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Dear Graduate Student:

A warm welcome to graduate study at 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 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 a 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 of 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.
President
Board of Trustees

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ACCREDITATIONS

DePaul University is accredited by:
The American Assembly of Collegiate Schools of Business
The American Psychological Association
The Association of American Law Schools
The National Association of Schools of Music
The National Council for Accreditation of Teacher Education
The National League of Nursing
The North Central Association of Colleges and Secondary Schools

DePaul is on the approved list of:
The American Bar Association
The Illinois Department of Registration and Education
The Illinois Office of Education, State Teacher Certification Board
The National Association for Music Therapy
The State Approving Agency for Veterans Training

DePaul University is a member of:
The American Association of Colleges of Nursing
The American Association of Colleges for Teacher Education
The American Association of Higher Education
The American Association of Theatre for Youth
The American Association of University Women
The American Council on Education
The Association of Catholic Colleges and Universities
The Association of Governing Boards of Universities and Colleges
The Chicagoland Advocates for Signed Theatre
The Consortium of Conservatory Programs
The Council of Graduate Schools
The Illinois Arts Alliance
The International Association of Theatre for Children and Young People
The League of Chicago Theatres
The Midwest Alliance in Nursing
The National Association of Independent Colleges and Universities
The National Catholic Education Association
The National League for Nursing
LOCATIONS

DePaul University has four locations. The Lincoln Park Campus is situated about three miles north of the Chicago Loop in the vicinity of Webster (2200 N), Halsted (800 W) and Racine (1200 W). On this campus the College of Liberal Arts and Sciences, The School of Music, The School of Education, and The Theatre School offer daytime and some evening programs leading to these undergraduate degrees:

Bachelor of Arts
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science
Bachelor of Science in Physical Education

The Loop Campus is located at 25 East Jackson Boulevard, on the corner of Jackson and Wabash. On this campus the College of Commerce, The College of Liberal Arts and Sciences, and The School for New Learning offer programs leading to these degrees:

Bachelor of Arts (Evening)
Bachelor of Science in Commerce (Day and Evening)

The Loop Campus, at the intersection of Jackson Boulevard and Wabash Avenue, houses the general administration of the University, the College of Law, the College of Commerce and the School for New Learning— as well as a library, bookstore, computer facilities, and a chapel.

The O'Hare Campus is located near O'Hare Airport at 3166 River Road, DesPlaines— just north of the intersection of River Road and Devon. The Oak Brook Campus is located at Two Westbrook Corporate Center, Suite 200, in Westchester—on 22nd Street, just east of the I-294 Tollway. The College of Commerce, the College of Liberal Arts and Sciences, The School of Education and The School for New Learning all offer courses at these sites.
LIBRARIES

The DePaul Libraries are divided into five different units: the Lincoln Park Library, the Loop Campus Library, the Law Library, the Oak Brook Campus Library and the O'Hare Campus Library. In the DePaul Libraries, the delivery of information and materials is increasingly linked to computer technologies. The DePaul Libraries are participants in Illinet Online which functions as an online catalog to materials in all the DePaul Libraries and also can be used for subject, author, and title access to the holdings of 300 other Illinois libraries. Another Component of Illinet Online is an online circulation system for the libraries of 28 other colleges and universities in Illinois. It provides online information on the availability of circulation items with the capacity to check them out and have them sent directly to DePaul. A second computer system, OCLC, can be used to locate and obtain materials throughout the United States. In addition, access to information resources in the sciences, social sciences, business, and humanities is available both on CD-ROM (compact disk read-only memory) and online systems.

The combined collection of the DePaul University Libraries includes nearly 528,000 volumes, 121,000 microfilm volumes, over 8,700 current serial subscriptions, and a varied microcomputer software and audiovisual collection. Handbooks, brochures, and bibliographies explaining library services, physical arrangement and collections are available at all five locations.

The Lincoln Park Campus Library supports the College of Liberal Arts and Sciences, the School of Education, the School of Music, and the Theatre School. Areas of particular strength are religion, philosophy, and Irish studies. The library also has a microcomputer with 20 IBM-compatible computers, a media area for using audiovisual materials, an Education Resource Center with materials for elementary and secondary school teaching, and Apple microcomputers. The Verrona Williams Derr Collection of Afro-American studies, an art slide collection, and a collection of music recordings and scores. Rare book collections include the Napoleon Collection, the Dickens Collection, and the Sporting Collection, as well as numerous titles dealing with nineteenth-century literature and book illustration. The University Archives contains various materials documenting the growth and development of DePaul.

The Loop Campus Library primarily contains business materials to support the programs of the College of Commerce but also has core collections of materials in other areas. It has a Career Information Center that provides computer access to, and materials on, career choice, job search techniques, and company information. The Reference Department maintains the industry file and the corporate annual report file. A microfiche collection of annual reports dating back to 1978 and Moody's Manuals starting with 1920 are also available.

The library of the College of Law has an extensive collection of Anglo-American legal materials, and provides both basic and advanced resources needed for study and research in the law school curriculum. The collection includes reports of American federal and state courts; court reports of Great Britain; the codes, constitutions and statutes of all fifty states and American territories; materials on tax law; and legal periodicals. Designated an official depository for government publications, the Law Library provides a comprehensive collection of federal documents.

The Oak Brook and O'Hare Campus Libraries offer an innovative approach to library service by providing access to information using computers and telecommunications. There are no permanent book or magazine collections; Illinet Online or OCLC is used to identify needed books which are then sent to the suburban campuses in a scheduled intra-university shuttle. Journal articles are transmitted from the two main campus libraries by telexfacsimile machines.
ACADEMIC COMPUTER SERVICES

Academic Computer Services (ACS) provides facilities and resources for instruction and research. DePaul's academic network consists of a VAXcluster of two VAX 11/780s, an IBM 4381, a Harris HCX-9, and an AT&T 3B2. Microcomputers are also provided on all campuses to further aid in achieving computer literacy throughout the university community.

The academic computer facilities currently support 408 computer ports and 512 terminal ports of which 144 are dial-in lines. Approximately 200 terminals and 250 microcomputers are available for student use in the following lab facilities.

Administration Center
Terminal Lab
243 S. Wabash, 4th floor 4th floor
Chicago, IL 60604
(312) 341-8336

Microcomputer Lab
Room 208
(312) 341-6226

Lewis Center
Computer Learning Center
25 E. Jackson Boulevard–13th floor
Chicago, IL 60604
(312) 341-8593

Lincoln Park Campus
Schmitt Academic Center
2323 N. Seminary Terminal Lab–
Room 193
Chicago, IL 60614
(312) 341-8342

Microcomputer Lab
Room 472
(312) 341-8051

McGaw Hall
802 W. Belden, Room 145
(312) 341-5208

Oak Brook Campus
Terminal and Micro Labs
Two Westbrook Corporate Center,
Suite 200 Westchester, IL 60153
(312) 562-2020 or (312) 341-8873

O'Hare Campus
Terminal and Micro Labs
3166 River Road
Des Plaines, IL 60018
(312) 296-5344

Students have access to a variety of software applications, languages, and utilities. Word processing, statistical packages, financial modeling, and database management are available for coursework and research. Computers are used extensively in coursework within the traditional computer science curriculum as well as in commerce, law, and the humanities.

Additional services provided by the ACS include quarterly seminar offerings and a microcomputer purchase program. Both services are available to faculty, staff and students. The microcomputer purchase program provides discount purchase arrangements, hardware/software consultation, and end-user training.
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, and information on fellow alumni. For more information, contact the Alumni Relations Office, Administrative Center, 243 South Wabash—7th Floor, Chicago, Illinois 60604 or call (312) 341-8584.

CAMPUS MINISTRY

Campus Ministry is open and available to persons of all faiths; we provide the University community with many and varied opportunities for worship and volunteer service. Retreats, liturgy planning, food and clothing drives, Tailgate Parties, and Charity Dances are just a few of the programs sponsored by Campus Ministry. Offices are located on the second floor of the Harold L. Stuart Center on the Lincoln Park Campus, and downtown at the Lewis Center in Room 1630. Daily and Sunday Masses are offered on both campuses. For information call 341-8515 or 341-6910.

CAREER PLANNING AND PLACEMENT

The University has two offices offering career planning and placement services to graduate students and alumni—providing resources for those exploring career options as well as for those actively involved in a targeted job search. Appointments are available at either the Loop Campus in room 1716 of the Lewis Center, or at the Lincoln Park Campus in room 176 of the Stuart Center.

DePaul’s Career Planning and Placement professionals are committed to helping develop clients’ skill in identifying career opportunities, and seeking out and securing satisfying employment. The tools utilized by the staff and made available to the clients include career and job search seminars, mock interviews, career libraries on both campuses, vocational interest inventories, and individual counseling.

Both full and part-time job leads are available through the Placement Centers. Graduate students seeking a career change are especially encouraged to acquire work experience related to their career objective. Leads for immediate openings are continually listed and updated, and an active on-campus interview program gives students and alumni access to career opportunities.

The Centers have recently developed an innovative program for the registration of full-time job seekers. A computerized data-base, the Applicant Information and Retrieval System (AIRS), allows candidate information to be matched to an employer’s job specifications. Rapid turn-around time has dramatically improved the consideration given candidates referred from DePaul.
COMMUNITY MENTAL HEALTH CENTER/
UNIVERSITY COUNSELING PROGRAM

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

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

The Center is located on the third floor of the Peter F. Byrne Hall, Lincoln Park Campus. For more information, call 341-8292 and ask for the intake worker or Della Corrifrossi, ACSW, 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 Student Affairs Office on the Lincoln Park Campus or the Student Life Office on the Loop Campus.

HOUSING

The Off-Campus Housing Office provides a referral service for available apartments 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 in 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 use throughout the academic year. Monthly scheduling may be obtained through the Athletic Department.
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 the annually published Student Handbook.

GRADES AND CREDITS

All courses carry four quarter hours of credit (2-2/3 semester hours) unless otherwise noted.

The grading system is as follows:

Faculty assigned grades:

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 (Requirements for courses with an "IN" grade must be completed within one calendar year; otherwise the "IN" grade will be converted to an "F").
P Thesis research not completed at end of term

Administrative grades

W Authorized withdrawal
AU Not for credit

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

Application form: Can be picked up in your graduate office.

Degree requirements: You must have successfully completed all of the general and specific degree requirements as listed in departmental or program sections of the bulletin under which you were admitted.

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: Conferred when a student receives a 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 passes the final oral, written examination or Master's papers "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 of $10.00 for each of the minimum number of thesis, dissertation or research papers copies required by your department or program.

Dean's or Director's Letter: Your graduate office will notify you by letter of your confirmation for graduation.

Convocation: Graduation ceremonies are held in June of each year. If you wish to graduate "in absentia," you must request permission in writing from your Dean. Application is for a specific convocation. If you cancel or are ineligible to graduate, you must re-apply for the next convocation.

Diploma: Graduation ceremonies are symbolic. Your diploma will be mailed shortly after the convocation.

Deadlines: Specific dates are established for submission to your graduate office of the completed graduation application and for completion of graduation requirements.

<table>
<thead>
<tr>
<th>Application for Graduation</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>June Convocation</td>
<td>January 27</td>
</tr>
<tr>
<td>October Degree Conferral</td>
<td>June 30</td>
</tr>
<tr>
<td>February Degree Conferral</td>
<td>October 14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Completed Thesis or Dissertation</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>June Convocation</td>
<td>May 12</td>
</tr>
<tr>
<td>October Degree Conferral</td>
<td>September 1</td>
</tr>
<tr>
<td>February Degree Conferral</td>
<td>January 6</td>
</tr>
</tbody>
</table>
Graduate Financial Policies
and Procedures

TUITION AND FEES

DePaul University is a non-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 1988-89 and applicable only to graduate students.

Graduate Student Tuition, per quarter hour:
Liberal Arts and Sciences
- 100-200 series, per hour ........................................... $143.00
- 300-700 series, per hour ........................................... 169.00
- Computer Science courses in 300-600 series, per hour ........ 182.00
Education
- 100-200 series, per hour ........................................... $143.00
- 300-600 series, per hour ........................................... 169.00
School of New Learning
- All courses, per hour ........................................... $169.00
Theatre
- Graduate 1-11 credit hours, per hour ........................... $202.00
- Graduate 12+ credit hour package, per term ................. 2,803.00

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 Times Not Designated ....................................... 20.00
Graduation Fee—Master's Degree ................................ 25.00
Graduation Fee—Doctorate ........................................ 25.00
Doctoral Dissertation Fee ........................................ 40.00
Thesis Binding (Per Copy) ......................................... 10.00
Each Transcript of Credit Fee ..................................... 3.00
Each Returned Check Fee ........................................ 20.00b
Computer User Fee .................................................. 20.00c

a. In addition to regular registration fee.
b. If a student gives the University a check that is returned by the bank upon which it is drawn marked "Not Sufficient Funds;" "Payment Stopped," or "Account Closed," a $20.00 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 second 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 and Discover card are accepted.
Students with any unpaid balance at the end of the 2nd 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
A student wishing to withdraw from a course or courses must report to his or her college office and fill out an Enrollment Change Form stating the reasons which make withdrawal necessary. Failure to notify the academic office (within the current term) of such withdrawal renders the student ineligible for refund.
SIMPLY CEASING TO ATTEND CLASSES OR NOTIFYING THE INSTRUCTOR DOES NOT CONSTITUTE A WITHDRAWAL OF RECORD AND WILL RESULT IN ACADEMIC AS WELL AS FINANCIAL PENALTIES.
Upon processing of the Enrollment Change Form, the tuition charge will be reduced according to the following schedule, where the effective date is:
Through the end of the second full week of classes ...................... 100%
After the second week of classes .............................................. 0%
For courses of four weeks or less but more than two weeks duration: 50% of the tuition will be charged for attendance in the first week, and 100% for any attendance thereafter. For workshops or courses of two weeks or less duration, 100% of the tuition will be charged for any attendance.
All withdrawals will be dated as of the day of the week in which the student signs an Enrollment Change Form in the academic office, and the period of attendance will be computed as the number of weeks from the date of opening class in each term to the termination date shown on the withdrawal slip.

FOREIGN CHECKS
Any foreign checks must be made payable in United States dollars or they will not be accepted by the University.

AUDITED COURSES
Audited courses earn no credit. Tuition and fees are charged at the regular rates and must be paid at the time of registration, and are not refundable. Students may not change status from credit to audit, or vice versa, after the third week of class.
ADDED COURSES

Students will receive a confirmation and revised billing within one week of adding a class. The additional charges are due immediately.

STUDENTS RECEIVING FINANCIAL AID

Students receiving financial aid in the form of scholarships, tuition grants or loans—from Federal Grants, 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 that such proration leaves a balance due from the student, this balance must be paid no later than the end of the 2nd week of the term in order to avoid a Delinquency Fee.

The Guaranteed Loan Program is administered by the Loan Commission and the student's bank. DePaul University assists the student in applying for these funds and does not delay the application process. The process may take as long as twelve weeks. Because the loan is a personal matter between the student and bank, the University does not recognize payment until the loan check is endorsed by the student and applied to his or her account. Delinquency fees apply.

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 or any other school to which they may transfer.

Financial Assistance

Several types of financial aid are available to graduate students through programs administered by the University graduate school departments. These include DePaul University graduate assistantships as well as special awards funded by foundations and corporations.

In addition, the DePaul Financial Aid Office administers a variety of loan and work programs for which graduate students are eligible to apply.

LOANS

Perkins (National Direct Student) Loans. This is a federally subsidized program that makes loans to students with demonstrated need. The awards range in value from $300 to $2,250 per year. Students may borrow a maximum of $9,000 as undergraduates. (Additional funds may be borrowed for graduate study up to a maximum of $18,000.) The interest rate on this loan currently is 5%. No interest payment or principal payments are due until the student is no longer enrolled for at least six months. If you are eligible for this loan, it will be included as part of your financial aid package. Please refer to the section on "How to Apply" for application requirements.
Guaranteed Student Loan. This program enables eligible students to borrow a loan at 8% from a bank, credit union, savings and loan association or other participating lenders who are willing to make the loan. The loan is guaranteed by a State or private non-profit agency.

Beginning with the 1987-88 academic year, ALL students must demonstrate need for this loan. Forms, which must be completed by the student before the loan can be processed, are available in the Financial Aid Office.

Graduate and professional students may borrow up to $7,500 per academic level. The aggregate limit for all graduate and professional students is $54,750, including undergraduate borrowing.

Lenders are authorized to charge student borrowers an origination fee of 5% of the principal of the loan. The guarantee agency may also charge an insurance premium. As a result, the actual loan disbursement will be less than the amount for which the loan was approved. However, repayment of the total approved amount is required. Please check with the Financial Aid Office for application instructions.

Supplemental Loan for Student (SLS) (Formerly ALAS) Students who are not eligible to borrow under either of the loan programs described, may be eligible to borrow under the Supplemental Loan for Students (SLS). If you are a student who does not receive support of any kind from your parents, and wish to consider this loan program, please contact the Financial Aid Office to determine your eligibility. This loan carries a maximum interest rate of 12% and repayment begins 45 days after the loan is received. Students may borrow $4,000 from this program each year. Please check with the Financial Aid Office for application instructions.

Alternate Financing Resources. Other sources of loan funding are made available through private agencies for those who feel their needs have not been met sufficiently or those who are found to be ineligible for other types of aid.

In addition, DePaul offers an installment payment plan through the EFI Fund Management Program. This is a monthly payment program which allows students or parents to budget the cost of attendance including tuition and fees and on-campus room and board charges.

PARTTIME EMPLOYMENT

College Work Study is federally funded. Through this program, student's salaries are paid jointly by federal funds and by the employer--either DePaul or a specially designated non-profit or government agency.

Student Service Employment takes the form of on-campus work with the full salary paid by DePaul. Any student wishing to work on campus may be eligible under this program as long as they are not receiving other need based aid that would be affected by such earnings. If you would like to work on campus, check with the Financial Aid Office to see if you are eligible.

HOW TO APPLY

For more information about these financial programs, or to apply for any programs, contact DePaul University's Financial Aid Office, 25 E. Jackson Blvd., Chicago IL 60604 Telephone (312) 341-8091.

In order to receive priority consideration for 1989-90, NEW students must complete their financial aid by the Financial Aid Office by April 22, 1989.
ASSISTANTSHIPS, FOUNDATION AND CORPORATE AWARDS

The following programs are administered by individual departments and programs. Application should be made to the chairperson of the department or program director for the program you plan to enter.

New applicants must have all their credentials (completed application form, admission fee, duplicate copies of transcripts and letters of recommendation) on file in the appropriate graduate office no later than the February 15 prior to Autumn Quarter admission.

Announcement of Graduate Assistantships is generally made by April 15. Assistantships must be accepted or declined in writing, by June 15.

University 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 80 assistantships were awarded (both full and partial). The stipends range from $4,000 to $5,000. Students may be offered a tuition waiver.

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

Traineeships

Mental Health Traineeships. Full-time, degree seeking students in clinical psychology are eligible to apply after they have completed at least three quarters of graduate work. As trainees, students are assigned to the University Mental Health Center on a half-time basis. Application should be made to the Director of the Mental Health Center.

Public Health Service Traineeships. A number of these 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.

Arthur J. Schmitt Graduate Assistant Awards. Ten awards for exceptionally outstanding candidates are allocated to the University's two doctorate granting departments - Philosophy and Psychology. Each award, up to a maximum of a $5,000 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.

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.
ADMINISTRATION
Richard J. Meister, Ph.D.
Dean
Robert E. Brewer, Ph.D.
Associate Dean
Carol Goodman-Jackson
Graduate Admissions Coordinator
Gina Faulk
Admissions Assistant

PHILOSOPHY

DEGREE PROGRAMS

ADMISSION

ACADEMIC DEPARTMENTS AND PROGRAMS
Biological Sciences
Chemistry
Computer Science
Economics
English
History
Interdisciplinary Studies
Liberal Studies
Mathematical Sciences
Nursing
Philosophy
Physics
Psychology
Public Services
Rehabilitation Services
Sociology
College of Liberal Arts and Sciences

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 to meet its need for educated individuals willing to be of service to others.

Richard J. Meister, Ph.D., Dean
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, 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 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 the policy governing registration in the University, in each of the quarters of the academic year until the degree requirements have been completed may result in dismissal from the doctorate program. 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 in 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.

Full Degree-Seeking Status

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 LA & S 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.

Conditional 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 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 LA & S 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 LA & S 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 LAS Graduate Office, DePaul University, 2323 North Seminary, Chicago, Illinois 60614 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 LAS Graduate 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 application, should request the Registrar to forward two official transcripts to the LAS Graduate Office, a written recommendation for admission from the appropriate chairperson or program director, and written certification by the appropriate Undergraduate Dean of the seniors 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 LASS 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, you must complete an application for Readmission.

INTERNATIONAL STUDENTS

Initially, all students educated outside the United States and its possessions should request general admission information and application forms from:
Graduate Admissions
Liberal Arts and Sciences
2323 North Seminary Avenue
Chicago, IL 60614 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 LASS Graduate Office, DePaul University, 2323 North Seminary, Chicago, Illinois 60614 or by calling (312) 341-8370. 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 LASS Graduate 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:

<table>
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<tr>
<th>Initial Enrollment</th>
<th>Deadline</th>
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<tr>
<td>Autumn Quarter</td>
<td>June 4</td>
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<tr>
<td>Winter Quarter</td>
<td>October 1</td>
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<td>Spring Quarter</td>
<td>January 2</td>
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<tr>
<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, but not more than four calendar years, you must file a readmission form with the LA&S Office. (If more than four years have elapsed since you have been in attendance, you must file a new application.) The form must be submitted at least two 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.

Registration Procedures

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 Graduate Liberal Arts and Sciences 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 ensure 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 Graduate 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.)

Mail Registration. Schedules for current course offerings may be picked up in the LA&S offices on either campus. 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 Graduate Office.
**Registration in Courses in Other Colleges or 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 LAS Loop Office for the necessary approval to process the forms.

**Residence Registration.** Whether in residence or not, all admitted graduate students, masters' 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.

**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 an authorized enrollment change form or registration 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.
Biological Sciences

FACULTY
Sidney L. Beck, Ph.D., Professor and Chairman .............. Brown University
Robert A. Anderson, Ph.D., Associate Professor ......... University of Arkansas
John R. Cortelyou, C.M., Ph.D., Professor ............... Northwestern University
Lester Fischer, D.V.M.,
Adjunct Associate Professor (Lincoln Park Zoo) University of Illinois
Danute S. Jurus, Ph.D., Associate Professor .............. Marquette University
Leigh A. Maginniss, Ph.D., Assistant Professor .......... University of Hawaii
Dolores J. McWhinnie, Ph.D., Associate Professor ....... Marquette University
Mary A. Murray, Ph.D., Associate Professor Emeritus .... University of Chicago
Robert L. Novak, Ph.D., Associate Professor
(Joint appointment with Chemistry) ........... University of Delaware
Daniel G. Oldfield, Ph.D., Associate Professor Emeritus .... University of Chicago
Robert C. Thommes, Ph.D., Professor Emeritus .......... Northwestern University
James E. Woods, Ph.D.,
Professor Emeritus .......... Stritch School of Medicine, Loyola University

PURPOSES
The Department offers a program of advanced study which will enable qualified students to earn a degree at the master's level.

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 degree program offered,
• opportunities for research leading to the thesis in accord with the student's 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 level,
• improvement in ability to synthesize, interpret, and conceptualize biological information consistent with achievement of the master's degree,
• 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 attitu-
DEGREE PROGRAM

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 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.

MASTER OF SCIENCE BIOLOGICAL SCIENCES

Admission Requirements

For full admission, students will generally 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 2.7 on a scale of 4.

Degree Requirements

Courses: a minimum of 36 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, Computer Science 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 expected 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 third quarter
of the student's first full year.
Participation in undergraduate laboratory instruction and/or research assisting: mini-
imum 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 course-
work, and basic biological concepts.

Courses

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

ADVANCED UNDERGRADUATE COURSES

300  Psychobiology. 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-only (4).

309  Plant Physiology. Functional and developmental aspects of plants, espe-
      cially of vascular autotrophs. Lecture-Laboratory (4). Laboratory Fee $20.00.

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-
      Laboratory (4). Laboratory Fee $20.00.

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.

330  Developmental Biology. Developmental phenomena of animals includ-
      ing gametogenesis, fertilization, cleavage, organogenesis, metamorphosis
      and regeneration. Lecture-Laboratory (4). Laboratory Fee $20.00.

335  Concepts in Evolution. Study of continuity, change, and diversity in the
      animal kingdom. Lecture Only (4).
GRADUATE COURSES

400  Discussions of Selected Topics in Biology. (2).

401  Independent Study. Experimental 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.

405  Biometry. The design and analysis of experiments in the Biological Sciences, and presentation by the student of analyses of published and/or unpublished data. Laboratory will consist of computer assisted data reduction (4). Laboratory Fee $25.00.

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

412  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).

416  Phycology. Introduction to algae with emphasis on freshwater forms: taxonomy, morphology, ultrastructure, physiology, life histories. Lecture-Laboratory (4). Laboratory Fee $25.00.

417  Aquatic Biology. The study of physical, chemical, and biological phenomena in freshwater environments. Lecture-Laboratory (4). Laboratory Fee $25.00.


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

450  Problems in Cell Biology. Analysis of basic contemporary problems in cellular morphology and physiology, with emphasis on the regulation of cell cycle processes by organelle interactions Seminar (4).

469  Developmental Toxicology. The toxic effects of exogenous chemicals, especially on the developing mammalian organism including the human. Laboratory project in experimental teratology. Lecture-Laboratory (4). Laboratory Fee $25.00.

471  Immunobiology. Basic factors governing immune phenomena and antigen-antibody reactions. Lecture-Laboratory (4). Laboratory Fee $25.00.

Special Course for Graduate Laboratory Teaching Assistants

495  **Practicum in Teaching Biology.** Experience with various teaching methods and research laboratory methods in Biology. Consideration of such topics as laboratory safety, handling of radioactive chemicals, instrument and equipment use, living organisms, etc. Autumn quarter only.

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.
FACULTY
Avrom A. Blumberg, Ph.D., Professor and Chairman .............. Yale University
Sharf U. Ahmed, Ph.D., Assistant Professor .................. Auburn University
Juris A. Anyas, Ph.D., Associate Professor ............. Illinois Institute of Technology
Fred W. Breitbeil, Ill., Ph.D., Professor .................... University of Cincinnati
Sanat K. Dhar, Ph.D., Professor ................................. Wayne State University
Sara Steck Melford, Ph.D., Associate Professor .... Northwestern University
Edwin F. Meyer, Ph.D., Professor ............................... Northwestern University
Thomas J. Murphy, Ph.D., Professor ............................ Iowa State University
Robert L. Novak, Ph.D., Associate Professor (Joint Appointment
  with Biological Sciences) ........................................ University of Delaware
William R. Pasterczyk, Ph.D.,
  Professor Emeritus ........ Loyola University, Stritch School of Medicine
Franklin S. Prout, Ph.D., Professor Emeritus ................. Vanderbilt University

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.
Inorganic Chemistry: one upper-level course.
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 432 or 434 Polymer Synthesis or Physical Chemistry of Poly-
mers or Polymer Characterization
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 422, 424 Advanced Inorganic Chemistry I, II
- CHE 430, 432 or 434 Polymer Synthesis or Physical Chemistry of Polymers or Polymer Characterization.
- 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 Experimental Biochemistry I

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). Fourteen 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.

**Coatings Technology: Nonthesis**

This program, which has been set up with the cooperation of the Chicago Society for Coatings Technology, is designed to provide students with the skills necessary for work in research and development in the coatings field. Since coatings systems are complex combinations of polymers, pigments and other chemicals, the course of study involves most branches of chemistry including organic, polymer, physical, inorganic, and analytical chemistry.

Courses: a minimum of 44 quarter hours, including any five from this set of six (substitutions, with other 300 or 400 level chemistry courses, may be made with permission of chairman):
- CHE 422, 424 Advanced Inorganic Chemistry I, II
- CHE 450, 452 Advanced Organic Chemistry I, II
- CHE 470, 472 Advanced Physical Chemistry I, II
and all of the following:
CHE 430 Polymer Synthesis
CHE 432 Physical Chemistry of Polymers
CHE 434 Polymer Characterization
CHE 460 Coatings Technology I
CHE 461 Coating Technology Laboratory I
CHE 462 Coatings Technology II
CHE 463 Coatings Technology Laboratory II.

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 113) Offered: Autumn.
211 Physical Chemistry II. (Prerequisite: CHE 210) 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 of even-numbered years.
267 Water 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 179) Offered: Spring of odd-numbered years.

Courses

All of the following courses are held in the Michael J. O'Connell Center, 1526 West Belden Avenue or the Arthur J. Schnitt 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: Spring.
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 of odd-numbered years.
342 Biochemistry II. (Prerequisite: CHE 340.) Offered: Winter of even-numbered years.
Experimental Biochemistry II. (Prerequisite: CHE 341; 261 or consent.) Offered: By Arrangement (2).

Spectral Interpretation. (Prerequisite: CHE 125 or 175; 261 or consent.) Offered: Spring.

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 taken twice in the field of polymers, transport phenomena, etc.

Advanced Chemical Techniques. (Prerequisite: Permission of Chairman.) This is a laboratory course which may be in the following areas: analytical, biochemistry, inorganic, organic, physical, or polymer chemistry. This course may be repeated for credit if topic is different. Offered: By arrangement.

Independent Study.

GRADUATE COURSES

Advanced Inorganic Chemistry I. (Prerequisites: CHE 312 and 321 or consent of instructor.) Offered: Winter of even-numbered years.

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

Bioinorganic Chemistry. (Prerequisite: CHE 422.) Offered: By arrangement.

Polymer Synthesis. (Prerequisite: CHE 175 or 125 or equivalent.) Offered: Spring 1988, 1990.

Physical Chemistry of Polymers. (Prerequisite: CHE 215 or equivalent.) Offered: Spring 1989, 1991.

Polymer Characterization. (Prerequisite: CHE 215 or equivalent.) Offered: Autumn 1988, 1990.

Biochemistry III. (Prerequisite: CHE 342.) Offered: Spring of even-numbered years.

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

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

Coatings Technology I. (Prerequisite: CHE 175 or 125 and 215 or equivalent.) Offered: Spring 1989, 1991.

Coatings Technology Laboratory I. (Prerequisite: CHE 175 or 125, and 215, or equivalents.) Offered: Every year (2 quarter hours).

Coatings Technology II. (Prerequisite: CHE 175 or 125; 215 or equivalent; and CHE 430, or permission of instructor.) Offered: Fall 1989, 1991.

Coatings Technology Laboratory II. (Prerequisite: CHE 175 or 125 and 215 or equivalent.) Offered: Every year (2 quarter hours).

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

Advanced Physical Chemistry II. Kinetics. (Prerequisite: CHE 215.) Offered: Winter of odd-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, polymer properties, coatings, sampling methods, design of experiments, etc. This course may be repeated if the topics are different. By arrangement.

490  **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

FACULTY
Helmut Epp, Ph.D., Associate Professor and Chairman ........... Northwestern University
L. Edward Allemand, Ph.D., Professor ........... University of Louvain
Gary Andrus, Ph.D., Associate Professor ........... Wayne State University
Ronald Benjamin, M.S., Adjunct Associate Professor ........... DePaul University
Dale Buchholz, M.S., Lecturer ........... DePaul University
Espiridion Celis, M.S., Instructor ........... DePaul University
Joseph Chan, Ph.D., Lecturer ........... University of Illinois, Chicago
Susy S. Chan, Ph.D., Assistant Professor ........... Syracuse University
Olivia Chang, Ph.D., Assistant Professor ........... Northwestern University
Hon-Wing Cheng, M.S., Instructor ........... Chinese University of Hong Kong
I-Ping Chu, Ph.D., Assistant Professor ........... S.U.N.Y. at Stony Brook
Peter Chu, Ph.D., Assistant Professor ........... McGill University
Lawrence Driblin, Ph.D., Lecturer ........... Illinois Institute of Technology
Br. Michael Driscoll, M.S., Instructor ........... Notre Dame University
Clark Elliott, M.M., Instructor ........... DePaul University
Robert James Fisher, Ph.D., Associate Professor ........... Harvard University
Bing Huen Foo, Ph.D., Assistant Professor ........... University of Illinois, Chicago
Gerald Gordon, Ph.D., Associate Professor ........... University of California, Berkeley
Henry Harr, Ph.D., Assistant Professor ........... Illinois Institute of Technology
James Janossy, M.S., Instructor ........... California State University
Richard Johnstone, Ph.D., Professor ........... University of Oregon
Steve Jost, Ph.D., Assistant Professor ........... Northwestern University
Waldo Kabat, Ph.D., Associate Professor ........... Illinois Institute of Technology
Martin Kalin, Ph.D., Associate Professor ........... Northwestern University
George Knaf, Ph.D., Associate Professor ........... Northwestern University
Warren Krueger, Ph.D., Associate Professor ........... University of Wisconsin
Glenn Lancaster, Ph.D., Associate Professor ........... University of California, Irvine
Mira Latozink, M.S., Instructor ........... DePaul University
Kam-Chan Lo, Ph.D., Lecturer ........... University of Nice
Peter Logothetis, M.B.A., Lecturer ........... DePaul University
David Miller, Ph.D., Associate Professor ........... University of Chicago
Rosaliee Nerheim, Ph.D., Assistant Professor ........... Indiana University
Robert Nordstrom, Ph.D., Assistant Professor ........... University of California, Berkeley
Jessie Pinkham, Ph.D., Assistant Professor ........... Harvard University
Stephen Samuels, M.A., Lecturer ........... DePaul University
Edward Wegryn, J.D., Lecturer ........... Loyola University
Jacek Witaszek, Ph.D., Assistant Professor ........... Warsaw University
Boris Zibinsk, Ph.D., Adjunct Associate Professor ........... 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, telecommunication systems, data analysis, telecommunications management, software engineering, and management information systems. 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.

