NIU Bulletin Series

Graduate Catalog
1995-96

Effective May 15, 1995
Notices

The university reserves the right to make changes in admission requirements, fees, degree requirements, and other specifications set forth in this catalog. Such changes take precedence over catalog statements. While reasonable effort is made to publicize such changes, the student should remain in close touch with departmental advisers and appropriate offices, because responsibility for complying with all applicable requirements ultimately rests with the student.

Although the university attempts to accommodate the course requests of students, course offerings may be limited by financial, space, and staffing considerations or may otherwise be unavailable. Nothing in this catalog may be construed to promise or guarantee registration in any course or course of study (whether required or elective) nor may anything be construed to promise or guarantee the completion of an academic program within a specified length of time.

Admission to the Graduate School is not complete until application materials have been fully processed and the applicant has been notified in writing of admission.

Other statements of a legal nature are printed in the “Notices” section and under “Student Information and Records” in the “Admission and General Regulations” section of this catalog.

Student Responsibility

It is the responsibility of students to know and observe all regulations and procedures relating to the program they are pursuing, as well as those of the university and Graduate School. In no case will a regulation be waived or an exception granted because students plead ignorance of, or contend that they were not informed of, the regulations or procedures. Questions on regulations and their interpretation pertaining to studies at the graduate level should be addressed to the office of the dean of the Graduate School.

Students planning to graduate should familiarize themselves with the dates relating to application for graduation and other pertinent deadlines. (See Graduate School Calendar.) It is necessary to apply for graduation by the specified deadline in order to graduate in a particular term, whether or not the student plans to attend the commencement ceremonies.

Students must satisfy the degree requirements of the catalog in force during the term for which they have been admitted to and begin course work in a degree program; or they may, with the consent of their advisers, meet graduation requirements by complying with the provisions of a later catalog. Students readmitted to a degree program must meet degree requirements of the catalog in force at the time of the later admission (or of a subsequent catalog, as provided above). Aside from degree requirements, all students are subject to the regulations and policies stated in the catalog currently in force. Exceptions to regulations contained in the Graduate Catalog require the written approval of the office of the dean of the Graduate School, unless otherwise stated in the catalog.

Graduate students and students-at-large should notify the Graduate School immediately of any change in address so that receipt of mail will not be delayed.

Graduate School Office

Further general information may be obtained from:

The Graduate School
Altgeld Hall 206
Northern Illinois University
DeKalb, Illinois 60115-2864

Phone: (815) 753-0395 (Graduate School)
(800) 892-3050 (toll-free number for Illinois callers only)
(815) 753-1000 (general university number)

Further information on specific graduate programs should be requested from the persons indicated in the “Directory for Correspondence” in this catalog.

Calendar

The university calendar for each term is printed in the Schedule of Classes, and an abbreviated version appears on page 4 of this catalog. For other dates that apply to graduate students, the Graduate School Calendar, available from the Graduate School, should be consulted.

University Academic Publications

The Undergraduate Catalog contains information on undergraduate admission policies and procedures, graduation requirements, academic regulations, expenses, housing, financial aid, and other student services, as well as detailed descriptions of academic majors, minors, and course offerings. Copies are available to current students from the university’s bookstore, and to prospective students from the Office of Admissions.

The Graduate Catalog contains detailed statements of Graduate School policies and procedures, curricula, and expenses, and lists the graduate course offerings of the various departments. Copies are available from the Graduate School office.

The College of Law Bulletin provides information regarding application procedures, academic requirements, course offerings, and tuition and fees, as applicable to law students. Copies may be obtained from the College of Law.

The Schedule of Classes supplies timetables of undergraduate and graduate class offerings for on-campus and off-campus courses (not for those offered by the College of Law). It describes registration and fee payment procedures and provides a detailed academic calendar. It is published for each academic term. Copies are available from the Office of Registration and Records.

Graduate School Publications

The following publications are available from the Graduate School:

Graduate School Calendar
Graduate Catalog
Information for Graduate Students from Abroad

The Graduate School also publishes The Graduate School Manual for Theses and Dissertations, which may be purchased at campus bookstores.
Contents

Calendar 4
A Guide to Reading This Catalog 5
Northern Illinois University 7
The Graduate School 9
Directory for Correspondence 12
Admission to Graduate Study 14
General Regulations 19
Requirements for Graduate Degrees 27
Tuition and Fees 36
Assistantships, Fellowships, Loans, Scholarships, and Student Employment 40
Scholarly Activities at Northern Illinois University 43
Campus Activities and University Services 47
College of Business 55
  Accountancy 60
  Finance 62
  Management 63
  Marketing 66
  Operations Management and Information Systems 67
College of Education 69
  Curriculum and Instruction 72
  Educational Psychology, Counseling, and Special Education 82
  Leadership and Educational Policy Studies 97
  Physical Education 107
College of Engineering and Engineering Technology 113
  Electrical Engineering 115
  Industrial Engineering 118
  Mechanical Engineering Technology 121
  Technology 123
College of Liberal Arts and Sciences 127
  Anthropology 130
  Biological Sciences 133
  Chemistry 138
  Communication Studies 142
  Computer Science 145
  Economics 147
  English 151
  Foreign Languages and Literatures 156
  Geography 160
  Geology 163
  History 167
  Journalism 173
  Mathematical Sciences 175
  Philosophy 182
  Physics 184
  Political Science 187
  Psychology 194
  Sociology 199
College of Professional Studies 202
  Allied Health Professions 204
  Communicative Disorders 206
  Human and Family Resources 210
  Military Science 216
  Nursing 217
College of Visual and Performing Arts 220
  Art 221
  Music 228
  Theatre Arts 235
Other Academic Units 239
  Center for Southeast Asian Studies 240
  Center for Burma Studies 242
  Center for Biochemical and Biophysical Studies 243
  Center for Plant Molecular Biology 245
  Social Science Research Institute 246
  Center for Governmental Studies 247
  College of Law 248
  International Programs 249
  University Libraries 250
Administration 251
Notices 253
Index 257
Campus Map inside back cover
The **Schedule of Classes** should be consulted for mail registration and telephone registration dates.

