Director of Clinical Training.) (No credit.)

597 Master's Thesis Research. Original investigation of a specific research problem. (7 to 4)

598 Master's Candidate Research. (Prerequisite: PSY 597) Open to Master's candidates who have fulfilled all requirements for the degree and who are devoting full time to thesis research and study. (0 hours; tuition equal to one four-hour course.)
599 Dissertation Research. (4 to 12 hours per quarter.)

701 Resident Candidacy Continuation. (Prerequisite: Admission to Candidacy) Students admitted to candidacy for the doctoral degree who have completed all course and dissertation registration requirements but who are regularly using the facilities of the University for study and research are required to be registered each quarter of the academic year until the dissertation and final examination have been completed. Non-credit, $388.00 per quarter.

702 Non-Resident Candidacy Continuation. (Prerequisite: Admission to Candidacy) This registration provides for doctoral candidates who have been admitted to candidacy who are not in residence and need only occasional use of the University facilities, including the libraries. Non-credit, $40 per quarter.
Public Services
(MPS)

Robert M. Heller, Ph.D., Program Director

FACULTY

Professors
Rosemary S. Bannan, Ph.D. .................................................. Loyola University
Edward Ignas, Ed.D. .............................................................. Indiana University
Dominic Parisi, Ph.D. ............................................................ Northwestern University
Joyce Sween, Ph.D. ............................................................... Northwestern University
Deena Weinstein, Ph.D. ......................................................... Purdue University

Associate Professors
Larry Bennett, Ph.D. ............................................................. Rutgers University
Judith Bootcheck, Ph.D. ......................................................... Purdue University
Craze B. DeSantis, Ph.D. ........................................................ University of Chicago
Robert M. Heller, Ph.D. ........................................................ Illinois Institute of Technology
Joan Lakebrink, Ph.D. ........................................................... University of Wisconsin-Madison
Robert Leonardi, Ph.D. ........................................................ University of Illinois, Champaign-Urbana
Robert Rotenberg, Ph.D. ........................................................ University of Massachusetts at Amherst
Charles S. Stevens, Ph.D. ........................................................ Northwestern University
Charles Suchar, Ph.D. ............................................................ Northwestern University
Harry Wray, Ph.D. ............................................................... University of North Carolina at Chapel Hill

Lecturers
Stanley Bakshy, Ph.D. ......................................................... Illinois Institute of Technology
John P. Barrett, M.S.I.R. ......................................................... Loyola University
Robert Cassiani, M.S. ........................................................... Loyola University
Christopher Cohen, M.A., J.D. .............................................. Northwestern University
Joseph Crawford, C.P.A., M.A. ............................................. DePaul University
Louis Goodman, Ph.D. ........................................................ New York University
Margaret T. Hastings, Ph.D. .................................................. Northwestern University
William Hay, M.B.A. ............................................................ DePaul University
PURPOSES

The management of Public Services program has developed interdisciplinary curricula in collaboration with other departments and schools. These collaborative efforts have enhanced the flexibility and applicability of our courses to fit the wide-range of needs of our student body.

The public service areas included in the program are not limited to governmental or not-for-profit agencies, but include all human services, health-related services, professional associations, unions, boards, educational bodies, academic and religious institutions and community agencies, as well as for-profit organizations working in liaison with public service organizations.

The Management of Public Services is committed to

- meet the ongoing educational and training needs of both public service agencies and their personnel, as well as individuals who aspire to enter into or interface with such organizations.
- provide training which will increase the skills and resources already developed by practitioners and mid-careerists in the public services.
- assist the individual to keep current with the state of the art in management and administrative issues, developments, and challenges.
- provide an atmosphere in which the student can become a change agent within the organization and assist with the development of new approaches, plan, methodologies, and ideas.
- direct the preparation of students toward future study or professional employment which will lead to the development of flexible, innovative, and dedicated managers and administrators.

Emphasis is placed on developing individuals so as to increase their value to the agency of which they are a part and to further their personal development as resources in the community.

DEGREE PROGRAMS

The student has available two programs: a master of science in the management of public services and a joint program with the College of Law leading to a master of science in the management of public services and a juris doctor degree in law.
MASTER OF SCIENCE: MANAGEMENT OF PUBLIC SERVICES

Admission Requirements

For full admission, students must have the following:
Bachelor's degree conferred by an accredited institution
Grade point average of at least 2.5 on a scale of 4.0
GRE scores. Not required of students with a graduate degree or its equivalent.
LSAT and GMAT scores are acceptable in certain circumstances.

Pre-program requirements. These pre-program requirements provide the student with the background in accounting, economics, management, and statistics for a successful pursuit of the degree program. Depending on the student's background all or a part of the pre-program courses or their equivalents may be waived by the Program Director.

- **MPS 401** Management Foundations of Administration or equivalent
- **MPS 402** Financial Foundations of Administration or equivalent
- **MPS 403** Economic Foundations of Administration or equivalent
- **MAT 404** Analytical Foundations of Administration or equivalent

Degree Requirements

Courses: successful completion of 52 quarter hours of graduate credit. Included in this requirement are the following courses:

**Core Courses** (28 quarter hours)
- **MPS 500** Functions of the Administrator
- **MPS 503** Executive Decision Making
- **MPS 504** Introduction to Management Sciences
- **MPS 533** Management Planning and Control Systems
- **MPS 553** Advanced Organization Concepts
- **MPS 598** Problems in Management: Graduate Seminar I
- **MPS 599** Research in Management: Graduate Seminar II

**Concentration Courses** (24 quarter hours)

General Concentrations: Students may select courses in either of the following concentrations:
Behavioral Science (BEH) or Management Science (MS) concentration. In the pursuit of the 24 quarter hours, students should have at least two courses in each of these areas.

Specific Concentrations: Students may focus on the following areas of concentration:
- Health Care Administration
- Public Administration
- Community and Urban Development
- Youth Services Administration
Law Enforcement Administration
Financial Administration
Administration of Systems Design

The following curricula have been developed with an interdisciplinary approach: Public Policy with the Department of Political Science; Law Enforcement, Youth Services, and Community with the Department of Sociology; and Human Service with the school of Education. Various other departments have also shared in the development of courses. Refer to the department brochure for specific concentration information.