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PROGRAMS

The graduate division offers degree programs in Computer Science, Information Systems, Telecommunication Systems, Management Information Systems and a non-degree program in Professional Development. All four degree programs offer advanced, comprehensive training in various computing fields; their 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 computing professionals and can be adapted easily to fit specific interests and needs. For more information, students should contact the Institute for Professional Development at 341-6282.

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 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—COMPUTER SCIENCE

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).
- Counseling session with a graduate counselor.
- A grade of "B" or better in the prerequisite phase courses.
- A course in assembly language (with a grade of B or better) or equivalent work experience.

PREREQUISITE PHASE COURSE REQUIREMENTS

The following courses are required as part of the Prerequisite Phase. Those students with extensive coursework and/or experience in the computer science field may take an equivalency exam, the Graduate Assessment Exam (GAE), for the courses listed below. The exam is offered at the beginning of each quarter. Applications for the exam must be received at least two weeks before the exam. A late fee will be charged for applications after this date. Exam dates, application forms and a detailed study guide are available from the department (phone 312/341-8381). For more information on this exam, contact a graduate advisor.
GRADUATE ASSESSMENT PREREQUISITES

Programming skills in two languages. A knowledge of two high-level programming languages is required. At least one must be chosen from C, 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 C will be assumed in many graduate courses. ADA is recommended for students choosing the Data Analysis concentration.)

Suggested courses are:
- **CSC 203** COBOL Programming
- **CSC 205** FORTRAN
- **CSC 210** PL/I Programming
- **CSC 215** Introduction to Programming Using C
- **CSC 220** Programming in PASCAL
- **CSC 225** C Language for Programmers
- **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 (Prerequisite: CSC 225)

File structures and file processing. Suggested courses is either:
- **CSC 342** File Processing and Data Management (prerequisite CSC 311 or CSC 410)

Discrete Mathematics. A suggested course is:
- **MAT 140** Discrete Mathematics

OTHER PREREQUISITES

The following competencies are required as part of the Prerequisite Phase. Equivalency exams are not offered for the following courses. Students with related coursework and/or experience in these areas should consult with a graduate advisor.

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. Only one course is required. (Note: Assembly Language is not required for students choosing the Data Analysis concentration, see Software Engineering below.)

Suggested courses are:
- **CSC 312** Assembly Language and Machine Organization
  OR
- **CSC 344** IBM Assembly Language

Quantitative Methods. The quantitative methods requirements are met by having taken courses equivalent to the following:
- **MAT 145** Calculus (or MAT 150-151)
- **CSC 323** Data Analysis with SAS
DEGREE REQUIREMENTS

CORE KNOWLEDGE PHASE—COMPUTER SCIENCE

Students must successfully complete all Graduate Assessment Prerequisites before taking any Core Knowledge Phase courses.

Successful completion of the Core Knowledge Phase in Computer Science consists of:

• Completion of Core Knowledge Phase Courses
• Passing the Core Knowledge Examination

Conditionally admitted students will receive credit for at most three graduate courses completed prior to successful completion of the Prerequisite Phase.

The Core Knowledge Phase courses for Artificial Intelligence, Standard Computer Science, and Data Communication are:

CSC 420 Discrete Structures
CSC 442 Data Structures
CSC 445 Computer Architecture
CSC 446 Operating Systems
CSC 491 Design and Analysis of Algorithms

The Core Knowledge Phase courses for Data Analysis are:

CSC 420 Discrete Structures
CSC 423 Data Analysis and Regression
CSC 442 Data Structures
CSC 446 Operating Systems
CSC 449 Database Technologies

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. The exam is offered in the Autumn and Spring quarters.

Students are allowed at most two attempts at this examination. Two failures result in dismissal from the graduate program. Call the department at (312) 341-8381 for further details on this examination.

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

ADVANCED PHASE—COMPUTER SCIENCE

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 receive credit for Advanced Phase courses only after successful completion of the Prerequisite Phase. 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 13 courses (52 hours) beyond the Prerequisite Phase and after receiving full degree-seeking admission.

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 480  Artificial Intelligence
CSC 580  Artificial Intelligence Programming
CSC 585  Knowledge Representation
CSC 696  Master's Project
Two 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
CSC 586  Advanced Artificial Intelligence Programming
CSC 587  Cognitive Psychology with Computer Applications
Two elective courses (see the Elective Course Restrictions Section below).

Standard Computer Science Concentration

Concentration Four of the following courses including at least one 500 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 493  Formal Grammars and Automata Theory
CSC 520  Advanced Discrete Structures
CSC 535  Formal Semantics of Programming Languages
CSC 545  Advanced Computer Organization
CSC 546  Operating Systems Design
CSC 548  Advanced Compiler Design
CSC 591  Advanced Topics in Algorithms
CSC 696  Master's Project
CSC 698  Master's Thesis

Four elective courses (see the Elective Course Restriction Section below).
Data Communications Concentration

Four of the following including at least one 500 level course.
CSC 452 Computer and Information Systems Modeling
CSC 462 Data Communications
CSC 463 Computer Networks
CSC 489 Queuing Theory with Computer Applications
CSC 561 Distributed Processing
CSC 562 Computer Communications Network Design and Analysis
CSC 563 Protocols and Techniques for Data Networks
CSC 564 Local Area Networks
CSC 696 Master's Project
CSC 698 Master's Thesis

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

Data Analysis Concentration

Two of the following:
CSC 451 Database Design
CSC 459 File Management and Organization
CSC 462 Data Communications
CSC 465 Software Engineering I
CSC 466 Software Engineering II
CSC 469 Introduction to Computer Graphics
CSC 474 Decision Support Systems
CSC 480 Artificial Intelligence
CSC 491 Design and Analysis of Algorithms
CSC 549 Advanced Database Technologies

Two of the following:
CSC 424 Advanced Data Analysis
CSC 432 Computer and Information Systems Modeling
CSC 467 Software Reliability
CSC 468 Software Measurement
CSC 481 Pattern Recognition and Machine Perception
CSC 489 Queuing Theory with Computer Applications
CSC 498 Digital Signal Processing
CSC 584 Computer Vision
CSC 598 Topics in Data Analysis
ECO 512 Applied Time Series and Forecasting

One course from either of the above listings or
CSC 590 Graduate Seminar or
CSC 696 Master's Project.

Three elective courses
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 are those Computer Science courses in the 400-599 range. Students may 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 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. An application can be obtained from the department.

Courses suggested for the Prerequisite Phase never count for elective credit. (This includes 500 level GSB courses.) 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 of at least 2.50 (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 may change to grades of F.
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 prepares student 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—INFORMATION SYSTEMS

All applicants who satisfy general graduate college admission requirements initially receive conditional admittance and may them pursue a degree 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 grade of "B" or better in the Prerequisite Phase courses
• A course in assembly language (with a grade of "B" or better) or equivalent work experience

PREREQUISITE PHASE COURSE REQUIREMENTS

The following courses are required as part of the Prerequisite Phase. Those students with extensive coursework and/or experience in the computer science field may take an equivalency exam, the Graduate Assessment Exam (GAE), for the courses listed below.

The exam is offered at the beginning of each quarter. Applications for the exam must be received at least two weeks before the exam. A late fee will be charged for applications after this date. Exam dates, application forms and a detailed study guide are available from the department (phone 312/341-8381). For more information on this exam, contact a graduate advisor.

GRADUATE ASSESSMENT PREREQUISITES

Programming skills in two languages. A knowledge of two high-level computer languages is required. At least one must be chosen from C, PASCAL, or PL/I. Students who choose the Standard Information Systems concentration must qualify in COBOL. Students who choose the Software Engineering concentration must qualify in Ada. (Note that a reading knowledge of C will be assumed in many graduate courses.)

Suggested courses are:

- **CSC 203** COBOL Programming
- **CSC 210** PL/I Programming
- **CSC 215** Introduction to Structured Programming Using C
- **CSC 220** Programming in PASCAL
- **CSC 225** C Language for Programmers
- **CSC 230** Programming in ADA
**Principles of Computer Science.** Suggested courses are either the undergraduate two quarter sequence:

**CSC 310-311** Principles of Computer Science I-II

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

**CSC 410** Principles of Computer Science (Prerequisite: CSC 225)

**File structures and file processing.** (Required for the Standard Information Systems concentration only) A suggested course is:

**CSC 204** Advanced Topics in COBOL (prerequisite CSC 203)

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

**MAT 140** Discrete Mathematics

**OTHER PREREQUISITES**

The following competencies are required as part of the Prerequisite Phase. Equivalency exams are not offered for the following courses. Students with related coursework and/or experience in these areas should consult with a graduate advisor.

**Systems Analysis.** Students in the Standard Information Systems concentration take the following course:

**CSC 375** Information Systems Analysis and Design

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

**MAT 145** Calculus (or MAT 150-151)

**CSC 323** Data Analysis with SAS I

**Accounting.** (Required for the Standard Information Systems concentration only)

A suggested course is:

**GSB 204** Financial Accounting (or both ACC 101 and ACC 103)

**Software Development.** Students who choose the Software Engineering concentration must have 2 years of documented work experience in the development of large-scale software systems. One year of experience is sufficient to gain full admission to the graduate program, however, students will not be allowed to take the Core Knowledge examination until they have documented a full 2 years of experience.

**DEGREE REQUIREMENTS:**

The requirements for the Core Knowledge and Advanced Phases are presented below:
CORE KNOWLEDGE PHASE—INFORMATION SYSTEMS

Successful completion of the Core Knowledge Phase in Information Systems consists of:

- Completion of Core Knowledge Phase Courses
- Core Knowledge Phase courses

Conditionally admitted students will receive credit for at most three graduate courses prior to successful completion of the Prerequisite Phase.

Students complete the following Core Knowledge Phase course requirements for the Standard Information Systems concentration:

CSC 442  Data Structures
CSC 446  Operating Systems
CSC 449  Database Technologies
CSC 459  File Management and Organization
CSC 475  Information Systems Analysis & Design

Students complete the following Core Knowledge phase course requirements for the Software Engineering concentration:

CSC 420  Discrete Structures
CSC 423  Data Analysis and Regression
CSC 442  Data Structures
CSC 465  Software Engineering I
CSC 466  Software Engineering II

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. The exam is offered in the Autumn and Spring quarters.

Students are allowed at most two attempts at this examination. Two failures result in dismissal from the graduate program. Call the department at (312) 341-8381 for further details on this examination.

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

ADVANCED PHASE—INFORMATION SYSTEMS

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 the approval of the student's advisor.

Conditionally admitted student receive credit for Advanced Phase courses only after successful completion of the Prerequisite Phase. 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 13 courses (52 hours) beyond the Prerequisite Phase after having received full degree-seeking admission.
Advanced Phase Course Requirements

Students must complete the following Advanced Phase courses:
One of the following:

Information System Concentration:

Two of the following:
- CSC 432 Computer and Information Systems Modeling
- CSC 467 Software Reliability
- CSC 468 Software Measurement
- SOC 415 Information Systems and Society

Three of the following including at least one at the 500 level, but not if applied above.
- CSC 423 Data Analysis and Regression
- CSC 432 Computer and Information Systems Modeling
- CSC 445 Computer Architecture
- CSC 450 Office Systems
- CSC 451 Database Design
- CSC 452 Database Programming
- CSC 466 Software Engineering II
- CSC 467 Software Reliability
- CSC 468 Software Measurement
- CSC 473 Information Systems for Management
- CSC 474 Decision Support Systems
- CSC 480 Artificial Intelligence
- CSC 483 Information Processing Management
- CSC 484 Computerized Accounting Systems
- CSC 491 Design and Analysis of Algorithms
- CSC 549 Advanced Database Technologies
- CSC 560 On-Line Systems and Telecommunications
- CSC 565 Voice and Digital Systems
- CSC 566 Integrated Telecommunication Systems
- CSC 571 Software Maintenance
- CSC 572 Computer Security
- CSC 587 Cognitive Psychology with Computer Applications
- CSC 590 Graduate Seminar
- CSC 696 Master's Project
- CSC 698 Master's Thesis

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

CSC 467 Software Reliability
CSC 696 Master's Project

Three of the following:
CSC 424 Advanced Data Analysis
CSC 449 Database Technologies
CSC 451 Database Design
CSC 468 Software Measurement
CSC 474 Decision Support Systems
CSC 480 Artificial Intelligence
CSC 483 Information Processing Management
CSC 581 Knowledge-based Systems
CSC 587 Cognitive Psychology with Computer Applications
CSC 590 Graduate Seminar

Three elective courses (see Elective Course Restriction section below).

Elective Course Restrictions

Elective courses are those in the 400-599 range. Students may 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. (This includes 500 level GSB courses.) 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 2.50 (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 may change to grades of F.

MASTER OF SCIENCE: TELECOMMUNICATION SYSTEMS

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

The Prerequisite Phase assures that all students have the proper background to enter the degree program. The Core Knowledge Phase provides the fundamentals of computer and communication systems. In the Advanced Phase, students delve more deeply into the theories and techniques of communications systems and to pursue elective interests. The student must pass an examination to move from one phase to another.

PREREQUISITE PHASE—TELECOMMUNICATION SYSTEMS

All applicants who satisfy the graduate college admission requirements initially receive conditional admittance and may then pursue a degree program. For full admission to a degree program, students must have the following:
- A Bachelor's degree (not necessarily in computer science)
- Counselling session with a graduate counselor
- A grade of "B" or better in the Prerequisite Phase courses

PREREQUISITE PHASE COURSE REQUIREMENTS

The following courses are required as part of the Prerequisite Phase. Those students with extensive coursework and/or experience in the computer science field may take an equivalency exam, the Graduate Assessment Exam (GAE), for the courses listed below. The GAE is offered at the beginning of each quarter. The exam is offered at the beginning of each quarter. Applications for the exam must be received at least two weeks before the exam. A late fee will be charged for applications after this date. Exam dates, application forms and a detailed study guide are available from the department (phone 312/341-8381). For more information on this exam, contact a graduate advisor.

GRADUATE ASSESSMENT PREREQUISITES

Programming skills in one high-level language. (Note that a reading knowledge of C will be assumed in many graduate courses). Suggested courses are:
- CSC 210  PL/I Programming
- CSC 215  Introduction to Structured Programming Using C
- CSC 220  Programming in PASCAL
- CSC 225  C Language for Programmers
- CSC 230  Programming in ADA
**Principles of Computer Science.** (Required for the Computer Science concentration only.) 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

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. Equivalency exams are not offered for the following courses. Students with related coursework and/or experience in these areas should consult with a graduate advisor.

**Physics**

**PHY 405** Physical Principles of Communication Systems

**Quantitative Methods**

**MAT 145** Calculus for Information Systems

**CSC 323** Data Analysis with SAS

**DEGREE REQUIREMENTS:**

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

**CORE KNOWLEDGE PHASE—TELECOMMUNICATION SYSTEMS**

Successful completion of the Core Knowledge Phase consists of:

- Completion of Core Knowledge Phase Courses
- Core Knowledge Phase courses

Conditionally admitted students will receive at most three graduate courses completed prior to successful completion of the Prerequisite Phase.

Students complete the following Core Knowledge Phase course requirements for the Computer Science concentration:

**CSC 445** Computer Architecture

**CSC 446** Operating Systems

**CSC 461** Basic Communication Systems

**CSC 462** Data Communications

**CSC 565** Voice and Digital Systems

**CSC 567** Telecommunication Systems Design and Management

Students complete the following Core Knowledge Phase course requirements for the Standard Telecommunications concentration:

**CSC 411** Computers in Telecommunication

**CSC 461** Basic Communication Systems

**CSC 462** Data Communications

**CSC 463** Computer Networks and Data Systems

**CSC 464** Telephone Systems
Passing the Core Knowledge Examination

The examination covers the subject matter of the Core Knowledge Phase courses required for the Telecommunication Systems degree. Students take this examination as soon as they successfully complete their Core Knowledge Phase course requirements. The exam is offered in the Autumn and Spring quarters.

Students are allowed at most two attempts at this examination. Two failures result in dismissal from the graduate program. Call the department at (312) 341-8381 for further details on this examination.

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

ADVANCED PHASE—TELECOMMUNICATION SYSTEMS

Students must fulfill the course requirements of the Telecommunication 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 receive credit for Advanced Phase courses only after successful completion of the Prerequisite Phase. 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 13 courses (52 hours) beyond the Prerequisite Phase and after receiving full-degree-seeking admission.

Advanced Phase Course Requirements

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

Computer Science Concentration

Four of the following:

- CSC 432 Computer and Information Systems Modeling
- CSC 450 Office Systems
- CSC 463 Computer Networks
- CSC 561 Distributed Processing
- CSC 562 Computer-Communication Network Design and Analysis
- CSC 563 Protocols and Techniques for Data Networks
- CSC 564 Local Area Networks
- CSC 566 Integrated Telecommunication Systems

Three elective courses (See the Elective Course Restrictions below)

Standard Telecommunications Concentration

- CSC 476 Economics of Telecommunication Systems
- CSC 565 Voice and Digital Systems
- CSC 566 Integrated Telecommunication Systems
- CSC 567 Telecommunication System Design and Management
- CSC 569 Telecommunications Regulation, Policy and Law
One of the following:

- CSC 563 Protocols and Techniques for Data Networks
- CSC 564 Local Area Networks
- CSC 568 Network Management

One elective course (See the Elective Course Restrictions below)

Elective Course Restrictions

Elective courses are those in the 400-599 range. Students may 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 2.50 (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 may change to grades of F.

MASTER OF SCIENCE: MANAGEMENT INFORMATION SYSTEMS

The master's 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 prepares students for advanced study. In the Advanced Phase, students specialize in selected areas of management information systems.
PREREQUISITE PHASE—MANAGEMENT INFORMATION SYSTEMS

All applicants who satisfy the general admission requirements of the Graduate School of Business and the College of Liberal Arts & Sciences initially receive conditional admittance to the Management Information Systems degree program. They may then pursue the degree program but need to fulfill the following requirements to become fully admitted.

- Bachelor's degree completed.
- Satisfactory Completion of GMAT.
- Counseling session with a graduate counselor.
- A passing score on the MIS Assessment Examination or grades of "B" or better in corresponding Prerequisite Phase courses.
- A course in assembly language or equivalent work experience.

MIS Assessment Examination

The purpose of the MIS Assessment Examination is to ensure a common background of knowledge in general business administration, software development, and quantitative methods. A passing score is required on this examination to move from the Prerequisite Phase to the Core Knowledge Phase and become fully admitted. To pass this examination, students either pass the DePaul courses listed below with grades of "B" or better or they pass the corresponding written examinations. The exam is offered at the beginning of each quarter. Applications for the exam must be received at least two weeks before the exam. A late fee will be charged for applications after this date. Exam dates, application forms and a detailed study guide are available from the department (phone 312/341-8381). For more information on this exam, contact a graduate advisor. The MIS Assessment Examination covers the following topics.

General Business Administration

- GSB 503  Organizational Behavior: Micro Perspective
- GSB 504  Financial Accounting
- GSB 505  Contemporary Economic Analysis
- GSB 507  Operations Management
- GSB 508  Marketing Management
- GSB 509  Legal Perspectives of Business—Fundamentals
- GSB 510  Organizational Policy Formulation and Strategic Management
- GSB 513  Money, Banking and Economic Activity

Software Development

- CSC 203  COBOL Programming
- CSC 204  Advanced Topics in COBOL
- CSC 215  Introduction to Structured Programming Using C
- CSC 310-311 or 410  Principles of Computer Science
Quantitative Methods
GSB 501 Mathematical Analysis for Decision Making
MAT 140 Discrete Mathematics
CSC 323 Data Analysis with SAS I

Other Prerequisites
Students must pass one course in Assembly Language or demonstrate equivalent experience. However, this prerequisite is not considered part of the MIS Assessment Examination. Suggested courses are:
CSC 312 Assembly Language and Machine Organization OR
CSC 344 IBM Assembly Language

Degree Requirements
The requirements for the Core Knowledge and Advanced Phases are presented below. In total, students complete 13 graduate courses. At least 6 of these courses are chosen from the Computer Systems offerings and at least 6 of them from the Systems Management offerings. The remaining course is chosen from either of the two groups of courses.

CORE KNOWLEDGE PHASE—MANAGEMENT INFORMATION SYSTEMS
Successful completion of the Core Knowledge Phase consists of completion of the Core Knowledge Phase courses and passing the Core Knowledge Examination.

Core Knowledge Phase Courses.
These consist of 3 Computer Systems courses and 3 Systems Management courses for a total of 6 courses. Most students complete the courses listed below. However, waiver of some of these courses is possible for students with related course work or experience but requires the permission of their advisor. Students are still responsible for the content of these courses on the Core Knowledge Examination. The course requirements are:

Systems Management
MIS 673 Database Systems
MIS 674 Systems Analysis and Design: Concepts, Tools, and Techniques
MIS 676 Management Information Systems: Planning, Design, and Implementation

Computer Systems
CSC 446 Computer Operating Systems
CSC 449 Database Technologies
CSC 474 Decision Support Systems
Core Knowledge Examination

This examination covers the subject matter of the 6 Core Knowledge Phase courses listed above. Students take this examination as soon as they successfully complete their Core Knowledge Phase courses.

Students who have related coursework or experience may earn a waiver of some of these courses by passing the Core Knowledge Examination but require the permission of their advisor to attempt this. Students earn a waiver only if they pass the associated Core Knowledge Examination material in one attempt. Waived Systems Management courses are replaced by Systems Management electives. Waived Computer Systems courses are replaced by Computer Systems electives.

Students must pass this examination in two attempts or they will not be allowed to continue in the program.

Deadline: Students must submit a written application three months before taking the Core Knowledge Examination.

ADVANCED PHASE—MANAGEMENT INFORMATION SYSTEMS

The Advanced Phase consists of 7 Advanced Phase courses. Students must fulfill the course requirements in both Systems Management and Computer Systems. Waiver of some of these courses is possible in individual cases but requires the approval of the student's advisor. In any case, 3 of these courses must be selected from the Advanced Phase Computer Systems courses, 3 others from the Advanced Phase Systems Management courses, and 1 more course from either collection.

Advanced Phase Systems Management Courses

Students must take at least one course from each of the following three groups. Waiver of these requirements is possible in individual cases but requires the permission of the student's advisor.

1 of the following:
- MIS 675 Advanced Systems Techniques
- MIS 677 Information Systems Project Management

1 of the following:
- MIS 678 Problems in Systems Design
- MIS 689 Graduate Seminar in Decision Support Systems

1 of the following:
- MIS 683 Information Processing Management
- MIS 684 Information Systems and Society
- MIS 685 Security, Accuracy, and Privacy in Computer Systems

Students who choose their elective course from the Systems Management courses or who have extra Systems Management electives due to waivers of required courses choose from the following courses or from courses in the above three groups. With the permission of the MIS Program Director for Systems Management, they may also take other graduate courses offered by the College of Commerce.

- ACC 535 Accounting Systems
- ACC 526 Microcomputer Uses in Decision Making
- ACC 527 Construction and Use of Decision Models
- GSB 511 Accounting Analysis for Decision Making
- MGT 510 Topics in Production Operations Management
- MGT 580 Operations Research
Advanced Phase Computer Systems Courses

Students must take 3 Advanced Phase Computer Systems courses chosen from the following two groups. Waiver of these requirements is possible in individual cases but requires the permission of the student's advisor.

1 course chosen from

CSC 423 Data Analysis and Regression
CSC 432 Computer and Information Systems Modeling

2 courses chosen from

CSC 450 Office Systems
CSC 462 Data Communications
CSC 480 Artificial Intelligence
CSC 494 Software Methodologies
CSC 560 On-Line Systems and Telecommunications
CSC 572 Computer Security

Students who choose their elective course from the Computer Systems courses or who have extra Systems Management electives due to waivers of required courses choose from the following courses or from courses in the above three groups. With the permission of Dr. Martin Kalin, Program Administrator for CSC, they may also take other graduate courses offered by the Department of Computer Science and Information Systems.

CSC 442 Data Structures
CSC 459 File Management and Organization
CSC 489 Queueing Theory with Computer Applications
CSC 549 Advanced Database Technologies
CSC 565 Voice and Digital Systems
ECO 512 Applied Time Series and Forecasting

Courses

All courses carry 4 hours of credit unless otherwise indicated.

UNDERGRADUATE COURSES

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 204 **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.

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. Laboratory fee.

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.) Laboratory fee.

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. Laboratory fee.

CSC 219 **Introduction to Structured Programming Using C.** An introduction to structured computer programming. Topics include: simple data types, control structures, character string processing, array processing, functions and structures. (Recommended: Students should have completed or be concurrently enrolled in MAT 140 or CSC 420.)

CSC 220 **Programming with Pascal.** An introduction to structured computer programming using the language Pascal. Topics include: elementary data types, program control structures, character strings, array processing, procedures and functions, and an introduction to user defined data types. Laboratory fee.

CSC 225 **Programming in C.** Introduction to the programming language C. Data types, pointers, structures, function and block structures, Preprocessors, Input and output, UNIX operating system. (Prerequisite: Experience in at least one high level programming language.) Laboratory fee.

CSC 230 **Programming with ADA.** An introduction to structured computer programming using the language ADA. Topics include: elementary data types, program control structures, character strings, array processing, procedures and functions. An introduction to user defined data types, packages, generic program units, exceptions and tasks. Laboratory fee.

CSC 310 **Principles of Computer Science I.** Conceptual models of a computer, machine and assembly language, internal data representation, programming methods, recursion, stacks, queues. (Prerequisite: CSC 215.) Laboratory fee.
CSC 311 Principles of Computer Science II. Basic data structures, stacks, queues, linked lists, trees, tree searches and string processing. (Prerequisite: CSC 310.) Laboratory fee.

CSC 312 Assembly Language and Computer Organization. Data representation, 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.) Laboratory fee.

CSC 323 Data Analysis with SAS I. Programming in the statistical language SAS. Introduction to data analysis, elementary statistical inference, regression and correlation. (Prerequisite: CSC 310 and MAT 140.) Laboratory fee.

CSC 342 File Processing and Data Management. File processing environment and file manipulation techniques using PL/I. Algorithms and techniques for implementing stream files, sequential files, direct files, indexed sequential files, inverted lists, multi-lists, and database structures will be discussed. Implementation of data management systems. (Prerequisite: CSC 311.) Laboratory fee.

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

MAT 145 Introduction to Information Systems. Limits, continuity, the derivative and rules of differentiation, applications of the derivative, exponential and logarithm functions, the definite integral and some methods of integration, improper integrals. (Prerequisite: MAT 141.)

MAT 150 Calculus I. Limits and derivatives, extrema, curve sketching, convexity, 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.)

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 225 or consent from graduate program advisor.) Laboratory fee.

CSC 411 Computers in Telecommunications. An introduction to computer organizations and operating systems. Computer components and functions, logic circuits, internal processing, multiprogramming, time-sharing, memory management, file management, interrupts and I/O peripheral devices. (Prerequisite: CSC 215.)

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. (Prerequisite: MAT 140.)
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 an investigation of available statistical software. (Prerequisite: CSC 323 or consent.) Laboratory fee.

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 432 Computer and Information Systems Modeling. Simulation, analytic modeling, and measurement of computer and information systems. Operational analysis. Introduction to queuing theory. (Prerequisite: CSC 446 or consent.) Laboratory fee.

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.) Laboratory fee.

CSC 445 Computer Architecture. A structured comparative study of computer organizations and design strategies. Memory organization, general register processors, stack processors, register transfer level, microprogramming and emulation. (Prerequisite: CSC 312 and CSC 420.)

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

CSC 447 Concepts of Programming Languages. Formal treatment of programming language principles, particularly as they relate to translation and compiler design concepts. Grammars, languages, and their syntax and semantics. Concepts of lexical scanning, parsing and ambiguity. Control structures and data flow. The effects of the run-time environment and binding time on various features of programming languages.

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 449 Database Technologies. An introduction to database technology and systems, including storage structures, integrated management systems, query languages, host language facilities, and on-line file organization. These topics will be discussed in relation to existing database systems. (Prerequisite: CSC 447.)

CSC 450 Office Systems. Basic technology for information retrieval, analytic tools, communication, text preparation, support tools, productivity analysis, distributed network design and network integration issues.

CSC 451 Database Design. Design methodologies. Requirement formulation and analysis, conceptual design, implementation design, physical design. Emphasis will be on data modeling techniques. Class team projects include the design of a complete database structure and implementations of design tools. (Prerequisites: CSC 449, a programming language.) Laboratory fee.
CSC 452 Database Programming. Programming in large-scale relational database environment using host languages such as C. Design and implementation of on-line applications and report generation. Microcomputer Database System programming. Concepts such as database integrity, transactions, transaction recovery, concurrency, and record locking will be covered. (Prerequisites: CSC 449, 215.) Laboratory fee.

CSC 459 File Management and Organization. The hardware and software involved in the creation and manipulation of files. Issues in the design, implementation, selection, and use of computer files for the external storage of data. Types of file organizations covered include: pile, sequential, indexed-sequential (static index), B-tree (dynamic index), hash, and multiring. (Prerequisite: CSC 446.) Laboratory fee.

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

CSC 461 Basic Communication Systems. A history of telecommunications and regulatory and regulatory agencies. The basic communication model and its application to different communication systems, communication models. The telephone architecture, a typical data communication system, common carrier services, mediums and their characteristics. (Prerequisite: PHY 405.)

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 411 and 461, or CSC 445 only)

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

CSC 464 Telephone Systems. Types of services and basic structure of the public network. Basic transmission systems, network and customer switching systems, carrier services, Customer-Services equipment and services. Basic traffic analysis and engineering. (Prerequisite: CSC 461.)


CSC 466 Software Engineering II. Testing techniques, strategies, and tools. Quality assurance. Verification and validation. Reviews, walkthroughs, and inspections. Management aspects. (Prerequisite: CSC 465 or consent.)

CSC 467 Software Reliability. The practical application and theory of software reliability models. Classification and comparison of software reliability models. Parametric estimation. (Prerequisite: CSC 323 and CSC 420 or consent.)

CSC 468 Software Measurement. Software metrics. Productivity, effort, and defect models. Software cost estimation. (Prerequisite: CSC 323 and either CSC 465.)

CSC 469 Introduction to Computer Graphics. Basic graphics hardware, output primitives, attributes of output primitives, two-dimensional transformations, windowing, segments, interactive input methods. Students will implement a small graphics package using GKS calls while learning about these concepts. Topics in three-dimensional graphics. Laboratory fee.

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. Data base and model base management aspects of DSS. Formal logic and artificial intelligence aspects of DSS. Case studies. Laboratory fee.

CSC 475 Information Systems Analysis and Design. Design skills for the analysis and design of Information Systems. Topics include logical data base design, data flow diagramming and preparation of data dictionaries, and preparation of mini-specs. Problems will include a case study in the design of an information system.

CSC 476 Economics of Telecommunication Systems. Inventory concepts, asset amortization, liabilities, consolidated statements, cost accounting, capital budgeting, investment decisions.

CSC 480 Artificial Intelligence. A survey of the basic problem areas, concepts, and techniques of artificial intelligence. Emphasis on how AI systems are accomplished via symbolic programming and the explicit representation of knowledge. Laboratory fee.

CSC 481 Pattern Recognition and Machine Perception. Decision theory, linear discriminant functions, clustering, image processing, scene descriptors, applications. (Prerequisite: One statistics course.)

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 483 Information Processing Management. The organization of the Information Systems Department. Staffing, documentation and performance standards. The budget process. Design and layout of data processing facilities. Hardware/software specifications and selection. (Prerequisite: CSC 473 or 475.)

CSC 484 Computerized Accounting Systems. Responsibility accounting systems. Profitability accounting systems. Customer invoicing, cash receipts and accounts receivable information processing. Customer order entry, finished goods inventory, purchasing and receiving information processing. Accounts payable, fixed assets and employee payroll systems. General ledger, budget and profit planning, sales analysis and market planning systems. (Prerequisite: GSB 504 or ACC 103.)
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. (Prerequisites: 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. (Prerequisites: 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, intractable problems. NP-complete problems. (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 420 and CSC 442.) Laboratory fee.

CSC 493 **Automata Theory and Formal Grammars.** An introduction to the most important abstract models of computation and their applications: finite state machines and pushdown automata. 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. (Prerequisite: one assembler course.)

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 CSC 323 or consent.)

CSC 498 **Digital Signal Processing.** Elements of circuit and signal theory, theory of modulation, mathematical basis of sampling and coding, principles of digital filtering, applications to communications, process control, image and voice recognition, voice synthesis.
CSC 510 Introduction to Systems Programming. Introduction to macroassembly systems and general microprocessors. Input and output control systems. Debugging tools. (Prerequisite: CSC 445, CSC 446 or consent.)

CSC 520 Advanced Topics in Discrete Structures. Continuation of CSC 426. Topics vary but may include: groups and group codes; rings, fields, and polynomial codes; network algorithms; Petri nets; advanced topics in graph theory. (Prerequisite: CSC 420.)


CSC 545 Advanced Computer Organization. Parallel, array and pipeline processors and other topics of current interest. (Prerequisite: CSC 445.)

CSC 546 Operating Systems Design. An algorithmic approach to the design of an operating system. Topics include concurrent programming methods; process and resource control; deadlock; 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 549 Advanced Database Technologies. Study and comparison of relational, hierachial and network database systems. Problems of implementation of database management systems. Critical evaluation of commercial database systems.