For detailed information regarding Graduate School deadlines pertaining to application, admission, and graduation, see the official **Graduate School Calendar**, which is available from the Graduate School.

---

### Summer Session 1995

**JUNE 19, MONDAY**  
Beginning of classes

**JULY 4, TUESDAY**  
Independence Day observed (no classes; university offices closed)

**AUGUST 11, FRIDAY**  
End of summer session

**AUGUST 12, SATURDAY**  
Commencement; summer 1995 degree date

---

### Fall Semester 1995

**AUGUST 21-25, MONDAY-FRIDAY**  
Departmental, college, and university faculty meetings

**AUGUST 28, MONDAY**  
Beginning of classes

**SEPTEMBER 4, MONDAY**  
Labor Day (no classes; university offices closed)

**NOVEMBER 22, WEDNESDAY**  
Beginning of Thanksgiving recess at noon (no classes)

**NOVEMBER 27, MONDAY**  
Resumption of classes

**DECEMBER 11-16, MONDAY-SATURDAY**  
Final examinations

**DECEMBER 17, SUNDAY**  
Commencement; fall 1995 degree date

---

### Spring Semester 1996

**JANUARY 8-12, MONDAY-FRIDAY**  
Departmental and college faculty meetings

**JANUARY 15, MONDAY**  
Martin Luther King, Jr., Holiday (no classes; university offices closed)

**JANUARY 16, TUESDAY**  
Beginning of classes

**MARCH 9, SATURDAY**  
Beginning of spring break after regularly scheduled classes

**MARCH 18, MONDAY**  
Resumption of classes

**MAY 5, FRIDAY**  
Reading Day

**MAY 4-6, SATURDAY, MONDAY-FRIDAY**  
Final examinations

**MAY 11, SATURDAY**  
Commencement, Spring 1995 degree date
A Guide to Reading This Catalog

Abbreviations Used in This Catalog

### Course Designators

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCY</td>
<td>Accountancy</td>
</tr>
<tr>
<td>AHP</td>
<td>Allied Health Professions</td>
</tr>
<tr>
<td>AHPP</td>
<td>Public Health</td>
</tr>
<tr>
<td>AHPT</td>
<td>Physical Therapy</td>
</tr>
<tr>
<td>ANTH</td>
<td>Anthropology</td>
</tr>
<tr>
<td>ART</td>
<td>Art</td>
</tr>
<tr>
<td>BIOS</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>CHEM</td>
<td>Chemistry</td>
</tr>
<tr>
<td>CI-</td>
<td>Curriculum and Instruction</td>
</tr>
<tr>
<td>CICE</td>
<td>Early Childhood Education</td>
</tr>
<tr>
<td>CIEE</td>
<td>Elementary Education</td>
</tr>
<tr>
<td>CIOE</td>
<td>Outdoor Teacher Education</td>
</tr>
<tr>
<td>CIRE</td>
<td>Reading</td>
</tr>
<tr>
<td>CISC</td>
<td>Curriculum and Supervision</td>
</tr>
<tr>
<td>CISE</td>
<td>(formerly LESE) Secondary Education</td>
</tr>
<tr>
<td>COMD</td>
<td>Communicative Disorders</td>
</tr>
<tr>
<td>COMS</td>
<td>Communication Studies</td>
</tr>
<tr>
<td>CSCI</td>
<td>Computer Science</td>
</tr>
<tr>
<td>ECON</td>
<td>Economics</td>
</tr>
<tr>
<td>ELE</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>ENGL</td>
<td>English</td>
</tr>
<tr>
<td>EP</td>
<td>Educational Psychology, Counseling, and Special Education</td>
</tr>
<tr>
<td>EPCO</td>
<td>Counseling</td>
</tr>
<tr>
<td>EPSE</td>
<td>Special Education</td>
</tr>
<tr>
<td>EPSY</td>
<td>Educational Psychology</td>
</tr>
<tr>
<td>FINA</td>
<td>Finance</td>
</tr>
<tr>
<td>FL-</td>
<td>Foreign Languages and Literatures</td>
</tr>
<tr>
<td>FLAL</td>
<td>Applied Linguistics</td>
</tr>
<tr>
<td>FLCL</td>
<td>Classical Languages</td>
</tr>
<tr>
<td>FLFR</td>
<td>French</td>
</tr>
<tr>
<td>FLEI</td>
<td>German</td>
</tr>
<tr>
<td>FLIN</td>
<td>Indonesian</td>
</tr>
<tr>
<td>FLIS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>FLIT</td>
<td>Italian</td>
</tr>
<tr>
<td>FLPO</td>
<td>Portuguese</td>
</tr>
<tr>
<td>FLRU</td>
<td>Russian</td>
</tr>
<tr>
<td>FLSP</td>
<td>Spanish</td>
</tr>
<tr>
<td>FLST</td>
<td>Special Topics</td>
</tr>
<tr>
<td>GEOG</td>
<td>Geography</td>
</tr>
<tr>
<td>MET</td>
<td>Meteorology</td>
</tr>
<tr>
<td>GEOL</td>
<td>Geology</td>
</tr>
<tr>
<td>HFR</td>
<td>Human and Family Resources</td>
</tr>
<tr>
<td>HIST</td>
<td>History</td>
</tr>
<tr>
<td>IBUS</td>
<td>Intra Business</td>
</tr>
<tr>
<td>IDSP</td>
<td>Interdisciplinary</td>
</tr>
<tr>
<td>IENG</td>
<td>Industrial Engineering</td>
</tr>
<tr>
<td>ILAS</td>
<td>Intra Liberal Arts and Sciences</td>
</tr>
<tr>
<td>JOUR</td>
<td>Journalism</td>
</tr>
<tr>
<td>LE-</td>
<td>Leadership and Educational Policy Studies</td>
</tr>
<tr>
<td>LEAC</td>
<td>Adult Continuing Education</td>
</tr>
<tr>
<td>LEBM</td>
<td>School Business Management</td>
</tr>
<tr>
<td>LEAA</td>
<td>Educational Administration</td>
</tr>
<tr>
<td>LEFE</td>
<td>Foundations of Education</td>
</tr>
<tr>
<td>LEIT</td>
<td>Instructional Technology</td>
</tr>
<tr>
<td>MATH</td>
<td>Mathematical Sciences</td>
</tr>
<tr>
<td>STAT</td>
<td>Statistics</td>
</tr>
<tr>
<td>MEE</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>MGMT</td>
<td>Management</td>
</tr>
<tr>
<td>MGBE</td>
<td>Business Education</td>
</tr>
<tr>
<td>MILS</td>
<td>Military Science</td>
</tr>
<tr>
<td>MKTG</td>
<td>Marketing</td>
</tr>
<tr>
<td>MUSC</td>
<td>Music</td>
</tr>
<tr>
<td>NURS</td>
<td>Nursing</td>
</tr>
<tr>
<td>OMIS</td>
<td>Operations Management and Information Systems</td>
</tr>
<tr>
<td>PHED</td>
<td>Physical Education</td>
</tr>
<tr>
<td>PHDN</td>
<td>Dance Education</td>
</tr>
<tr>
<td>PHHE</td>
<td>Health Education</td>
</tr>
<tr>
<td>PHIL</td>
<td>Philosophy</td>
</tr>
<tr>
<td>PHYS</td>
<td>Physics</td>
</tr>
<tr>
<td>POLS</td>
<td>Political Science</td>
</tr>
<tr>
<td>PSPA</td>
<td>Public Administration</td>
</tr>
<tr>
<td>PSYC</td>
<td>Psychology</td>
</tr>
<tr>
<td>SOCI</td>
<td>Sociology</td>
</tr>
<tr>
<td>TECH</td>
<td>Technology</td>
</tr>
<tr>
<td>THEA</td>
<td>Theatre Arts</td>
</tr>
<tr>
<td>TH-D</td>
<td>Dance Performance</td>
</tr>
</tbody>
</table>