JOINT PROGRAMS: MANAGEMENT OF PUBLIC SERVICES
AND JURIS DOCTOR

The College of Liberal Arts and Sciences (Management of Public Services Program) and the College of Law have designed joint programs of study which permit the full-time student to obtain the M.S. Degree in the management of public services and the J.D. degree in law at a substantial reduction in time.

Generally, the combined degree programs require enrollment in both the day and evening classes on a full-time coordinated basis according to a designated schedule and sequence. Enrollment in these programs is restricted to highly qualified and motivated students who meet the standards of the joint committee which coordinates these programs.

Admittance into the College of Law and into the College of Liberal Arts Graduate Program does not necessarily guarantee acceptance into the combined degree programs.

Additional information may be obtained on request from either the Program Director, Management of Public Services, or the College of Law.

CERTIFICATION PROGRAM: ADMINISTRATIVE
FOUNDATIONS IN PUBLIC SERVICES

The department also has available a program leading to a certificate in Administrative Foundations in Public Services. This program is developed for mid-careerists who recognize their need to enhance their managerial and administrative skills. The program is conducted on an intensive weekend and/or evening basis.

Admission Requirement

For full admission, students must have
Bachelor's degree conferred by an accredited institution

Certification Requirements

Courses: successful completion at graduate level of the four certificate courses:

MPS 401 Management Foundations of Administration
MPS 402 Financial Foundations of Administration
MPS 403 Economic Foundations of Administration
MPS 404 Analytical Foundations of Administration
Courses

All courses worth four credit hours unless otherwise indicated.

PRE-PROGRAM/CERTIFICATE COURSES

MPS 401 Management Foundations of Administration. Survey of past and emerging organizational theories, including concepts of leadership and management principles. (3 credit hours)

MPS 402 Financial Foundations of Administration. An introduction to the discipline of accounting as applied to not-for-profit organizations. (3 credit hours)

MPS 403 Economic Foundations of Administration. Review of basic economic behavior concepts and principles in understanding the development of public services. (3 credit hours)

MPS 404 Analytical Foundations of Administration. A review of statistical and analytical techniques most frequently utilized in public sector organizations. Topics include descriptive and inferential statistics, hypothesis testing, prediction theory, and correlational techniques. (3 credit hours)

CORE COURSES

500 Functions of the Administrator. (Prerequisite: MPS 401 or equivalent) Advanced treatment of the theory and application of the management process and external elements which impact on these processes, including policy planning, leadership and control.

503 Executive Decision Making. (Prerequisite: MPS 500 or concurrently) Quantitative and non-quantitative approaches to decision making; a case-oriented approach to assess individual, group, and organizational decision-making processes.

504 Introduction to Management Sciences. (Prerequisite: MPS 500) A problem-oriented course utilizing modern techniques in research methodology and management sciences. Topics may include statistical sampling, probability theory, breakeven analysis, linear programming, and project management techniques.

533 Management Planning and Control Systems. (Prerequisite: MPS 401 or equivalent) Concepts underlying public and non-profit finance: management planning and control methods as well as the budgeting models that accomplish these functions. Also preparation for the financial administration sequence.

553 Advanced Organizational Concepts. (Prerequisites: MPS 500 and 503; crossed-listed with Sociology 467) Critical understanding of formal organizations (including their functioning, premises, and consequences) by examining a wide range of concepts, perspectives, activities, and issues concerning organizational life.
598 Problems in Management: Graduate Seminar I. (Prerequisite: minimum 8 courses completed.) Examination of current evaluation techniques to assess issues confronting management. Student presentation is required.

599 Research in Management: Graduate Seminar II. (Sequel to: MPS 598) A formal study is conducted to evaluate specific aspects concerning management and organizations. A research paper is required. (Lab and Binding fee required.)

CONCENTRATION COURSES
(to be taken concurrently with or upon completion of core courses)

506 Management and the Behavioral Sciences. Examination of differences between applied and pure sciences in terms of the basic contributions and concepts. Differences analyzed in terms of their relevance to administration. (BEH)

507 Information Technology. (Prerequisite: MPS 504) Preliminary theoretical understanding of the computer and its applications. Principles of computerization, data base, and management information systems stressed. (Lab fee) (MS)

508 Management Control for Non-Profit Organizations. (Prerequisite: MPS 553) Relationship of accounting information to the management functions of planning and control. Emphasis on management techniques and decision models which aid in the financial planning and control functions. (MS)

509 Budgeting and Program Evaluation. (Prerequisite: MPS 533) Pragmatic approach to resource allocation and budget preparation methods: the preparation and presentation of an actual budget document. (MS)

510 Operations Research. (Prerequisite: MPS 504) Advanced treatment of scientific management and operations research. Techniques include linear and non-linear programming, simulation models, etc. Each technique examined and applied to practical case studies. (Lab fee) (MS)

511 Advanced Statistics. (Prerequisite: undergraduate statistics course and MPS 504) Study of the various sampling distributions, the use of testing hypotheses, and the concept of power of a test, as well as non-parametric methods utilized in solving management problems. Computerized packages will be utilized. (Lab fee) (MS)

513 Human Relations. Focus on human, as opposed to technological, aspects of management. Study of one's own human relations skills and how they apply to life as well as work experiences. (BEH)

515 Public Sector Financial Administration. (Prerequisite: MPS 509 and consent of Director) A budgeting laboratory. Topics include the sources of revenue and the nature of expenditures for governmental, not-for-profit, and other public sector institutions. (MS)

516 Monetary and Debt Management. (Prerequisite: MPS 533) Examination of cash management principles and administration of government debt, the various financing methods, as well as the market for public sector issues. (MS)
517 Administrative Processes and Organizational Structure of Health Care Organizations. A case-study approach emphasizing the interaction of the clinical, administrative, and other components of the health care team, the formulation of policy, and the control and distribution of resources. (BEH)

520 Personnel Theory and Contemporary Practice. General and special managerial functions of the personnel department and its relationship to other organizational functions. Particular emphasis on human resource planning and development. (BEH)