CSC 560 On-Line Systems and Telecommunications. On-line system design and development: technical design control; network topology; telecommunication (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 561 Distributed Processing. Interconnect technologies, multiprocessor software, including synchronization and message communication software. Performance requirement analysis and system design. Case studies of distributed systems. The special problems of data base.

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; security; data base management in distributed networks. (Prerequisite: CSC 463 or consent.)

CSC 564 Local Area Networks. A detailed discussion of the current standards and technology. Medium access techniques, topologies, network operating systems, applications, and an introduction to several commercial and research networks. (Prerequisite: CSC 463.)

CSC 565 Voice and Digital Systems. Digitization, efficient speech coding, digital transmission, circuit switching, traffic engineering, Microwave, satellite and fiber optic transmission. (Prerequisite: CSC 464, 462.)

CSC 567 Telecommunication Systems Design and Management. The theory and practice of Telecommunication system design. Ongoing systems management. Telecommunication management including selection of vendors/systems, structuring an RFP, systems proposal analysis, computer aided telecommunications management, Telecommunication management strategies from a business perspective. (Prerequisite: CSC 566 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 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.) Laboratory fee.

CSC 580 Artificial Intelligence Programming. Introduces the basic concepts of symbolic programming as embodied in the language LISP. Basic data and control structures of LISP: symbolic expressions, the interpreter, functions, recursions, iteration, Advanced data and control structures. Making language extensions. How symbolic programming leads to new techniques of procedural and data abstraction. (Prerequisite: CSC 480.)

CSC 581 Knowledge-based Systems. A detailed study of development of artificial intelligence application systems. System architecture. Knowledge engineering. rule-based programming. Existing systems will be surveyed. (Prerequisite: CSC 480.)

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 480 and CSC 445.)

CSC 583 Understanding Natural Language. Introduction to natural language understanding, including representation schemes, grammars, parsing, text generation, and machine translation. An overview of some natural language processing systems. (Prerequisites: CSC 480.)
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. (Recommended: CSC 480.)

CSC 585 Knowledge Representation. Techniques of knowledge representation, including logic, associative networks, and frames. (Prerequisite: CSC 480.) Laboratory fee.

CSC 586 Advanced Artificial Intelligence Programming. AI system implementation. Semantic networks, slot and filler data bases, deductive information retrieval. Procedural knowledge representation. Pattern directed procedure invocation, agenda-based control structures. (Prerequisite: CSC 580.)


CSC 590 Research Seminar. Readings and discussion on current research topics. Students may register for this course at most twice. (Prerequisite: Consent of the instructor.)

CSC 591 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 593 Topics in Telecommunications. (Prerequisite: Consent of instructor. Independent Study form required.)

CSC 594 Topics in Artificial Intelligence. (Prerequisite: Consent of instructor. Independent Study form required.)

CSC 595 Computer Logic Design. Combinatorial 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. Independent Study form required.)

CSC 597 Topics in Data Communications. (Prerequisite: Consent of instructor. Independent Study form required.)

CSC 598 Topics in Data Analysis. (Prerequisite: Consent of instructor. Independent Study form required.)

CSC 599 Topics in Computer Science. (Prerequisite: Consent of instructor. Independent Study form required.)

CSC 610 Computer Science I. An introduction to structured programming using PASCAL. Topics include: elementary data types, program control structures, character strings, array processing, procedures and functions, and an introduction to user defined data types.

CSC 611 Computer Science II. Conceptual models of a computer, machine and assembly language, internal data representation, programming methods, recursion. Basic data structures, stacks, queues, linked lists, trees, tree searches and string processing. (Prerequisite: CSC 610)

CSC 640 **Teaching Computer Science.** A study of different programming languages used in high schools: PASCAL, BASIC, LOGO etc. A survey of computer topics covered in high school courses. Motivation and objectives in computer education. (Prerequisite: CSC 611.)

CSC 650 **Executive Program.** A course of study designed to provide executive and management professionals with the skills required to make effective use of personal computers. The course provides an integrated format covering popular database and spreadsheet software packages as well as topics in data communication, office automation, networks, and computer based expert systems. (10 hours, admission is restricted.)

CSC 651 **Artificial Intelligence Program.** (10 hours, admission is restricted.)

CSC 670 **Computer-Assisted Instruction.** Study and analysis of the use of the computer as an aid in instruction. Use of CAI languages such as PILOT. (Prerequisite: CSC 630.)

CSC 680 **Programming with LOGO.** An introduction to LOGO, a powerful yet easy-to-learn language that both adults and children can use to express ideas.

CSC 696 **Master's Project.** Students may register for this course only after their advisor has approved a written proposal for their project. 2 credit hours. (Prerequisite: Consent of advisor. Independent study form required.)

CSC 698 **Master's Thesis.** Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration 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; Independent study form required.)

**COURSES FROM OTHER DEPARTMENTS**

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

ECO 512 **Applied Time Series and Forecasting.** Consult the Department of Economics Section of this bulletin for the description of this course.

Courses Related to the MIS Degree

All GSB courses listed below will be offered each term.

GSB 501 **Mathematical Analysis for Decision Making.** The objective of this course is to introduce the student to mathematical concepts necessary for the analysis of business problems. Topics covered are: a brief review of college algebra; differential calculus and linear algebra. (Prerequisite: Graduate Standing.)

GSB 503 **Organization Behavior: Micro Perspective.** This course will consider those aspects of psychology and social psychology that impact on the individual in his or her role as a member of a formal organization or a group therein. Specific attention will be given to the following topics: Individual Topics: Job satisfaction, personality factors, learning, socialization, organizational commitment, and evaluating and rewarding individual effectiveness; Small Group Topics: Communications, organizational change and organizational development. (Prerequisite: Graduate Standing.)
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.)

GSB 505 Contemporary Economic Analysis. The fundamental concepts, models, and analytic tools of micro- and macroeconomics required for competent decision making are explored. Economics, and the economic problem, are defined, and the micro issues of demand and supply, elasticity, cost, pricing, and distribution are covered as one explanation of economic activity inside the firm. In the macro area, emphasis is placed on measurement of economic activity, simple models of national output, fiscal and monetary policy, and inflation and unemployment. (Prerequisite: GSB 500, 501, 502, or their equiv.)

GSB 507 Operations Management. This course provides an introduction and overview of the field of operations management. Major problems and issues in the field are addressed. Concepts both quantitative and qualitative and problem solving techniques used by operations managers are applied to both the manufacturing and services sectors. (Prerequisite: GSB 500, 501, 502 or their equiv.)

GSB 508 Marketing Management. Major marketing institutions and the processes which facilitate the flow of goods and services from production to final consumption are studied. Analysis is made of the major factors which are considered at various stages of the consumer decision process. (Prerequisite: GSB 501, 502, 505 or their equiv.)

GSB 509 Legal Aspects of Business—Fundamentals. A study of the legal framework within which the U.S. businessman must operate in accordance with ethical considerations and social responsibilities is combined with the study of the application of substantive rules in the basic area of contracts. The second half of the term provides a study of the applications of the rules of the more specialized business contracts, namely, real and personal property, commercial paper, sales, and the laws of the agency. Landmark decisions in each of these areas will be discussed in exemplifying the manner in which law is applied to business. (Prerequisite: Graduate Standing.)

GSB 510 Organizational Policy Formulation and Strategic Management. This is a "capstone course" drawing heavily on the subject matter covered in all prerequisite courses. Emphasis is upon the role of general management and the development of policies and strategies for the organization as a whole. Topics include: the relationship among functional, tactical, and strategic management; the identification and integration of policy and strategy alternatives; the importance of the external environment; and the evaluation and execution of strategy. Case analyses will be used to afford the student the opportunity to apply some of the concepts and approaches developed in the course. (Prerequisite: GSB 500 through 509 and GSB 513 or their equiv.)
**GSB 513 Money, Banking and Economic Activity.** A study of the complex relationship between fiscal and monetary policies and the business environment within which the individual investor, financial institutions, and the financial officers of business operate. Special topics include: role of money in the economy; financial markets and financial intermediaries with emphasis on commercial banks; commercial bank asset and liability management; central banking; monetary theories and monetary policy; and international finance. (Prerequisite: GSB 501, 502, 505 or their equiv.)

**ACCOUNTING**

**526 Micro Computer Uses in Decision Making.** This course is concerned with the applications of quantitative analysis techniques to the solution of business problems. Topics include probability distributions, simulation of complex decision situations, the use of game theory in competitive situations, and linear programming techniques for allocating limited resources. The case method is used in this course. The use of mini and microcomputers will be required. Offered Winter. (Prerequisite: Completion of Phase I or equiv.)

**527 Construction and Use of Decision Models.** This course covers the art of decision model construction and the application of existing decision models to managerial planning, control, and decision making. Existing models covered include linear programming and sensitivity analysis, learning curves, correlation analysis, inventory control models, PERT, and CPM. Students will learn to apply probability and utility theory to decision making under uncertainty, as well as to apply the concepts of game theory to conflict situations in a business setting. If time permits, the application of Markov processes and simulation to managerial planning and decision situations will be covered. Extensive microcomputer applications will be used in this course. Offered Spring. (Prerequisite: Completion of Phase I or equiv.)

**535 Accounting Systems.** Today's business person requires a fundamental knowledge of computer-based information systems and their role in accounting functions and financial decision making. This course will enable the student to interface with accounting systems, to participate in their design and audit, and to use microcomputers effectively in financial planning, control, and analysis. Topics include: advanced data processing concepts; computer security and controls; systems analysis, design, and implementation; hardware/software evaluation and selection; database systems; data communications; and office automation. Students will gain substantial hands-on experience on microcomputers using Lotus 1-2-3 and Lotus Symphony.

**MANAGEMENT INFORMATION SYSTEMS**

**673 Database Systems.** An introduction to database concepts and working details from the point of view of an information systems analyst who works more closely with management than with the computer facility. Topics include a comparison of file structure and database structure, the advantages of database structure, simple retrieval of data and complex database queries, the control of potential anomalies peculiar to databases, and database conceptual design. Laboratory exercises include the use of a relational database management system. (Cross-listed with Mgt. 673). (Prerequisite: Acct./Mgt. 671 and Acct./Mgt. 676 or equiv. or permission.)
Systems Analysis and Design: Concepts, Tools and Techniques. This course focuses on the phases involved in the systems life cycle and the basic techniques used in each of these phases. The scope of coverage is broad as the concepts of systems analysis and design are applicable to both manual and computer systems. This course includes organizing and controlling the systems study, feasibility studies, fact gathering, systems design and implementation, preparation and presentation of reports, records management and other topics. Practical exercises and/or cases will give the students and opportunity to apply these techniques to realistic problems. (Prerequisite: Completion of Phase 1.)

Advanced Systems Techniques. This course assumes a familiarity with basic systems techniques and tools such as data gathering, recording, and analysis, flow charting, decision tables, system implementation, etc. Topics to be covered include systems concepts and philosophy, project management, advanced tools of systems analysis and design, the human element in systems, and the like. (Prerequisite: MIS 676 or equiv. or permission.)

Management Information Systems: Planning, Design and Implementation. Information, to be useful, must be timely, relevant, accurate and delivered at a reasonable cost. All too often, management is required to extract pertinent information from masses of raw data. This course will establish a framework to determine information needs of management and how to satisfy them. A systems approach is used to develop the various information subsystems in the organization, and their integration into a management information system (MIS). This synergistic approach combined with the computer promises a new frontier in management planning and control. Topics covered include MIS concepts, planning, design and Implementation. Theoretical and practical tools in MIS design are discussed using cases or problems to reinforce the students understanding. (Prerequisite: MIS 671 and MIS 674 or equiv.)

Information Systems Project Management. Projects are often late, over-budget, technically inoperable, operationally infeasible, and in some cases never finished. One of the roots of this problem has been the lack of experienced management. What is needed are appropriate managerial procedures of planning, scheduling and control that are responsive to the needs of the environment. This course will define the essential components of good project management. Although the emphasis will be on management of systems and data processing projects, the concepts and techniques presented will be general enough to be of value to those involved with the design and implementation of any project. (Prerequisite: MIS 674 or equiv. or permission.)

Problems in Systems Design and Management. Problems in systems design, analysis, implementation and management are presented, discussed and analyzed. The emphasis in this course is on developing an analytical ability for dealing with systems problems and a professional capability in planning and managing systems. (Prerequisite: MIS 676 or equiv. or permission.)
Graduate Seminar in Decision Support Systems. A seminar on the planning, design and implementation of decision support systems (DSS) and expert systems (ES). The emphasis of the course is on developing and building decision support systems. Consideration will also be given to end-user computing and the evaluation and selection of DSS generators and ES skills. Students will gain hands-on experience in using DSS generators such as IFPS, prototyping languages such as FOCUS, and expert system skills. The course will include readings, a research paper and presentations. (Prerequisite: MIS 676 or equiv. or permission.)

MANAGEMENT

Advanced Production Management and Operations Research. An advanced treatment of production management activity, incorporating an intensive consideration of recent developments in management application of operations research. The techniques of operations research are examined and applied to production from the management point of view. (Prerequisite: Completion of Phase I or equiv.)

Operations Research. This course focuses on a scientific approach to problem solving and model building. Topics covered include mathematical programming, integer programming, Markov processes, game theory and simulation. Emphasis is placed on application models, computer implementation and solutions. (Prerequisite: Mgt. 501.)
Economics

FACULTY

Bala Batavia, Ph.D., Professor and Chairman ........ North Carolina State University
Elliah Brewer, Ph.D., Lecturer .............. Massachusetts Institute of Technology
Frank J. Brown, Ph.D., Professor Emeritus ........ Catholic University of America
In Choi, Ph.D., Lecturer ....................... Iowa State University
Destree Clecka, M.A., Instructor .............. DePaul University
James E. Clecka, Ph.D., Professor .............. Purdue University
James J. Diamond, Ph.D., Professor Emeritus ........ Northwestern University
Floyd R. Dill, Ph.D., Assistant Professor ........ Cornell University
William Dugger, Ph.D., Professor ............... University of Texas
Animesh Ghoshal, Ph.D., Professor ............... University of Michigan
David Hansen, M.A., Lecturer ...................... Stanford University
William A. Hayes, Ph.D., Professor .............. Catholic University of America
Anthony C. Krautmann, Ph.D., Assistant Professor ........ University of Iowa
Adolph E. Mark, Ph.D., Associate Professor ........ University of Illinois
Michael S. Miller, Ph.D., Associate Professor ........ University of Pittsburgh
Thomas Mondschean, M.A., Assistant Professor ........ University of Wisconsin
Larry R. Mote, B.A., Lecturer .................... Cornell University
Herbert E. Neil, Jr., Ph.D., Adjunct Professor ........ University of Michigan
Margaret A. Oppenheimer, Ph.D., Associate Professor ........ Northwestern University
Barbara R. Resque, Ph.D., Director

Center for Economic Education ...................... University of Chicago
William Sander, Ph.D., Associate Professor ........ Cornell University
Richard M. Thornton, Ph.D., Associate Professor and Associate Director, Center for Economic Education ........ Northern Illinois University
William R. Waters, Ph.D., Professor .............. Georgetown University
Richard J. Wiltgen, Ph.D., Professor ............... University of Illinois

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 forecasting and performing 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, ECO 306 National Income Analysis, and ECO 342 Strategies for Economists, or equivalent. The remaining courses may be in political science, sociology, psychology, statistics, history, or geography. Often the number of required courses is reduced when the analytic background and the maturity of the student are taken into consideration.

Degree Requirements

The candidate for the Masters Degree in Economics may choose either the thesis or non-thesis option.

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 the Program Coordinator or the Department Chair. 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 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 the Program Coordinator or the Department Chair. 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 two courses chosen by the student with the approval of the chairperson or student's advisor.

The examinations are usually 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.

Note: GSB Courses, ECO 509, ECO 511 and ECO 556 cannot be used to fulfill degree requirements for M.A. students in economics.

**Economics as a Minor Field**

Economics may be combined as a minor field only with those departments whose chairmen 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.

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**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.
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; measures of macroeconomic activity; models of output consumption, investment, and government behavior; business cycles; international economic relations; and macroeconomic forecasting. (Cannot be used to fulfill degree requirements for M.A. students in economics.)

Business and Economic Forecasting. (Prerequisite: Graduate Standing.) This course surveys a number of quantitative techniques commonly used to forecast business and economic variables. Emphasis will be on the techniques, their relative strengths and weaknesses, and real-world economic applications. Topics include smoothing techniques, regression and econometric analysis, and Box-Jenkins time series. (Cannot be used to fulfill degree requirements for M.A. students in economics.)

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

Industrial Organization. (Prerequisite: Graduate Standing.) This course is concerned with how the market system directs production decisions under varying deviations from the competitive environment. The links between market structure, conduct, and performance are examined. Topics include determinants of market structure, various theories of imperfect competition, price discrimination, predatory pricing, and antitrust policy.

Business and Public Policy. (Prerequisite: Graduate Standing.) Critical examination of the roles of government in business. A sketch of the historical relationship of government and business and the options open to the American people of different kinds of social control systems.

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.

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.

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.

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.
Regional and Urban Economics. (Prerequisite: Graduate Standing) This course investigates the spatial character of an economic system. The first part of the course is concerned with theories in regional economics, including business and household location theory, urbanization, and regional development. The latter part of the course deals with urban economics, a specialized area concerned with the economic forces behind many urban problems. Topics include the economics of housing, transportation, poverty, crime, and urban public finance.

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. (Cannot be used to fulfill degree requirements for M.A. students in economics.)

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

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.

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.

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.

Topics in Quantitative Economics. (Prerequisites: Graduate Standing, ECO 305 or GSB 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.

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.

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.

799 Independent Study. Available to graduate students of demonstrated capability for intensive independent work in economics. Prerequisite: Written permission of supervising faculty member and, Chairman, is required prior to registration.

Courses cross-listed with CDG (not available for M.A. students in economics)

406 The U.S. Macroeconomy and Chicago. Profile of Chicago's economy with emphasis on its development and current structure and contemporary links to international trade. The course will present principles of economics in terms of the Chicago economy and the national economy.

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.

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.

436 Integrating International Trade in the Curriculum. This course will combine curricular principles with the presentation of models for incorporating international trade in courses in economics, geography, political science, and urban science.
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 those theories to the Chicago community.

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.

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.

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 those concepts themselves to their students, using materials and methods organized for this course.

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.

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.

The Global Economy and the Chicago Economy. An introduction to international economics with a focus on the role of Chicago in the world economy. The course will deal with economic and financial aspects of international business and the impact of conditions and shifts in the international economy on Chicago's economy.
FACULTY

James S. Malek, Ph.D., Professor and Chairman .......... University of Chicago
Bernard A. Bruner, Ph.D., Professor .......... University of Chicago
Caryn Chaden, Ph.D., Assistant Professor .......... University of Virginia
Carol Cyganowski, Ph.D., Assistant Professor .......... University of Chicago
Stanley I. Damberger, M.A., Associate Professor .......... Saint Louis University
Richard deCordova, Ph.D.,
Assistant Professor .......... University of California, Los Angeles
Patricia Ewers, Ph.D., Professor .......... Loyola University
William Fahrenbach, Ph.D., Assistant Professor and
Director, Graduate Program in English .......... University of Toronto
William I. Feeney, Ph.D., Professor Emeritus .......... University of Oregon
Kristine Garrigan, Ph.D., Associate Professor .......... University of Wisconsin
Hugh I. Ingelsick, Ph.D., Associate Professor .......... University of Michigan
Ellin M. Kelly, Ph.D., Professor .......... University of Wisconsin
Helen Marlborough, Ph.D., Assistant Professor .......... Brown University
Zahava McKeon, Ph.D., Professor Emeritus .......... University of Chicago
Patricia Murray, Ph.D., Associate Professor .......... University of Southern California
Gerald F. Mulderig, Ph.D., Associate Professor .......... Ohio State
Margaret M. Neville, Ph.D., Professor Emeritus .......... Loyola University
John E. Price, Ph.D., Associate Professor .......... Loyola University
Lavon Rasco, Ph.D., Associate Professor .......... Northwestern University
Frank Sherman, Ph.D., Associate Professor .......... University of California, Berkeley
Rev. John Smith, C.M., M.A., Professor Emeritus .......... DePaul University
Fredrick I. Tietze, Ph.D., Professor Emeritus .......... 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 401 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.

Note: Under special circumstances and with the Director's approval, students may take a limited number of advanced undergraduate courses for graduate credit.

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.

405 Composition Theory. Explores the development of contemporary theories of written composition; focuses on contexts for writing, the writing process, and reader-writer relationships.
408  **Stylistics.** Theory and practice in examining features of prose style: linguistic, rhetorical, and literary perspectives on style.

409  **Topics in Writing.** See schedule for current offering.

**Medieval**

411  **Age of Chaucer.** Chaucer’s works in the context of his milieu.

412  **Studies in Arthurian Literature.** Geoffrey of Monmouth, Wace, Layamon, and Malory.

413  **Studies in Medieval Literary Forms.** Alternating emphasis on poetic and narrative genres of the 14th and 15th centuries.

419  **Topics in Medieval Literature.** See schedule for current offering.

**Renaissance**

421  **Studies in English Renaissance Prose.** Major prose works, including More’s *Utopia*, Sidney’s *Apology for Poetry*, Bacon’s *Essays*, and Milton’s *Areopagitica*.

422  **Studies in English Renaissance Poetry.** Alternating emphasis on the English epic, the 16th-century lyric, and the 17th-century lyric.

423  **Studies in English Renaissance Drama.** Tudor-Stuart drama, 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 offering.

**Restoration and Eighteenth Century**


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

434  **Studies in Restoration and Eighteenth-Century Authors.** Alternating emphasis on Dryden, Pope, Swift, and Johnson.

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

**Nineteenth Century**

442  **Studies in the English Romantic Poets.** Major Romantic poets, including Coleridge, Wordsworth, Byron, Keats, and Shelley.

443  **Studies in Victorian Prose.** Major Victorian prose works, including the work of Carlyle, Newman, Ruskin, Arnold, and Pater.

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 Brontës, Hardy, Eliot, Meredith, and Trollope.

449  **Nineteenth-Century Topics.** See schedule for current offering.
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.
453 Studies in Modern British Drama. Representative British and Irish plays from World War I to contemporary times.
459 Topics in Modern British Literature. See schedule for current offering.

American Literature
464 Studies in American Authors. Alternating emphasis on major writers, including Hawthorne, Melville, Poe, Whitman, Dickinson, Twain, and James.
466 Studies in Modern American Poetry. Alternating areas of emphasis, including Imagism, Eliot, Frost, and contemporary poetry.
469 Topics in American Literature. See schedule for current offering.

Literary Criticism
470 Studies in Literary Criticism. Study of the theoretical foundations of literary criticism, exemplified by major texts from ancient Greece to the present.
479 Topics in Literary Criticism. See schedule for current offering.

Special Studies
484 Studies in Literature. See schedule for current offering.
487 Studies in Drama. Comparative studies in English, Continental, and American dramatic literature.
489 Topics in Comparative Literature. See schedule for current offering.
498 Independent Study. Written permission of supervising faculty member and of the program director is necessary before registration. Variable credit.
499 Thesis Research. Written permission of supervising faculty member and of the program director is necessary before registration. Limited to four credits.
FACULTY
Cornelius Sippel, Ph.D., Associate Professor, and Chairperson......University of Michigan
Donald I. Abramske, Ph.D., Associate Professor.................University of Chicago
Thomas Croas, C.M., S.T.D., Ph.D., Assistant Professor........Carnegie-Mellon University
Lillie J. Edwards, Ph.D., Assistant Professor....................University of Chicago
Albert Erlebacher, Ph.D., Professor..........................University of Wisconsin, Madison
Bruce L. Fenne, Ph.D., Associate Professor.....................Cornell University
Robert F. Fries, Ph.D., Professor Emeritus......................University of Wisconsin, Madison
Robert Garfield, Ph.D., Associate Professor......................Northwestern University
Gregory C. Kozlowski, Ph.D., Associate Professor..............University of Minnesota
James P. Krokar, Ph.D., Assistant Professor.....................Indiana University
Joseph H. Lehmann, Ph.D., Professor..........................Northwestern University
Ralph I. Malileid, Ph.D., Professor Emeritus.....................Loyola University
Richard I. Meister, Ph.D., Professor..........................Notre Dame University
Susan Ramirez, Ph.D., Associate Professor.....................University of Wisconsin, Madison
Ben Richardson, B.A., S.T.B., Professor Emeritus.............Harvard University
Arthur W. Thurner, Ph.D., Professor..........................University of Chicago

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 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
  Atlantic
  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
- Asian
- 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

**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**

301  **History of Chicago.** A history of the founding and evolution of Chicago from a frontier village to a major industrial, commercial, and cultural center.

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 Napoleonic.** 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.
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.

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

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.

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.

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.

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.

Scholars and Samurai: Traditional Chinese and Japanese Civilizations. An examination of the major elements of traditional Chinese and Japanese civilization, emphasizing religion, philosophy, ethics, and political and social structures.

Revolutionary China and Modern Japan. An examination of the coming of the Europeans, the transformation of traditional Chinese and Japanese civilizations, the rise of nationalism and revolution in China, the modernization and militarization of Japan, and post-World War II developments in East Asia.

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.

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

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.

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.

Toward Freedom: Afro-American History, 1860 to the Present. Reconstruction and its aftermath, Black self-help organizations, the Black Renaissance, Black participation in the World Wars, the civil rights movements.

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

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.
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.

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.

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.

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.

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.

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.

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.

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 multinational empires.

Eastern Europe, 1800 to present. A survey of the decline of empires and the rise of nation states: the destruction of traditional agrarian societies; the impact of World War II; and the establishment of communist regimes.

Conquest and colonial Rule. An analysis of Indian cultures, Spanish and Portuguese colonialism, and the struggles for independence.

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.

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.

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


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

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.
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.

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.

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.

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

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

The Emergence of Modern America, 1877-1914. New cultural patterns, political party battles, growth of big business and organized labor, Fupism, and the Progressive period.

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.

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

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.

American Civilization in the Twentieth Century: Ideas and History. Continues course 378.


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

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.

United States Constitutional History since 1965. 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.

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

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.

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.
Study Tour. An in-depth, on-site overview of the historical, political, social and economic reality of a foreign country. Credit is variable.

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

Graduate Courses

Historical Method and Bibliography.

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

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

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

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

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

Colloquium in Asian History. (Prerequisite: One 300-level course in Asian History or consent of the instructor)

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.

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

Program Director
Robert E. Brewer, Ph.D.

College Coordinators
Tom Dolan, M.A., 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; 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.

Courses

ISP 498 Independent Study. No more than four quarter hours may be applied
toward degree requirements.

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.

ISP 602 Candidacy Continuation. This registration is required of all students who
are not registered for courses but who occasionally use University facilities
during completion of course requirements or research projects. Non-
credit, $40.00 per quarter.
Liberal Studies

FACULTY
Charles R. Strain, Ph.D., Associate Professor, Program Director...University of Chicago
Avrom A. Blumberg, Ph.D., Professor...Yale University
Stanley J. Damberger, M.A., Associate Professor...Saint Louis University
Jeanne La Duke, Ph.D., Associate Professor...University of Oregon
Richard I. Meister, Ph.D., Professor...University of Notre Dame
John E. Price, Ph.D., Associate Professor...Loyola University
Robert Rotenberg, Ph.D., Associate Professor...University of Massachusetts at Amherst
Arthur W. Thurner, Ph.D., Professor...University of Chicago
J. Harry Wray, Ph.D., Associate Professor...University of North Carolina at Chapel Hill
Simone Zurawski, Ph.D., Assistant Professor...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 five-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, in the "standard concentration" 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.

In addition to a Standard Concentration, the MALS program offers the Executive Concentration. This program has been specially designed to enhance the student's professional training and experience by emphasizing the development of the skills of critical thinking, written communication, and creative imagination. The basis of the executive concentration is an expanded, seven course core program. Students may choose either concentration after consultation with an advisor.
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

Standard Concentration

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

Core Courses

- MLS 401 Visions of Self
- MLS 402 Perceptions of Reality
- MLS 403 The American Experience
- MLS 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 MLS 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 MLS 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.

Executive Concentration

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

Core Courses

- MLS 401 Visions of the Self
- MLS 402 Perceptions of Reality
- MLS 403 The American Experience
- MLS 404 The City
- MLS 452 Great Ideas, Business and Society
- MLS 459 Writing in the Professions
- MLS 462 Seminar in Business Ethics
Electives: five 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: Optional in the Executive Concentration. If the student chooses to do an Integrating project, MALS 499 must be taken in place of one of the student's elective courses.

Courses

Core Courses

**MLS 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.

**MLS 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 literary and visual artists.

**MLS 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.

**MLS 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.

Colloquia

**MLS 430 MALS Colloquium.** Topics vary. See schedule for current offering.

Special Topics Courses

**MLS 450 Chicago: Architecture and Urban Development.** 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 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 Parable and Imagination: The Literature of Subversion from Jesus to Borges. 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.

MLS 456 The Uses of Autobiography. Study of selected autobiographical writings to serve as models for self-expression.

MLS 457 Endings and Imagination: The Literature of Ancient and Modern Apocalypse. Ancient apocalypse invoked a catastrophic vision of the self's future. Today religious visions are accompanied by the literature of secular apocalypse. Why does imagination become fascinated by apocalyptic endings?

MLS 458 Islam and the West in the Modern World. (Cross-listed with HST 342). An examination of the economic, cultural and political interactions of Europe and the Islamic World.

MLS 459 Writing in the Professions. (Cross-listed with ENG 301/ COM 376). Improves writing skills useful in semi- and non-technical professions; emphasis on style, tone, awareness of purpose and audience; effective memo, proposal, and report design. Special attention given to writing skills connected with the MALS Integrating Project.

MLS 460 The Dilemma of the Modern Age. (Cross-listed with SOC 473). The crisis of the individual's place in society is exposed through social sciences, philosophy, literature, art, and music. The distinctive features of and responses to modern culture—individualism, alienation, and depersonalization—are illuminated through multiple perspectives.


MLS 462 Seminar in Business Ethics. (Cross-listed with PHL 640). A seminar in business ethics that centers on theoretical, practical, and pedagogical issues.

MLS 463 Nationalism and International Conflict. This course will explore the social origins and development of national identities. How these identities have been manipulated to serve specific competitive interests in the past two hundred years will also be discussed.

MLS 464 The Culture of American Catholics. This course will attempt a sociological and historical investigation of the culture of American Catholics, with special attention to the literary works of contemporary American Catholic writers including Flannery O'Connor, Mary Gordon and Eugene Kennedy.


MLS 466 Law, the State, and Freedom in America. (Cross-listed with HST 394). Examination of the relationship of the individual to the state in America. The course will focus on The Federalist Papers and other documents central to our constitutional structure.
MLS 467 Selected Topics on Women in Literature. Topics vary. See schedule for current offering.

MLS 468 Selected Topics: Women, Self and Society. (Cross-listed with WMS 394). Topics vary. See schedule for current offerings.


MLS 470 Scholars and Samurai. Traditional Chinese and Japanese civilizations. (Cross-listed with HST 339). An examination of the major elements of traditional Chinese and Japanese civilizations, emphasizing religion, philosophy, ethics, and political and social structures.

MLS 471 The Arts of Japan. The visual arts of traditional Japanese culture.

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.
FACULTY

Carolyn Narasimhan, Ph.D., Associate Professor and
Chairman ................................................................. Northwestern University

Louis Aquila, M.S., Adjunct Associate Professor ...................... DePaul University

J. Marshall Ash, Ph.D., Professor ........................................ University of Chicago

Allan Berele, Ph.D., Assistant Professor ................................ University of Chicago

Jeffrey Bergen, Ph.D., Associate Professor ............................. University of Chicago

W. S. Black, Ph.D., Lecturer .............................................. University of Wyoming

Jonathon Cohen, Ph.D., Assistant Professor ........................... Washington University

Barbara Cortzen, Ph.D., Associate Professor .......................... University of California, San Diego

Susanna Epp, Ph.D., Associate Professor ............................... University of Chicago

Thomas Farrell, M.S., Lecturer .......................................... University of Chicago

Eduardo Gatto, Ph.D., Assistant Professor .............................. Universidad de Buenos Aires

Constantine Georgakis, Ph.D., Associate Professor .................. Illinois Institute of Technology

Lawrence Gluck, Ph.D., Associate Professor .......................... Illinois Institute of Technology

Sigrun Goes, Ph.D., Associate Professor ............................... Northwestern University

Jerry Goldman, Ph.D., Professor ........................................ Illinois Institute of Technology

Roger Jones, Ph.D., Professor ........................................... Rutgers University

Leonid Krop, Ph.D., Assistant Professor ................................ University of Chicago

Ron Kuziel, M.S., Lecturer .............................................. University of Chicago

Jeanne LaDuke, Ph.D., Associate Professor ............................ University of Oregon

Charles Lindblade, Ed.D., Lecturer ..................................... Loyola University

Thomas Meik, C.M., M.S., Lecturer ..................................... DePaul University

Effat Moussa-Hamouda, Ph.D., Associate Professor ................ University of Iowa

Peter Pereira, A.M.T., Associate Professor ............................. Harvard University

Rochelle Plager, M.S., Lecturer .......................................... Northeastern Illinois University

Janice Pranger, M.S., Lecturer .......................................... University of Illinois

Walter Pranger, Ph.D., Professor ......................................... Illinois Institute of Technology

Gerald Samp, M.S., Lecturer ............................................. University of Illinois, Chicago

Daniel Seiden, M.B.A., Lecturer ........................................ University of Michigan, Ann Arbor

Beverly Shuh, M.S., Lecturer ............................................. DePaul University

Jacob Towner, Ph.D., Professor .......................................... University of Chicago

Stephen Vagi, Ph.D., Professor .......................................... University of Chicago

Yuen-Fat Wong, Ph.D., Professor ....................................... Cornell University

Shahn Zitzler, Ph.D., Lecturer ........................................... Lehigh University

PURPOSES

The Department of Mathematics offers a program in applied mathematics leading to a Masters of Science in Applied Mathematics. The program is designed to prepare students for careers in such areas as Statistics, Actuarial Science, and Operations Research. Many organizations realize the value of quantitative methods in their decision making process, consequently there is a need for individuals with such quantitative skills. The program is offered during the evening on DePaul's Lincoln Park campus. Students can complete the program in two years.
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 area by providing a demanding sequence of course to individuals carefully chosen for their capacity to rapidly apply what they learn at DePaul to their own classroom settings.