### Advanced Degrees

<table>
<thead>
<tr>
<th>Degree</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed.D.</td>
<td>Doctor of Education</td>
</tr>
<tr>
<td>Ed.S.</td>
<td>Educational Specialist</td>
</tr>
<tr>
<td>J.D.</td>
<td>Juris Doctor</td>
</tr>
<tr>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>M.A.S.</td>
<td>Master of Accounting Science</td>
</tr>
<tr>
<td>M.B.A.</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>M.F.A.</td>
<td>Master of Fine Arts</td>
</tr>
<tr>
<td>M.M.</td>
<td>Master of Music</td>
</tr>
<tr>
<td>M.P.A.</td>
<td>Master of Public Administration</td>
</tr>
<tr>
<td>M.P.H.</td>
<td>Master of Public Health</td>
</tr>
<tr>
<td>M.S.</td>
<td>Master of Science</td>
</tr>
<tr>
<td>M.S.Ed.</td>
<td>Master of Science in Education</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Doctor of Philosophy</td>
</tr>
</tbody>
</table>

### Other Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRO</td>
<td>Prerequisite: a requirement that must be met before a student registers for a given course.</td>
</tr>
<tr>
<td>CRQ</td>
<td>Corequisite: a requirement that must be undertaken at the same time as a given course (if it has not been completed previously).</td>
</tr>
<tr>
<td>T</td>
<td>This letter following a course number indicates that an old number is being reused for a new course.</td>
</tr>
<tr>
<td>X</td>
<td>This letter following a course number indicates that the course is offered primarily by another department but may be taken for credit in the department offering it with the &quot;X&quot; listing.</td>
</tr>
</tbody>
</table>
Definitions of Terms Used in This Catalog

*ACADEMIC DISMISSAL: Dismissal from the university for reasons such as not maintaining the required grade point average (GPA), or for accumulating excessive hours of grade F's, D's, and U's.

*ACADEMIC PROBATION: Academic status of a graduate-level student whose graduate GPA is below 3.00.

ACCREDITED INSTITUTION: A postsecondary institution that is accredited by the appropriate regional agency (New England Association of Schools and Colleges, Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools, or Western Association of Schools and Colleges).

*ADMISSION (to the Graduate School): Formal acceptance, both by the Graduate School and by a particular department or program, to pursue a specific graduate degree or certificate in a specified subject area.

*AUDITING: Registering for and attending a class regularly without completing the work required for credit; requires agreement of the instructor. (No grade points or credit hours are earned for audited classes.)

CONCENTRATION: An interdisciplinary area of study in which a student may pursue course work and research. Completion of the requirements for a particular concentration will result in an appropriate notation on the student's academic record.

COREQUISITE: A requirement, usually enrollment in a course, which should be undertaken at the same time as the course being described (if that requirement has not been completed previously).