522 Wage and Salary Administration. Topics included are methods of job evaluation for management and non-management positions, appraisal of personnel performance, construction of wage scales, fringe benefits, and related court decisions, as well as development of benefit packages. (BEH)

524 Marketing for Service Organizations. (Prerequisite: MPS 500; cross-listed with MKT 593) This course explores the resources and constraints of not-for-profit service organizations regarding their marketing responsibilities, and discusses the formulation of marketing strategy particularly useful to them. (BEH)

525 Intergroup Relations. Complexities of selected groups and their problems. Consideration of the social and economic adjustments for racial, ethnic, and religious groups, and the current proposals for the reduction of intergroup tensions. Specific areas of interest may include minority groups, equal opportunity employment issues, lobbying and interest groups, as well as labor relations. (BEH)

526 Industrial Psychology. (Cross-listed with PSY 380) Application of the psychological principles of learning, perception, and adjustment to work. Special attention to personnel placement and selection, motivation and morale, training, and introduction to human engineering. (BEH)

527 Human Resource Administration in Health Care Organizations. Analysis of various personnel and industrial relations functions as they affect the human resource component of health care organizations and the role of a human resources department in such organizations. Various current and projected issues are examined. (BEH)

531 Communications for Managers: Current Theory and Practice. Advanced course designed to analyze written and oral communications through lectures, role-playing, and analyses of cases. Topical areas can include communication networks, leadership, conducting evaluations, and conducting business meetings.

537 Health Care Delivery Systems. (Cross-listed with Sociology 437) Examination of various types of delivery systems by practitioners and agencies—public and private—which provide health services. Comparative analysis made of the evolution of health care systems on local, national, and international levels; the effects of social policy in health care delivery systems also included. Emphasis on understanding the system of delivering health care services in their different forms. (BEH)
541 **Determinants of Public Policy.** (Cross-listed with PSC 320) Examination of the process of public policy making. Considers the context which limits the range of possible policy options, and details the structure and policies of the policy process. Case studies of specific public policies used to illustrate how the process works. (BEH)

542 **Policy Analysis.** (Cross-listed with PSC 322) Problems of measuring the impact of public policies. Examination of the commonly used means of evaluating public program impacts, with emphasis placed on their respective strengths and weaknesses. In addition, consideration of the role of policy analysis in the policy making process, and hence the political implications of policy analysis. (MS)

543 **Health Care Policy Issues.** Development of state and national health legislative policy and a survey of the current private, state, and federal policies. Analysis of such major policy areas as private reimbursement, planning access to care, cost containment, manpower development, research, and prevention. (BEH)

544 **Law Enforcement Policy Issues.** Theory, application, and impact on policies in criminal law on police, corrections, and the courts. (BEH)

545 **Policies and Urban Development.** (Cross-listed with Sociology 426) Sequel to MPS 555 (Sociology 425). Community agencies viewed as problem-solving organizations. Concentration on the impact of state and local governments on community organizations and how community organizations influence social policy. (BEH)

546 **Planning, Policy, and Politics.** (Cross-listed with PSC 329) Public planning explored as a particular component of the policy-making process. Examples drawn from the United States as well as from other political systems. Attention directed to particular substantive fields; also discussion of the relationship between planning and the broader dimensions of the particular economy. (BEH)

547 **Social Dimensions of Health Care Management.** Overview of health care services. Services examined in terms of the providers of services (physicians and allied health personnel), the population receiving services and the organizational setting in which care is provided. Discussion of alternatives to traditional health services and review of health insurance mechanism. (BEH)

548 **Bureaucracy in the American Polity.** Bureaucracy viewed as pervasive means of organizing complex activities in the public as well as the private sector; and examined in terms of formal structural characteristics, information, human dynamics, and examined as a decision-making institution. Further, consideration of the relative compatibility of bureaucracy, so defined, with the remaining components of the American political systems. (BEH)

550 **Management of Training and Internal Development.** (Cross-listed with PSY 445) Methods utilized to identify training needs and certain principles necessary to develop and manage in-service training program. Major topics include needs assessment, curriculum design and planning, and general supervision of instruction. (BEH)
551 Law and the Human Services. An understanding of the laws related to fair treatment of personnel, introduction to the variety of social and legal issues involved in the dimension of work. Various topics will be considered. (BEH)

552 Principles and Practices of Supervision. Supervision viewed from a human resources perspective, dealing with motivation, responsibility, and success at work as means to intrinsic satisfaction. (BEH)

554 Urban and Community Analysis. (Cross-listed with Sociology 422) Quantitative analysis of urban issues including social area analysis, patterns of segregation, neighborhood change and other selected topics. (BEH)

555 Strategies of Community Organizations. (Cross-listed with Sociology 425) Strategies and techniques used in the formation and process of community organizations. Primary conceptual emphasis from sociology, but a considerable interdisciplinary content included: application of social science knowledge to bring about social change. (BEH)

556 Law Enforcement and Community Relations. (Cross-listed with Sociology 444) Examination of the policies and practices of law enforcement agencies and personnel and their impact on the communities they serve. (BEH)

558 Human Services Consulting. Focus on a human behavior rationale in consultation work with personnel in various human services agencies and institutions. Use of case studies, role playing and observation of the consultant role. Stress on the facilitation of communication and dynamics on interpersonal relationships. (BEH)

559 Human Services Information Systems. Procedures for the dissemination of economic, occupational, social and educational information channels. Various topics will be considered: economic impact on occupational trends, techniques for conducting surveys, and developing information systems. (BEH)

561 Labor Relations and Government Policy. Examination of legal requirements and constraints which affect collective bargaining process. Emphasis upon the historical background of labor law and on the Supreme Court decisions affecting the application of these laws to labor relations. Review of present public policy regarding labor law and its impact on services. (BEH)

562 Law and Administration of Justice. (Cross-listed with Sociology 443) Analysis of legal systems and their implementation; jurisprudence and its role in the development and change of legal systems; role of the courts and the police as related to community social problems. (BEH)

563 Crime, Delinquency and Systems of Correction. (Cross-listed with Sociology 442) Study of major criminological theories and the application to systems of corrections. Present trends at federal, state, city, and private correctional institutions. (BEH)