MASTER OF SCIENCE APPLIED MATHEMATICS

Admission Requirements

For full admission, students must have the following:
Bachelor's degree.
Four quarters of calculus.
A course in linear algebra.
A course in statistics.
A course in computer programming.
(Note: Students without this background are invited to enroll in appropriate mathematics undergraduate courses to build the necessary foundation.)

Degree Requirements

Courses: 48 quarter hours of graduate level work in mathematics
Comprehensive Examination: Part I covers the material in MAT 451, 452 and 453. Part II is based on courses from the students area of concentration.

Program Requirements:
The program consists of the following required courses:
MAT 451 Probability and Statistics I
MAT 452 Probability and Statistics II
MAT 453 Probability and Statistics III
MAT 456 Applied Regression Analysis
MAT 470 Advanced Linear Algebra
MAT 484 Mathematical Modelling
MAT 485 Numerical Analysis
MAT 487 Operations Research I
Students select four additional courses from the set of electives related to their concentration. Approval of the student's graduate advisor is required for all electives. With the approval of the student's graduate advisor, students may take up to two electives from related disciplines such as Physics, Computer Science, and Commerce.

COMPUTER USAGE

The computer plays an important role in the program. It will be used to illustrate ideas that arise in various courses, to do the data analysis required in the statistics courses, to find solutions to problems in the operations research course, and to find numerical solutions to problems that arise in numerical analysis and mathematical modelling. Seminars will be offered on the use of statistical packages. These packages are likely to play an important role in the solution of the problems the student ultimately finds in his or her place of employment.
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.

Registration for M.A. in Mathematics Education program courses is open only to program majors or to those students who have the written authorization of the program director.

Courses

GRADUATE COURSES

Actuarial Science

461  Actuarial Science I. The Theory of Interest. The theory and application of compound interest to annuities, amortization schedules, sinking funds, bonds, and yield rates. (Prerequisite: MAT 162 or 152.)

462  Actuarial Science II. Basic Contingencies. The theory and applications of contingency mathematics in life and health insurance, annuities, and pensions from both a probabilistic and a deterministic viewpoint. Topics include: survival distribution and life tables, life insurance and life annuities. (Prerequisite: MAT 461.)

463  Actuarial Science III. Advanced Contingencies. A continuation of MAT 462. Topics include: net premiums, net premium reserves, multiple life functions, multiple decrement models, and valuation theory for pension plans. (Prerequisite: MAT 462.)
Applied Algebra and Analysis

470  **Advanced Linear Algebra.** Matrix representation of linear transformations, inner product and rotations, eigenvalues and eigenvectors, diagonalization of symmetric linear transformations, principal axis theorem and positive definite quadratic forms, applications to geometry and statistics. (Prerequisite: MAT 262.)

481  **Fourier Analysis and Special Functions.** The course covers the basic principles of discrete and continuous Fourier analysis and some of its applications currently used in scientific modeling. Students will use the computer to implement the computational algorithms developed in the course. Some of the topics covered will include Fourier transforms and their application to signal and image processing, discrete Fourier series, the fast Fourier transform algorithm and applications to digital filtering, and the Radon transform and its applications to Tomography. (Prerequisite: MAT 262.)

484  **Mathematical Modelling.** The goal of the course is to provide illustrations of how modern mathematics is actually employed to solve relevant contemporary problems. Methods include differential equations, graph theory, combinatorics, probability and statistics. Students will see examples of real world problems that have been solved with the aid of mathematical models. Typically a problem will be presented, a mathematical model found, and then used to help understand aspects of the original problem. Examples could include inventory policy, traffic problems, spread of disease, and population growth.

Quantitative Methods and Operations Research


486  **Numerical Analysis II.** Theory and algorithms for efficient computation including the Fast Fourier Transform, Numerical solution of nonlinear systems of equations, Minimization of functions of several variables, Sparse systems of equations and eigen value problems. (Prerequisite MAT 485.)

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 or MAT 262 and programming knowledge.)

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

Statistics and Probability

451  **Probability and Statistics I.** Probability spaces; random variables and probability distributions; law of large numbers and the central limit theorem.

452  **Probability and Statistics II.** Joint probability distributions and correlation; sampling distributions; theory of estimation. (Prerequisite: MAT 451.)
Probability and Statistics III. Testing of hypotheses; linear regression; one-way analysis of variance; categorical data analysis. Nonparametric statistics. (Prerequisite: MAT 452.)

Multivariate Statistics. The multivariate normal distribution. The general linear model. Multivariate regression and analysis of variance. Discriminant Analysis; principal component and factor analysis; applications and use of statistical software. (Prerequisites: MAT 453.)

Applied Regression Analysis. Simple linear, multiple and polynomial regression models. Selection of best regression equation and examination of residuals for homoscedasticity and autocorrelation. Use of statistical software. (Prerequisite: MAT 348 or MAT 452.)

Design and Analysis of Experiments. 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. (Prerequisite: MAT 348 or MAT 452.)

The following courses may be offered if there is interest from a significant number of students. Some of these courses may be offered during the day.

Applied Abstract Algebra I. The course will serve as an introduction to the algebraic structures found useful in applied mathematics, electrical engineering, and computer science. Applications of abstract algebra to algorithms and algebraic computing as well as to computer engineering in general are covered. Specific applications include automata theory, analysis of algorithms, and the fast Fourier transform. Topics covered include sets, induction, functions, relations and graphs, rings and Boolean algebras and semigroups and groups. These topics have applications to finite state machines, graph theory, switching circuits and functions, formal language, and coding theory.

Applied Abstract Algebra II. This course is a continuation of MAT 400. Topics covered include lattices, linear algebra and field theory, linear machines, and algebraic coding theory. These topics have applications to decomposition and structure of finite state machines, fast Fourier transforms, transfer functions and shift registers, and to BCH coding, decoding, and Reed-Solomon codes. (Prerequisite: MAT 400.)

Stochastic Processes. Markov chains; branching processes; Poisson process; queueing theory; telephone traffic problems; Brownian motion applications. (Prerequisite: MAT 348 or MAT 452.)

Nonparametric Statistics. Inference concerning location and scale parameters, goodness of fit tests, association analysis and tests of randomness using distribution free procedures. (Prerequisite: MAT 348 or MAT 452.)

Statistical Quality Control. 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. (Prerequisite: MAT 348 or MAT 451.)

Simulation Models and the Monte Carlo Method. Techniques of computer simulation of the classical univariate and multivariate probability distribution models and such random processes as random walk, Markov chains, and queues. (Prerequisite: MAT 348 or MAT 451.)
Queueing Theory with Applications. An overview of queueing theory: queueing systems, related random processes, classification of queues, priority queueing, computer time sharing and multi-access systems. (Prerequisite: MAT 348.)


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

Applied Time Series and Forecasting. 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 BMDP, and application to economic, business, and industrial forecasting. (Prerequisite: MAT 348 or MAT 452.)

Sampling Theory and Methods. Simple random, stratified, systematic, and cluster sampling. Multistage and area sampling. Random response and capture-release models. (Prerequisite: MAT 348 or MAT 452.)

Mathematics Education


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.

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.)

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 607 and 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.

630 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 modeling or mathematical appreciation germane to the secondary classroom. (Prerequisite: Consent of instructor.)

Miscellaneous

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

FACULTY
Sister Mary Jeremy Buckman, R.S.M., Ph.D., R.N., Professor
and Chairperson .................................. Saint Louis University
Marianne Araujo, M.S., R.N., Adjunct Professor ......................... DePaul University
Sally Ballenger, M.S., R.N., Associate Professor ........................ DePaul University
Kathleen Cesafsky, M.S.N., R.N., Instructor .......................... Loyola University of Chicago
Edith Hogle, Ph.D., R.N., Associate Professor ........................ Loyola University of Chicago
Merle Kataoka-Yahiro, M.S.N., M.P.H., R.N., Instructor .......... Northwestern University
Marcia McCaughey, M.S., R.N., Lecturer ................................. DePaul University
Michele Poradzisz, M.S.N., R.N., Instructor ............................. Saint Xavier College
Sharon Rinaldi, M.S., R.N., Instructor .................................. DePaul University
Patricia Wagner, M.S., R.N., Associate Professor ...................... DePaul University

PURPOSE
The purpose of the graduate program in nursing is to prepare qualified nurses for leadership roles in teaching or administration. Provision is made for continued growth in clinical skills, as well as exploration and testing of various nursing theories. The graduate studies introduces the three core roles of the master’s program as organizing threads for the curriculum. The core roles (manager, teacher, and researcher) intertwine with and build upon the vertical strands of nursing research, theory and the collaboration process. Through specifically designed learning experiences the student will pursue a functional role in either nursing education or nursing administration. Cognate courses are taken to support both advanced nursing practice, the functional role, or thesis.

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.
Students whose undergraduate cumulative GPA is less than 2.75 on a 4.0 scale will be required to successfully complete the GRE Aptitude Test prior to their registration for graduate classes.
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
Certification as a basic rescuer in cardiopulmonary resuscitation
Current licensure as a registered professional nurse in Illinois
Physical examination, positive rubella titer, and any other requirements of specific clinical agencies within the year of clinical and practicum courses.
Professional liability insurance must be maintained through the clinical and practicum courses and purchased through DePaul University.
Degree Requirements

Courses: minimum of 48 quarter hours.
Thesis (Optional)
Comprehensive Written Examination: qualification for this examination requires completion of a) all course requirements and b) professional portfolio.

Curriculum

**FIRST YEAR**

<table>
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<tr>
<th>Autumn Quarter</th>
<th>Quarter Hours</th>
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<tbody>
<tr>
<td>Nursing Core</td>
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<tr>
<td>400—Theoretical Components of Nursing</td>
<td>4</td>
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<tr>
<td>410—Advanced Statistics</td>
<td>4</td>
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<tr>
<td>Winter Quarter</td>
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<tr>
<td>Nursing Core</td>
<td></td>
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<tr>
<td>401—Research</td>
<td>4</td>
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<tr>
<td>439—Nursing Practicum</td>
<td>6</td>
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<tr>
<td>Spring Quarter</td>
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<tr>
<td>Functional Role Nursing Administration</td>
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<tr>
<td>451—Effective Organization and Administration</td>
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<td>of the Division of Nursing</td>
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<td>452—Dimensions of Nursing Administration</td>
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<tr>
<td>Nursing Education</td>
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<tr>
<td>455—Dynamics of Curriculum</td>
<td>4</td>
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<td>458—Dynamics of Teaching</td>
<td>4</td>
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<tr>
<td>Summer Quarter</td>
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<td>Cognate</td>
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<td>Cognate</td>
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**SECOND YEAR**

<table>
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<tr>
<th>Autumn Quarter</th>
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<tbody>
<tr>
<td>442—Applied Physiology (Nursing Education Majors)</td>
<td>4</td>
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<tr>
<td>459—Practicum in Teaching</td>
<td>4</td>
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<tr>
<td>—OR—</td>
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<tr>
<td>MPS 402—Financial Foundations of Administration (Nursing Administration Majors)</td>
<td>4</td>
</tr>
<tr>
<td>457—Practicum in Administration</td>
<td>6</td>
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<tr>
<td>Winter Quarter</td>
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<tr>
<td>470—Perspectives in Nursing</td>
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<tr>
<td>Written Comprehensive Examination</td>
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**COGNATES IN NURSING**

<table>
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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>405</td>
<td>Research in Nursing II.</td>
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<tr>
<td>421</td>
<td>Evaluation in Allied Health Education and Service.</td>
</tr>
<tr>
<td>NSG</td>
<td>Applied Physiology. (This course, or its equivalent, is required for students in the education functional role.)</td>
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<td>422</td>
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</tbody>
</table>
All courses are four quarter hours unless otherwise indicated.

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.

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 fifty dollars ($50.00) 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. The focus is placed on development/synthesis and critiques 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. (Offered even numbered years.)

439  **Advanced Clinical Nursing Practicum.** A clinical and seminar course designed to provide the student with an opportunity to examine the collaborative, consultative, and teaching-learning processes, as well as the core roles of researcher, teacher, and manager in selected clinical settings. The roles of theory, professional standards, and ethical principles are emphasized. Students will develop learning contracts to identify experiences which will best enhance the advanced functional role. (6 hrs.)

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 interested in specific topics.
Effective Organization and Administration of the Division of Nursing. Theoretical concepts of nursing leadership, management, and supervision are explored. This examination is based on a synthesis of concepts, principles, and theories from organizational development, social and psychology, industrial psychology, social systems theory, nursing management and leadership, psychology of groups, and sociology. Systems theory provides an overall framework.

Dimensions of Nursing Administration. (Prerequisite: NSG 437 or consent of the instructor.) The various components of the role of the nurse executive officer are explored. Areas specific to nursing administration are examined such as the utilization of a professional standards board, staff development, labor relations, and management by objectives.

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.

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.)

Dynamics of Teaching. 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.

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.)

Perspectives on Collaboration. A seminar course designed to successfully share the talents, knowledge and skills of the graduate students with advanced preparation in the specialty area of nursing education or nursing administration. The collaboration process will be utilized between the graduate students of both functional areas: to achieve a changing and blending of nursing and service; to provide an opportunity to know, trust, and appreciate one another; and, to discuss shared avenues to increase the quality of care.
Philosophy

FACULTY

Thomas N. Munson, S.T.L., Ph.D., Professor and Chairman ........ University of Louvain
Kenneth D. Alpern, Ph.D., Assistant Professor .................. University of Pittsburgh
Bernard J. Boelen, Ph.D., Professor Emeritus ............... University of Louvain
Robert A. Cooke, Ph.D., Associate Professor ................. University of Chicago
Parvis Emad, Ph.D., Professor ............................... University of Vienna
Manfred S. Frings, Ph.D., Professor ............................ University of Cologne
Stephen G. Houlgate, Ph.D., Assistant Professor ......... Cambridge University
Gerald F. Krayche, Ph.D., Professor ............................ University of Ottawa
James W. Keating, Ph.D., Professor ........................... Catholic University of America
Mary Jeanne Larrabée, Ph.D., Associate Professor ............. University of Toronto
Robert Lechner, C.Pp.S., Ph.D., Professor Emeritus .......... University of Fribourg
Thomas N. Munson, S.T.L., Ph.D., Professor .................. University of Louvain
David W. Pellauer, Ph.D., Assistant Professor ............. University of Chicago
Bruno Switalski, S.T.D., Ph.D., Professor Emeritus .......... University of Toronto
Donald Hermann, Professor ..................................... L.L.M. (Harvard), Ph.D. (Northwestern)
David White, Ph.D., Adjunct Associate Professor .......... University of Toronto
Joseph F. Bief, Ph.D., Adjunct Assistant Professor ............ DePaul University

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 doctor’s 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 interests of its faculty and the need for focus on the graduate level, the Department concentrates on phenomenology, life philosophy, philosophies of existence, and the historical sources of these movements. The Department also specializes in theoretical and applied ethics.

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 taking a terminal Master's degree can profit from the experience of writing a thesis. A student advancing to the doctorate may find that a thesis offers a perspective for the doctoral dissertation.
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 (emphasizing 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. 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.

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
Satisfactory completion of 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.
The M.A. exams will be administered twice a year, in Fall and Spring, on three consecutive Saturdays. Students planning to take these exams should notify the department at the latest by the beginning of the Fall and Spring quarters.

Day 1: Ancient Philosophy—Plato or Aristotle
Medieval Philosophy—Augustine or Aquinas
Early Modern (Rationalism)—Descartes or Spinoza or Leibniz
Day 2: Empiricism—Locke or Berkeley or Hume
Later Modern—Kant or Hegel
Later Modern—Kierkegaard or Marx or Nietzsche
Day 3: Contemporary German—Husserl or Heidegger or Scheler
French Existentialism—Sartre or Merleau-Ponty or Ricoeur
Contemporary French—Derrida or Foucault or Levinas

The student will have 1½ hours to answer one of several questions in each section
(i.e. Ancient, Medieval, Early Modern, etc.) The questions will be broad in scope,
since the purpose of the examinations is to test the student's grasp of the history of philosophy. A pool of questions will be developed as various courses are offered.

Grading
(1) The students may fail one section (e.g.) Ancient, Early Modern of the examinations.
(2) In the event of failure of more than one section on any given day, the day's three sections must be repeated.
(3) The event of a failure of five sections or more, than the entire sequence of examinations must be repeated.
(4) An examination on only one thinker from each section may be repeated a third time.

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.

The master's written comprehensive examination. (See above)

MASTER OF ARTS PHILOSOPHY / MASTER OF BUSINESS ADMINISTRATION

Admission Requirements
For full admission, students must have the following: Bachelor's degree
Admittance into both the Graduate Division of Liberal Arts and Sciences and the Graduate School of Business Acceptance by the Joint Degree Committee coordinating the M.A./M.B.A. Program

Degree Requirements
Courses: 24 quarter hours of graduate Philosophy courses including:
PHL 513, 514, 527, 640, 641, and one of PHL 639, PHL 656, or a specified REL graduate seminar.
56 quarter hours of cognate courses in the Graduate School of Business of which a minimum of 16 to 20 quarter hours are from the major field for the M.B.A.
One 4 quarter hour integrated seminar, GSB 510.
Written Qualifying Examination: Successful completion of an examination that tests philosophical knowledge gained through coursework in the Joint Degree Program, and that measures the ability to integrate ethical analysis with the material from the GSB core courses.

Competence in Logic: Successful completion of a specified course in logic or of an examination.
DOCTOR OF 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.

Unless waived, the student is also required to pass a course or examination in Symbolic Logic and American and Anglo-American philosophy (e.g., PHL 304, 451, 452, 470, 655).

Eight 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: The doctoral examination are offered twice a year, in Fall and Spring, on three consecutive Saturdays. They consist of two-hour written examinations aimed at testing the student's ability to handle philosophical problems in metaphysics, theory of knowledge and ethics. In each examination, the student will be offered a choice of issues for discussion.

The student may repeat only one examination.

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.

Admission to doctoral candidacy: approval of the 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 dissertation 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 Division, Liberal Arts Loop office.
Courses

Courses listed in the 300 series provide background or 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
304 Introduction to Analytic Philosophy.
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.
315 American Philosophy: Political Ideals and Pragmatism.
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.

Topics and Controversies
350 Philosophy and the Natural Sciences.
361 Figures in Intellectual History.
362 Themes in Eastern Thought.
370 Existential Thinking.
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.
415 Aristotle I. A study of Aristotle's life and selected topics of his theoretical philosophy: Organon, Physics, Psychology, and Metaphysics.
416 Aristotle II. A study of aspects of Aristotle's practical and productive philosophy: Ethics, Politics, Rhetoric, and Poetics.
420 Augustine. A study of Augustine's philosophy through an examination of some 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; issues of the Regulae, the Discourse, and the Meditations.
440 Spinoza. A study of the Ethics and/or the Theologico-Political Treatise.
510 Kant I. An introduction to the Critical Philosophy of Kant by concentrating on the Critique of Pure Reason.
511 Kant II. A study of the Critique of Practical Reason or the Critique of Judgment.
515 Hegel I. An Introduction to Hegel: The Phenomenology of Spirit.
516 Hegel II. Readings in the 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.
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 302 Symbolic Logic or equivalent.)
600 Seminar on American Philosophy.
20th Century Philosophers

German Philosophers

525 Nietzsche. An introduction to the philosophy of Nietzsche through Beyond Good and Evil, Also Spake 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.

557 Topics in Continental Philosophy.

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, deconstruction, philosophy of language, and hermeneutics in contemporary French thought.

Ethics and Value Studies

513 Theoretical Foundations of Normative Ethics I. A comparative overview of the ethical writings of Aristotle and Aquinas, with emphasis on the natural law tradition.

514 Theoretical Foundations of Normative Ethics II. A comparative overview of Kant's moral theory and Mills' moral theory.

527 Philosophy, Ethics and Economics. An examination of classical and contemporary theories from Smith and Marx to Friedman, Heid, and others.
Seminar on Contemporary Problems.

Seminar on Rawls, Nozick and the Contractual Tradition. A study of the contract model from its roots in Locke and Rousseau to the work of Rawls and Nozick.

Problems in Ethics. A seminar in business ethics that centers on theoretical, practical, and pedagogical issues.

Seminar on the Continental Tradition in Ethics. A comparative discussion of the ethical theories of Scheler, Hartmann, and Brentano.

Seminar on the Social and Political Thought. A study of selected writings of key social and political thinkers.

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

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. Direction and advisement is given by the thesis director. Variable credit.

Independent Study.

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. $388.00 per quarter. (Prerequisite: Admission to candidacy.)

Non-Resident Candidacy Continuation. This registration provides for doctoral candidates already admitted to candidacy who are not in residence and need only occasional use of University facilities, including the libraries. Non-credit. $40.00 per quarter. (Prerequisite: Admission to candidacy.)
Physics

FACULTY
Donald O. Van Ostenburg, Ph.D., Professor
and Chairman..................................................Michigan State University
Anthony F. Behof, Ph.D., Associate Professor........University of Notre Dame
Mary L. Boas, Ph.D., Professor Emeritus........Massachusetts Institute of Technology
Eric D. Carlson, Ph.D., Adjunct Assistant Professor.(Adler Planetarium)
..................................................Northwestern University
Richard J. DeCoster II, Ph.D., Assistant Professor........University of Iowa
Zuhair M. El Saffar, Ph.D., Professor Emeritus........University of Wales, Great Britain
Margaret S. Greenwood, Ph.D., Associate Professor........University of Colorado
Julius J. Hupert, Ph.D., Professor Emeritus........Northwestern University
Gerard P. Lietz, Ph.D., Associate Professor........University of Notre Dame
Mark T. Ratliff, Ph.D., Associate Professor........Northwestern University
Edwin L. Schilling, Ph.D., Professor Emeritus........University of Notre Dame
Thomas G. Stinchcomb, Ph.D., Professor........University of Chicago

PURPOSE
The purpose of the Graduate Physics Program is to develop professional competence in its students. To fulfill this purpose, the Department offers the following degree programs: Master of Science in Physics, Master of Science in Applied Physics, Master of Science in Teaching Physics, and Master of Science in Physics (Medical Physics option).

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 Applied Physics
Master of Science Teaching of Physics
Master of Science PHYSICS (thesis)

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.
Degree Requirements

Courses: a minimum of 44 quarter hours of graduate credit (11 courses), including:

PHY 395 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 Research. 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 credit 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.

An oral examination on the thesis.

MASTER OF SCIENCE APPLIED PHYSICS (thesis)

Admission Requirements: The science requirements in the program are the following: Complete sequence of courses in general physics; complete sequence of courses in mathematics including integral calculus.

Degree Requirements

Courses: a minimum of 44 quarter hours of graduate credit (11 courses), including:

PHY 395 Methods of Theoretical Physics
PHY 410, 411, 412 Theoretical Physics I, II, III
PHY 478 Topics in Applied Physics
PHY 480 Thesis Research
PHY 490, 491 Solid State Physics I, II

Other courses may be substituted for the above with the approval of the Applied Physics Committee.
A choice of the following:

- **PHY 405** Physical Principles of Telecommunications
- **PHY 424** Electrodynamics of Plasma
- **PHY 442** Applied Mechanics
- **PHY 451** Analog Signal Processing
- **PHY 452** Digital Signal Processing
- **PHY 454** Modern Optics
- **PHY 459** Thin Film Microelectronics
- **PHY 465** Nuclear Physics
- **PHY 466** Radiation Physics
- **PHY 492** Solid State Device Physics
- **PHY 493** Introduction to Nuclear Magnetic Resonance
- **PHY 498** Digital Signal Processing

Additional courses from 300 or 400 level. Selection from courses in biological sciences, chemistry, mathematics, computer science or other minor fields with the written approval of the Applied Physics committee. The exact number of the additional courses required is dependent upon credit earned from PHY 480 thesis research.

Thesis: The thesis requirement is the same as Master of Science: Physics, except, the thesis may involve the building of a piece of equipment used in departmental research areas.

**MASTER OF SCIENCE PHYSICS OR APPLIED PHYSICS:**
(non-thesis)

**Degree Requirements**

In special cases and with the approval of the appropriate Graduate Committee, the thesis requirement may be replaced with a graduate level physics course.

**MASTER OF SCIENCE: TEACHING OF PHYSICS**

**Admission Requirements:**

The same as the requirements for Applied Physics.

**Degree Requirements**

Eleven four-hour courses or equivalent planned in individual consultation with a faculty member. These may include some allied field offerings.
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.
331 Active Circuits—Solid State Devices.
332 Logic Design—Theory and Practice.
340 Thermal Physics.
350 Optics.
360 Twentieth Century Physics I.
361 Twentieth Century Physics II.
380, 381, 382 Experimental Physics I, II, III. (2 hours each.)
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.

405 Physical Principles of Telecommunications. This course treats the basic concepts of Physics on which communications are based, such as basic electricity, circuit elements, transmission lines, and fibers. Included will be a discussion of combinatorial and sequential digital circuits. The format consists of lecture and laboratory exercises. (Prerequisite: Mathematics 162 or equivalent.)

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.
**Electrodynamics.** (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 as applied to electrodynamics; charged particle collisions and radiations.

**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.

**Logic Design.** Application of switching theory to the solution of logic design problems. (Prerequisite: PHY 232 or consent.) Analysis and design of synchronous and asynchronous sequential networks. Required laboratory project.

**Theoretical Mechanics.** (Prerequisite: PHY 410) Variational principles: Lagrangian and Hamiltonian mechanics; rigid body dynamics; small oscillations; special relativity theory; canonical transformations; Hamilton-Jacobi theory.

**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.

**Analog Signal Processing and Systems.** (Prerequisite: PHY 331) Analog filter design. Systems analysis via convolution. Laplace and Fourier techniques. Laboratory.

**Digital Signal Processing and Systems.** (Prerequisite: PHY 332) Discrete-time signals and systems. Digital filters. DFT and FFT. Laboratory.

**Modern Optics.** Fourier Optics and optical processing of information. Topics include diffraction theory, optical transfer functions and holography. The Fourier Transform, Discrete Fourier Transform and Fast Fourier Transform are used extensively.

**Thick Film Microelectronics.** (Prerequisite: PHY 331) An introduction to the fabrication, design, and applications of thick-film hybrid microcircuits. Laboratory.

**Quantum Mechanics.** (Prerequisite: PHY 412) Review of basic quantum theory; vector spaces; linear operators; observables; commutators; projection operations; representations; angular momentum theory; systems of identical particles; invariance.

**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 bonding; phonons. Debye theory of heat capacity; inelastic scattering, anharmonic interactions and thermal conductivity.
491 **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; superconductivity.

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.

493 **Introduction to Nuclear Magnetic Resonance.** (Prerequisites: PHY 393, 360). The resonance condition, absorption lines. Free induction decays, theory of relaxation phenomena, imaging.

497 **Microprocessor Interfacing.** Design and construction of microcomputer based peripherals and adapters. (Prerequisite: PHY 345, 396 or 496.) Driver software, PCB construction and bus structures. Required laboratory project.

**Seminars and Independent Study Courses**

478 **Topics in Applied 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.
Psychology

FACULTY
Sheeldon Cotler, Ph.D., Professor and Chairman .......... Southern Illinois University
Robert E. Brewer, Ph.D., Associate Professor .......... Southern Illinois University
Mari J.K. Brown, Ph.D., Associate Professor .......... Columbia University
Linda A. Camras, Ph.D., Associate Professor .......... University of Pennsylvania
Douglas Cellar, Ph.D., Assistant Professor .......... University of Akron
Ernest J. Doleys, Ph.D., Associate Professor .......... University of Missouri
Jane Halpert, Ph.D., Assistant Professor .......... Wayne State University
Frederick H. Heilizer, Ph.D., Associate Professor .......... University of Rochester
Leonard A. Jason, Ph.D., Professor .......... University of Rochester
George F. Michel, Ph.D., Assistant Professor .......... Rutgers University
Mark Miller, M.A., Instructor .......... Pennsylvania State University
John M. Reisman, Ph.D., Professor .......... Michigan State University
Sheila C. Ribordy, Ph.D., Professor .......... University of Kansas
W. LaVonne Robinson, Ph.D., Associate Professor .......... University of Georgia
Patrick Tolan, Ph.D., Assistant Professor .......... University of Tennessee
Robert J. Tracy, Ph.D., Associate Professor .......... Texas Christian University
Midge Wilson, Ph.D., Associate Professor .......... University of North Carolina
Edwin S. Zollik, Ph.D., Professor .......... Catholic University of America

ADJUNCT FACULTY
Melany E. Baehr, Ph.D. .......... University of the Witwatersrand
Robert W. Cavanagh, Ph.D. .......... Loyola University
Della Corrrossi, A.C.S.W. .......... University of Illinois at Chicago
Robert L. Davenport, Ph.D. .......... DePaul University
Kurt R. Elster, Ph.D. .......... Illinois Institute of Technology
Hector Machabaski, Ph.D. .......... University of Kentucky
Joseph A. Orban, Ph.D. .......... Virginia Polytechnic & State University
Catherine Pines, Ph.D. .......... Emory University
William Terris, Ph.D. .......... Illinois Institute of Technology
Derise E. Toliver, Ph.D. .......... Duke 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. The M.A. is not a terminal degree; it leads directly to the Ph.D. 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 may 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 3 semester hour (4 quarter hour) elementary statistics course is to be included in this minimum, as well as a course in experimental psychology.

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 LAS&S Graduate Application.
Students considering application to the M.A.-Ph.D. programs in Clinical Psychology should be aware of the following:

In 1987-88, over 400 students applied to the doctoral program in clinical psychology. Of the applicants, 12 students were offered admission. 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 application. Approximately one applicant in seven is rejected on this basis. Application materials should be complete by January 31. The process of evaluating applications begins 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.

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 3 years were members of minority groups.

MASTER OF ARTS CLINICAL PSYCHOLOGY

Degree Requirements

Courses: minimum of 72 quarter hours including 4 hours of 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>PSY 402</td>
<td>Perceptual Processes or 404 Learning Processes</td>
</tr>
<tr>
<td>PSY 406</td>
<td>Physiological Processes</td>
</tr>
<tr>
<td>PSY 430</td>
<td>Advanced Social Psychology</td>
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<tr>
<td>PSY 437</td>
<td>Advanced Personality or 439 Advanced Developmental Psychology</td>
</tr>
</tbody>
</table>

Statistics Courses:

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<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>PSY 410, 411, 412</td>
<td>Advanced Statistics I, II, III</td>
</tr>
</tbody>
</table>
Additional Courses

PSY 481 Intelligence Testing
PSY 482 Personality Assessment
PSY 484 Behavioral Assessment
PSY 486 Advanced Psychopathology
PSY 487 Psychopathology of the Child
PSY 488 Principles of Psychotherapy
PSY 493 Clinical Community Psychology
PSY 500 Professional Ethics and History of Clinical Psychology
PSY 574 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 program or withdraw after completion of the M.A.

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 six courses:

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 500 Professional Ethics and History of Psychology (required of everyone)

Statistics Courses:

Three courses: PSY 410, 411, 412, Advanced Statistics I, II, 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 doctoral 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 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:
Three courses: PSY 410, 411, 412 Advanced Statistics I, II, III

Core Courses in the Industrial Psychology Area:
- 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
- PSY 446 Psychological Theories of Organizations

Other Required Courses: 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: 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 program or withdraw after completion of the M.A.

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 doctoral programs in Clinical, General Experimental, and Industrial/Organizational Psychology. The Clinical Program offers special emphasis in Clinical Community or Clinical Child Psychology. Within the General Experimental Program, the most commonly selected areas are quantitative methods, learning, physiological, developmental, social psychology, although an innovative course of study could be developed in consultation with an advisor.
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:

- PSY 361 History and Systems of Psychology or passing a special exam in this area
- 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
- PSY 481 Intelligence Testing
- PSY 482 Personality Assessment
- PSY 484 Behavioral Assessment
- PSY 486 Advanced Psychopathology
- PSY 487 Psychopathology of the Child
- PSY 488 Principles of Psychotherapy
- PSY 493 Clinical Community Psychology
- PSY 500 Professional Ethics and History of Clinical Psychology
- PSY 569 Seminar in Program Evaluation
- PSY 596 Internship (0 hours)
- PSY 597 Master's Thesis Research (4 hours)
- PSY 599 Dissertation Research (12 hours)

Note: 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 general knowledge of clinical and experimental psychology and the student's area of specialization (child or community). 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, statistics, 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 or 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 or fifth year in the 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 doctoral oral 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 500 Professional Ethics and History of Psychology
PSY 597 Master's Thesis Research (4 hours)
PSY 599 Dissertation Research (12 hours)

Areas of Specialization

The most frequently selected specialization areas are developmental, learning, quantitative methods, physiological, and social. The student is not strictly limited to these areas. In consultation with advisors, the student is given some latitude in designating an area of specialization. Given our individualized educational philosophy and the rapidly changing nature of the science of psychology, innovative courses of study are sometimes developed within General Experimental psychology.