*CORRESPONDENCE COURSE: A course, other than an independent study course, that does not involve significant real-time interaction between students and faculty, when such interaction would normally be a part of the same course offering on campus.

DEPARTMENTAL REQUIREMENTS: Courses or other requirements specified by a department as necessary for completion of a given course of study.

DISMISSAL: See ACADEMIC DISMISSAL.

DROP: A procedure that allows a student to delete a course from the schedule so the course does not appear on the student's permanent academic record. This procedure must be completed by the date indicated in each academic term's Schedule of Classes. An administrative office may drop students from courses in which they are not eligible to enroll. See also WITHDRAWAL.

ELECTIVE: A course in which a student chooses to enroll, as distinguished from a specific course required as part of a particular course of study.

ENCUMBRANCE: A hold placed on a student's record as a result of an unfulfilled obligation to the university. This may prevent the distribution of grade reports and transcripts and may prevent further registration.

ENROLLMENT: Registration in a course that subsequently appears on the student's permanent academic record.

*GPA HOURS: The number of semester hours for which grades of A, B, C, D, F, or U are recorded.

*GRADE POINT: The numerical value given to letter grades. A grade of "D" is equivalent to 1 point per semester hour, a "C" to 2 points, a "B" to 3 points, and an "A" to 4 points.

*GRADE POINT AVERAGE (GPA): A student's scholastic average, computed by dividing the total number of grade points earned by the total number of credit hours attempted. For a graduate student or student-at-large, the GPA is based on all courses taken at NIU that carry graduate credit.

GRADUATE-LEVEL STUDENT: A student admitted to the Graduate School whose admission has not been canceled or terminated and who has not been academically dismissed.

HALF-SESSION COURSES: Courses that are offered for a half, rather than a full, academic term. They are distinguished in the class schedule by a letter "F" (first half term) or "L" (last half) after the course number.

HOLD: See ENCUMBRANCE.

INCOMPLETE: A grade (I) that may be assigned by an instructor when a student is temporarily unable to complete course requirements because of unusual personal circumstances. Left unresolved, a grade of I becomes on the academic record a permanent grade of Incomplete (IN).

INTERNATIONAL STUDENT: With respect to academic regulations in this catalog, any student who is not a U.S. citizen.

MAJOR: A program of study leading to a graduate degree or certificate in a designated subject area.

OPTION: An academic track within a program or specialization.

PREREQUISITE: A requirement, usually completion of another course, which should be met before a student registers for the course being described.

PROBATION: See ACADEMIC PROBATION.

PROFICIENCY EXAMINATION: A way for a student to receive course credit for individual or special study. Graduate credit may not be earned by proficiency examination.

REENTRY: Return of a student to study at NIU after a lapse in enrollment, into the same status/program as that in which the student was previously enrolled. This may require readmission to the Graduate School.

REINSTATEMENT: A procedure by which a student who was formerly enrolled in the university but was academically dismissed is permitted to enroll again.

SEMESTER HOUR: The university's unit of academic credit, a permanent grade of Incomplete (IN).

SPECIALIZATION: A subdivision of a graduate major representing a particular subject focus within the major area.

STUDENT-AT-LARGE: A student who holds a baccalaureate or higher degree from an accredited institution, who is not admitted to the Graduate School, but who has received permission from the Graduate School to register for graduate-level classes and who has not been academically dismissed.

TRANSCRIPT: A copy of a student's permanent academic record at a particular institution.

TRANSFER CREDIT: Course work completed at an accredited institution other than NIU that is accepted in partial fulfillment of requirements for a graduate degree at NIU.

WITHDRAWAL: Formal action by which a student officially discontinues participation in a course; a record of enrollment remains on the student's permanent academic record. This action must be taken by the deadline published each term in the Schedule of Classes. See also DROP.

*See the more detailed discussion of this topic elsewhere in this catalog.
Northern Illinois University

History

Northern Illinois University is a comprehensive university, whose faculty, staff, and students engage in instruction, research, and professional service in a variety of fields.

Established in 1895 by an act of the Illinois General Assembly, the Northern Illinois State Normal School opened its doors to students in September 1899. At that time only a two-year curriculum in teacher education was offered.

In July 1921, the legislature gave the institution the name Northern Illinois State Teachers College and empowered it to award the four-year degree Bachelor of Education. By action of the Teachers College Board in 1943 the title of the degree was changed to Bachelor of Science in Education. Eight years later, the Teachers College Board authorized the college to grant the degree Master of Science in Education, and the institution's Graduate School was established.

On July 1, 1955, as a result of action by the state legislature, the college was renamed Northern Illinois State College. Moreover, the legislature authorized the college to broaden its educational services by offering academic work in areas other than teacher education. The Teachers College Board then granted permission for the college to add curricula leading to the degrees Bachelor of Arts and Bachelor of Science.

By action of the Seventieth General Assembly, Northern Illinois State College became Northern Illinois University on July 1, 1957. Since that time, authority has been granted for the university to offer additional degrees and certificates at the baccalaureate, professional, and graduate levels.

In 1965, the Illinois State Teachers College Board became the Board of Governors of State Colleges and Universities; in 1967, Northern Illinois University was placed under the control of the newly created Board of Regents.

In 1965, the graduate school of the college was named the Graduate School. In 1970, the schools of the college were changed to colleges. In 1971, the Illinois State Teachers College Board of Education consisted of 14 members; in 1972, the Board of Regents was established.

In the College of Business the M.A.S., M.B.A., M.S. in finance, and M.S. in management information systems programs are accredited by the American Assembly of Collegiate Schools of Business.