564 Institutional Reaction to Deviants. (Cross-listed with Sociology 447) Examination of the social organization of the societal response to individuals labeled as deviant. Acquaints the student with the sociological examination of deviant processing institutions and familiarizes the student with the major conceptual frameworks which explain the functioning of such institutions and which assess the consequences of such processing. (BEH)
565 Youth Services, Health and Welfare. (Cross-listed with Sociology 434) Review of research on various youth problems (e.g., substance, abuse, pregnancy, runaways) and consideration of efforts at amelioration and control. (BEH)

566 Sociology of Youth. (Cross-listed with Sociology 461) Critical analysis of literature on non-delinquent youth; focus on the social contexts within which the transition to adulthood occurs. (BEH)

574 Systems Analysis and Design. First part of a two-course sequence on the basic tools of general systems methodology. Analytical skills and problem-solving ability on a theoretical basis in dealing with systems analysis, managing systems facilities, and basic systems techniques. (MS)

575 Advanced Systems Techniques. (Prerequisite MPS 574) Application of general systems methodology to project planning. A very pragmatic approach taken to develop solutions to various situations. Case studies utilized in developing the student's problem-solving abilities. (MS)

578 Problems in Systems Design and Management. Prepares student to integrate users with the systems functions in understanding organizational constraints as applied to an overall computer system. Emphasis placed on special topics of planning and managing a component of a larger system. Course stands alone from the other systems courses in developing projects plans. (MS)

587 Operations Research for Health Care Facilities. (Prerequisite: MPS 504) Exploration of certain mathematical and statistical models relating to health facilities and services, which pertain to the solution of health care problems in human populations. (MS)

597 Seminar in Health Care: Special Topics. (MS)

SPECIAL STUDIES COURSES

600 Independent Study. (Prerequisites: consent of program director) Special topics chosen for study. A project/practicum report: the culmination of either a study done in a work setting or library-based research. (Variable credit)

601 Internship. Supervised work experience during one or more quarters. Focus on management skills in an organizational setting. This course cannot be taken as part of the elective phase of the program. (Variable credit)

602 Candidacy Continuation. Required of all students who are not registered for regular courses but who occasionally utilize University facilities during completion of course requirements and/or research. Non-credit, $30.00 per quarter.
Rehabilitation Services

(RSA)

William A. Calzaretta, Ph.D., Program Director

FACULTY

Associate Professor
William A. Calzaretta, Ph.D., C.R.C. ............. Northwestern University

Assistant Professor
James E. Bordieri, Ph.D. ......................... Illinois Institute of Technology

Lecturers
Gary Austin, Ph.D. ................................. Northwestern University
James Bitter, Ed.D. ............................... University of Northern Colorado
James Ciecka, Ph.D. ............................... Purdue University
James DeOre, M.S. ................................. DePaul University
Alex DeVience, J.D. ............................... Loyola University
Jerry Dincin, Ph.D. ................................. Northwestern University
Carolyn Eagen, M.S. ............................... DePaul University
Donald Galvin, Ph.D. ............................. University of Michigan
Edwin Giermak, C.A.S. ....................... Northern Illinois University
Peter Griswold, M.A. ............................ Michigan State University
Norman Grunewald, M.S. ..................... DePaul University
William Hay, M.B.A. ............................ DePaul University
Donald Jackson, M.S. ........................... DePaul University
James Lundstrom, M.S. ....................... DePaul University
Gary McCleary, M.B.A. ....................... Sangamon State University
Herman Murov, Ph.D. ............................ New York University
John Newman, Ph.D. ............................. Emory University
Donald Olson, Ph.D. ............................ Northwestern University
Louis Pansino, Ed.D. ........................... University of Illinois
Dominic Parisi, Ph.D. ......................... Northwestern University
PURPOSES

Programs are offered in rehabilitation services to qualified students to provide:
the knowledge and skills required to manage, supervise, and administer the various rehabilitation facilities which exist to develop the vocational and personal competencies of disabled persons;
the training of men and women to meet the standards of professionalism in the field.

Four core areas of concentration provide the foundation necessary to develop well-prepared professionals in the rehabilitation field:
Programmatic: Provision of services to rehabilitate disabled persons.
Resource Utilization: Organization of resources such as staff, board of directors, funding sources, and rehabilitation research for effective management.
Community: Interagency collaboration leading to the development and use of community resources and the formation of rehabilitation facility/agency networks.
Planning: Use of socioeconomic data and current trends in legislative, professional and advocacy areas to plan for effective rehabilitation facility programs, and the professional development of staff within the rehabilitation profession.

PROGRAMS

Certifications
Rehabilitation Facility Administration Psychosocial Rehabilitation

Master of Science
Management of Rehabilitation Services
CERTIFICATION: REHABILITATION FACILITY ADMINISTRATION

May be taken by persons without entering the degree program.
Designed to provide students with a background in accounting, economics, management, and the legal and philosophical fundamentals of rehabilitation.

Admission Requirements
Employment in a related rehabilitation work setting and/or Program Director approval.

Certificate Requirements
Courses (twelve quarter hours)

RSA 402 A&B  Introduction to Rehabilitation Philosophy (3 credit hours)
RSA 403 A&B  Organization and Managerial Foundations (3 credit hours)
RSA 406 A&B  Economic Principles for Social Service and Personnel Administration (3 credit hours)
RSA 407 A&B  Business Law and Accounting - Principles in the Not-For-Profit Organizations (3 credit hours)

Note: A student may request in writing to waive up to six quarter hours of credit, based upon previous academic course work taken within the last six years. The request must be submitted at time of application or at least four weeks prior to the scheduled first class meeting. Official course descriptions from an accredited institution must accompany all requests and official transcripts must be forwarded to the department.

CERTIFICATION: PSYCHOSOCIAL REHABILITATION

May be taken by persons without entering the degree program.
Designed to provide rehabilitation professionals with training in the practice and theory of the psychosocial approaches for psychiatrically disabled persons.
New students seeking careers in this area will be provided with the fundamentals necessary for a successful pursuit of a degree program.