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 would supplement his or her training by taking additional courses chosen with the aid of the advisor. Choice of additional courses would 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 the advisor, the student will begin to plan a thesis project which usually will be conducted during the 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 or her dissertation. The dissertation project usually is conducted during the fourth year. Typically the graduate student would 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 statistics, 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 120 hours beyond the bachelor's degree, including twelve dissertation hours and the following:

Core Courses: All core courses plus either a course in history and systems or passing a special exam in this area.

Industrial Psychology Courses: All core courses in the I/O area: PSY 440, 441, 442, 444, 445, 446.

Electives: Additional courses with consent of the student's advisor to attain the required 120 credit hours. Electives are grouped into two areas: methods and content. At least one course must be taken in each area. Method courses include Math 454, 456, 457; Computer Science 423, 424, and 432. Content courses include Management 526, 560; Marketing 545; Psychology 425, 434, and 443.

Doctoral Candidacy Examination: designed to assess the student's knowledge of psychology and the student's area of specialization. The examination is given in five sections. The first two sections cover two minor areas selected by the student from the areas of learning, statistics, perception, physiological, personality, developmental and social psychology. The third section consists of an examination in the areas represented by the required courses in industrial/organizational psychology. The fourth area is in the area of the student's specialization in I/O psychology. The fifth section is an oral examination in the area of I/O psychology.

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

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

333 Child Psychology. (Prerequisite: PSY 105 or 106.) Description and evaluation of principles and theories of development from conception through childhood.

334 Adolescent Psychology. (Prerequisite: PSY 105 or 106.) Biological, cognitive, emotional, and social development. Covers theories and research on normal and abnormal development during adolescence.

347 Social Psychology. (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.

353 Abnormal Psychology. (Prerequisite: PSY 105 or 106.) Description of the nature, symptoms, and etiology of psychological disorders.

354 Ecosystems and Behavior. 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.) Study of behavior of individuals in groups and the analysis of leadership styles as a function of the type of task and group structure.

356 Introduction to 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 105 or 106.) A survey of the classical and modern theories of learning.

361 History and Systems of Psychology. (Prerequisite: PSY 105 or 106 or consent) Historical development of psychology and its fields.

362 Cognitive Process. (Prerequisite: PSY 105 or 106.) A survey of modern cognitive psychology with major emphasis on Information Processing theory.

366 Behavior Problems of Children. (Prerequisite: PSY 105 or 106.) Factors associated with deviance in children and adolescents. Examination of personal and social consequences. Review treatment programs for children.

367 Psychology of Exceptional Children. (Prerequisite: PSY 105 or 106.) Comprehensive introduction to the study of special children—those children who do not reach their fullest potential because of physical, social, cognitive, or behavioral factors.

368 Computer Programming. (Prerequisite: PSY 240 or consent.) Laboratory fee $15.00. Introduction to word processing, writing computer programs in BASIC or FORTRAN, and use of Statistical Packages such as SPSS or BMDP.
Research Methods in Developmental Psychology. (Prerequisite: PSY 333 or equivalent.)
Research Methods in Social Psychology. (Prerequisite: PSY 347 or equivalent.) Laboratory fee $5.00. Overview of methods and associated problems unique to conducting research with humans, both in the laboratory and the field.
Perception. (Prerequisite: PSY 103 or 106.) Environmental and stimulus control of behavior; chemical control of perception.
Physiological Psychology. (Prerequisite: PSY 105 or 106.) The nervous system and endocrine functions as related to behavior.
Comparative Psychology. (Prerequisite: PSY 105 or 106.) Patterns of behavior shown by various animal species.
Industrial and Organizational Psychology. (Prerequisites: PSY 105 or 106.) Application of theories and methods of psychology to the study of human behavior in business, industrial, and other organizations.
Personnel Psychology. (Prerequisite: PSY 380 or consent.) Application of concepts from differential psychology and measurement to employee selection, performance appraisal, placement and training in business and other organizations.
Organizational Behavior. (Prerequisite: PSY 380 or consent.) Application of theories in leadership, work and motivation, and job satisfaction to employee and management behavior. Applied social psychology in an organizational context.
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. (Cross-listed with PSY 443).
Consumer Behavior and Advertising. (Prerequisite: PSY 380 or consent.) Application of psychological principles and methods to advertising, marketing, product development, sales, and propaganda.
Psychology of Alienation. (Prerequisites: PSY 105 or 106.) Causes of individual and group alienation, and the resultant behavior.
Psychology of Language. (Prerequisite: PSY 105 and 106.) Development of language in children, and effects of language on thinking.
Advanced Topics in Psychology. (Prerequisites: Senior standing and consent of Chairman.)
Field Work and Study. (Prerequisite: Junior standing and consent of Chairman.) Supervised experience in selected off-campus settings and associated readings.
Reading and Research. (Prerequisites: Advanced 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.** Analysis of the variables involved in the determination of perception with particular attention to the problems of space, motion, distance, size, form, the aftereffects 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.** The functional role of neural systems important for the processes of motivation, emotion, sleep, memory, and cognition.

409 **Statistics for the Behavioral Sciences.** (Prerequisite: PSY 240.) Applied inferential statistics.

410 **Advanced Statistics I.** 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.** 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.** Theory and statistical techniques underlying the analysis of multiple measurements.

419 **Factor Analysis.** Theoretical foundations; methods of analysis, and comparison of various factor analytic models.

420 **Advanced Research Methodology.** Design, and analysis, of basic and applied psychological research with an emphasis on statistical software.

421 **Advanced Experimental Design.**

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.** 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.** Theory and research in attitude formation and organization, communication and persuasion, resistance to persuasion, and measurement techniques.

433 **Social Judgment.** Theory and research in judgment of social stimuli, perceiving and evaluating persons, and social comparison processes.
Small Group Behavior. 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.

Advanced Personality. Critical analysis of research in personality with emphasis on the development and testability of major constructs in contemporary research.


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.

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 and human factors design. 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. Critical analysis of techniques and research pertaining to training and development. Emphasis on traditional training programs and innovative organizational development techniques.

Psychological Theories of Organizations. Theory and research in the social psychology of organizations relating to organizational design, analysis, systems, and processes.

Psychological Measurement. Logical and mathematical principles underlying test construction with emphasis on evaluating the reliability and validity of scores.

Applied Statistical Prediction. Applications of statistics and psychological measurement to the problems of predicting human performance. Several computer programs will be used to analyze data.

Behavior Modification. Analysis of principles, practices, and research related to learning theory and the modification of human behavior.

Emotions and Emotional Development. This course covers contemporary theories of emotions, the development of emotions, the development of emotion recognition skills and relationships among emotions, cognition, and social behavior.
Individual Intelligence Testing. Theories of intelligence and cognitive development. Introduction to the administration of verbal and various nonverbal 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. Administration and scoring of the Rorschach and Thematic Apperception Test and other tests. Evaluation of tests and related areas of research and development.

Advanced Psychodiagnosis. Advanced study of projective techniques and other assessment methods, with emphasis on analysis, interpretation and integration of all pertinent clinical data, and report writing.


Advanced Psychopathology. Review of the major diagnostic categories as outlined by the Diagnostic and Statistical Manual. Current issues in psychopathology and related research are reviewed.


Principles of Psychotherapy. Analysis of theoretical approaches to psychotherapy.


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.

Treatment Methods with Children. Consideration of a variety of treatment approaches used to help alleviate the psychological problems of children, with emphasis on play psychotherapy.

Principles of Consultation. 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)

Clinical Community Psychology.

Evaluation and Research in Community Mental Health.

Professional Ethics and History of Psychology. (2)

Behavioral Medicine. Concerned with development and integration of psychological and biomedical science knowledge and techniques relevant to health and illness. Prevention, treatment, and rehabilitation at individual, group, and systems levels are dealt with.


Minority Issues. Considerations related to minority status and issues specific to diagnostics and interventions with minority populations.
Seminars numbered 550 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.

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. (4 hours)
562 Seminar in Family Therapy. A review of systems theory and the assessment and treatment of families and couples. (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. 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.
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<th>Course Code</th>
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<tr>
<td>590</td>
<td>Thesis Seminar</td>
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<td>592</td>
<td>Directed Research</td>
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<td>A-Experimental</td>
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<td>G-Community Mental Health</td>
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<td>H-Perception</td>
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<td>I-Psychotherapy</td>
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<td>J-Developmental</td>
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<td>K-Industrial/Organizational</td>
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<td>The course involves individual projects (non-thesis research) under the supervision of a faculty member. (Arranged by consultation with the Chairman.) (1 to 4)</td>
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<td>594</td>
<td>Psychological Research</td>
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<td>A course involving intensive readings in contemporary psychological literature. (Arranged by prior consultation with the Chairman.)</td>
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<td>595</td>
<td>Colloquium</td>
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<td>Required of all graduate students. Lectures by psychologists and members of the faculty. (No credit.)</td>
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<tr>
<td>596</td>
<td>Internship in Clinical Psychology</td>
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<td>(Arranged with consent of Director of Clinical Training.) (No credit.)</td>
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<td>597</td>
<td>Master's Thesis Research</td>
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<td>Original investigation of a specific research problem. (1 to 4)</td>
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<td>598</td>
<td>Master's Candidate Research</td>
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<td>(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.)</td>
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<td>599</td>
<td>Dissertation Research</td>
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<td>(1 to 12 hours per quarter.)</td>
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<td>701</td>
<td>Resident Candidacy Continuation</td>
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<td>(Prerequisite: Admission to Candidacy) Students admitted to candidacy for the doctoral degree who have completed all course and dissertation registration requirements and 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.</td>
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<tr>
<td>702</td>
<td>Non-Resident Candidacy Continuation</td>
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<td>(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, $40 per quarter.</td>
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Public Services

FACULTY
Grace Budrys, Ph.D., Professor, Program Director ............... University of Chicago
Rosemary S. Bannan, Ph.D., Professor ................................. Loyola University
John P. Barrett, M.S.I.R., Lecturer ................................. Loyola University
Larry Bennett, Ph.D., Associate Professor ......................... Rutgers University
Robert Cassiani, M.S.I.R., Lecturer ................................. Loyola University
Keaneth Fidel, Ph.D., Associate Professor ......................... Washington University
Eleanor French, Ph.D., Assistant Professor, The Maxwell School, Syracuse University
Anne C. Keays, J.D., Lecturer ................................. M.B.A., Northwestern University; J.D., Chicago-Kent College of Law
Leo Kerczynskyj, M.S., J.D., Lecturer ............................... Northern Illinois University
Claire H. Kohrman, Ph.D., Lecturer ................................. Michigan State University
John T. Leahy, S.T.D., Associate Professor ......................... Loyola University
J. Patrick Murphy, C.M., Ph.D., Assistant Professor ................ Stanford University
Joyce Sween, Ph.D., Professor ....................... Northwestern University
Stanley Tarr, M.B.A., C.P.A., Lecturer ............................... Northwestern University

PURPOSES
The Management of Public Services Program was created to provide academic training for people interested in developing or enhancing those skills which are necessary to carry out administrative work. The program uses an interdisciplinary approach drawing upon the knowledge bases developed by political science, sociology, and economics. The curriculum reflects a commitment to achieve a balance between a theoretical and an applied approach to the challenge of the administrative work role.

While the skills required to manage organizations in the public sector are becoming largely indistinguishable from skills used in the private sector, the ultimate goals of not-for-profit versus for-profit organizations provide a sharp distinction. The Management of Public Services Program aims to keep this distinction firmly in the forefront in its course offerings. The courses focus on the means which will best achieve the goals that public service, human service, and other not-for-profit organizations aim to achieve.

PROGRAMS
Master of Science Degree in Management of Public Services.
Joint Degree—Master of Science degree in Management of Public Services and Juris Doctor degree in Law.
Certificate in Administrative Foundations in Public Services.
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 are not required; however, if GRE, LSAT, or GMAT scores are available, they may be submitted to strengthen the application. Two letters of recommendation are required. They may be written by a person in a supervisory position at the place of employment or by a faculty member familiar with the individual's work.

Students who have completed their undergraduate education outside of the United States may be required to take an additional English language examination offered by DePaul University.

Prerequisite courses. Fulfillment of these courses at DePaul University or another accredited institution is required to achieve full acceptance into the master's degree program. Students who are accepted on a conditional basis maintain this status until the prerequisites are fulfilled.

MPS 402 Financial Foundations of Administration (equivalent to an introductory accountancy course).

MPS 403 Economic Foundations of Administration (equivalent to an introductory economics course).

Degree Requirements

Courses: successful completion of 52 quarter hours of graduate credit. (Each course carries 4 credit hours unless otherwise specified.) Included in this requirement are the following courses:

Core Courses (30 credit hours)

MPS 500 Functions of the Administrator
MPS 507 Information Technology
MPS 533 Management Planning and Control Systems
MPS 540* Bureaucracy, Public Policy, and the American Policy
MPS 553 Organizations
MPS 590 Statistics for Decision Making (2 credit hours)
MPS 598 Research in Administration I
MPS 599 Research in Administration II

*Note: MPS 543, Health Care Policy, may be substituted to fulfill this requirement.

Elective Courses (22 credit hours) These courses are designed to address a content area or to develop an analytical skill. Students are free to choose elective courses according to their interests. A maximum of two courses may be taken in departments other than MPS. Permission of the Director must be obtained prior to registration for such courses.
Concentration: Students may focus on one of the following areas of concentration:

I. Content Area Concentrations
   - Health Care Administration
   - Law Enforcement Administration
   - Not-for-Profit Organizational Management
   - Public Administration and Public Policy
   - Community and Urban Development
   - Youth Services Administration

II. Analytical Skills Concentrations
   - Information Management
   - Economic Analysis

Grades: No more than two "C" grades will be accepted in courses leading to the M.S. degree.

JOINT PROGRAM: MANAGEMENT OF PUBLIC SERVICES AND JURIS DOCTOR

The College of Liberal Arts and Sciences and the College of Law offer a joint program of study leading to the M.S. degree in the management of public services and the J.D. degree in law. The joint degree program is available to both day and evening students.

The student is responsible for gaining admission to the College of Law and the MPS Program independently. Once admitted to both degree programs, the student may petition to be accepted into the joint degree program.

In practice, since all first-year Law courses are required, the student may not take elective courses leading to the joint degree during the first year of study.

CERTIFICATION PROGRAM: ADMINISTRATIVE FOUNDATIONS IN PUBLIC SERVICES

A program leading to a certificate in Administrative Foundations in Public Services is also available. This program is designed for people who wish to pursue course work covering basic administrative skills. College credit is awarded for completion of these courses. The two 300-level courses may be credited toward the M.S. Degree program.

Admission Requirement

For full admission, the student must have a Bachelor's degree conferred by an accredited institution.

Certification Requirements (12 credit hours)

Courses: successful completion of the following four courses:
   - MPS 402 Financial Foundations of Administration (3 credit hours)
   - MPS 403 Economic Foundations of Administration (3 credit hours)
   - MPS 500 Functions of the Administrator (4 credit hours)
   - MPS 590 Statistics for Decision Making (2 credit hours)
Courses

Courses are conducted on an evening and/or intensive weekend basis.
All courses are worth four credit hours unless otherwise indicated.

PREREQUISITE COURSES

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)

*Note: MPS 402 and 403 may be taken on a Pass/Fail basis, unless otherwise indicated upon admission to the Program.

CORE COURSES

500 Functions of the Administrator. This course introduces students to the concepts of research and related theory which apply to the administrative process. Traditional administrative function models (decision making, interpersonal relations, goal setting) and administrative skills (planning, organizing, staffing, coordinating, and directing) are reviewed. Alternative models are explored.

507 Information Systems. Preliminary theoretical understanding of the computer and its applications. Principles of computerization, data base, and management information systems stressed. (Lab Fee)

533 Management Planning and Control Systems. (Prerequisite: MPS 402 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.

540 Bureaucracy, Public Policy, and the American Policy. Bureaucracy examined as the pervasive means of organizing complex activities in the public and private sectors, and in relation to its utility as a decision-making and implementation structure in the context of other political institutions.

553 Organizations. (Prerequisites: MPS 500.) Theory and research which focuses on organizational structures and processes, goals, means and success measures as well as organizational problem areas.

590 Statistics for Decision Making. A review of statistical and analytical techniques most frequently utilized in public sector organizations. Topics include descriptive and inferential statistics. Computerized statistical packages are utilized. (2 credit hours) (Lab Fee)

598 Research in Administration I. (Prerequisite: 6 Core Courses.) Students are expected to design and carry out a research project based on a problem in administration they have identified. The primary aim of the course is to provide students with sufficient knowledge about scientific research methods to make them well-educated consumers of research.

599 Research in Administration II. (Sequel to MPS 598.) The final product of this course is a master's paper describing the administrative problem and steps taken to investigate it as outlined in MPS 598. (Lab and Binding fees.)

145
CONCENTRATION COURSES
(To be taken concurrently with or upon completion of core courses)

508 Management Control for Non-Profit Organizations. (Prerequisite: MPS 533) 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.

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.

510 Operations Research. (Prerequisite: MPS 507) 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)

511 Advanced Statistics. (Prerequisite: MPS 590) 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)

513 Human Relations. The primary focus is on human, as opposed to technological, aspects of administration. Research on small group processes and related administrative techniques is reviewed.

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.

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.

517 Case Analysis in Health Care Administration. (Cross-listed with SOC 435) A case-study approach focusing on the relationship between structure and process given the variation between the clinical and administrative approaches to issues presented in the case materials.

518 Planning for Organizational Growth. The course is designed to provide an understanding of the interface between strategic planning and marketing as related to non-profit organizations. The course outlines skills needed to integrate these activities at the level of strategy, development, implementation, and evaluation.

520 Human Resources. General and special managerial functions of the human resources department and its relationship to other organizational functions. Particular emphasis on human resource planning and development.

521 Organization Development. The course addresses organizational structures and processes and the values and behaviors of the people who work within them. The emphasis is on the role of the administrator in improving the quality of life in organizational environments and organizational effectiveness through techniques in participative management.

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.
Administrative Case Analysis. (Prerequisite: completion of at least four core courses) This course simulates administrative problem-solving situations using a case analysis format. Cases are used based on a variety of problems that regularly confront administrators. The experience involves learning to identify the basic problems, gather relevant background information, and evaluate the potential effects of possible courses of action.

Marketing for Service Organizations. (Prerequisite: MPS 500) 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.

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.

Industrial Psychology. 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.

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.

Health Care Delivery Systems. (Cross-listed with SOC 437) Examination of systems 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.

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 of the policy process. Case studies of specific public policies used to illustrate how the process works.

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. Also considered is the role of policy analysis in the policy making process, and hence the political implications of policy analysis.

Health Care Policy. 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.

Law Enforcement Policy Issues. (Cross-listed with SOC 440) Theory, application, and impact on policies in criminal law on police, corrections, and the courts.
Policies and Urban Development. (Cross-listed with SOC 426) Sequel to MPS 555 (SOC 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.

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.

Medical Sociology. (Cross-listed with SOC 431) Overview of health-seeking behavior focusing on the population receiving health care services, those providing services, and the organizational settings in which services are delivered.

Management of Training and Development. Methods utilized to identify training needs and certain principles necessary to develop and manage in-service training programs. Major topics include needs assessment, curriculum design and planning, and general supervision of instruction.

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.

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.

Urban and Community Analysis. (Cross-listed with SOC 422) Quantitative analysis of urban issues including social area analysis, patterns of segregation, neighborhood change, and other selected topics.

Strategies of Community Organizations. (Cross-listed with SOC 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.

Law Enforcement and Community Relations. (Cross-listed with SOC 444) Cross-cultural analysis of the policies and practices of law enforcement agencies and their impact on the communities they serve.

Medical Economics. Addresses the financing and delivery of health care services. Also discussed are public policies for economic efficiency and equity in the distribution, cost, and quality of health care services. The role of profit in health care organizations is also considered.

Labor Relations and Government Policy. Examination of legal requirements and constraints which affect the 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.

Law and Administration of Justice. (Cross-listed with SOC 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.
Crime, Delinquency, and Systems of Correction. (Cross-listed with SOC 442) Study of major criminological theories and their applications to systems of corrections.

Institutional Reaction to Deviants. (Cross-listed with SOC 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.

Youth Services, Health, and Welfare. (Cross-listed with SOC 434) Review of research on various youth problems (e.g., substance abuse, pregnancy, runaways) and consideration of efforts at amelioration and control.

Sociology of Youth. (Cross-listed with SOC 461) Critical analysis of literature on non-delinquent youth; focus on the social contexts within which the transition to adulthood occurs.

Youth Service Delivery Systems. (Cross-listed with SOC 436) Consideration of the current state of youth services in Illinois. Analysis of the administration of agencies and their programs: program design, the funding process, intervention strategies.

Introduction to Health Law. This course introduces the student to the legal system and a provides an examination of legal materials including statutes, judicial opinion, and administrative regulations. Basic legal research skills are taught. The process of legal development and change is examined in the process of library basic legal skills. (2 credit hours)

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.

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.

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 project plans.

Special Topics. (2 credit hours)

Communications for Managers: Current Theory and Practice. This course is designed to develop writing skills used in administrative work. Emphasis on purpose, organization, tone; effective proposal and report writing. (2 credit hours)

Community Needs Assessment. Use of census data to develop demographic profiles of the community, identify community resources, and determine community needs for specific services. (2 credit hours)

Ethics in Administration. Problems faced by administrators which introduce an ethical dimension into the decision-making process. Alternatives identified and implications for action are discussed. Case materials used. (2 credit hours)

Seminar in Administration: Special Topics.
SPECIAL STUDIES COURSES

600  Independent Study. (Prerequisite: 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 may be taken as an elective course. (Variable credit)

602  Candidacy Continuation. Required of all students who are not registered for regular courses but who occasionally utilize University facilities (computer lab and library) during completion of course requirements and/or research. Non-credit. $40.00 per quarter.
Rehabilitation Services

FACULTY

William A. Calzaretta, Ph.D., C.R.C., Associate Professor
and Program Director ........................................... Northwestern University

Harry Allen, Ed.D., Adjunct Lecturer ................................... University of Arkansas

Gary Austin, Ph.D., Adjunct Lecturer ........................................ Northwestern University

James Bitter, Ed.D., Adjunct Lecturer ...................................... University of Northern Colorado

James E. Bordieri, Ph.D., Adjunct Lecturer .................................. Illinois Institute of Technology

Carol A. Calzaretta, M.M., Adjunct Lecturer .................................. Northwestern University

James Ciccia, Ph.D., Adjunct Lecturer ........................................... Purdue University

Alex DeVence, J.D., Adjunct Lecturer ........................................ Loyola University

Jerry Dincin, Ph.D., Adjunct Lecturer ........................................ Northwestern University

Donald Galvin, Ph.D., Adjunct Lecturer ..................................... University of Michigan

William Hellman, Ph.D., Professor Emeritus ................................. University of Chicago

Peter Griswold, M.A., Adjunct Lecturer ........................................ Michigan State University

Norman Grunewald, M.S., Adjunct Lecturer .................................. DePaul University

William Hay, M.B.A., Adjunct Lecturer ...................................... DePaul University

Cathy Lorber, Ph.D., Adjunct Lecturer ....................................... Northwestern University

James Lundstrom, M.S., Adjunct Lecturer ................................... DePaul University

Diane Neuhauser, M.B.A., Adjunct Lecturer .................................. Loyola University

John Newman, Ph.D., Adjunct Lecturer ....................................... Emory University

Don Olson, Ph.D., Adjunct Lecturer ........................................ Northwestern University

Louis Pansini, Ed.D., Adjunct Lecturer ....................................... University of Illinois

Dominic Parisi, Ph.D., Adjunct Lecturer .................................... Northwestern University

Majorie P. Piechowski, Ph.D., Adjunct Lecturer ............................. University of Wisconsin

Nancy B. Ronquillo, M.A., Adjunct Lecturer ................................ Illinois University

William Salyers, Ed.D., Adjunct Lecturer ................................... University of Indiana

Alfred Stiger, M.A., Adjunct Lecturer ......................................... Northwestern University

Marvin Spears, M.A., Adjunct Lecturer ....................................... University of Minnesota

Stanley B. Tarr, M.B.A., C.P.A., Adjunct Lecturer ............................ Northwestern University

PURPOSES

Programs are offered in rehabilitation services to qualified students and these programs provide:

the knowledge and skills required to manage, supervise, and administer the varying rehabilitation facilities which 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 which comprise 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: Intergency collaboration leading to the development and use of community resources and the formation of rehabilitation facility/agency networks; and
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

Certificates
Rehabilitation Facility Administration
Psychosocial Rehabilitation

Master of Science
Management of Rehabilitation Services

CERTIFICATE: REHABILITATION FACILITY ADMINISTRATION
May be taken by persons not 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 a waiver of three 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 first scheduled class meeting. Official course descriptions from an accredited institution must accompany all requests and official transcripts must be forwarded to the department.

CERTIFICATE: PSYCHOSOCIAL REHABILITATION
May be taken by persons not 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.

Degree Requirements
Courses: 48 quarter hours (core courses), 6 quarter hours (independent study research courses). Successful completion of an acceptable master's project.
Successful completion of the certificate course requirements in Facility Administration, or their equivalent is a prerequisite.

Core Courses:

RSA 638 Computer Utilization and Introduction to Management Sciences in Rehabilitation
RSA 639 Fiscal and Human Resource Management
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 Administration
RSA 648 Rehabilitation Clients: The Self Evident Disabilities
RSA 650 Social Psychology of Rehabilitation Administration
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 the Program Director, may waive one or two of the core courses and replace them with other relevant 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. The M.S. project policy and procedure manual may be obtained from the department.

Note: Detailed information on the above Certificate or Degree requirements and program policies is listed in separate departmental brochures. They may be obtained from the department.

SCHEDULES FOR COMPLETING PROGRAMS

Intensive Schedule

This schedule accommodates the educational goals of working students who reside in the Rehabilitation Services Administration Federal Region V.

On-campus intensive schedules are often available locally and regionally.

A course offered on an intensive schedule covers a 10-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 or the University or in other off-campus locations locally or regionally.

Typical length of time for completion of the degree program on the intensive schedule is 10 quarters or 2½ years. The certificate programs are completed in 2 quarters. Each course, offered on the intensive schedule, carries three quarter hours of academic credit and is the full academic equivalent of 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.

Professional Development Seminar Series

Today's rehabilitation professional is faced with a rapidly changing work environment. Faced with changing federal laws and programs, advancing medical and engineering technology, changing funding priorities, and increasingly complex management problems, rehabilitation professionals want educational programming which will keep them abreast. The Professional Development Seminar Series offered by DePaul University provides one and two day seminars on topics responding to current trends and issues in Rehabilitation. Registration fees vary by seminar.

Commission on Rehabilitation Counselor Certification Continuing Education Units are offered in all CRCC approved seminars. To be added to the mailing list for all Series brochures, contact the Rehabilitation Services Program.
Unless otherwise stated, all courses are three credit 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 which builds an understanding of the development of welfare services in general and rehabilitation in particular. B—Personnel Administration—The structure, role and techniques of the personnel function in an organization. Recruitment, selection, placement, job analysis and job description are also 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 the Program Director.
RSA 638 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 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. Simulated workshop 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 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.

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)
Sociology

FACULTY
Charles Suchar, Ph.D., Associate Professor
   and Chairman ........................................ Northwestern University
Nancy M. Abbae, B.A., Lecturer .......................... Mundelein College
Therese Baker, Ph.D., Professor ....................... University of Chicago
Rosemary S. Bannan, Ph.D., Professor ................. Loyola University
Noel Barker, M.A., Lecturer ............................. University of Illinois, Urbana
Judith A. Bootcheck, Ph.D., Associate Professor .... Purdue University
Grace Budrys, Ph.D., Professor ........................ University of Chicago
Kenneth Fidel, Ph.D., Associate Professor .......... Washington University
Roberta Garner, Ph.D., Professor ..................... University of Chicago
John P. Koval, Ph.D., Associate Professor .......... University of Oregon, Eugene
Theodoric Manley, Jr., Ph.D., Assistant Professor ... University of Chicago
Larry Mayo, Ph.D., Assistant Professor .............. University of California, Berkeley
Patrick Murphy, J.D., Lecturer ......................... Northwestern University
Felix Padilla, Ph.D., Assistant Professor .......... Northwestern University
Lavinia C. Raymond, Ph.D., Professor Emeritus .... University of Sao Paulo
Robert Rotenberg, Ph.D., Associate Professor .... University of Massachusetts, Amherst
Charles Stevens, Ph.D., Associate Professor .... Northwestern University
Joyce Sween, Ph.D., Professor ........................ Northwestern University
Deena A. Weinstein, Ph.D., Professor ............... Purdue University

PURPOSE
The purpose of the graduate program in Sociology is to enable students to study sociological principles, ways of knowing, and sociological findings in areas of current interest and commitment. The one required course for all students, Sociological Perspectives, gives an overview to both the theoretical and methodical issues which guide the discipline.

Three specialized areas offer more detailed training in applied sociology: Urban Studies; Law and Society; and Health and Human Services with a special emphasis on Youth 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, youth 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 is required.

Degree Requirements

There are three options in the Master of Arts in Sociology program:

Master of Arts in Sociology with Essay

SOC 405 Sociological Perspectives.

Eleven additional courses. Students must complete 44 hours in courses from specialized areas.

Essay: A literature review or analytical essay indicating mastery over a body of literature. It should be prepared in conjunction with one of the specialized courses.

Master of Arts in Sociology with Research Project

SOC 405 Sociological Perspectives
SOC 411 Logic of Research Design and Evaluation
SOC 412 Data Analysis (A course in Qualitative methods may be substituted for Soc 412.)

Nine additional courses. Students must complete 36 hours in courses from specialized areas.

Research Project: Students will design and carry out a research project and prepare a final research report in the two-quarter methods sequence.

Master of Arts in Sociology with Thesis

SOC 405 Sociological Perspectives
SOC 411 Logic of Research Design and Evaluation
SOC 500 Thesis Research I
SOC 501 Thesis Research II

Eight additional courses. Students must complete 32 hours in courses from specialized areas.

Thesis: The design for the thesis project may be set up in SOC 411. A student must select an advisor and together they will set up a committee of three faculty. A thesis proposal hearing is required at the commencement of the project and an oral presentation at its completion.
Internships
Students are encouraged to serve as an intern in an organization or institution in order to undertake a study in conjunction with a research, administrative, or counseling position. Students should see the internship coordinator and register for SOC 498.

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:
405  Sociological Perspectives. Examines sociological theories, methods and concepts through a study of the work of contemporary sociologists.

Methods Courses:
411  Logic of Research Design and Evaluation. Selection of research strategies and methods for carrying out a research project. Research methods include survey design, experiment and quasi-experimental approaches for assessing the consequences of social programs. Research proposal formulated. (Cross-listed with MPS 598.)
412  Data Analysis. The implementation of a research project. Analytic techniques, data processing, and the preparation of a written research report. (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.
401  Sociological Theory: Concepts and Perspectives. Introduction to the major theories of sociology in the development of the discipline. Desirable for students taking essay option.
Courses in Specialized Areas

Urban Studies

420 Urban Sociology. Introduction to advanced level studies in applied urban sociology: contemporary urban theory, research, and policy 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 urban issue with a focus on federal and Chicago-area policies.

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 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 Social Services in Contemporary Societies. 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.)
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. (Cross-listed with MPS 517.)

Youth Service Delivery Systems. Consideration of the current state of youth services in Illinois. Analysis of the administration of agencies and their programs: program design, the funding process, intervention strategies. (Cross-listed with MPS 567.)

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.)

Other courses recommended for students in this area include Sociology of Youth, Socialization, Social Deviance, Sex Roles, and Social Inequality.

Law and Society

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.

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.)

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.)

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.)

Law Enforcement Policy Issues. Theory, application, and impact of policies in criminal law on police, corrections, and the courts. (Cross-listed with MPS 544.)

Institutional Reaction to Deviants. Examines theories and research on the social organization of institutions that label and process deviants. (Cross-listed with MPS 564.)

Other courses recommended for students in this area include Intergroup Relations, Social Deviation and Collective Behavior.

General Electives

Social Policy and Social Change. Examines the process of policy-making and the effects of policies on individuals, organizations, and communities.

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.
Advanced Statistics I. An introduction to sample spaces, random variables, distributions and parametric statistics, sampling, and the concept of sampling distribution. (Cross-listed with PSY 410.)

Advanced Statistics II. Point estimation procedures are developed for a variety of parameters. Internal estimation and hypothesis testing are compared. Linear regression, correlation, and analysis of variance are studied. (Cross-listed with PSY 411.)

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.)

Socialization. A synthesis of relevant psychological and sociological perspectives relating to the individual's acquisition of patterns of behavior and culture in social groups.

Social Psychology. The influence of group life on personality development, social interaction, and social behavior.

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.

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.

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.

Organizations. The functioning, premises, and consequences of formal organizations will be considered using a variety of perspectives. (Cross-listed with MPS 553.)

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, patterns of deviant socialization, and the roles of agents or agencies of social control.

Middle Age and Aging. A look at the changing age composition of the population: meaning and societal definition of aging, the different types of responses to growing older, and the various Social Programs designed for the aged.

Sex Roles. Attention to the growing literature and empirical research on changing patterns in economic, psychological, and social outcomes for women and men. Consideration of various theories of sex differentiation and inequality.

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.