In the College of Education the Council for Accreditation of Counseling and Related Educational Programs (CACREP) has accredited the following program areas in counseling within the Department of Educational Psychology, Counseling, and Special Education: community counseling, school counseling, and student development in higher education (M.S.Ed.), and counseling (Ed.D.).

In the College of Engineering and Engineering Technology, the undergraduate programs in electrical engineering, industrial engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). The undergraduate technology programs are developed as appropriate according to ABET or National Association of Industrial Technology criteria.

In the College of Liberal Arts and Sciences, the Master of Public Administration within the Department of Political Science has its standards certified by the National Association of Schools of Public Affairs and Administration, and the clinical psychology area within the Doctor of Philosophy degree program in the Department of Psychology is accredited by the American Psychological Association.

In the College of Professional Studies, the Department of Communicative Disorders offers an M.A. with specializations in audiology and speech-language pathology that are accredited by the Educational Standards Board of the American Speech-Language-Hearing Association and a specialization in deafness rehabilitation counseling that holds accreditation from the Commission on Rehabilitation Education. The specialization in marriage and family therapy in the M.S. program in applied family and child studies within the Department of Human and Family Resources is accredited by the Commission of Accreditation for Marriage and Family Therapy. In the same department, the Approved Pre-Professional Practice Program (AP-4) in dietetics, taken in conjunction with the M.S. degree in nutrition and dietetics, is approved by the American Dietetic Association. The graduate program in the School of Nursing is accredited by the National League for Nursing.

Within the College of Visual and Performing Arts, the School of Art, School of Music, and Department of Theatre Arts are accredited, respectively, by the National Association of Schools of Art and Design, the National Association of Schools of Music, and the National Association of Schools of Theatre.

The College of Law is accredited by the American Bar Association and is a member of the American Association of Law Schools.

The university and its colleges have institutional membership or other affiliations in or with the American Association of Colleges for Teacher Education, American Council on Education, Association of State Colleges and Universities, Council of Graduate Schools, and the North Central Association of Colleges and Schools.

Accreditation and Affiliation

Northern Illinois University is fully accredited by the North Central Association of Colleges and Schools. The university is fully accredited by the National Council for Accreditation of Teacher Education to offer teacher education programs. Teacher education programs are available at undergraduate and graduate levels, and may be offered in conjunction with degree programs.
The Graduate School

Jerrold H. Zar, Ph.D., dean and associate provost for graduate studies and research
Carla W. Montgomery, Ph.D., associate dean
Irene H. Johnson, Ph.D, assistant dean

Graduate Council
James P. Bobis, Ph.D., P.E., College of Engineering and Engineering Technology
Colin Booth, Ph.D., College of Liberal Arts and Sciences
Gordon J. Dorn, M.F.A., College of Visual and Performing Arts
Pamela J. Farris, Ph.D., College of Education
Jerald D. Floyd, Ed.D., College of Business
James C. Gari, B.S., student, College of Business
Charles R. Gowen, Ph.D., College of Business
Tammy Harpel, B.S., student, College of Professional Studies
Samantha Hucke, B.S., student, College of Engineering and Engineering Technology
Irene H. Johnson, Ph.D., assistant dean of the Graduate School
Martin Kaplan, Ph.D., College of Liberal Arts and Sciences
Daniel Kempton, Ph.D., College of Liberal Arts and Sciences
William Koehler, D.M.A., College of Visual and Performing Arts
Miriam Levitt, B.A., student, College of Liberal Arts and Sciences
William H. Logue, Ph.D., College of Liberal Arts and Sciences
Muriel E. Mackett, Ph.D., College of Education
Carol Wilson, Ph.D., College of Professional Studies
Neal R. Norrick, Ph.D., College of Liberal Arts and Sciences
Ellen S. Parham, Ph.D., College of Professional Studies
David M. Piatak, Ph.D., College of Liberal Arts and Sciences
Elaine Rast, M.A.L.S., University Libraries
Elice Rogers, B.S., student, College of Education
Daniel M. Schneider, LL.M., College of Law
Jay S. Wagle, Ph.D., College of Business
Robert F. Wheeler, Ph.D., College of Liberal Arts and Sciences
Carol Wilson, Ph.D., College of Professional Studies
Jerrold H. Zar, Ph.D., dean of the Graduate School

PURPOSE
Northern Illinois University aims to create an environment that will foster attitudes of self-reliance and self-discipline conducive to professional excellence and intellectual maturity.

The university strives to provide graduate students with a body of knowledge in their own and related disciplines, to offer students opportunities to acquire and apply techniques that will aid them in their pursuit of knowledge, and to encourage students and the faculty to engage in research and artistic activity.

GRADUATE PROGRAMS
The graduate degrees and certificates offered by the university are listed below by the name of the college and of the department or school in which that degree program is housed.

College of Business
Master of Business Administration (M.B.A.)

Department of Accountancy
Master of Accounting Science (M.A.S.)
with or without specialization in Taxation

Department of Finance
Master of Science (M.S.)