Admission Requirements
Employment in a related rehabilitation work setting and/or Program Director approval.
Certificate Requirements

Courses (twelve quarter hours)

RSA 410 A&B  Psychosocial Rehabilitation Foundations I (6 credit hours)
RSA 412 A&B  Psychosocial Rehabilitation Foundations II (6 credit hours)

MASTER OF SCIENCE: MANAGEMENT OF REHABILITATION SERVICES

Admission Requirements

For full admission, student must have the following:
Bachelor's degree conferred by an accredited institution
Successful completion of the certificate course requirements in Facility Admin-
istration, or their equivalent

Degree Requirements

Courses: 48 quarter hours (core courses), 6 quarter hours (independent study
research courses).

Certificate of Rehabilitation Facility Administration Courses

Core Courses:

RSA 638  Computer Utilization and Introduction to Management
         Sciences in Rehabilitation
RSA 640  Theories and Concepts in Rehabilitation Practice
RSA 641  Management Theories and Concepts
RSA 642  Rehabilitation Programming: Principles and Practices
RSA 643  Managerial Principles and Practices
RSA 644  The Supervision of Programs and Staff
RSA 646  Rehabilitation Clients: The Hidden Disabilities
RSA 647  Research Methods and Statistics in Rehabilitation Administra-
         tion
RSA 648  Rehabilitation Clients: The Self Evident Disabilities
RSA 650  Social Psychology of Rehabilitation Administration
RSA 652  Fiscal and Human Resource Management
RSA 653  Program Evaluation and Funding in Rehabilitation
RSA 655  The General Management of the Rehabilitation Facility
RSA 657  Job Placement Strategies and Technical Communication in
         Rehabilitation
RSA 691  Management Seminar in Advanced Organization Concepts
RSA 692  Rehabilitation Seminar: Emerging Issues and Trends

Note: Degree students, with the written consent of their advisors, may waive one or two of the core courses and replace them with other rehabilitation courses.

Special Studies Courses
RSA 660  Topics in Rehabilitation Research
RSA 661  Selected Topics in Rehabilitation Research
RSA 662  Candidacy Continuation

Master's Project: Completed under the guidance of a departmental faculty advisor

Note: Detailed information on the above Certificate/Degree requirements and program policies is listed in separate departmental brochures. They may be obtained from the department.

SCHEDULES FOR COMPLETING PROGRAMS

Students may choose to complete the certificate or degree programs through either an Intensive or a Day schedule.

Intensive Schedule

This schedule accommodates the educational goals of working students who reside in the Rehabilitation Services Administration Federal Region V.

Off-campus intensive schedules are often available locally and regionally.

A course offered on an intensive schedule covers a 16-week period, but contains only six days of actual class meetings. Students receive a syllabus prior to the class meetings. The first weeks of the quarter are devoted to independent reading and preparation as recommended by the instructor. The class then meets for 2 three-day sessions in Chicago, at the University, or in other off-campus locations locally or regionally.

Typical length of time for completion of a degree program on the intensive schedule is 10 quarters or 2 ½ years. Each course offered on the intensive schedule carries three quarter hours of academic credit and is the full academic equivalent of a 10-week resident course. Entry into intensive schedules (both on and off-campus) is typically in the autumn and spring quarters of the academic year.

Day Schedule

The day schedule offers a six quarter in-residence program designed for full-time students. Entry into the full-time day schedule is annually; typically, classes commence in the autumn quarter.
NON-DEGREE

For non-degree students who wish to increase their knowledge and expertise in the field of rehabilitation, credit for designated courses is available.

Admission Requirement

Bachelor's degree from an accredited institution and/or Program Director approval.

Courses Available

All courses listed below are four hours of credit unless otherwise specified.

RSA 100 Human Potentials Seminar
RSA 611 Family Systems and Disabilities
RSA 612 Gerontological Rehabilitation
RSA 614 Rehabilitation Client Populations
RSA 615 Marketing Strategies in Rehabilitation
RSA 616 Principles and Practices of Private Rehabilitation
RSA 654 The Cornell Management Game (3 credit hours)

Courses

Unless otherwise stated, all courses are three quarter hours.

CERTIFICATE COURSES: REHABILITATION FACILITY ADMINISTRATION

RSA 402 A&B Introduction to Rehabilitation Philosophy. A review of the historical and philosophical foundations of rehabilitation. Emphasis is on the development of societal values, attitudes, and beliefs as applied to disabled individuals. A descriptive overview of the federal/state rehabilitation system is provided.


RSA 406 A&B Economic Principles for Social Services and Personnel Administration. A - An introduction of basic economic behavior concepts and principles in understanding the development of welfare services in general and rehabilitation in particular. B - Personnel Administration - The structure, role and techniques of the personnel organization in recruitment, selection, placement, job analysis and job description are reviewed.
RSA 407 A&B Business Law and Accounting Principles for the Not-For-Profit Organization. A - Business Law - The fundamental principles of law pertaining to business, not-for-profit organizations, unions and government regulations and ethics, are examined and applied to the rehabilitation setting. B - Accounting Principles - Accounting concepts and fundamentals applied to the not-for-profit organization.

Note: The above courses or their equivalent, are required to meet the admission requirements for the master's degree program in the Management of Rehabilitation Services.

CERTIFICATE COURSES: PSYCHOSOCIAL REHABILITATION

RSA 410 A&B Psychosocial Rehabilitation Foundations I. An introduction to theories and concepts of psychosocial rehabilitation. (6 credit hours.)

RSA 412 A&B Psychosocial Rehabilitation Foundations II. A survey of the principles and practices of psychosocial rehabilitation. A pre-practicum designed as an on-site experience is required in this course. (6 credit hours)

DEGREE COURSES:

When prerequisites are stated, an equivalent course taken elsewhere is acceptable upon written consent of a faculty advisor.