Sociology of Religion. An historical and contemporary analysis of the interrelationship between religion and society. Emphasis upon the sacred-secular and church-sec sect typologies, new religious movements and religion's contributions to societal values, beliefs and meaning systems.
The Dilemma of the Modern Age. The crisis of the individual's place in society and in the world itself—the dilemma of modernity—is exposed through Social Science, Philosophy, Literature, Art, and Music. The distinctive features of and responses to modern culture—individualism, alienation, and depersonalization—are illuminated through the multiple perspectives that form the modern mind. (Cross-listed with MLS 460)

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 activities such as research and counseling. 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.
ADMINISTRATION
Kenneth F. Sarubbi, D.P.E.
   Dean
Joan M. Lakebrink, Ph.D.
   Director of Graduate Programs

FACULTY

PURPOSE

ADMISSION

CURRICULUM AND COURSES
Curriculum Development
Educational Leadership
Human Services and Counseling
Reading and Learning Disabilities
The School of Education seeks to prepare students for professional positions in educational and community service settings. In addition, the School strives to engage the public-at-large, as well as professionals of other related fields, in the consideration of basic ideas, questions, and concerns underlying Education as a personal, life-long phenomenon, and an institutional obligation to all members of society. The School believes that an in-depth and comprehensive understanding of educational issues is crucial to the preparation of professional educators and to a more knowledgeable public.

By presenting programs that stress concept mastery, skill development and competency achievement, as well as the broadening of insights into the nuances and complexities of education, the School of Education provides students with an opportunity to function effectively in a wide variety of professional positions based in the school and other service-oriented institutions.

Kenneth F. Sarubbi, D.P.E., Dean
Faculty

Kenneth Sarubbi, D.P.E., Associate Professor and Dean ............ Indiana University
Judy Eby, Ph.D., Assistant Professor .......................... Northwestern University
Urban H. Fleeger, Ph.D., Professor Emeritus ................. Catholic University of America
Gerald Foster, Ph.D., Assistant Professor ....................... University of Iowa
William E. Gorman, Ed.D., Professor ......................... Northwestern University
Sharon R. Guthrie, Ph.D., Assistant Professor ............... The Ohio State University
Andrew T. Kogan, Ph.D., Professor ........................ University of Chicago
Joan M. Lakebrink, Ph.D., Associate Professor ............. University of Wisconsin-Madison
John J. Lane, Ph.D., Professor ............................. University of Wisconsin-Madison
Peter Pereira, A.M.T., Associate Professor ................. Harvard University
Barbara R. Radner, Ph.D., Associate Professor ............... University of Chicago
Sr. Frances Ryan, A.C.S.W., Ph.D., Associate Professor .... Loyola University of Chicago
Hans A. Schieser, Ph.D., Professor .......................... Loyola University of Chicago
John R. Taccarino, Ph.D., Associate Professor ............... Northwestern University
Rafaela Wetter, Ph.D., Professor .............................. Illinois Institute of Technology
Kathryn C. Wiggins, Ph.D., Assistant Professor ............. Michigan State University
Nancy Williams, Ph.D., Assistant Professor .................. Northwestern University
Carol T. Wren, Ph.D., Associate Professor ..................... Northwestern University

Purpose

The School of Education seeks students who show intellectual promise, social responsibility, and those personal qualities suitable for working with others in a social setting. Students admitted to degree programs must demonstrate these characteristics by working with others in tutorial projects or programs that foster human development. Completion of a program will lead to a specific degree, and candidates with appropriate prior requisites may apply for State of Illinois Certification.

Located in a large metropolitan area, the School of Education is specifically committed to preparing personnel for professional service in those fields that touch upon and affect the human development of people living in an urban environment. To this end, the School of Education espouses the following for its graduate programs:

To prepare graduate students in specialized areas for assuming leadership roles in educational settings.

To prepare graduate students for professional service in organizations that are committed to developing human potentials and dealing with human problems.
ADMISSION REQUIREMENTS
A Bachelor's degree conferred by an accredited institution.
A previous grade point average of 2.75 or above on a 4.00 scale.
Two years of successful teaching or other work experience.
Two letters of recommendation from professors or supervisors.
Interview with program advisor.
Evidence of adequate background for the program.

Curriculum Development

Curriculum design and implementation have become increasingly significant concerns for hospitals, community organizations, business and industries all confronted with the necessity of keeping their employees up to date in a milieu of fast-moving social and technological change. Continuing education and training are being viewed as major responsibilities by institutions and business and by museums and civic agencies that are perceived as educational organizations. Growing numbers of senior citizens and far more leisure time available to other members of the population also are contributing to the demand for adult education programs, particularly among those who hold degrees.

There are important challenges in responding to this growing demand. The educational skills needed are in many respects similar to those already well developed in the public schools; in other respects they are quite different.

Both the Master of Arts and the Master of Education programs degree offer courses essential to succeed in curriculum work. These include:

• DELIBERATIVE SKILLS (i.e. analytical skills involved in the clear formulation of curriculum problems)

• DEVELOPMENT SKILLS in program planning, content selection and the creation as well as the arrangement of materials.

• EVALUATION SKILLS

• KNOWLEDGE about CURRICULAR DESIGNS, their underlying assumptions and implications for different settings

• KNOWLEDGE OF INSTRUCTIONAL METHODOLOGIES and their influence on the success of curriculum planning

DEGREE PROGRAMS
Master of Arts or Master of Education: Curriculum Development
Computing in Education Concentration
Economic Education Concentration
Language Arts Concentration
Liberal Studies Concentration
Mathematics and Science Concentration
Supervision Concentration
Degree Requirements

Courses: (52 quarter hours)
Three Foundations courses (12 quarter hours)
  CUG 400 Education Research Design and Statistics
  CUG 401 Advanced Developmental Psychology or
  CUG 402 Psychology of Learning
  CUG 408 Contemporary Issues in Education
Three Curriculum Design and Evaluation courses (12 quarter hours)
  CDG 485 Curriculum/Program Evaluation
  CDG 487 Introduction to Curriculum Deliberation
  CDG 488 Designing and Interpreting Curriculum
One Course in Supervision or Human Relations (4 quarter hours)
  A&S 498 Principles and Practices of Supervision
  A&S 590 Organizational Development
One course in Instructional Methodology (4 quarter hours) (chosen with consent of advisor)
  CDG 489 Instructional Strategies to Develop Practical and Creative Thinking

Four Career Emphasis courses (20 quarter hours) including one practicum.
One course (4 quarter hours) from
  Master of Arts: CDG 589 Thesis Research in Curriculum Development
  Master of Education: One Elective course

THESIS/PAPERS
  Masters of Arts: CDG 589 Thesis Research in Curriculum Development. The master's thesis is written to fulfill the requirements of this course. Oral examination on thesis.
  Master of Education
  Two papers with course work: Review of Literature
  Integrative Paper

ILLINOIS SUPERVISORY CERTIFICATE

Students holding valid Illinois teaching certificate with two years successful teaching experience may be eligible for the Illinois General Supervisory Endorsement upon completion of the program. See Director of Graduate Programs.

CONCENTRATIONS

These courses should be a set of carefully chosen electives to support the student's career goals. Usually these courses will be a sequence especially designed as a career emphasis. If it is an individual sequence planned in consultation with the student's advisor, the student must write a rationale for the sequence which, when approved, will be placed in his/her file.

I. Computing In Education

A student who wishes a Master's degree may apply up to six courses toward a degree in Curriculum Development. The degree prepares educators to design, organize and coordinate educational programs involving computers and computing.
Instructional Methodology
CDG 581 Computers in Instruction

Curriculum Development and Evaluation
CDG 583 Utilizing Microcomputers in Curriculum Development
CDG 584 Practicum: Developing Computer Based Curriculum Materials

II. Economic Education
This concentration will prepare educators to teach economics, to develop economic education materials, to coordinate economic education projects, and to organize economic education programs for schools and community groups. Six courses may be applied toward a degree in Curriculum Development.

One course in Instruction Methodology
CDG 430 Teaching Consumer Education
CDG 431 Teaching the American Economic System
CDG 443 Teaching Economics: Applied Basic Concepts

Two courses in Curriculum Development and/or Curriculum Evaluation
CDG 485 Curriculum/Program Evaluation and one of the following:
CDG 417 Introduction to Economics
CDG 433 Development of Economic Education Programs
CDG 434 Implementing Economic Education
CDG 436 Integrating International Trade in the Curriculum
CDG 445 Integrating Economics in the High School Curriculum
CDG 483 Practicum in Developing Curriculum Materials
CDG 486 Practicum: Conducting Curriculum/Program Evaluation Four Career Emphasis courses
CDG 435 Teaching Money and Banking

and three of the following:
CDG 406 U.S. Macroeconomy and Chicago
CDG 429 Teaching Economics in U.S. History
CDG 432 Introduction to Labor and Industry
CDG 440 Social Economic Development
CDG 441 Introduction to American Economic Development
CDG 442 Introduction to Business and Public Policy
CDG 444 Chicago's Current and Future Economy
CDG 456 The Global Economy and the Chicago Economy

III. Language Arts
The following courses may be taken as the career emphasis within the program or as a non-degree sequence.
CDG 426 The Teaching of Writing
CDG 427 Curriculum in Language Communication
CDG 428 Literature and the Reader
IV. Liberal Studies
Courses may be selected from the following list:
- MLS 401 Visions of Self
- MLS 402 Perceptions of Reality
- MLS 403 The American Experience
- MLS 404 The City

V. Mathematics/Science
Courses may be selected from the following list:
- CDG 410 The Psychology of Learning Mathematics and Science
- CDG 411 Science Processes I
- CDG 412 Science Processes II
- CDG 413 Foundations of Mathematics: Geometry
- CDG 414 Foundations of Mathematics: The Real Numbers
- CDG 415 Practicum: Curriculum and Methods in Science
- CDG 416 Practicum: Curriculum and Methods in Mathematics
- CDG 583 Utilizing Microcomputers in Curriculum Development

VI. Supervision
- A&S 496 Community Relations
- A&S 499 Clinical Supervision
- A&S 590 Personnel Administration

CERTIFICATE PROGRAMS
Computing in Education
The work required for this Certificate prepares educators especially those in elementary and middle schools (K-9) to develop and implement programs of computer use. Depending on background and career goals, the Certificate also may qualify educators for curriculum work in programs for older students.
Two courses in programming or computer concepts chosen from
- CDG 420 Microcomputers in Education
- CDG 421 Computer Programming with Logo
- CDG 422 Intermediate Logo Programming
or courses in programming or fundamental concepts of computing offered by the Department of Computer Science. Two courses in curriculum and instruction
- CDG 581 Computers in Instruction
- CDG 583 Utilizing Microcomputers in Curriculum Development
One practicum course
- CDG 584 Developing Computer Based Curriculum Materials
One elective
Chosen in consultation with the program advisor from offerings of the School of Education or the Department of Computer Science.
Economic Education

With this certificate program, educators will be prepared to introduce economics into programs for schools and community groups.

CDG 435 Teaching Money and Banking
any four (4) of the following courses in economic education:

CDG 417 Introduction to Economics
CDG 429 Teaching Economics in U.S. History
CDG 430 Teaching Consumer Education
CDG 431 Teaching the American Economic System
CDG 432 Introduction to Labor and Industry
CDG 433 Developing of Economic Education Programs
CDG 434 Implementing Economic Education Programs

All economic education courses are cross listed in Curriculum (CDG) and in Economics (ECO).

Courses

Curriculum Development (CDG)

406 The US Macroeconomy and Chicago. Profile of Chicago's economy, with emphasis on its development and current structure and contemporary links to international trade. The course will present principles of economics in terms of the Chicago economy and the national economy. (Cross listed with ECO 406.)

410 The Psychology of Learning Mathematics and Science. This course will develop a rationale for teaching mathematics and science in the elementary grades using Piaget's theories of cognitive development. The theories will be illustrated by experiments and practical activities. Students will also be expected to do clinical observations of children engaged in Piagetian tasks. Piaget's principles and terms will then be compared with those of other learning theorists.

411 Science Processes I. This course will use common, everyday materials to study naturally occurring phenomena. Students will be expected to learn about the processes and content of science by becoming actively involved in doing science. Activities will cover topics in biology, chemistry, and physics.

412 Science Processes II. A continuation of Science Processes I with the same emphasis on active involvement and the processes of scientific inquiry. Naturally occurring phenomena which are not experienced in everyday living will be the objects of study.
Foundations of Mathematics: Geometry. This course will use the Logo computer language to investigate topics in Euclidean geometry and topology from the perspective of a "turtle" moving in a plane. Closed paths, space filling designs, mazes, and some spherical geometry will be included along with the topics normally included in the K-8 curriculum. Emphasis will be placed on developing understanding of key concepts such as symmetry, interior, congruence, and similarity, as well as enriching mathematics curricula.

Foundations of Mathematics: The Real Numbers. This course will use a variety of physical materials to develop the fundamental concepts underlying the system of real numbers and its subsystems (whole numbers, integers, and rational numbers). Emphasis throughout will be placed on the way in which embodiments of mathematical concepts can be used to facilitate learning.

Practicum: Curriculum and Methods in Science. Materials, methods, and classroom management techniques appropriate for teaching science in the elementary grades. In addition to specific activities, topics will include questioning skills, equipment handling, resources for materials, program planning, and evaluation.

Practicum: Curriculum and Methods in Mathematics. Materials, methods, and classroom management techniques appropriate for teaching mathematics in the elementary grades. In addition to specific activities, topics will include the proper use of manipulative materials, academic games, discovery teaching, program planning and evaluation.

Introduction to Economics. 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. (Cross listed with ECO 417.)

Microcomputers in Education. An introduction to microcomputers for educators and administrators who have no previous computer experience. The course includes an overview of the present state of hardware and of educational software; an introduction to basic concepts in computing and computer usage; a framework for classifying educational uses of the computer; an analysis of selected research on educational computing; and discussion of the likely social and organizational consequences of the increased use of computers in schools. Hands-on experience with a variety of hardware and software will be provided.

Computer Programming with Logo. An introduction to computer programming using Logo, a powerful yet easy-to-learn language that both adults and children can use to express their ideas. This course covers the programming concepts needed for turtle graphics, including procedure definition, use of variables, file management, structured programming, and tail-recursion. Extensive hands-on experience will be provided, and classroom applications (especially for students in grades 3 through 8) will be discussed. No previous computer experience is required.
Intermediate Logo Programming. A continuation of LOG 421 which extends the principles learned to the manipulation of words and other symbols. The course includes arithmetic and logical operations, list processing, tree and hierarchical structures, and recursion. Extensive hands-on experience will be provided, and classroom applications (especially for students in grades 5 through 10) will be discussed. A knowledge of turtle graphics in Logo will be assumed.

Microcomputer Based Science Labs. This course demonstrates how a microcomputer can be used to measure force, light, pressure, temperature, velocity, acceleration, heart rate, response time, muscle activity, and many other quantities observable in the world around us. After experiencing how such an instrument can transmit a feel for phenomena, participants will use a variety of software to record, graph, and analyze the data they have collected. This will be followed by discussion of ways to use the hardware and software to revitalize science teaching. For elementary as well as secondary science teachers.

Computers and Writing. An analysis of how the use of word processors affects composing, editing, and revising skills. The course focuses on writing as a process, theory and research about writing and motivation, and current computer capabilities. Participants will use and evaluate a variety of word processing software.

Workshop for Inservice Teachers. Topics of particular interest and concern to educators will be presented in a high involvement seminar format.

The Teaching of Writing. Focus on important aspects of a writing program from the primary grades to college: the composing process; motivation and writing; the teaching of grammar and syntax; and the relationship of speaking and writing. Also teaching the various types of writing—personal, narrative, expository writing, poetry and correspondence—examined and practiced by the class.

Curriculum In Language Communications. Develop models for a curriculum in communications. To develop these models, the communications activities of speaking, reading and writing will be related to each other and to a central core language so that communication can be viewed more in a unified related sense and less in a discrete, fragmented sense. Approaches for teaching speaking, reading and writing as integrated phenomena will be examined.

Literature and the Reader. Analysis of the interaction which occurs between the reader and the literary work and an examination of the implications for classroom teaching and curriculum development, kindergarten through college. The emphasis is on the reader in the reading of the work.

Teaching Economics in U.S. History. 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 economics development into junior and senior high school courses. (Cross listed with ECO 429).

Teaching Consumer Education. 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 Chicago area sites as well as current consumer education resources to deal with consumer economic issues. Meets the certification requirements for teachers of consumer economics in Illinois. (Cross listed with ECO 430)
Teaching the American Economic System. 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. (Cross listed with ECO 431.)

Introduction to Labor and Industry. 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. (Cross listed with ECO 432.)

Development of Economic Education Programs. 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. (Cross listed with ECO 433.)

Implementing Economic Education. 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. (Cross listed with ECO 434.)

Teaching Money and Banking. 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. (Cross listed with ECO 435.)

Integrating international Trade in the Curriculum. This course will combine curriculum principles with the presentation of models for incorporating international trade in courses in economics, geography, political science, and urban studies. (Cross listed with ECO 436.)

Teaching Economic Geography. This course will present major concepts of economics and geography as teachers learn how to use maps to profile places, analyze change, and plan development. The course will focus on urban geography as well as regional geography.

Teaching Economic History. This course will use principles of economics to analyze conditions and changes in history. Course materials and methods will be applicable to teaching local, state, national, and world history.

Teaching the Economics of Government. Fiscal policy will be the main topic of this course, which will examine the principles and practices of taxation and spending at local, state, and national levels of government. The course will include an examination of the basis for governments economic role, including the Constitution. While the course will deal primarily with the United States governments, it will include a study of governments based on other systems.
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 those theories to the Chicago community. (Cross listed with ECO 440.)

Introduction to American Economic Development. 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. (Cross listed with ECO 441.)

Introduction to Business and Public Policy. 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. (Cross listed with ECO 442.)

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

Chicago's Current and Future Economy. 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. (Cross listed with ECO 444.)

Integrating Economics in the High School Curriculum. 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. (Cross listed with ECO 445.)

The Global Economy and the Chicago Economy. An introduction to international economics with a focus on the role of Chicago in the world economy. The course will deal with economic and financial aspects of international business and the impact of conditions and shifts in the international economy on Chicago's economy. (Cross listed with ECO 456.)

Curriculum for Religion Education. Recent developments in the formation of religious studies curriculum for public and private school settings, including materials, resources, and criteria.

Practicum in Material Development. A series of workshop experiences designed to explore the technology of curriculum in social studies, language arts, science and mathematics.
The Study of Teachers and Teaching. A selective survey and analysis of research on teachers and teaching. Particular emphasis will be placed on the assumptions which are built into various forms of research and the effect these assumptions have on how results should be interpreted and used in supervision and curriculum development. Each student will be expected to become familiar with alternative ways of studying teachers and the teaching process in his/her area of expertise. While many school settings will be utilized because of the many studies done in this area, research in non-school settings will be given a good deal of emphasis.

The History of Curriculum Practice. A survey of trends and movements in curriculum practice. Particular emphasis will be placed on the recurrent nature of curriculum practices and the reasons for this. The underlying models of curriculum practice in their historical settings will be considered as possible models for modern day needs and the assets and liabilities of these models will be used in viewing modern day practices.

Practicum in Developing Curriculum Materials. Text books, audio-visual and microprocessor curriculum materials will be studied in order to ascertain the intended and actual relationships between curriculum design and the materials. More than one set of materials may be developed per curricular design, and differences among materials will be carefully examined. Students will develop actual curriculum materials reflecting at least two distinct ways of implementing a given design. (2 quarter hours.)

Multimedia Materials Production. The role of multimedia materials in meeting local instructional needs. Setting objectives, selecting content, filmstrips, slides, transparencies and cassettes to meet educational needs.

Curriculum/Program Evaluation. Theories of evaluation. The role of evaluation in Curriculum/Program Development. Materials and methods for curriculum/program evaluation in the schools and organization. The planning for an evaluation of an ongoing program will be the major project of this course.

Practicum: Conducting Curriculum/Program Evaluation. Involves carrying out an evaluation of the effectiveness of an ongoing program. Field work will be expected of students. The planning for this evaluation will be undertaken in CDG 485. (2 quarter hours.) (Prerequisite: CDG 485.)

Introduction to Curriculum Deliberation. An introduction to systematic and collaborative deliberation on curriculum problems. A pattern for deliberation (including situation analysis, problem discrimination and formulation, development of alternative courses of action, and anticipation of consequences) will be developed and exemplified. This pattern will be contrasted with other descriptions of curriculum planning. Each student will complete a project which describes his/her systematic formulation of a curriculum problem and a plan of action for resolving it.
Designing and Interpreting Curriculum. An examination of the underlying structures of diverse curriculums and of the processes by which they are developed and implemented. Principles and methods for organizing subject matter will be analyzed. The translation of subject matter into curriculum will be examined with particular attention to the assumptions about subject matter built into texts and other curricular materials. Students will analyze curriculum guides and materials to uncover their underlying structures and their explicit and implicit assumptions about subject matter.

Instructional Strategies to Develop Critical and Creative Thinking. In this course students will analyze a wide variety of instructional strategies and curriculum models and apply them to their own school settings. Teacher-centered, student-centered and computer strategies will be introduced which can be applied to a wide range of ability, grade levels and subject areas. The emphasis will be on models which call upon students to use and thereby develop critical and creative thinking skills, inquiry, independent research skills, problem solving abilities and communication skills.

Teaching English as a Second Language. An examination of the factors that affect the communicative language and academic proficiencies of Limited English Proficient students. Linguistic principles of language learning, assessment procedures, program design and teaching methods are included.

Research Seminar in Curriculum Program Development. Students in the Master of Education program in curriculum development complete a bibliographical research study of issues and problems in curriculum development. Students who currently hold positions in curriculum may complete an action research project for this seminar.

Computers in Instruction. An examination of how computers are being used in educational settings and of the impact they may have on learners. The course includes consideration of the roles which teachers and computers play, the social organization of classrooms in which computers are being used, research on the impact computers have within educational settings, demonstrations and discussion of uses which have so far not been widely implemented. Participants will be expected to observe educational settings in which computers are being used and report the analysis of their observations to the class. (Prerequisite: CEG 420 or equivalent preparation.)

Practicum in Curriculum Development. The student is provided directed experiences in decision-making for curriculum, participation and leadership in curriculum committee activities, planning and management of learning resource centers and other aspects of administration of curriculum development in schools and school systems. (Prerequisite: Permission of program advisor.)
Utilizing Microcomputers in Curriculum Development. Fundamentals of educational software design and evaluation for teachers and curriculum workers. After a brief introduction to the complexities of writing educational programs in a conventional programming language such as BASIC, participants will learn how to use PLOT and other authoring systems. Then they will be asked to test and evaluate a wide variety of programs written by others, including commercially prepared software related to their career goals. The course also includes discussion of how particular software does or does not fit the overall design of a curriculum. (Prerequisites: CDG 420 or equivalent preparation.)

Practicum: Developing Computer Based Curriculum Materials. In this workshop, students have the option, under direction of the professor, to plan a set of experiences that will add to their competencies and qualify them to perform leadership functions. Areas of study available in the workshop include: introduction to program writing in BASIC language; analysis of statistical computer programs; use of common parametric and non-parametric intermediate statistics in the analysis of data; teacher-made programs for teaching; and programs designed to facilitate curriculum program evaluations. (Prerequisite: CDG 583 or equivalent preparation.)

Independent Study in Curriculum Development. (Prerequisite: Permission of the instructor)

Thesis Research in Curriculum Development. A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. (Prerequisites: CUG 400 and thesis proposal approved.)

Registered Student in Good Standing. This registration is required of all students who are not enrolled in a course but are completing course requirements and/or research. It provides access to University facilities. Non-credit. $40.00 per quarter.

Workshop—Alternative Approaches to Early Childhood Education. (Offered during summer sessions only)

Methods of Secondary Science Education. The course is designed to update teachers in the methods of science teaching. This involves reviewing the processes of science, theories of learning and instructional strategies appropriate to laboratory science. The course also provides an update on the current trends and issues in science education as well as an analysis of successful science curricula programs.

Educational Leadership

The major purpose of the Educational Leadership programs is to prepare educational personnel for administrative and supervisory positions for schools, industry, business, and a variety of social, medical, recreational, and welfare agencies. These programs are
DISCIPLINE-BASED
concepts, research findings, and models of inquiry in social sciences

THEORY-BASED
relevant theories of organization, leadership and curriculum

PROBLEM-BASED
contemporary issues and problems likely to confront administrators and supervisors

CAREER-BASED
examination of administrative and supervisory functions and objectives within a variety of settings and for different purposes

DEGREE PROGRAMS
Master of Arts or Master of Education: Educational Leadership
Administration and Supervision concentration
Catholic School Leadership concentration
Physical Education concentration

I. Administration and Supervision

Degree Requirements

Courses: minimum of 12 (48 quarter hours)

Foundations (12 hours)

- **CUG 400** Education Research Design and Statistics
- **CUG 401** Advanced Developmental Psychology or
- **CUG 402** Psychology of Learning
- **CUG 408** Contemporary Issues in Education

Curriculum (4 hours)

- **CDG 485** Curriculum/Program Evaluation
- **CDG 487** Introduction to Curriculum Deliberation
- **CDG 488** Designing and Interpreting Curriculum

Administration and Supervision (20 hours)

- **A&S 491** Administrative Theory and Behavior
- **A&S 494** School Finance
- **A&S 495** School Law
- **A&S 496** Community Relations
- **A&S 498** Principles and Practices of Supervision
Electives (8 hours)

A&S 492 The Principalship
A&S 499 Clinical Supervision
A&S 590 Organizational Development
A&S 593 Practicum in Educational Leadership
A&S 594 Internship in Educational Leadership
A&S 596 Personnel Administration
A&S 597 Politics of Education

Courses in cognate disciplines: students who have career needs in a subject matter field may substitute one course in that field. (This course needs the written approval of the program advisor.)

One course (4 quarter hours) from

Master of Arts: A&S 599 Thesis Seminar in Educational Leadership
Master of Education: Elective Course

THESIS/PAPERS

Master of Arts: A&S 599 Thesis Seminar in Education Leadership. The master's thesis is written to fulfill the requirements of this course.

Master of Education: Two papers with course work: Review of Literature Integrative Paper

Examinations:

Master of Arts: oral examination on thesis

ILLINOIS ADMINISTRATIVE CERTIFICATE

Students holding valid Illinois teaching certificates with two years successful teaching experience may be eligible for the Illinois Administrative Certificate upon completion of the program. See the Director of Graduate Programs for information.

II. Catholic School Leadership

Degree Requirements

Courses: minimum of 12 (48 quarter hours)

Foundations (8 hours)

CUG 400 Education Research Design and Statistics
CUG 401 Advanced Developmental Psychology or
CUG 402 Psychology of Learning

Curriculum (4 hours)

CDG 488 Designing and Interpreting Curriculum

Administration and Supervision (24 hours)

A&S 491 Administrative Theory and Behavior
A&S 494 School Finance: The Catholic School
A&S 495 School Law
A&S 496 Community Relations
A&S 498 Principles and Practices of Supervision
A&S 590 Organizational Development in Catholic School Administration
Electives (8 hours)

A&S 492 The Principalship
A&S 499 Clinical Supervision
A&S 593 Practicum in Educational Leadership
A&S 594 Internship in Educational Leadership
A&S 596 Personnel Administration
A&S 597 Politics of Education

One course (4 quarter hours) from:

**Master of Arts: A&S 599 Thesis Seminar in Educational Leadership**

**Master of Education:** Elective course

**THESIS/PAPERS**

**Master of Arts: A&S 599 Thesis Seminar in Educational Leadership.** The master's thesis is written to fulfill the requirements of the course.

**Master of Education:** Two papers with course work: Review of Literature, Integrative Paper

Examination:

**Master of Arts:** oral examination on thesis

**III. Physical Education**

**Degree Requirements**

Courses: minimum of 12 (48 quarter hours)

Foundation (12 hours)

CUG 400 Education Research Design and Statistics
CUG 401 Advanced Development Psychology or
CUG 402 Psychology of Learning
CUG 408 Contemporary Issues in Education

Administration and Supervision (16 hours)

A&S 491 Administrative Theory and Behavior
A&S 495 School Law
A&S 496 Community Relations
A&S 498 Principles and Practices of Supervision

Physical Education (16 quarter hours)

PE 450 Psychology of Sport Behavior and Athletic Performance
PE 451 Current Issues and Trends in Athletics and Physical Education
PE 452 Exercise Science and Sport
PE 453 Advanced Health Concepts
PE 454 Seminar in Adapted Physical Education

One course (4 quarter hours) from:

**Master of Arts: A&S 599 Thesis Seminar in Educational Leadership**

**Master of Education:** Elective course

**THESIS/PAPERS**

**Master of Arts: A&S 599 Thesis Seminar in Educational Leadership.** The master's thesis is written to fulfill the requirements of this course.

**Master of Education:** Two papers with course work: Review of Literature, Integrative Paper
Examination:

**Master of Arts:** oral examination on thesis

**Illinois Athletic Coaching Certification**

Students may be eligible for coaching certification in the State of Illinois through the Illinois Athletic Coaching Certification Board upon completion of the program.

- **PE 450** Psychology of Sport Behavior and Athletic Performance
- **PE 451** Current Issues and Trends in Athletics and Physical Education
- **PE 452** Exercise Science and Sport
- **PE 456** Medical and Legal Aspects of Coaching
- **PE 457** Advanced Coaching Theories and Techniques

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**Courses**

**ADMINISTRATION AND SUPERVISION (A&S)**

- **465 Administrative Planning.** This course concerns program budgeting and systems analysis. Students will be introduced to operations analysis, PERT, input-output analysis and cost-effectiveness.

- **469 Educational Finance.** This course examines the bases for collecting and distributing local, state, and federal funds for education; problems and issues in financial support of education. Special emphasis on assessment and evaluation techniques for the review of individually budgeted programs and familiarization with current worksheets and formulas for computing state aid.

- **491 Administrative Theory and Behavior.** This course concerns theoretical concepts and empirical research relating to administrator behavior in organizations with special reference to educational organizations. Concepts are examined within the typical decisional framework of supervisors, chief school business officers, principals, and superintendents, and similar positions in the helping professions. Assignments are individualized.

- **492 The Principalship.** An intensive study of factors involved in the administration and supervision of a school. Topics considered include the administration and supervision of student personnel, faculty, the instructional program, financial and physical resources, community relations and other basic needs in administering and supervising schools.

- **494 School Finance.** Major consideration will be given to problems relating to the preparing of a school budget, procuring revenue, financial accounting, capital outlays, insurance on property, and taking of inventory.

- **495 School Law.** Authority, powers, and liability of school personnel; status of students; character of districts and school board control of curriculum, school property, finances. Special emphasis on recent state and federal court decisions as they affect Illinois and neighboring states.
Community Relations. Importance of designing programs around the needs and problems of the organization and its special publics. Students will review findings from research and ideas of practitioners in the field as sources for the enrichment and development of sound and defensible programs.

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.

Clinical Supervision. Develops competencies in a system of person-to-person supervision that will give supervisors reasonable hope of accomplishing significant improvements in the personnel performance.

Administrative Uses of Microcomputers. Applications will include word processing, record keeping, reporting, budgeting, forecasting, and instructional management. Hardware, software, personnel, and cost questions will be addressed. There will be an opportunity for extensive hands on experience with representative hardware and software. (Prerequisite: CDG 420 or equivalent preparation.)

Organizational Development. A development approach used in combining theory, research, and applications for improving interpersonal effectiveness in organizations. The course is about people in organizations and the achievement of individual and organizational goals.

Research Seminar in Educational Leadership. Master of Education students complete a bibliographical research study of issues and problems in administration and supervision. (Prerequisite: 400.)

Practicum in Educational Leadership. The practicum provides opportunities for advanced students in administration and supervision to participate in and complete a research project in selected systems on a full-time or part-time basis. The experiences are intended to provide, under professional direction and supervision for (1) study of major factions, policies, and problems of administration and supervision and (2) intensive study of certain critical administrative and supervisory practices. (Prerequisites: Advanced standing in administration and supervision and permission of advisor.)

Internship in Educational Leadership. The internship provides supervised experiences in selected organizations on a full-time or part-time basis. The student intern is cooperatively assigned to an organization under the immediate supervision of organization personnel. The experiences provided are designed to enrich the student's theoretical background with practical opportunities of participating in (1) overall contact with personnel and with the major functions and problems of certain critical administrative and/or supervisory activities; and (2) a detailed study and analysis of a particular administrative and/or supervisory function or activity. (Prerequisites: Advanced standing in administration and supervision and permission of advisor.)

Workshop in Educational Leadership. Topics of particular interest and concern to administrators and supervisors will be presented in a high involvement seminar format. Primary reliance will be on written materials; however, audiovisual and role-playing mechanisms may also be used. Participation in workshops is limited to advanced students of administration and supervision. (Prerequisite: Consent of instructor.)
Personnel Administration. Theory, practice and relevant research in modern personnel administration. Recruitment, staff development, interviewing, collective bargaining, conflict resolution and employee evaluation are emphasized.

Politics of Education. Policy development in education as a political process; community power, state and national politics in educational decision making and role of leadership and pressure groups in the shaping of educational policy at local, state, and national levels.

Independent Study in Educational Leadership. (Prerequisite: Consent of instructor.)

Thesis Seminar in Educational Leadership. A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. (Prerequisites: CUG 400 and thesis proposal approved.)

Registered Student in Good Standing. This registration is required of all students who are not enrolled in a course but are completing course requirements and/or research. It provides access to University facilities. Non-credit, $40.00 per quarter.

Legal Aspects of Special Education for Classroom Teachers.

The Administration and Operation of Special Education. Recent state and federal legislations have changed the nature of Special Education services in selected states. This legislation has both modified Special Education services and increased the involvement of general education in the instruction of handicapped students. Both practicing public school administrators who now find themselves active participants in the education of exceptional children, and Special Education staff members who wish to obtain an increased understanding of the intent of the legislative innovations have been affected by this legislation.

PHYSICAL EDUCATION COURSE (PE)

Psychology of Sport Behavior and Athletic Performance. A study of the philosophy and psychology concepts pertaining to sports, in general, and competitive athletic programs specifically. The course will be conducted in a seminar style analyzing the various coaching and administrative techniques in sports programs. Emphasis will be given to intercollegiate sports but elementary, secondary, and professional sports programs will be included.