Department of Management

Department of Marketing

Department of Operations Management and Information Systems
Master of Science (M.S.) Management Information Systems

College of Education
Department of Curriculum and Instruction
Master of Science in Education (M.S.Ed.)
Curriculum and Instruction with specialization in
Curriculum and Supervision
Outdoor Teacher Education
Secondary Education
Early Childhood Education
Elementary Education
Reading
Educational Specialist (Ed.S.)
Curriculum and Instruction with specialization in
Curriculum and Supervision
Elementary Education
Secondary Education

Doctor of Education (Ed.D.)
Curriculum and Instruction with specialization in
Curriculum and Supervision
Elementary Education
Reading
Secondary Education
Department of Educational Psychology, Counseling, and Special Education
Master of Science in Education (M.S.Ed.)
Counseling
Educational Psychology
Special Education
with specialization in
Administration and Supervision
Early Childhood Special Education
Learning Disabilities
Maladjusted
Multiply Handicapped, Deaf and Vision
Rehabilitation Teaching of the Adult Blind
Visually Handicapped
Educational Specialist (Ed.S.)
Counseling
Doctor of Education (Ed.D.)
Counseling
Educational Psychology
Special Education

Department of Leadership and Educational Policy Studies
Master of Science in Education (M.S.Ed.)
Adult Continuing Education
Educational Administration
Foundations of Education
Instructional Technology
School Business Management
Educational Specialist (Ed.S.)
Educational Administration
Doctor of Education (Ed.D.)
Adult Continuing Education
Educational Administration
Instructional Technology

Department of Physical Education
Master of Science in Education (M.S.Ed.)
with or without specialization in
Adapted Physical Education
Exercise Physiology/Fitness Leadership
Sport Management

College of Engineering and Engineering Technology
Department of Electrical Engineering
Master of Science (M.S.)

Department of Industrial Engineering
Master of Science (M.S.)

Department of Mechanical Engineering
Master of Science (M.S.)

Department of Technology
Master of Science (M.S.)
Industrial Management

College of Liberal Arts and Sciences
Department of Anthropology
Master of Arts (M.A.)

Department of Biological Sciences
Master of Science (M.S.)
Doctor of Philosophy (Ph.D.)

Department of Chemistry
Master of Science (M.S.)
Doctor of Philosophy (Ph.D.)

Department of Communication Studies
Master of Arts (M.A.)

Department of Computer Science
Master of Science (M.S.)

Department of Economics
Master of Arts (M.A.)
Doctor of Philosophy (Ph.D.)

Department of English
Master of Arts (M.A.)
Doctor of Philosophy (Ph.D.)

Department of Foreign Languages and Literatures
Master of Arts (M.A.)
with specialization in
French
Spanish

Department of Geography
Master of Science (M.S.)

Department of Geology
Master of Science (M.S.)
Doctor of Philosophy (Ph.D.)

Department of History
Master of Arts (M.A.)
with or without option in
Historical Administration
Doctor of Philosophy (Ph.D.)

Department of Journalism

Department of Mathematical Sciences
Master of Science (M.S.)
Applied Probability and Statistics
Mathematics
with specialization in
Applied Mathematics
Computational Mathematics
Mathematics Education
Pure Mathematics
Doctor of Philosophy (Ph.D.)

Department of Philosophy
Master of Arts (M.A.)

Department of Physics
Master of Science (M.S.)
with specialization in
Applied Physics
Basic Physics
Physics Teaching

Department of Political Science
Master of Arts (M.A.)
Master of Public Administration (M.P.A.)
with specialization in
Comparative and Developmental Administration
Fiscal Administration
Human Services Administration
Public Administration
Urban Management
Doctor of Philosophy (Ph.D.)
Department of Psychology
Master of Arts (M.A.)
Doctor of Philosophy (Ph.D.)

Department of Sociology
Master of Arts (M.A.)
  with or without specialization in
  Criminology
Master of Science (M.S.)
  with or without specialization in
  Criminology

College of Professional Studies
School of Allied Health Professions
Master of Public Health (M.P.H.)

Department of Communicative Disorders
Master of Arts (M.A.)
  with specialization in
  Audiology
  Deafness Rehabilitation Counseling
  Speech-Language Pathology

Department of Human and Family Resources
Master of Science (M.S.)
  Applied Family and Child Studies
    with or without specialization in
    Marriage and Family Therapy
    Home Economics Resources and Services
    Nutrition and Dietetics

Department of Military Science

School of Nursing
Master of Science (M.S.)

College of Visual and Performing Arts
School of Art
Master of Arts (M.A.)
  with specialization in
  Art History
  Studio Art
Master of Science (M.S.)
  with specialization in
  Art Education
  Art Therapy
Master of Fine Arts (M.F.A.)

School of Music
Master of Music (M.M.)
  Music Education
  Performance and Pedagogy: Band and Orchestra
  Performance and Pedagogy: Keyboard Instruments
  Performance and Pedagogy: Voice
  Individualized Major
  Performer’s Certificate

Department of Theatre Arts
Master of Arts (M.A.)
Master of Fine Arts (M.F.A.)
  with specialization in
  Acting
  Design and Technology
  Directing

Interdisciplinary Concentrations
Concentration in Biochemistry
Concentration in Biophysics
Concentration in Gerontology
Concentration in Southeast Asian Studies
Concentration in Women’s Studies
Directory for Correspondence

Inquiries concerning graduate programs, specializations, and concentrations should be addressed according to the following list, using the individual's department.

Prospective students seeking information on assistantships and fellowships should also direct their inquiries to the persons whose names appear below or to other offices that appoint graduate assistants.