RSA 611 Family Systems and Disabilities. A study of systems theory applied to the current practice of identifying and assessing family interactional patterns with disabled family members. (4 credit hours)

RSA 612 Gerontological Rehabilitation. Selected theories of psychosocial aspects of aging. Such concerns as stress reactions to retirement, physical disabilities, impact of reduced economic resources, and other personal-social changes in aging are reviewed. Topics will address the knowledge needed by students concerned with rehabilitation of aging clients in institutional, community, and home settings. (4 credit hours)

RSA 613 Strategies for Job Placement. Designed to prepare rehabilitation personnel in the development of job placement and job readiness programs within the Rehabilitation process. (4 credit hours)

RSA 614 Rehabilitation Client Populations. Principles and practices of rehabilitation programming relative to the care and treatment of special populations. (4 credit hours)

RSA 615 Marketing Strategies in Rehabilitation. This course explores the resources relevant to Rehabilitation programs and not-for-profit organizations in general. The formulation of marketing strategies are discussed. (4 credit hours)

RSA 616 Principles and Practices of Private Rehabilitation. The goals, objectives, methods, and techniques used in private for-profit rehabilitation are studied. (4 credit hours)
RSA 630 Computer Utilization and Introduction to Management Sciences in Rehabilitation. (Prerequisite: RSA 647 or equivalent). The use of the computer in facility administration and the quantitative methods for decision-making in management are explored.

RSA 639 Fiscal and Human Resource Management. (Prerequisite: RSA 407 or equivalent). A - Fiscal Management - the relationship of accounting information to management control, accounting techniques, budgeting, and fiscal administration are examined. B - A seminar with emphasis placed on the human factor in the rehabilitation process. Specifically, behavioral decision making, motivation, accountability, wage and salary administration and labor relations are addressed.

RSA 640 Theories and Concepts of Rehabilitation Practice. (Prerequisite: RSA 402 or equivalent) An examination of the philosophical, behavioral, and cultural foundations of rehabilitation practice.

RSA 641 Management Theories and Concepts. (Prerequisite: RSA 403 or equivalent) A critical review of management theories and the underlying management philosophy. A specific emphasis will be placed upon the consideration of current trends related to the management of an organization's social and community responsibility to disabled persons.

RSA 642 Rehabilitation Programming: Principles and Practices. The goals, objectives, methods, and techniques used in rehabilitation programs are studied.

RSA 643 Managerial Principles and Practices. (Prerequisite: RSA 641 or equivalent) Operation systems, employing the case method; development of analytical skills and problem-solving ability; administrative management operations, concepts, and philosophies are studied.

RSA 644 The Supervision of Programs and Staff. A study of the administrative, programmatic and professional aspects of supervision.

RSA 646 Rehabilitation Clients: The Hidden Disabilities. This course will provide basic medical and psychosocial information about the impact of the hidden disabilities.

RSA 647 Research Methods and Statistics in Rehabilitation Administration. Formulation of empirical questions, basic design, statistical methods, and the utilization of research in rehabilitation will be explored.

RSA 648 Rehabilitation Clients: The Self Evident Disabilities. This course will provide basic medical and psychosocial information about the impact of self-evident disabilities.

RSA 650 Social Psychology of Rehabilitation Administration. Contemporary issues in management and rehabilitation will be examined within the context of human interaction.

RSA 653 Program Evaluation and Funding in Rehabilitation. A study of the methods used in planning and evaluating rehabilitation programs. Fund raising in the not-for-profit sector will be explored.

RSA 654 The Cornell Management Game. A seminar employing the technique of learning by discovery. Computerized experiences focus on the decision-making processes of the rehabilitation facility manager.
RSA 655 The General Management of the Rehabilitation Facility. The problems of marketing, contract procurement, operations, production management, and budgeting within a public sector framework are critically examined.

RSA 657 Job Placement Strategies and Technical Communication in Rehabilitation. A - Principles and practices in programming associated with job placement of disabled individuals are examined. B - Technical Communication in Rehabilitation - Fundamentals of the writing skills applicable by rehabilitation administrators and supervisors.

RSA 691 Management Seminar and Advanced Organization Concepts. Emphasis on analyzing the tasks and problems encountered in managing rehabilitation agencies and facilities. An examination is made of the current issues confronting management.

RSA 692 Rehabilitation Seminar: Emerging Issues and Trend. Identification and examination of emerging trends and issues in the field of Rehabilitation are studied.

SPECIAL STUDIES COURSES

RSA 100 Human Potentials Seminar. This seminar is designed as a structured group process, and focuses on the identification of individual personal resources. To accomplish this, the student is assisted in discovering his or her personal and vocational goals.

RSA 660 Topics in Rehabilitation Research. (Independent Study) A research oriented course which allows the student to work independently under the guidance of the instructor, to review existing literature pertaining to the Management of Rehabilitation Programs and the development of a M.S. project topic.

RSA 661 Selected Topics in Rehabilitation Research. (Independent Study) Continued supervised investigation of the student's identified M.S. project. (Binding fee required.)

RSA 662 Candidacy Continuation. This registration provides for degree-seeking students who have been admitted to candidacy who are not enrolled in a course in a given quarter and need occasional use of the University facilities. Required of all students completing previous course requirements and/or M.S. project research. Non-credit, $30.00 per quarter.
Therese Baker, Ph.D., Chairperson

FACULTY

Professors
Rosemary Bannan, Ph.D. ........................................ Loyola University
Roberta Garner, Ph.D. ........................................... University of Chicago
Joyce Sween, Ph.D. ............................................. Northwestern University
Deena Weinstein, Ph.D. ........................................ Purdue University

Associate Professors
Therese Baker, Ph.D. ........................................... University of Chicago
Judith Bootcheck, Ph.D. ...................................... Purdue University
Grace DeSantis, Ph.D. ......................................... University of Chicago
Kenneth Fidel, Ph.D. .......................................... Washington University
John Koval, Ph.D. ............................................... University of Oregon, Eugene
Charles Stevens, Ph.D. ....................................... Northwestern University
Charles Suchar, Ph.D. ........................................ Northwestern University

Assistant Professor
Robert Rotenberg, Ph.D. .................................... University of Massachusetts at Amherst

Lecturers
Noel Barker, M.A. ........................................... University of Illinois, Urbana
Carol Stocking, Ph.D. ........................................ University of Chicago

Emeritus
Lavinia Raymond, Ph.D. .................................... University of Sao Paulo
PURPOSE

The purpose of the graduate program in Sociology is to enable students to apply the findings of sociology to concrete issues of social policy. The program emphasizes the learning of sociological principles, the strategies and methods of research, and the implications of sociological findings for policy planning. These intellectual and practical skills are oriented toward the needs of individuals involved in social research, evaluative work settings, and policy decision-making and implementation.