Current Issues and Trends in Athletics and Physical Education. An analysis of the current issues, trends, and changes in competitive athletic programs and physical education programs. Major consideration will be given to problems relating to development of goals and objectives, preparation of program budgets, financial conditions, media input, and legal ramifications of the various programs.
Exercise Science and Sport. A study of the advanced concepts and theory pertaining to analysis of human movement. Application will be made for the teaching of fundamental motor skills as well as the specialized analysis made by the coach. Discussion of the various techniques, sophisticated equipment, and empirical evidence will support the conclusions determined in the seminar. The course will be designed for professional physical educators and individuals involved in the coaching profession.

Advanced Health Concepts. This course will present advanced concepts in health for the individual interested in Health Education or the Allied Health Professions. Emphasis will be placed on instructional methodology, curriculum planning, and educational evaluation in the Health profession.

Seminar in Adapted Physical Education. A study of the trends in Adapted or Special Physical Education in the school system. Particular emphasis will be given to the application and interpretation of P.L. 94-142 which outlines requirements for mainstreaming in the public schools. The students will be exposed to various programs dealing with the handicapped children and adults. The course will be appropriate for administrators and teachers involved with adapted physical education programs. Emphasis will also be given to the handicapped athletes and their role in the athletic programs.

Workshop in Physical Education. Topics of particular interest to physical education teachers, coaches and others involved in sports or physical education will be presented in a high involvement seminar format.

Medical and Legal Aspects of Coaching. Training and conditioning practices and procedures to prevent athletic injuries. Emergency treatment and care of injured athletes including first aid and CPR protocols will be practiced. Nutrition/ergogenic aids, and their effects on athletic performance, as well as legal issues associated with coaching will be discussed.

Advanced Coaching Theories and Techniques. Applied administrative theory to coaching. Emphasis on personnel and supervision, facility and equipment management, budgeting, programming, record keeping, scheduling, transportation, use of support personnel, scouting, AV aids.

Human Services and Counseling

The Human Services and Counseling programs present a core of courses designed to provide professionals with skills, mastery and competencies which will enable them to provide comprehensive counseling and consulting services in many educational and community environments.

Some of the specific career opportunities for Human Services and Counseling graduates include private and public school elementary and secondary counseling, rehabilitation counseling, mental health and corrections, employment counseling, ministerial counseling, teaching, work in social welfare and community agencies, junior college personnel work, human relations consulting, migrant family counseling, general hospital service counseling, work in institutional care settings, counseling and aging, and marriage and family counseling.

Emphasis is placed on assisting students from a variety of professional disciplines: 1) in developing leadership skills which facilitate understanding and influence organizational systems, 2) in developing effective communication performance, and 3) in actualizing human potential through group and individual counseling approaches.
DEGREE PROGRAMS

Master of Arts or Master of Education:
Human Services and Counseling

Human Services Management and Higher Education Concentration
Elementary Schools Concentration
Secondary Schools Concentration
Higher Education, Agencies, and Family Concerns Concentration

I. Human Services Management and Higher Education

Degree Requirements

Courses: minimum of twelve (48 quarter hours)

- CUG 400 Educational Research Design and Statistics
- CUG 401 Advanced Developmental Psychology or
- CUG 402 Psychology of Learning
- HSC 452 Seminar in Human Services Organization
- HSC 453 Human Services Information Systems
- HSC 498 Facilitating Human Services through the Group Process
- HSC 462 Counseling and Communication Theory
- HSC 464 Human Services Consulting
- A&S 491 Organizational Theory and Behavior
- A&S 495 Law and the Human Services
- A&S 496 Community Relations
- A&S 498 Principles and Practices of Supervision
- HSC 582 Practicum in Managing the Human Services
- HSC 569 Thesis Research in Managing the Human Services

Thesis


The master's thesis is written to fulfill the requirements of this course.

Examination

Oral examination on thesis

II. Elementary Schools

Degree Requirements

Courses: minimum of twelve (48 quarter hours)

Eleven Courses (44 quarter hours)

- CUG 400 Educational Research Design and Statistics
- CUG 401 Advanced Developmental Psychology or
- CUG 402 Psychology of Learning
- CUG 408 Contemporary Issues in Education
- HSC 453 Human Services Information Systems
- HSC 478 Facilitating Human Services through the Group Process
- HSC 460 Guidance in the Elementary School
- HSC 461 Use of Tests in Appraisal and Development
- HSC 462 Counseling Theory and Practice for Human Services
HSC 463 Technique of Human Services and Counseling in Elementary and Junior High School
HSC 464 Consulting in Human Services
HSC 562 Practicum in Human Services and Counseling Elementary

Note: Students who have career needs in a subject matter field may substitute one course in that field. The course substitution needs the written approval of the student's advisor.

One Course (4 quarter hours) from
- **Master of Arts**: HSC 559 Thesis Research in Human Services and Counseling
- **Master of Education**: Elective course

**THESIS/PAPERS**

- **Master of Arts**: HSC 559 Thesis Research in Human Services and Counseling. The master's thesis is written to fulfill the requirements of this course.
- **Master of Education**: Two papers with course work: Review of Literature, Integrative Paper

Examination

- **Master of Arts**: Oral examination on thesis

Note: Students holding valid teaching certificates may be eligible for the Illinois State Certificate in Guidance upon completion of the appropriate Master's sequence.

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**III. Secondary Schools**

**Degree Requirements**

Courses: minimum of twelve (48 quarter hours)

Eleven Courses (44 quarter hours)

- CUG 400 Educational Research Design and Statistics
- CUG 401 Advanced Developmental Psychology or
- CUG 402 Psychology of Learning
- CUG 408 Contemporary Issues in Education
- HSC 452 Seminar in Human Services Organization
- HSC 453 Human Services Information Systems
- HSC 456 Counseling the College Bound Student
- HSC 458 Facilitating Human Services through the Group Process
- HSC 459 Clinical Studies in Human Services and Counseling
- HSC 461 Use of Tests in Appraisal and Development
- HSC 462 Counseling Theory and Practice for Human Services
- HSC 552 Practicum in Human Services and Counseling - Secondary

Note: Students who have career needs in a subject matter field may substitute one course in that field. The course substitute needs the written approval of the student's advisor.

One Course (4 quarter hours) from

- **Master of Arts**: HSC 559 Thesis Research in Human Services and Counseling
- **Master of Education**: Elective course
THESIS/PAPERS

Master of Arts: HSC 559 Thesis Research in Human Services and Counseling. The master's thesis is written to fulfill the requirements of this course.

Master of Education: Two papers with course work: Review of Literature Integrative Paper

Examination

Master of Arts: oral examination on thesis

Note: Students holding valid teaching certification may be eligible for the Illinois State Certificate in Guidance upon completion of the appropriate Master's sequence.

IV. Agencies, Family Concerns and Higher Education

Degree Requirements

Courses: minimum of twelve (48 quarter hours)

CUG 400 Educational Research Design and Statistics
CUG 401 Advanced Developmental Psychology

or

CUG 402 Psychology of Learning
HSC 468 Issues in Human Services and Counseling
HSC 452 Seminar in Human Services Organization
HSC 453 Human Services Information Systems
HSC 455 Human Services and Aging Progress

or

HSC 556 Family and Marriage Counseling
HSC 458 Facilitating Human Services through the Group Process
HSC 459 Clinical Studies in Human Services and Counseling
HSC 461 Use of Tests in Appraisal and Development
HSC 462 Counseling Theory and Practice for Human Services
HSC 572 Practicum in Human Services and Counseling-Agencies, Higher Education, and Family Concerns
HSC 559 Thesis Research in Human Services and Counseling

Thesis

Master of Arts: HSC 559 Thesis Research in Human Services and Counseling. The master's thesis is written to fulfill the requirements of this course.

Examination

Oral examination on thesis
Human Services and Counseling (HSC)

452 Seminar in Human Services Organization. Principles and current practices used in the development and organization of programs in human services and counseling program. Administrative problems, integration of human services, community relations and evaluation procedures will be studied. Organizational structure and management styles, as they affect counseling and other human services, are examined and discussed.

453 Human Services Information Systems. Results of studies in procedures for the dissemination of economic, educational, occupational and social informational channels. Various topics will be considered: economic impact on occupational trends, techniques for conducting surveys and developing information systems.

454 Human Services and Counseling for Career Development. Ways to assist the individual to choose, prepare for, and progress in a career. Vocational testing, sources of occupational information are described. Study of vocational behavior in relation to career patterns, with special attention to the analysis of empirical data and theories pertaining to vocational choice.

455 The Administration of Human Services and Counseling Programs. The administration of human services programs, an interdisciplinary approach to meeting human needs, describes how administrators and counselors can develop skills and competencies to employ, assign and supervise their staff. An analysis of various supervisory techniques is made.

456 Counseling the College-Bound Student. Designed to assist professionals in the human services and counseling areas in formulating a deeper perspective of the college counseling process. The use of profile, types of colleges and admission procedures, testing scholarships, advance placement, the preparing of the school report and many other items will be included in the instruction. The workshop approach will be used in the final two weeks of the course to put into practice the concepts, skills and techniques learned earlier.

457 Seminar: Improving Parent-Child Relationships. Structured to assist the student to develop a theoretical understanding of the development growth enhancing child-parent relationships. Lectures, discussions and action oriented group encounters focus on the following: understanding child development, the goals of misbehavior, logical and natural consequences, establishing a family council and utilizing effective encouragement methods within the family structure.

458 Facilitating Human Services through the Group Process. Study of group process, its theory, procedures and problems as they relate to facilitating human growth and development through counseling. The class engages in a regular group experience. Opportunity to observe and participate in group work is provided.
Clinical Studies in Human Services and Counseling. Study of normal person with learning and emotional problems. The nature, synthesis and use of case studies for personal development will be stressed. The inter-relationship among the various counseling and human service techniques will be demonstrated.

Guidance in the Elementary School. A study of the philosophy, concepts and rationale which underlie elementary school guidance. Principles and practices as they relate to the guidance program are presented. The student is acquainted with the role of the counselor and is introduced to the various facets of the elementary school program. Attention is given to the development of guidance techniques in the classroom and group guidance.

Use of Tests in Appraisal and Development. Detailed analysis of intelligence, aptitude, personality, and achievement tests used with groups and individuals. The course is intended to familiarize students with various appraisal procedures and their utilization. Attention is given to the development of the institutional testing program.

Counseling Theory and Practice for Human Services. An understanding of the major counseling theories and their application for professionals in the human services. Each student investigates counseling theory through wide reading and has an opportunity to see the implications of the theories in demonstration and practice. The basic theoretical consideration underlying human services and counseling care stressed. Students are expected to develop a personal theory of counseling.

Techniques of Human Services and Counseling in Elementary and Junior High School. A thorough study of the counseling relationship and counseling process. Students are introduced to specific techniques in counseling. The course is designed to help the student acquire the necessary counseling skills such as the establishment of a relationship, reflection, summarization, tentative analysis, and encouragement. The student evaluates and analyzes tapes, develops listening skills to facilitate communication, engages in role playing, and has limited contact with the censee. The relationship of counseling and consultation and the skills necessary to employ human services are considered. (Prerequisites: 460 and 462.)

Consulting in Human Services. Focus on a human behavior rationale consultation work with personnel in various institutions and human service agencies. Use of case studies, role playing, and observation of the consultant role. Stress on the facilitation of communication and dynamics in interpersonal relationships.

Issues in Human Services and Counseling. Topics of particular interest and concern to human service personnel will be presented in a high involvement seminar format.

Research Seminar in Human Services and Counseling. Opportunity is provided in this seminar for Master of Education candidates to write their 5,000 word paper. Individual research and study of problems in guidance form the basis of this class.

Practicum in Human Services and Counseling—Secondary. Selected and directed experiences provided to qualify students to service in the secondary schools as student personnel and guidance staff members. (Prerequisite: Open to students in degree programs only by advisement.)
Internship in Human Services and Counseling. Intern is assigned to one or more cooperating schools or social agencies where he or she, under the joint supervision of the counseling services administrator and the university supervisor, gains practical experience in various aspects of counseling materials, functions, procedures and services. Intern completes a jointly approved research project related to human services and counseling in cooperating school or agency.

Human Services and the Aging Process. This course is intended to afford training in basic helping and referral skills as well as training in interpersonal communications skills to service providers who are concerned with the needs of older persons. Gerontological counseling skill training is a prime factor in this course. Further, this course is intended to clarify attitudes toward aging as well as to identify the needs of the aging population.

Marriage and Family Counseling. This course focuses on providing theoretical formulations and practical illustrations applicable to the practice of marriage and family counseling. Students engage in role playing, case study and observation of counseling techniques. Skills expected in this course include understanding the process of marriage and family counseling and understanding the role of the counselor in the marriage and family setting. Students will learn to develop effective marriage and family counseling strategies and to conduct complete case analyses.

Independent Study in Human Services and Counseling. (Written permission of instructor required.)

Thesis Research in Human Services and Counseling. A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. (Prerequisites: CUG 400 and thesis proposal approved.)

Physical and Sexual Abuse of Children.

Practicum in Human Services and Counseling: Elementary. Selected and directed experiences provided to qualify students to serve in the elementary schools as student personnel and guidance staff members. (Prerequisite: Open to students in degree program only by advisement.)

Thesis Research in Managing the Human Services. A student registers for four quarter hours of credit. Where the thesis research and the writing of the thesis are prolonged beyond the usual time, the program advisor may require the student to register for additional credit. (Prerequisite: CUG 400 and thesis proposal approved.)

Practicum in Human Services and Counseling: Agencies, Higher Education, and Family Concerns. Selected and directed experiences provided in various aspects of counseling materials, functions, procedures and services. (Open to students in degree programs only, by advisement.)

Practicum in Managing the Human Services. Selected and directed experiences provided to qualify students to serve in the management of human services programs. (Prerequisite: Open to students in degree program only by advisement.)
Reading and Learning Disabilities

Combining the disciplines of Special Education (Learning Disabilities) and Reading Education (Developmental and Remedial Reading), the 13-course sequence leads to either a Master of Arts or a Master of Education Degree. Beginning with a theoretical understanding of both fields, course work proceeds to develop in the graduate student, assessment techniques, and diagnostic strategies that produce appropriate remedial programming. Course work focuses on a theoretical understanding of reading and learning disabilities in individuals of all ages, and practicum courses provide experiences in the assessment, diagnosis and remediation of children and adults with reading and learning disabilities. Course work culminates in: 1) the completion of a thesis and an oral defense before a committee of faculty (Master of Arts) or 2) the completion of two papers as extensions of course work: Review of Literature and Integrative Paper (Master of Education). Graduates of the Program are entitled to apply for Type 10 State of Illinois Certification in Learning Disabilities.

Center for Reading and Learning

Operated by DePaul University in conjunction with the Master's Degree Program in Reading and Learning Disabilities, the Center provides diagnostic and remedial programming services for children and adults with specific reading and learning disabilities. Graduate students who are enrolled in advanced courses provide assessment, diagnostic and remedial services to children and adults in the Chicago area. These advanced graduate students, supervised by trained instructors or professors, are taught these skills through observation and participation.
DEGREE PROGRAMS
Master of Arts or Master of Education: Reading and Learning Disabilities

Certifications, Endorsements, Approvals
Learning Disabilities, Type 10 Certification
Supervisory Endorsement
Reading Specialist Approval Behavior Disorders Approval

Specializations
Reading and Learning Disabilities
Bilingual/Multicultural Learning Disabilities
Adolescent Learning Disabilities

I. Reading and Learning Disabilities
Degree Requirements
Courses: minimum of thirteen (52 quarter hours)
Eleven Courses (44 quarter hours)
  CUG 400 Educational Research Design and Statistics
  CUG 402 Psychology of Learning
  CUG 408 Contemporary Issues in Education
  REL 441 The Psychology of Reading
  REL 442 Characteristics of the Exceptional Learner
  REL 443 Psychological Tests and Methods in Diagnosis
  REL 444 Characteristics and Diagnosis of Reading and Learning Disabilities
  REL 445 Remediation of Reading and Learning Disabilities
  REL 540 Testing and Diagnosis of Reading and Learning Disabilities Practicum IV
  REL 542 Testing and Diagnosis of Reading and Learning Disabilities Practicum I
  REL 543 Diagnosis and Remediation of Learning Disabilities Practicum II
  REL 544 Diagnosis and Remediation of Learning Disabilities Practicum III

One Course (4 quarter hours) from
  Master of Arts: REL 549 Thesis Research in Reading and Learning Disabilities
  Master of Education: Students must select one additional course from the following:
     REL 447 Language Development and Learning Disabilities
     REL 448 Strategies for Teaching Learning Disabled Adolescents
**THESIS/PAPERS**

**Master of Arts: R&L 549** Thesis Research in Reading and Learning Disabilities. The master’s thesis is written to fulfill the requirements of this course.

**Master of Education:** Two papers with coursework: Review of Literature Integrative Paper

Examination

**Master of Arts:** oral examination on thesis

Clinical hours

The program requires 200 clinical hours working with students with reading and learning disabilities.

**CERTIFICATIONS**

Type 10—Learning Disabilities

**Certification Requirements**

Valid teaching certificate from State of Illinois (Elementary, Secondary or Special)

Completion of required courses

200 clinical hours

**Supervisory Endorsement**

See an academic counselor for details

**Reading Specialist Approval**

See an academic counselor for details

**Behavior Disorders Approval**

See an academic counselor for details

II. Bilingual (Spanish) Multicultural Learning Disabilities

In addition to the R&LD course, students may specialize in Bilingual Learning Disabilities. If certification in Bilingual Education is desired, see an academic counselor for details.

**Admission Requirements**

Bachelor's degree in Education

A previous grade point average 2.75 or above on a 4.00 scale

Proficiency in both English and Spanish

Teaching certificate from the State of Illinois

Three letters of recommendation from instructors, professors, supervisors

Interview with academic counselor
Specialization Requirements

Courses: five (20 quarter hours)

R&L 404 Child Rearing Across Cultures
R&L 406 Psychology and Education of the Bilingual Child
R&L 407 Non-Discriminatory Tests-SOMPA System
R&L 429 Teaching Reading in First and Second Language
R&L 466 First and Second Language Acquisition

III. Adolescent Learning Disabilities
Specialization Requirements

R&L 448 Strategies for Teaching Learning Disabled Adolescents
Special sections of foundations, theory and practicum courses will be offered that reflect the development, needs and characteristics of the LD adolescents. In practic-um courses students will assess and teach adolescents.

NON-DEGREE
For non-degree students who wish to increase their knowledge and expertise in the field of education, credit for designated courses are available.

Courses

READING AND LEARNING (R&L)

404 Child Rearing Across Cultures. Study of child rearing practices, the effects of culture on cognitive development and the implications for teaching strategies for the bilingual child.

406 Psychology and Education of the Bilingual Child. Psycho-social aspects of bilingualism as well as the implications for teaching strategies for the bilingual child.

407 Non-Discriminatory Tests-SOMPA System. Administration and interpretation of diagnostic test using a pluralistic model to make testing procedures more responsive to cultural pluralism. (Case Study Approach)

425 Teaching Reading in First and Second Language. Analysis of reading problems of bilingual children. Educational implications of language dominance assessment as a prerequisite to the decision in which language to teach reading. Advantages and disadvantages of teaching in dominant and/or weak languages will be emphasized.

441 The Psychology of Reading. Introduces the student to current information concerning the role of the neurophysiological, psychological and educational factors that influence both normal and abnormal development of reading.
Characteristics of the Exceptional Learner. A survey of educational programs as well as a consideration of alternative placement appropriate to children with disabilities in the various handicapped, auditorily impaired, mentally retarded, gifted, multiple handicapped, emotionally disturbed and learning disabled children reviewed. Emphasis will include theoretical, practical and legal implications and issues.

Psychological Tests and Methods in Diagnosis. Background into the principles of measurement, including an evaluation of standardized test instruments, and administration of selected assessment tools appropriate for diagnosing reading and learning disabilities and an understanding of strengths and limitations of specific testing instruments. (Prerequisite: RSL 441 and RSL 447.)

Characteristics and Diagnosis of Reading and Learning Disabilities. Exploration of the theory and nature of reading and learning disabilities. This course proceeds to enhance the student's skills at translating test scores to meaningful diagnostic hypotheses. A case study approach will culminate in the students' ability to integrate assessment information from a variety of sources, especially an individually administered instrument(s) that leads to a profile analysis. (Prerequisite: RSL 443.)

Remediation of Reading and Learning Disabilities. A study of theoretical and practical approaches to the remediation of reading and learning problems. Basic principles of diagnostic teaching will be introduced; instructional materials will be evaluated and reviewed. (Prerequisite: RSL 444.)

Psychology and Education for the Exceptional Child. Identification, characteristics, differences, programs, schools, curricular variations, techniques for securing maximal development.

Language Development and Learning Disabilities. A review of the development of verbal language in normal and atypical learners, as presented by psycholinguists and the speech pathologists. Basic teaching procedures and evaluation of language skills will be emphasized.

Strategies for Teaching Learning Disabled Adolescents. A study of the theoretical and practical approaches to the remediation of reading and learning disabilities in adults and adolescents. Instructional techniques will be presented and remedial materials evaluated.

Characteristics and Diagnosis of Behavior Disordered Children and Adolescents. This course explores the origins of behavior disorder from a family, biological, and school perspective. Screening, classification, and assessment procedures are discussed. Differential diagnosis of behavior disorders from other psychiatric disorders is discussed along with appropriate education placements.

Methods of Teaching the Behavior Disordered Child and Adolescent. A variety of models of education programming for students with behavior problems are presented. Specific teaching and management techniques are presented consistent with the various models. Data collection, accountability, computer utilization, and research methods will be included.

First and Second Language Acquisition. Study of language theories and their applications to first and second language acquisitions in bilingual children.
Testing and Diagnosis of Reading and Learning Disabilities Practicum IV. Students participate in a clinical setting and evaluate children and adults with suspected learning problems. Under close instructor supervision, students will administer and interpret tests, deal with the ethics of testing and interpretation and communicate results to parents and school and other social agencies. (Prerequisite: R&L 542.)

Seminar on the Psychopathology of Learning. A review of specific research applicable to the atypical learner. Opportunity is provided in this seminar for the Master of Education candidate to write the master's paper. 4 hours credit. The student may enroll as many times as is necessary to complete seminar paper.

Testing and Diagnosis of Reading and Learning Disabilities: Practicum I. Students participate in a clinical setting and evaluate children and adults with suspected learning problems. Under close instructor supervision, students will administer and interpret tests, deal with the ethics of testing and interpretation and communicate results to parents and school and other social agencies. (Prerequisites: R&L 445.)

Diagnosis and Remediation of Learning Disabilities: Practicum II. Clinical observation and practical application of the diagnostic-remedial process by working in a supervised clinical setting with children and young adults who have specific reading disabilities. (Prerequisite: R&L 540.)

Diagnosis and Remediation of Reading Disabilities: Practicum III. Clinical observation and practical application of the diagnostic-remedial process by working in a supervised clinical setting with children and young adults who have specific reading disabilities. (Prerequisite: R&L 543.)

Strategies of Teaching Comprehension. Comprehension is treated as an interactive process between reader and the instruction and text. By assuming roles of direct instruction and modelling, the teacher guides students in the interdependent use of prior knowledge, comprehension, metacognition habits, and attitudes using both narrative and expository text.

Individual Assessment of Children Using the WISC-R. Focus on further development of diagnostic skills in areas of reading and learning disabilities. This course teaches advanced clinicians the skills involved in both administration and interpretation of the WISC-R. Emphasis placed on analyzing characteristic test profiles, and on application of this information to educational treatment plans. (Prerequisites: 443 or 444: approval of the instructor.)

Creative Methods and Materials for Teaching Reading in the Mainstreamed Classroom. Emphasis on the creative utilization of a variety of multisensory materials designed to provide specific learning goals. Teaching techniques that precede the use of materials also discussed.

Independent Study in Reading and Other Learning Disabilities. (Written permission of instructor required.)

Thesis Research in Reading and Learning Disabilities. A Master of Arts candidate conducts original research, writes a thesis and presents an oral defense before a committee of faculty members. (Prerequisite: CUG 400 and Thesis proposal approved.)
Registered Student in Good Standing. This registration is required of all students who are not enrolled in a course but are completing course requirements and/or research. It provides access to University facilities. Non-credit, $40.00 per quarter.

Miscue Analysis. Theory and practice in Miscue Analysis will be examined historically in order that the teacher understand its present status. The aim is to increase the range of instructional strategies available to the teacher of reading.

Workshop in Reading and Learning Disabilities. Topics of particular interest and concern to the regular education teacher and special educator will be presented in a high involvement seminar format.

Teaching Reading to the Disadvantaged. A consideration of the linguistic, demographic, and educational factors that are believed to be disadvantaged. An examination of teaching methods and materials that might be appropriate for this group also pursued.

Children's Literature. Sources of literature for children and youth are presented. Criteria for selection and evaluation are also discussed. Included also is an intensive review and analysis of both poetry and prose.

Correcting Reading Problems. Techniques appropriate to the diagnosis of reading problems in a classroom setting presented along with methods and materials for correcting those reading difficulties. Emphasis upon informal assessment techniques and methods of instruction that allow for the creation of individualized learning environments in a group setting.

Teaching of Reading in the Content Areas. Focus on the special skills and problems involved in the teaching of reading in the content areas. The course also acquaints the student with both the place of content reading in the development of skilled reading and methods and techniques of improving the teaching of reading in the content areas.

Foundations of Education

Educational foundations courses—extracted from the disciplines of history, philosophy, psychology, sociology, and research methodology—are an integral part of all degree programs. In this respect the educational foundations program is composed of humanistic and behavioral studies. These studies have as their major purpose providing students with a set of contexts in which educational problems can be understood and interpreted at a level beyond that required for the initial preparation of teachers at the graduate level.

As in basic programs, the problems of education are studied with respect to their historical development and the sociological and philosophical issues to which they are related. They are also studied with respect to the findings and methods of behavioral and social sciences in the areas of research methodology and statistics, learning theories, and developmental psychology.
FOUNDATIONS OF EDUCATION (CUG)

400 Educational Research Design and Statistics. Content of the course includes principles of research design, bibliographical skills and statistical procedures for the interpretation of educational data.


402 Psychology of Learning. Study of the learning-teaching process, with specific emphasis on the person as a learner, human capacity and potential, learning theories and materials, motivation, concept formation and behavior.

404 Child Rearing Across Cultures. Study of child rearing practices, the effects of culture on cognitive development and the implications for teaching strategies for the bilingual child.

405 History and Philosophy of Bilingual Education.

407 Non-Discriminatory Tests-SOMPA System. Administration and interpretation of diagnostic test using a pluralistic model to make testing procedures more responsive to cultural pluralism. (Case Study Approach)

408 Contemporary Issues in Education. An analysis of selected issues and controversies in American education in their political, social, economic, religious and cultural dimensions and the dynamics inherent in the changing concepts of the educational enterprise.

409 Seminar: Understanding the Urban Child: Discipline and Learning. An interdisciplinary seminar which studies the anthropological, philosophical, social, medical and practical aspects of children’s needs with specific emphasis on discipline and learning problems. Strategies and materials that meet and facilitate learning in both home and classroom are examined and discussed.

419 Field Experience: British Infant Schools. An intensive experience in England. Students will visit schools, attend workshops and seminars conducted by British education specialists. (Offered during summer sessions only.)

430 Dynamics of African-American Culture. This course is intended for those interested in cultural and human relations in order that they may examine the contributions of the black person to American culture; gain a functional understanding of the social, economic and political development of the black person on America itself. (Cross listed with Sociology 490.)

461 Use of Tests in Appraisal and Development. Detailed analysis of intelligence, aptitude, personality, and achievement tests used with groups and individuals. The course is intended to familiarize students with various appraisal procedures and their utilization. Attention is given to the development of the institutional testing program.

527 Comparative Education. Studies of school systems outside the United States, their methods, curriculum and achievements.
The Irish Educational System. This course will focus on selected aspects and elements of the educational system in the Republic of Ireland. Topics will include the organization and administration of education of Eire, educational curriculum in Eire, teacher training in Eire, and higher education in Eire.


STATE OF ILLINOIS CERTIFICATION

DePaul University School of Education offers approved programs for State of Illinois certification in four areas of study. This means students may be eligible for the following certificates upon completion of the respective programs.

Type 10 Special (K-12): Learning Disabilities
Type 73 School Service Personnel Certificate: Guidance
Type 75 Administrative Certificate:
  General Supervisory
  General Administrative

Please note that other requirements also apply: generally a teaching certificate and successful teaching experience are prerequisites. A test of basic skills and a test of subject-matter knowledge are required. The tests will be given at four regularly scheduled administrations per year. The Illinois State Board of Education recommends taking the tests as soon as possible. Students are advised to confer with program faculty or the Director of Graduate Programs for further information.

Certification is not automatic upon completion of a program. The student must apply. Forms and procedural information are available in the Education Graduate office.

Timeliness is important. Ordinarily only graduate work completed within the past ten years is acceptable for purposes of applying courses for certification requirements. If the degree was granted more than ten years past, the Graduate Director in consultation with program faculty may grant certification recommendation upon the successful completion of appropriate courses and/or comprehensive examinations in the program. In all instances current certification requirements must be met.
SCHOOL
FOR NEW
LEARNING
ADMINISTRATION

David O. Justice, M.A.
Dean
Catherine Marienau, Ph.D.
Director
Jean W. Knoll, Ph.D.
Associate Director
Beverly Firestone, M.A.
Academic Mentor
Renee Gilbert-Levin, M.A.
Academic Mentor
Mechthild Hart, Ph.D.
Academic Mentor
John Rury, Ph.D.
Academic Mentor
Barbara Nicholls, B.A.
Administrative Assistant

PHILOSOPHY

ADMISSION

FACULTY

COMMON CURRICULUM
The School for New Learning, DePaul's alternative college for adult learners, has served students over the age of 24 since 1972. In 1984, SNL received a major grant from the U.S. Department of Education to design a new model for graduate professional education, the Master of Arts for Working Professionals.

The Master's program offers students with at least three years of working experience related to their proposed field of study an opportunity to design for themselves a professional program of study to fit their individual professional and personal needs. Students come from fields which are not readily served by existing graduate programs, either because these fields are new or rapidly changing or because they wish to take an existing field in new directions. A few students have completed programs of graduate study previously and now want to update their skills. Because much of the program is completed away from campus, every student's pace through the program varies; in general, however, program completion should require between 18 and 24 months. As graduates of this fully accredited program of DePaul University, students receive a Master of Arts with a Professional Concentration.

Each student designs a professional program with the guidance of an Academic Mentor from the college's faculty and a Professional Advisor who is an established
practitioner in the student's chosen field. The Academic Mentor helps to guarantee that each individualized program meets the highest academic standards of the University, and provides ongoing academic advisement during the program. The Professional Advisor helps each student refine the focus of the professional area and identify appropriate learning activities. These activities include coursework across the graduate and professional programs of DePaul, independent research, tutorials or guided readings, professional certificate programs, and documented prior learning. Because the program emphasizes experience as part of the learning process, each student also develops on-the-job projects (called 'applied research') to apply what is being studied in actual professional practice. All non-classroom professional projects are evaluated by the Professional Advisor.

Admission

To qualify for admission, students must have:

- at least three years of experience related to the proposed field of study
- an undergraduate degree from an accredited institution
- a workplace in which to develop applied research projects
- a schedule which allows them to attend class one night per week over the course of a year
- successfully completed the Professional Assessment Workshop, a two-day residential experience during which students work one-on-one and in small groups with members of the Master's program's faculty and staff to identify further their goals for graduate study.

Students are accepted to the Master's program in September, February, and May. Classes meet at DePaul's Loop campus and at the Oak Brook Center. Information Sessions are scheduled regularly in the Loop and at both suburban campuses.

Faculty

Beverly Firestone, M.A., Assistant Professor.................University of Michigan
Mechthild Hart, Ph.D., Assistant Professor.................Indiana University
David O. Justice, M.A., Associate Professor, Dean...........Indiana University
Catherine Marienau, Ph.D., Associate Professor.............University of Minnesota
John Rury, Ph.D., Associate Professor......................University of Wisconsin
The Common Curriculum

The Common Curriculum of the School for New Learning's Master of Arts program is designed to develop the skills described in the Liberal Learning Criteria. During weekly meetings, students in this program develop and refine those skills of critical thinking, problem solving, communications, interpersonal facility, and self-assessment which are rooted in the academic liberal arts tradition (hence the term 'liberal learning skills'). Students develop and practice these liberal learning skills in the group setting of the Common Curriculum, working with and learning from each other as well as from books. The liberal learning skills are designed to enhance performance in the Professional Concentration and at the worksite; their application in these settings is reviewed at various intervals during the course of the Common Curriculum and Professional Concentration.

The Common Curriculum consists of a series of "colloquia," each meeting once a week over the course of four to six weeks. The first three colloquia focus on specific skill development (i.e., research, oral communication, interpersonal) of the individual; the next two colloquia enlarge students' perspectives to consider the individual in larger interpersonal, professional, and social settings. A sixth colloquium focuses on professional ethics; the topic of the seventh 'capstone' colloquium varies according to the interests of each group. A common knowledge base is provided for students through assigned readings. Through the structured discussion and exercises of the colloquia, students are given the opportunity to interact with professionals from diverse fields, experience other perspectives, and develop and apply these skills and perspectives to their own experience. Students are graded, or "assessed", not for mastery of certain content but for demonstrated mastery of the liberal learning skills.