Acting: See Theatre Arts
Administration and Supervision (Special Education): See Educational Psychology, Counseling, and Special Education
Adult Continuing Education: See Leadership and Educational Policy Studies
Allied Health Professions: Sherilynn F. Spear, Ph.D., acting chair of school
Anthropology: Fred H. Smith, Ph.D., chair of department
Applied Family and Child Studies: See Human and Family Resources
Art (including art education, art history, art therapy, and studio art): Robert L. Bornhuetter, M.F.A., director of graduate studies
Audiology: See Communicative Disorders
Biochemical and Biophysical Studies: Gordon C. Kresheck, Ph.D., director of center
Biological Sciences: Samuel M. Scheiner, Ph.D., coordinator of graduate studies
Business Administration: Sally A. Wakefield, M.S., director of graduate studies; Harold O. Wright, Jr., J.D., director of executive M.B.A.
Chemistry: David M. Piatak, Ph.D., director of graduate studies
Communication Studies: Richard L. Johannesen, Ph.D., chair of department
Communicative Disorders: Earl J. Seaver, Ph.D., chair of department
Comparative and Developmental Administration: See Public Administration
Computational Mathematics: See Mathematical Sciences
Computer Science: Rodney Angotti, Ph.D., chair of department
 Counseling: See Educational Psychology, Counseling, and Special Education
Criminology: See Sociology
Curriculum and Instruction: Dennis D. Gooller, Ph.D., chair of department
Curriculum and Supervision: See Curriculum and Instruction
Deafness Rehabilitation Counseling: See Communicative Disorders
Design and Technology: See Theatre Arts
Directing: See Theatre Arts
Early Childhood Education: See Curriculum and Instruction
Early Childhood Special Education: See Educational Psychology, Counseling, and Special Education
Economics: James A. Gherity, Ph.D., director of graduate studies
Educational Administration: See Leadership and Educational Policy Studies
Educational Psychology, Counseling, and Special Education: Raymond J. Dembinski, Ph.D., chair of department
Electrical Engineering: Alan P. Genis, Ph.D., chair of department
Elementary Education: See Curriculum and Instruction
English: Neal R. Norrick, Ph.D., director of graduate studies
Exercise Physiology/Fitness Leadership: See Physical Education
Finance: Robert E. Miller, Ph.D., chair of department
Fiscal Administration: See Public Administration
Foreign Languages: Frederic W. Murray, Ph.D., chair of department
Foundations of Education: See Leadership and Educational Policy Studies
French (in Department of Foreign Languages and Literatures): D. Raymond Tourville, M.A., coordinator of program
Geography: John M. Harlin, Ph.D., chair of department
Geology: Colin J. Booth, Ph.D., director of graduate studies
Gerontology: John F. Stote, Ph.D., director of program
History (including historical administration): William H. Logue, Ph.D., director of graduate studies
Home Economics Resources and Services: See Human and Family Resources
Human and Family Resources: Mary E. Pritchard, Ph.D., chair of department
Human Services Administration: See Public Administration
Industrial Engineering: Mohamed Dessouky, Ph.D., chair of department
Industrial Management: See Technology
Instructional Technology: See Leadership and Educational Policy Studies
Leadership and Educational Policy Studies: L. Glenn Smith, Ph.D., chair of department
Learning Disabilities: See Educational Psychology, Counseling, and Special Education
Maladjusted: See Educational Psychology, Counseling, and Special Education
Management: Daniel R. Wunsch, Ph.D., chair of department
Management Information Systems: See Operations Management and Information Systems
Marketing: H. Lee Meadow, Ph.D., chair of department
Mathematical Sciences (including applied probability and statistics; applied, computational, and pure mathematics; and mathematics education): Henry S. Leonard, Ph.D., director of graduate studies
Mechanical Engineering: Parviz Payvar, Ph.D., P.E., chair of department
Multiply Handicapped, Deaf and Vision: See Educational Psychology, Counseling, and Special Education
Music (including music education and performance and pedagogy): Lawrence R. Rast, Ph.D., graduate coordinator
Nursing: Sara Barger, Ph.D., chair of school
Nutrition and Dietetics: See Human and Family Resources
Operations Management and Information Systems: William J. Tallon, Ph.D., chair of department
Outdoor Teacher Education: See Curriculum and Instruction
Performance and Pedagogy (including band and orchestra, keyboard instruments, and voice): See Music
Performer's Certificate: See Music
Philosophy: Sherman Stanage, Ph.D., chair of department
Physical Education: Judith A. Bischoff, Ph.D., chair of department
Physics (including applied and basic physics and physics teaching): John C. Shaffer, Ph.D., chair of department
Political Science: Daniel R. Kempton, Ph.D., director of graduate studies
Psychology: Martin F. Kaplan, Ph.D., director of graduate studies
Public Administration: James M. Banovetz, Ph.D., director of division
Public Health: See Allied Health Professions
Reading: See Curriculum and Instruction
Rehabilitation Teaching of the Adult Blind: See Educational Psychology, Counseling, and Special Education
School Business Management: See Leadership and Educational Policy Studies
Secondary Education: See Curriculum and Instruction
Sociology: David F. Luckenbill, Ph.D., director of graduate studies
Spanish (in Department of Foreign Languages and Literatures): John A. Kerr, Jr., Ph.D., coordinator of program
Special Education: See Educational Psychology, Counseling, and Special Education
Speech-Language Pathology: See Communicative Disorders
Southeast Asian Studies: Michael Aung-Thwin, Ph.D., director of center
Sport Management: See Physical Education
Statistics: Mohsen Pourahmadi, Ph.D., director of division
Taxation: See Accountancy
Technology: Conard L. White, Ph.D., acting chair of department
Theatre Arts: John H. Brooks, Jr., M.F.A., chair of department
Urban Management: See Public Administration
Visually Handicapped: See Educational Psychology, Counseling, and Special Education
Women’s Studies: Lois S. Self, Ph.D., director of program
Admission to Graduate Study

General Requirements for Admission to the Graduate School

To be admitted as a graduate student, an applicant must have obtained a baccalaureate or higher degree from a college or university that is accredited by one of the regional agencies that evaluates such institutions (or the equivalent from an institution outside the United States), prior to the start of the NIU term for which the student is admitted. Applicants must have the approval of the department in which they plan to major and either must have a minimum 2.75 overall grade point average (GPA), based on a 4.00 system, in their baccalaureate program or must have completed 15 or more semester hours of graduate work at an accredited institution with a GPA of 3.20 or better. The overall baccalaureate GPA is here defined as the GPA as reflected on the official transcript of the institution granting the baccalaureate degree; if the institution specifies none, or uses other than a 4.00 system, NIU will compute the GPA for course work at that institution. To be admitted to a program beyond the master's degree, students must have at least a 3.20 GPA in any graduate work taken.