A Core Program provides a basic knowledge of issues of social policy, social change, formal organization, and research strategies and modes of analysis. Three specialized areas offer more detailed training in applied sociology: Urban Studies; Law and Society; and Health and Human Services. As an alternative to specialized training, the student may develop a program in general sociology.

Training at the master's level in sociology is applicable to employment in such areas as law enforcement, corrections services, urban planning, public and private administration, health and welfare services, community organizations, and education.

A limited number of assistantships and traineeships are available to graduate students, as well as internships. Additional information is available upon written request to the Chairperson, Department of Sociology.

MASTER OF ARTS: SOCIOLOGY

Admission Requirements

For full admission, students must have the following:
Bachelor's degree

The Department accepts as graduate students only those who show definite promise for completing the requirements for the advanced degree. Preference is given to applicants who have had undergraduate study in social science, who are currently employed in jobs related to the Department areas of specialization, or who have an expressed interest in these specialized areas.

One page written statement describing the applicant's reason for wishing to undertake graduate study in sociology and social policy is required.

Degree Requirements

Courses:

Core Courses: Students must complete a series of courses introducing them to the concepts and the methods of social policy.

Courses for Qualifying Examination:
SOC 402 Issues in Policy Analysis
SOC 403 Social Policy and Social Change
SOC 467 Organizations

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Methods Courses:

**SOC 411** Methods of Policy Analysis and Evaluation

**SOC 412** Program Evaluation; To be completed by those students preparing data analysis projects.

Qualifying Examination: Upon completion of those core courses: SOC 402, SOC 403 and SOC 467, students will take a qualifying examination for continuance in the graduate program.

Courses: Specialized or General Electives: Students must complete 32 hours in courses, selected from specialized areas or from a set of general electives. Students may, in consultation with their advisor, supplement their training by taking additional courses in other departments.

Non-thesis: Two Project Papers: Students who elect not to write a thesis complete two project papers: one, bibliographical in conjunction with a 400-level elective course and one in data analysis to be carried out in SOC 411-412.

Thesis: Prerequisites for enrolling in the thesis research courses (SOC 500 and 501) are successful completion of the core courses and the qualifying examination. Students completing a thesis must take SOC 411, but need not take SOC 412.

Admission to candidacy requires approval of the student’s Thesis Committee.

**Courses**

All courses carry four quarter hours of credit unless otherwise noted.

**ADVANCED UNDERGRADUATE COURSES**

Graduate students may take 300-level undergraduate courses for graduate credit with permission of the Chairperson. A graduate student in an advanced undergraduate course must receive an “A” or “B” to obtain graduate credit.

The Sociology Department offers advanced undergraduate courses in the areas of law and society, urban studies, social services, juvenile justice, and foundations of sociology. Please refer to the Undergraduate Bulletin for the complete listings.

**GRADUATE COURSES**

All courses carry four quarter hours of credit unless otherwise noted.

**Core Courses: Required Prior to Qualifying Examination.**

**402 Issues in Policy Analysis.** Case studies in the areas of human services, law, and community. Examination of the theoretical underpinnings in the formulation of social policies and the implementation of programs.
403 Social Policy and Social Change. Conceptual and theoretical basis for analyzing social policy, planning policy in the larger context of social change.

467 Organizations. A consideration of current problems faced by policy planners in corporate and public sector organizations, as well as selected theoretical and empirical studies related to the administration of programs. (Cross-listed with MPS 553.)

Methods Courses:

411 Methods of Policy Analysis and Evaluation. Evaluation and use of research instrumentation and statistical techniques for policy analysis. (Cross-listed with MPS 598.)

412 Program Evaluation. Policy impact analysis: experimental and quasi-experimental approaches for assessing the consequences of education, social services, criminal corrections, law, welfare reform, urban and business administrative programs; practical and political problems of evaluation research; formative and summative distinctions. Data analysis project completed here. (Cross-listed with MPS 599.)

Sociological Background

240 Introductory Statistics for the Social Sciences. (Prerequisite: MAT 101 or two years of high school math or consent of instructor) Presentation and description of data, contingency table construction and interpretation, introduction to multivariate analysis, correlation and hypothesis testing. This course is desirable for students who have not had a previous statistics course. It does not carry graduate credit.

400 Essential Sociology for Graduate Study. Review of sociological perspectives on social interaction and the organization of societies. The goal of the course work is to provide students with a basic understanding of the language, conceptual frameworks and sub-fields of the discipline of sociology. This course is desirable for graduate students who have not had extensive undergraduate work in sociology. The course counts toward the 36 hours of graduate electives.

401 Sociological Theory: Concepts and Perspectives. Introduction to the major theoretical and conceptual perspectives of sociology and the ways in which they are applied to research and analysis — with an emphasis upon implications for social policy.

Courses in Specialized Areas

Urban Studies

420 Urban Sociology. Comprehensive introduction to advanced level studies in applied and evaluative aspects of urban sociology. This course introduces the student to contemporary urban theory and research and presents an evaluation of selected urban issues.
422 Urban and Community Analysis. Quantitative analysis of urban issues including social area analysis, patterns of segregation, neighborhood change and other selected topics. (Cross-listed with MPS 554.)

423 Urban Cultural Areas. Ethnological approach to urban life stressing the qualitative analysis and evaluation of different types of urban communities, community organizations and urban life styles.

424 The Sociology of Housing. An in-depth approach to a major area of urban problems and policy stressing the use of techniques of analysis and the formulation of social policy and policy analysis.

425 Strategies of Community Organizations. Strategies and techniques used in the formation and process of community organizations. Primary conceptual emphasis from sociology, but a considerable interdisciplinary content included; an application of social science knowledge to bring about social change. (Cross-listed with MPS 555.)

426 Policies and Urban Development. (Sequel to SOC 425.) Community agencies viewed as problem-solving organizations. Concentration on the impact of state and local government on community organizations and how community organizations influence social policy. (Cross-listed with MPS 545.)