In addition, an Assessment Colloquium meets at intervals during the course of the Common Curriculum to offer students and program staff a setting for mutual assessment of overall growth in these abilities.
THE MASTERY SKILLS COLLOQUIA

Applied Research Methods

In this colloquium students are introduced to the Applied Research Model used by the program, learn how to use their experience as research data, and develop strategies for using the workplace as a laboratory for learning. The colloquium provides an overview of various research methodologies (e.g., survey research, library research, computer-assisted research) and project design, as well as hands-on practice in the use of Assessment Contracts for projects in the Professional Concentration. In addition, it provides practice in conceptualization and problem-framing at the graduate level, and discusses strategies for successful management of independent research and self-managed learning.

Communications for Professionals

In this colloquium students focus on both speaking and listening skills. They are introduced to the breadth and importance of management communications skills; and in this context they come to appreciate the importance of active listening in the basic communication process. They also learn to analyze their audience as they conceptualize communication objectives, and they use this concept as a defining framework for structuring a message. Finally, they learn the importance of visual support in presentations, as well as how to manage question/answer sessions effectively. Each student prepares an oral presentation on a topic of his or her choice, and participates actively in the evaluation of other students' presentations.

Group Process in the World of Work

This colloquium provides students with an opportunity to explore the special dynamics of small group interaction, and to assess the resultant assets and liabilities of working in a group. Topics include: what groups need to pay attention to and how they need to proceed for optimum creativity and productivity; phases and stages of group development; the balance in the relationship between individual and group interests; functional and dysfunctional roles in groups; patterns of communication; and differences between leading a group or work team and leading individual workers.

Models of Change

The purpose of this colloquium is to analyze the nature of change: to explore individual, group, and organization experience with change; and to learn about tools and methods which facilitate change. Students learn the evolution of change theory, its link to general systems theory and its nature in terms of time and relationship. They are exposed to a variety of change models, apply them appropriately to personal change experiences, and compare and critique the usefulness of such models. Finally, they develop and practice individual strategies for adaptive change judgment and behavior, identify values which influence change, and develop organizational strategies for implementing change.
Valuing Human Differences

This colloquium brings experts from a variety of disciplines together with students to explore issues of stereotyping, prejudice, muting, and contrasting communication styles. By participating in panel discussions, students gain both a deeper understanding of their own prejudices towards human differences, and a rationale for re-valuing the differences. They explore the origins of prejudices and barriers that interfere with the valuing of human differences, and enhance their awareness of the extent to which undervaluing of human differences takes place in everyday situations, and especially in the workplace. Students increase their effectiveness in verbal presentation skills, in decision-making informed by values, and in interpersonal skills.

THE MASTERY COLLOQUIA

Ethics in the Professions

This colloquium prepares students to recognize, discuss, and respond to ethical issues which confront them in their professional roles. Case studies stimulate reflection on individual and societal moral values, and help students identify recurring problems of values arising in their professional settings, as well as resources in the literature of ethics for future need. The colloquium focuses in particular on the following: how ethical issues arise in professional practice; the use of “ethical theory” in responding to ethical challenges and perplexities; and the ways in which the ethos of the profession is transmitted through professional schools and/or training of the apprentice.

Capstone Colloquium

Topics for the capstone vary according to the interests of each group. They may include:

- The Humane Professional
- Creative and Situational Leadership
- Strategic Planning—Personal and Organizational
- Managing in a Cross-Cultural Environment
THE THEATRE SCHOOL

Founded As The Goodman School of Drama In 1925
ADMINISTRATION
John Ransford Watts, Ph.D.
Dean
John F. O'Malley, Ph.D.
Associate Dean
John Bridges, M.A.
Director of Administration
Leslie Shook, M.A.
Theatre Manager
Anastasia Gonzalez
Accounts Manager
Peggy Froh, B.A.
Director of Development
Melissa Meltzer, B.S.
Admissions Coordinator
Gayle Russell
Press Representative
Kathy Minelli
Secretary to the Dean

FACULTY

ADMISSION

CURRICULUM
Acting
Directing
Scenic Design
Costume Design

COURSES
THE THEATRE SCHOOL

When this school was founded in 1925 at The Art Institute of Chicago, it was called The Goodman School of Drama.

As we celebrated our sixtieth anniversary in 1985, we began our eighth year as a part of DePaul University. By all measurements the school is stronger now than it has ever been.

To celebrate our sixtieth year, to confirm the strength of our life in the University, to turn aside confusion and to move into the future, we decided to change our name. We are now The Theatre School, DePaul University.

Although our name has changed, the essential life and purpose of the school remains the same. Our basic principles and standards are exactly what they have been for over 60 years. We are a conservatory, now a strong part of a vital urban university, and we operate with professional concentrations on the development of artists for the theatre and related professions.

The students now in our program follow the unbroken tradition of the many professionals who trained here before them. We welcome you to their ranks and to the graduate program of The Theatre School.

John Ransford Watts, Ph.D., Dean
GRADUATE STUDY IN THE THEATRE SCHOOL

The Theatre School's graduate programs in the theatre arts are intensive and focused. As a leading drama school in the United States, The Theatre School functions as a conservatory. The central core of the School is an extensive program which produces more than one hundred and sixty performances for Chicago audiences each season.

The specific objectives of the graduate curriculum are to prepare the student for creative participation in the chosen major concentration at a high level of technical competence, to develop the specific skills and disciplines necessary for advanced achievement in the student's area of specialization, and to ready the student to meet the rigorous demands of the professional performance or production world.

Each Theatre School course builds and expands upon its predecessor. Work in the classroom is complemented by quarterly assignments in an intensive production schedule. By the time the student's program is complete, the graduate should be able to begin professional life confident that he/she has the tools and a way of working which will enable him/her to meet his/her career goals.

Facilities

The Theatre School offices are situated in The Theatre School Building, located at 2135 North Kenmore Avenue on DePaul's Lincoln Park campus. The building is minutes from downtown Chicago by elevated train, bus, or car. In addition to housing most Theatre School classes, the building provides rehearsal rooms, faculty and administration offices, design studios, and shop facilities.

The Theatre School presents two series for Chicago Audiences, the Playworks (originally known as the Goodman Children's Theatre) and the Showcase Series. Until recently, these productions were done in several locations on and off the DePaul Campus. Starting in 1988-89, following the acquisition of the famous Blackstone Theatre from the Shubert Organization, all of The Theatre School's performances for the public will be produced there. The Blackstone, arguably the best theatre in Chicago, is in the South Loop in the heart of the city. It offers professional standards state-of-the-art facilities to match the professional standards of the training and the productions which have been a tradition in Chicago since 1925. Both the Playworks and Showcase series have spawned such talents as Linda Hunt, Adrian Zmed, Ted Wass, Melinda Dillon, Bruce Boxleitner, Elizabeth Perkins, Joe Guzaldo, Karl Malden, Joe Mantegna, Kevin O'Connor, and Kevin Anderson.

The Theatre School is situated in the center of Chicago's off-loop theatre district. Neighboring theatre and related performing arts companies include the Body Politic Theatre, Steppenwolf Theatre, Victory Gardens Theater, Organic Theater, Apollo Theater Center, Royal George Theatre, and MoMing Dance and Arts Center. The Theatre School's location and tradition make possible contact with innovative professional theatres, a resource unparalleled between the two coasts. In addition, the rapidly growing film and television industries in Chicago offer further training possibilities.

Metropolitan Chicago, with its internationally famous Symphony and Opera, art museums, libraries, resident professional theatres, and touring theatre productions from Broadway, provides continuous opportunities for cultural growth and enrichment.
Members of the faculty and staff are highly qualified, both professionally and academically. This is in keeping with the School's concept of the dual importance of theory and practice and of producing a superior quality of instruction. The faculty is regularly supplemented by qualified working professionals.

In addition, visiting artists and professionals appear in our guest speaker series, CHICAGO LIVE: THE ARTS. Among them have been Pulitzer Prize-winning playwright Edward Albee; actress Dorothy Loudon; Broadway star Donna McKeechie (A CHORUS LINE); Chicago's nationally known Steppenwolf Ensemble; actor-author Orson Bean; Shelley Winters; television news personality Bill Kurtis; Chicago theatre critics Richard Christiansen and Glenna Syse; actress-playwright Gretchen Cryer; cast members from NICHOLAS NICKLEBY; comedian Shelley Berman; Obie Award-winning playwright David Mamet; artistic director of Lincoln Center Theatre at Lincoln Center in New York, Gregory Mosher; alumnus Jim Ragona, singing ringmaster for the Ringling Bros. and Barnum & Bailey Circus; the late Geraldine Page; Jean Stapleton, Peter Falk, Judd Hirsch, and Cleavon Little; and Oscar-winning production designer Patrizia von Brandenstein.

Guest artists who have worked closely with students in productions have been James Earl Jones, Lillian Gish, Len Cariou, and Zoe Caldwell. Recently, guest workshops have been given by professional clown Steve Smith (Ringling Bros. & Barnum and Bailey; NBC Television); stage combat experts David Boushey and James Finn; famed Japanese Kabuki actor/director Onoe Kuroemon II; musical theatre actor Carl Hall (THE WIZ). Marie Higlemann of the Guthrie Theatre conducted a dye and paint workshop on the latest techniques used in costume fabrications. Playwright Pamela Blake previewed her play, BLACKBIRD as a new playwright-in-residence with The Theatre School Showcase; playwright Max Bush presented his new plays. AALMAURIA: THE VOYAGE OF THE DRAGONFLY and 13 BELLS OF BOGLEWOOD as the playwright-in-residence with The Theatre School Playworks. Hollywood film director Peter Werner (Academy Award-winner) spent an intensive weekend workshop with students in Acting for Film and Video, and Chicago's master of comedy improvisation, Del Close (Second City and Saturday Night Live writer and comedy coach), taught a workshop to student actors in Comedy Improv.

John Ransford Watts, Ph.D., Dean ..................................... Union Graduate School
Jane Alderman, B.A., Audition ....................................... Adelphi University
David Avallone, M.F.A., Acting ...................................... Southern Methodist University
Jeff Bauer, M.F.A., Scene Design ...................................... Northwestern University
Tim Brault, B.F.A., Master Carpenter ................................. Central Michigan University
John Bridges, M.A., Director of Administration .................. Western Illinois University
William Brown, Acting .................................................. American Conservatory Theatre
Dennis Brozynski, B.F.A., Drawing .................................... Art Institute of Chicago
Bill Burnett, M.F.A., Voice and Speech .............................. Ohio University
Nan Cibula, M.F.A., Costume Design ................................. Yale University
John Culbert, M.F.A., Lighting Design ............................... New York University
Carol D. Delk, B.F.A., Movement ...................................... University of Utah
Peggy Froh, B.A., Development Officer .............................. Northern Michigan University
Judy Geichman, M.F.A., Drawing ..................................... Art Institute of Chicago
Anastasia Gonzalez, Administrative Assistant
Phyllis Griffin, M.F.A., Voice and Speech .................. Goodman School of Drama
Betsy Hamilton, B.F.A., Movement.......................... University of Texas
Donald Ilko, Ph.D., Acting ................................. Case Western Reserve University
Tom Irwin, B.S., Acting .......................................... Illinois State University
Bella Ikin, Ph.D., Acting ........................................ Western Reserve University
John Jenkins, B.A., Movement ............................... Pittsburgh State University
Trudie Kessler, M.F.A., Voice and Speech ................. University of California, Irvine
James Krag, B.F.A., Box Office Assistant ................. DePaul/Goodman School of Drama
James Maronek, M.F.A., Scene Design ...................... Art Institute of Chicago
Dawn McKeen, Assistant to the Costume Shop Manager
Melissa Meltzer, B.S., Admissions Coordinator .......... Northwestern University
Janet C. Messmer, M.A., Costume Shop Manager ......... University of Illinois, Urbana
Kathy Minelli, Secretary to the Dean
Ric Murphy, M.A., Acting ..................................... University of Washington
Joseph Nieminski, B.F.A., Scene Design ................. Art Institute of Chicago
Karen O'Connor, Box Office Assistant
John O'Malley, Ph.D., Associate Dean ..................... Florida State University
Cindy Orthal, B.F.A., Box Office Manager ................. DePaul/Goodman School of Drama
James Ostholthoff, M.F.A., Acting and Directing ........ Art Institute of Chicago
Gerald Reynolds, Carpenter
Gayle Russell, Press Representative
Karen Sheridan, M.F.A., Movement ......................... DePaul/Goodman School of Drama
Leslie Shook, M.A., Theatre Manager ....................... University of Illinois
Robert Shook, M.F.A., Lighting Design ................. Ohio University
Joseph Skowik, M.F.A., Acting and Directing ........... Art Institute of Chicago
Wayne Smith, B.F.A., Property Master ..................... University of Illinois, Urbana
Michael Sokoloff, M.F.A., Stage Combat .................. New York University
Kevin White, B.A., Production Coordinator ............... DePaul University
David William, Acting ......................................... University College, Oxford
Frank Wuhtsch, M.F.A., Technical Director .............. Art Institute of Chicago
Nan Zabriskie, M.F.A., Make-up ............................. University of Minnesota

Programs of Study

The Theatre School offers programs leading to the Master of Fine Arts degree in the areas of acting, direction, scene design, and costume design. The minimum quarter hour requirements vary from program to program. The student in scene or costume design takes a minimum of 114 graduate credits, directing students 144 graduate credits, and acting students 150 graduate credits. All programs require a three year course of study, though advance placement credit is sometimes available in scenic or costume design. Specialization requirements are listed under course requirements on page 223.
The first charter of DePaul University included a statement on nondiscrimination and the policy has been enforced vigorously for over 80 years. Students, faculty and the public are entitled to equal treatment regardless of race, creed or color. It is the policy of The Theatre School to make admission decisions without regard to the race, color, religion, age, sex, national origin or handicap of the candidate.

Admission to the Master of Fine Arts degree programs is based on evidence of ability to be successful in graduate study. Specific requirements include:

- Completion of an Undergraduate Degree.
- A cumulative grade point average of 3.0 (A=4.0).
- Three letters of recommendation.
- Demonstration of special competence in the major area through an audition or portfolio interview.

Applicants who do not fulfill these requirements may be enrolled as special students in basic undergraduate courses for such time as is necessary to make up any deficiencies.

AUDITIONS

Acting

Our auditions place special emphasis on the applicant's potential for future growth. We believe that imagination, personal initiative, self-discipline, stamina, seriousness of commitment to the legitimate stage and trainability are fundamental.

By "trainability" we mean that we attempt to judge the applicant's potential for growth. We believe that this potential can be assessed by evaluating how the student reveals inner resources through the work. We look for the student's ability to focus personal energies in a relaxed manner which will enhance communication of the conflict the character faces in the context of the play. Students who get trapped in "characterization" or "style" tend to demonstrate their level of virtuosity rather than tapping their deeper, inner resources.

You are urged to select material for which you are temperamentally suited; preferably something in which you might conceivably be cast now or in the near future. Avoid material which causes you to disguise yourself or "put on" a character. If you have not acquired the skills and techniques needed to perform metered verse, do not attempt pieces from plays written in that form. You are asked to prepare two short contrasting pieces. The pieces selected should be from plays. Recital of poetry or cuttings from short stories are not acceptable. Concentration and a sincere interest in your pieces are important. During your audition, keep your attention on what you are doing rather than on the effect you are having on the audition committee.

You should be prepared to spend 2½ to 3 hours at the audition. The first half of the audition will be with a group and will entail vigorous physical activity. Please dress accordingly. The second part of the audition is where you get to present your prepared pieces to the audition committee. You will be alone at that point and a 4-minute limit will be imposed (two minutes per monologue).
Directing

In addition to the audition process outlined above, directing students interview with the head of the directing program and present a directorial analysis of a play previously assigned by the program head.

INTERVIEWS FOR CANDIDATES IN SCENIC AND COSTUME DESIGN

Scene Design

During an interview, candidates will present a portfolio of work done that includes scene design renderings (for a model), working drawings, and if possible, painting elevations. We want to see evidence of artistic achievement, up to the time of application, in the medium that is best suited to the candidate. Slides of designs executed may be presented to augment the portfolio.

Costume Design

Candidates should submit a portfolio of costume design renderings, some of which must be in a paint medium. The candidate should also include samples of sewing ability. Slides of designs executed may be presented to augment the portfolio.

Procedures for Admission

Applicants for admission should obtain an application by writing the Admissions Coordinator, The Theatre School, 2135 N. Kenmore Avenue, Chicago, Illinois 60614 or by calling (312) 341-8374. Outside Illinois, you may call toll free: 1-800-4DEPAUL. Once the completed application, three letters of recommendation, and official transcripts of credit are on file, an audition or interview will be scheduled. There is a $100.00 audition fee and a $20.00 application fee. The student will be informed of his/her acceptance status as soon as possible after the audition/interview date (usually about two weeks) but only after his/her application file is complete.

Applicants are accepted for the fall quarter only. All applicants are asked to submit one photo for identification purposes: 2” X 2” or wallet size is preferred but not mandatory.

RESIDENCE REQUIREMENTS FOR THE MASTER OF FINE ARTS DEGREE

All courses for the master of fine arts degree must be taken at DePaul University. Graduate credit for courses completed at other institutions may not be applied toward the degree, though in some exceptional cases they may be used as a foundation for advanced placement in the areas of scene and costume design only.
Candidates must complete 9 quarters of a 3 year course of study. Each course of study is sequential and begins in the Fall Quarter only. While it is possible for a student to apply for a leave of absence for one year between two given years of study (i.e., between the second and third year, first and second year), it is never possible to skip one quarter within a single year.

All requirements for the degree must be completed within eight calendar years from the time a student is admitted to the degree program. For special students removing deficiencies, this period will begin when all deficiencies are removed and admission to the MFA degree program has been formally granted.

**TERMINAL REQUIREMENTS FOR THE MASTER OF FINE ARTS DEGREE**

In addition to completing the graduate credit hour requirements of the major program, each student must complete three terminal requirements:

1. A written comprehensive examination in the history of theatre and development of dramatic literature. This exam is given in the Fall of the third year. Reading lists are available for students who wish to begin early preparation.
2. A written comprehensive examination in the major area of study. This exam is given in the Spring of the third year.
3. A graduate thesis project which has both a written and performance/design component.

**GRADES AND CONTINUANCE POLICY**

Graduate students are expected to maintain a higher level of academic achievement than undergraduate students. The basic grade of "C" will be acceptable in no more than half the graduate courses required in the major field. (See page 00 for grade information.)

A satisfactory grade in any given course and an acceptable GPA do not insure continuation in the program. At the end of each year every student is evaluated by the faculty, not only in terms of his/her progress in class, but also in terms of overall growth within the chosen discipline, professional attitude toward the activities prescribed in the program, and professional potential. Retention in the program is by invitation of the faculty.

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**Major Field Requirements**

1. **MFA in Acting**
   
   **First Year:**
   
   Acting I: 511, 512, 513  
   Voice and Speech: 531, 532, 533  
   Movement: 521, 522, 523  
   Theatre Elective or Independent Study: 599, 599, 599  
   Rehearsal and Performance: 561, 562, 563
Second Year:
Acting II: 611, 612, 613
Voice and Speech: 631, 632, 633
Movement: 621, 622, 623
Graduate Seminar: 601, 602, 603
Technique: 599, 599, 599
Rehearsal and Performance: 661, 662, 663

Third Year:
Acting III: 711, 712, 713
Audition: 414, 415, 416
Thesis Project: 714, 715, 716
Rehearsal and Performance: 761, 762, 763
Voice and Movement Lab: 717, 718, 719

II. MFA IN DIRECTING
First Year:
Directing I: 581, 582, 583
Principles of Design for Directors: 541, 542, 543
Acting I: 511, 512, 513
Stage Management: 367, 368, 369
Rehearsal and Performance: 561, 562, 563

Second Year:
Directing II: 681, 682, 683
Visual Concepts: 641, 642, 643
Acting II: 611, 612, 613
Graduate Seminar: 601, 602, 603
Rehearsal and Performance: 661, 662, 663

Third Year:
Thesis Project: 781, 782, 783
Theatre Elective or Independent Study: 599, 599, 599
Rehearsal and Performance and/or Internship: 761, 762, 763
III. MFA IN SCENIC DESIGN

First Year:
Scene Design III: 441, 442, 443
Rendering II: 484, 485, 486
Theatre Elective or Independent Study: 599, 599, 599
Production Practice I: 571, 572, 573

Second Year:
Design Elective: (Variable)
Theatre Elective or Independent Study: 599, 599, 599
Graduate Seminar: 601, 602, 603
Production Practice II: 671, 672, 673

Third Year:
Thesis Project: 741, 742, 743
Theatre Elective or Independent Study: 599, 599, 599
Production Practice III and/or Internship: 771, 772, 773

IV. MFA IN COSTUME DESIGN

First Year:
Costume Design III: 444, 445, 446
Rendering II: 484, 485, 486
Theatre Elective or Independent Study: 599, 599, 599
Production Practice I: 571, 572, 573

Second Year:
Design Elective: (Variable)
Theatre Elective or Independent Study: 599, 599, 599
Graduate Seminar: 601, 602, 603
Production Practice II: 671, 672, 673

Third Year:
Thesis Project: 741, 742, 743
Theatre Elective or Independent Study: 599, 599, 599
Production Practice III and/or Internship: 771, 772, 773
Courses

With the exception of Independent Study and Rehearsal and Performance, Theatre School courses are minimally a year in length. Course goals are realized annually rather than quarterly. The courses below are offered and registered for in a Fall, Winter, Spring sequence.

367, 368, 369 Stage Management. This course develops the skills required of the working stage manager. Through discussion and application students work problems of stage management through to practical solutions. (1 credit hour.)

381, 382, 383 Survey: Art, Architecture, Fashion, and Furniture. Western European art history, the decorative arts, and architecture from ancient Egypt to the present day are explored. Emphasis will be placed on major eras in playwriting. (3 credit hours)

441, 442, 443 Scene Design III. Students complete assignments in the conceptual analysis and fulfillment of projects covering a wide variety of genres, including designs for the classical and modern drama, opera, and the ballet. As a corollary, portfolios of professional caliber are developed. (3 credit hours)

444, 445, 446 Costume Design III. Costume design for the diverse styles of the pre-modern drama evolving through lecture and project work. Projects will include script interpretation, advanced rendering techniques, developing a professional portfolio, and discussions on career planning. (3 credit hours)

484, 485, 486 Rendering II. A practical study class in the graphics of set and costume design. Theoretical problems as well as assignments growing out of design class and the production program will result in sketches, renderings, draftings, and models produced to their major interests and skills. (2 credit hours)

511, 512, 513 Graduate Acting I. Through scene study, the actor develops working habits which will aid him/her in rehearsal as well as performance. Special attention is given to moment by moment study of beat, intention, relationship, obstacle, conflict, and theme. Emphasis is placed on developing a role throughout the play. (4 credit hours)

521, 522, 523 Movement. The building of kineshetic awareness, with emphasis on developing a generally capable, articulate physical instrument; understanding the restrictions of habit; exploring dynamics and increasing the ability to make dynamic choices. (2 credit hours)

531, 532, 533 Voice and Speech. Fundamental work consists of alignment, relaxation and breathing, the development of free voice flow, resonance and focus. Vigorous articulation of vowels and consonants leads to the elimination of regionalisms. Text study includes dialogue from contemporary plays as well as Shakespearean verse, where emphasis is on scansion and accurate verbal action. (2 credit hours)

541, 542, 543 Principles of Design for Directors. This course is structured to develop in the student director an understanding of the design process and to foster a visual sensitivity to the dramatic content. It explores the collaboration between the director and the designer. (3 credit hours)

561, 562, 563 Rehearsal and Performance. Graduate acting and directing students are continually involved in rehearsal and performance of plays in the Showcase, the Playwork Series, and Workshop productions. These students constitute the acting company for the school. (3 credit hours)
571, 572, 573 Production Practice I. To be taken by all design and technical students. Design area duties include practical work on production-planning, constructing, painting, and running. Technical area duties include practical work on productions in construction, rigging, and crewing sets; rigging and crewing lighting and sound tape design, and stage management. (6 credit hours)

581, 582, 583 Directing I. The course covers the director's pre-production preparation, the theatre space, elements of composition and picturization, and the relationship between the director and the actor. Through lecture, discussion, and performance projects, the goal is to develop a common vocabulary usable in the wide variety of theatrical situations the modern director is likely to encounter. (3 credit hours)

599, 599, 599 Independent Study.

601, 602, 603 Graduate Seminar. The course familiarizes the student with the requisites of the thesis project and prepares the student to successfully complete this graduate requirement. Additionally, students review material in preparation for the comprehensive exam in the history of theatre and dramatic literature. (3 credit hours)

611, 612, 613 Graduate Acting II. This class in Period Acting provides the student with basic skills to perform Shakespeare, Restoration, Eighteenth Century Comedy, and Moliere. Special focus is given to scansion and verse-speaking. As well as special focus to an introduction to period comedy techniques. This study is coordinated with both movement and voice and speech classes. (5 credit hours)

621, 622, 623 Movement II. The work is focused on the exploration of effort and how to function within the boundaries of form. Period techniques will be taught, as well as some contact with the structure of musical theatre. This class is taught in conjunction with Graduate Acting II. (2 credit hours)

631, 632, 633 Voice and Speech II. Individual voice and speech skills are refined through monologues, scenes and further exploration of vocal and physical energies. Dialect study includes Standard British, Cockney, Irish and American Southern. All work emphasizes integration of skills and the development of self-sufficiency. (2 credit hours)

641, 642, 643 Visual Concepts. An investigation, through research and discussion, of the conceptual problems of physically mounting specific, assigned scripts from the classic and modern theatre, covering a broad stylistic range. Students will submit proposals for designs and justify their ideas through literary and pictorial research. The directorial and collaborative problems of arriving at a production concept, up to but not including fully-realized design documentation, is emphasized through a series of projects. (3 credit hours)

661, 662, 663 Rehearsal & Performance II. See 561, 562, 563. (3 credit hours)

671, 672, 673 Production Practice II. See 571, 572, 573. (6 credit hours)

681, 682, 683 Directing II. A laboratory in which student directed scenes are presented for discussion and criticism. Each directing student directs up to six scenes during the year. (3 credit hours)

711, 712, 713 Graduate Acting III. The actor-audience relationship is examined in an attempt to free the inner and the outer skills. Scene work and exercises continue developing the student's total instrument in order to function freely, imaginatively and believably within the boundaries of the text. Emphasis is placed on communicating behavior of any period and genre by the writer and director. (3 credit hours)

714, 715, 716 Thesis Project in Acting. Students work independently on performance projects assigned through the casting pool. All projects involve a written as well as practical component. (3 credit hours)
717, 718, 719 Voice and Movement Lab. Advanced integrative work in Voice and Movement team taught by faculty from the respective departments concerned. (4 credit hours.)

721, 722, 723 Movement III. Three quarters of independent study projects will allow complete focus on individual work. Students will be advised by movement faculty in projects that help them develop in particular areas of need or interest. (2 credit hours.)

731, 732, 733 Voice and Speech III. Specific individualized work consolidates all Voice and Speech skills. (2 credit hours.)

741, 742, 743 Thesis Project in Design. The production of the MFA Thesis, consisting of portfolio and manuscript, under the supervision of the advisor and the head of graduate studies. (9 credit hours.)

761, 762, 763 Rehearsal and Performance III. See 561, 562, 563. (5 credit hours.)

771, 772, 773 Production Practice III. See 571, 572, 573. (6 credit hours.)

781, 782, 783 Thesis Project in Directing. Produced on the Theatre School's main stage, the student directed thesis production will receive as complete a physical mounting as possible given the demands of any specific season. Performances are seen by the general public. (9 credit hours.)
### 1988-89

**Graduate Academic Calendar**

Registration information is published in the University’s Schedule of Classes.

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autumn</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>22</td>
<td>Monday. College of Law Autumn Semester classes begin.</td>
</tr>
<tr>
<td>September</td>
<td>2</td>
<td>Friday. Final date for submitting thesis or dissertation for October degree conferral.</td>
</tr>
<tr>
<td>September</td>
<td>5</td>
<td>Monday. Labor Day.</td>
</tr>
<tr>
<td>September</td>
<td>14</td>
<td>Wednesday. Autumn Quarter begins.</td>
</tr>
<tr>
<td>October</td>
<td>1</td>
<td>Saturday. October Degree Conferral.</td>
</tr>
<tr>
<td>October</td>
<td>10</td>
<td>Monday. St. Vincent DePaul Day. Holiday—No classes</td>
</tr>
<tr>
<td>October</td>
<td>14</td>
<td>Friday. Last day to file for February Degree Conferral.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to file for Autumn Quarter Comprehensive Examinations.</td>
</tr>
<tr>
<td>October</td>
<td>12-18</td>
<td>Wednesday-Tuesday. Mid-Term Week (optional).</td>
</tr>
<tr>
<td>November</td>
<td>4</td>
<td>Friday. Last day to withdraw from classes.</td>
</tr>
<tr>
<td>November</td>
<td>5</td>
<td>Saturday. Administration of Comprehensive Examinations.</td>
</tr>
<tr>
<td>November</td>
<td>23-27</td>
<td>Wednesday Evening-Sunday. Thanksgiving Holiday. No classes Wednesday evening through Sunday.</td>
</tr>
<tr>
<td>November</td>
<td>28</td>
<td>Monday. Last day of Autumn Quarter evening classes.</td>
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<tr>
<td>November 29-December 5</td>
<td></td>
<td>Tuesday-Monday. Final Examinations for Autumn Quarter evening classes.</td>
</tr>
<tr>
<td>December</td>
<td>5</td>
<td>Monday. End of Autumn Quarter. End of College of Law classes.</td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td></td>
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</tr>
<tr>
<td>January</td>
<td>3</td>
<td>Tuesday. Winter Quarter evening classes begin.</td>
</tr>
<tr>
<td>January</td>
<td>6</td>
<td>Friday. Final date for submitting thesis or dissertation for February degree conferral.</td>
</tr>
<tr>
<td>January</td>
<td>16</td>
<td>Monday. College of Law Spring Semester classes begin.</td>
</tr>
<tr>
<td>January</td>
<td>27</td>
<td>Friday. Last day to file for June Convocation. Last day to file for Spring Quarter Comprehensive Examinations.</td>
</tr>
<tr>
<td>February</td>
<td>1</td>
<td>Wednesday. Winter Degree Conferral.</td>
</tr>
<tr>
<td>February</td>
<td>1-7</td>
<td>Wednesday-Tuesday. Mid-Term Week (optional).</td>
</tr>
<tr>
<td>February</td>
<td>24</td>
<td>Friday. Last day to withdraw from classes.</td>
</tr>
<tr>
<td>March</td>
<td>13</td>
<td>Monday. Last day of Winter Quarter evening classes.</td>
</tr>
<tr>
<td>March</td>
<td>14-20</td>
<td>Tuesday-Monday. Final Examinations for Winter Quarter evening classes.</td>
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<tr>
<td>March</td>
<td>20</td>
<td>Monday. End of Winter Quarter.</td>
</tr>
<tr>
<td>Month</td>
<td>Date</td>
<td>Event</td>
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<tr>
<td>March</td>
<td>26</td>
<td>Sunday, Easter.</td>
</tr>
<tr>
<td>March</td>
<td>27</td>
<td>Monday, Spring Quarter evening classes begin.</td>
</tr>
<tr>
<td>April</td>
<td>8</td>
<td>Saturday, Administration of Comprehensive Examinations.</td>
</tr>
<tr>
<td>April</td>
<td>28</td>
<td>Friday, College of Law classes end.</td>
</tr>
<tr>
<td>April</td>
<td>24-29</td>
<td>Monday-Saturday, Mid-Term week (optional).</td>
</tr>
<tr>
<td>May</td>
<td>12</td>
<td>Friday, Last day to withdraw from class. Final date for submitting thesis or dissertation for June convocation.</td>
</tr>
<tr>
<td>May</td>
<td>29</td>
<td>Monday, Memorial Day, Holiday—No classes.</td>
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<tr>
<td>June</td>
<td>2</td>
<td>Friday, Last day of Spring Quarter evening classes.</td>
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<tr>
<td>June</td>
<td>3-9</td>
<td>Saturday-Friday, Final Examinations for Spring Quarter evening classes.</td>
</tr>
<tr>
<td>June</td>
<td>9</td>
<td>Friday, Spring Quarter ends.</td>
</tr>
<tr>
<td>June</td>
<td>10-11</td>
<td>Saturday-Sunday, Convocation.</td>
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<tr>
<td>June</td>
<td>14</td>
<td>Wednesday, First Summer Session begins.</td>
</tr>
<tr>
<td>June</td>
<td>30</td>
<td>Friday, Last day to file for October Degree conferral.</td>
</tr>
<tr>
<td>July</td>
<td>4</td>
<td>Tuesday, Independence Day, Holiday—No classes.</td>
</tr>
<tr>
<td>July</td>
<td>14</td>
<td>Friday, College of Law classes end.</td>
</tr>
<tr>
<td>July</td>
<td>18</td>
<td>Tuesday, First Summer Session ends.</td>
</tr>
<tr>
<td>July</td>
<td>19</td>
<td>Wednesday, Second Summer Session begins.</td>
</tr>
<tr>
<td>August</td>
<td>22</td>
<td>Tuesday, Second Summer Session ends.</td>
</tr>
</tbody>
</table>
The Vincentian Character of DePaul University

DePaul, a Catholic university, takes its name from St. Vincent DePaul. The religious community founded by Vincent, commonly known as Vincentians, opened the university and endowed it with a distinctive spirit: to foster in higher education a deep respect for the God-given dignity of all persons, especially the materially, culturally, and spiritually deprived; to instill in educated persons a dedication to the service of others. In each succeeding generation the women and men of DePaul have pursued learning in this spirit of Vincent DePaul.