Other courses recommended for students in this area include Population Trends, Intergroup Relations, Social Deviation and Collective Behavior.

Health, Education, and Welfare

430 Medical Anthropology. Issues in the health care fields arising from cultural diversity in the clinical context. Topics include culturally-based theories of disease and treatment-expectations, ethnic differences in locating symptoms and responding to pain and problems of intercultural communication.

431 Medical Sociology. Analysis of the social system of health care; practitioners, organizations, patients, and their multiple interrelationships. An evaluation of problems in health care delivery systems. (Cross-listed with MPS 547.)

432 The Sociology of Welfare and Welfare Services. Analysis of the concept of welfare, evaluation of the social organization of welfare and the problems of welfare service systems. The interrelationships between welfare and the family, employment, health and crime are explored.

433 The Sociology of Education. Analysis of educational organizations and their effects—including characteristics of institutional structures, teaching as an occupation, and the relationship between educational attainment and social mobility.

434 Youth Services: Health and Welfare. Review of research on various youth problems (e.g., substance abuse, pregnancy, runaways) and consideration of efforts at amelioration and control. (Cross-listed with MPS 563.)

437 Health Care Delivery Systems. Consideration of the current state of health care delivery in the United States, the growth and projected direction of health care in the future. Implications of national policy on local delivery; cross-national comparisons and economic conditions will be considered. (Cross-listed with MPS 537.)
438 Research Strategies in HEW. Examination of special and general research techniques; an assessment of procedures, strategies, data sources related to evaluative research.

Other courses recommended for students in this area include Sociology of Youth, Socialization, Social Deviance, Sex Roles, and Social Inequality.

Law and Society

440 Law and Social Science. Analysis of the American legal system as an instrument of social control, social change and social reform. The impact of social science research on public policy decisions.

442 Crime, Delinquency and Systems of Correction. Study of major criminological theories and their application to systems of corrections. Present trends at federal, state, city and private correctional institutions. (Cross-listed with MPS 563.)

443 Law and Administration of Justice. Analysis of legal systems and their implementation; jurisprudence and its role in the development and change of legal systems; role of the courts and the police as related to community social problems. (Cross-listed with MPS 562.)

444 Law Enforcement and Community Relations. Examination of the policies and practices of law enforcement agencies and personnel and their impact on the communities they serve. (Cross-listed with MPS 556.)

446 Law Enforcement Policy Issues. Theory, application and impact on policies in criminal law on police, corrections and the courts. (Cross-listed with MPS 544.)

447 Institutional Reaction to Deviants. Examination of the social organization of the societal response to individuals labeled as deviant. Acquaints the student with the sociological examination of deviant processing institutions and familiarizes the student with the major conceptual frameworks which explain the functioning of such institutions and which assess the consequences of such processing. (Cross-listed with MPS 564.)

448 Research Strategies in Law and Society. Techniques used for evaluating agencies, policies and problems of law enforcement, corrections, and legal systems.

Other courses recommended for students in this area include Intergroup Relations, Social Deviation and Collective Behavior.

General Electives

415 Information Systems and Society. Examines the societal impact of information systems and computer technology. A social scientific perspective for comprehending technologically induced social change at the level of the larger social system and in terms of the life styles and careers of individuals in society.

450 Advanced Statistics I. An introduction to sample spaces, random variables, distributions and parametric statistics and sampling. (Cross-listed with PSY 410.)
451 **Advanced Statistics II.** Point estimation procedures are developed for a variety of parameters. Interval estimation and hypothesis testing are compared. Linear regression, correlation, and analysis of variance are studied. (Cross-listed with PSY 411.)

461 **Sociology of Youth.** Critical analysis of literature on non-delinquent youth; focus on the social contexts within which the transition to adulthood occurs. (Cross-listed with MPS 566.)

462 **Socialization.** A synthesis of relevant psychological and sociological perspectives relating to the individual’s acquisition of patterns of behavior and culture in social groups.

463 **Individual in Society.** The influence of group life on personality development, social interaction and social behavior.

464 **Social Inequality.** An analysis of inequalities in power, wealth and prestige with an emphasis on the concept of social class, trends in social mobility and relationships to current social topics such as housing, welfare, and political participation.

465 **Intergroup Relations.** Theoretical perspectives on minority groups emphasizing processes of group formation, patterns of prejudice and discrimination, and an evaluation of methods to reduce prejudice and/or discrimination.

466 **Collective Behavior.** Study of social trends, social movements, communications, and crowd behavior. Emphasis on processes of social change, includes examination of historical and cross-cultural case material.

468 **Social Deviation.** An analysis of the various theoretical positions and findings in the sociology of deviant behavior, emphasis upon such topics as the labeling of deviants, the analysis of deviant careers and patterns of deviant socialization and the roles of agents or agencies of social control.

469 **Population Trends.** An examination of demographic variables — birth, death, and migration, their measurement; current trends and their implications; projections and forecasts.

470 **Sex Roles.** Attention to the growing literature and empirical research on changing patterns in economic, psychological and social outcomes for women and men. Development of bibliographies and analyses of current data on sex differences in social indicators.

471 **Sociology of Knowledge.** An analysis of the social forms of knowledge and the social processes by which individuals acquire this knowledge. The institutional organization and social distribution of knowledge.

472 **Sociology of Religion.** An historical and contemporary analysis of the interrelationship between religion and society. Emphasis upon the sacred-secular and church-sect typologies, new religious movements and religion’s contributions to societal values, beliefs and meaning systems.

490 **Afro-American Culture.** Intended for teachers in order that they may examine the contributions of the black community to American culture; gain a functional understanding of the social, economic and political development of blacks in America; gain an insight into problems created in America because of non-acceptance relationships. (Cross-listed with EDU 450.)
Special Topics in Sociology. Special courses will be offered as students and faculty identify selected topics of common interest.

Internship. Students may be placed with agencies where they will have the opportunity to participate in typical sociological research. Credit may vary but is subject to the limit of eight quarter hours.

Independent Study.

Thesis Research


Thesis Research. The student works independently toward the completion of the thesis.