Applicants whose GPA is below the required level may, at the discretion of the major department, be recommended for admission if they satisfy one of the following criteria:

1. Demonstrated ability to conduct graduate work at a regionally accredited college or university.
2. Exceptional performance on required graduate-level admission tests (GRE or GMAT).
3. Presentation of other relevant evidence acceptable to the department, such as a portfolio in art or an audition in music.

The above are minimum academic requirements for admission to the Graduate School. The applicant's character, integrity, and general fitness to practice a particular profession may also be considered in the admissions process. Departments reserve the right, in consultation with the Graduate School, to establish additional standards and criteria for admission. It is the responsibility of the applicant to ascertain the nature and extent of these requirements. In addition, limited resources may indicate a need for limited enrollments, requiring departments to restrict admissions and to entertain special admissions only under exceptional circumstances. Admission of any student failing to meet admissions criteria as set forth in the Graduate Catalog requires the approval of the office of the dean of the Graduate School.

A student-at-large must be in good academic standing to be admitted to the Graduate School; see "Enrollment for Graduate Study as a Student-at-Large."

Application for Admission

In order to enroll in course work for graduate credit without pursuing a graduate degree, a person must apply for and obtain permission to enroll as a student-at-large (see "Enrollment for Graduate Study as a Student-at-Large").

To obtain an "Application for Admission to the Graduate School," applicants may call or write to the Graduate School. The completed application form, with the required application fee, must be received by the Graduate School no later than June 1 for admission to the fall semester, November 1 for the spring semester, and April 1 for the summer session. All remaining application materials—official transcripts, required test scores, and letters of recommendation—must be received by August 1 for the fall semester, January 1 for the spring semester, and be from a faculty member in the department in which the student is interested. Thus, the application deadlines are waived for a student already enrolled in a graduate program at Northern Illinois University who wishes to apply for admission to another graduate program. See also "International Students" for application deadlines applicable to such students.

The above deadlines are Graduate School deadlines and represent the dates by which materials must be received in order for an application to be processed for a given academic term. However, an individual department's admission procedures may involve committee meetings, interviews, or other activities that only occur at certain times, which may be well before the Graduate School's final application deadline for a given term. Applicants are therefore advised to contact the department in which they are interested in order to ascertain any such special deadlines, and to refer to the departmental sections of this catalog for additional information.

Payment of the application fee indicated on the application form must accompany the submission of that form, unless the applicant is exempt from paying that fee. A person who qualifies for a GRE fee waiver is exempt and should include evidence of that fee waiver in lieu of the application fee. Also exempt are students who have been enrolled in Northern Illinois University graduate programs within two years prior to the start of the term for which they are seeking admission. Employed and retired Northern Illinois University faculty and staff are also exempt and must indicate their faculty or staff affiliation when submitting the application form.

Care should be exercised in selecting persons to write letters of recommendation. These should be persons in a position to write analytically about the applicant's academic qualifications to pursue graduate studies, and/or professional competence and ability to benefit from advanced study. For an applicant currently pursuing a graduate program, at least one of the letters should be from a faculty member in the department in which the student is enrolled. Applicants uncertain of the suitability of particular individuals as writers of recommendations should consult with the head of the department or program to which they are applying.

Applicants for admission to the Graduate School assume all responsibility for the completion of their admission files; the Graduate School assumes no obligation to inform them about erroneous or missing credentials.
Graduate assistantships are normally awarded to begin in the fall semester. A prospective student wishing to be considered for an assistantship is urged to apply for admission and submit the "Application for Graduate Assistantship" form well in advance of June 1, preferably prior to February 15.

Applicants who hold baccalaureate degrees from colleges or universities other than Northern Illinois University, or who have engaged in graduate study elsewhere, must submit an official transcript showing each such degree and all graduate work as of June 1, preferably prior to February 15.

An applicant whose native language is not English must present a satisfactory score for the Test of English as a Foreign Language (TOEFL), as indicated below under ‘Examinations Required for Admission.’

A student whose application for admission to a graduate program is denied may request reconsideration at any time prior to the close of admissions for the term for which application was made. If the admission deadline for that term is past, the student must submit a new application form by the deadline applicable to the next term for which admission is sought. At the discretion of the department or program to which the student desires admission, additional materials may be required in support of a reaplication or reconsideration request, and such a request will not normally be considered unless the student presents additional academic information not previously available to the faculty.

Students who wish to take graduate course work but not pursue a degree program should refer to the section “Enrollment for Graduate Study as a Student at Large” in this catalog.

Admission Procedures for International Students

For international students, all application material—the application for admission, letters of recommendation, diplomas, mark sheets, and test scores—must be received by the Graduate School no later than May 1 for admission for the fall semester or October 1 for the spring semester. Normally, new international students will not be admitted to begin a degree program in the summer session. The application deadlines are waived for a student already enrolled in a graduate degree program at Northern Illinois University who wishes to apply for admission to another graduate program. An international student enrolled as an undergraduate at NIU, or who has permanent resident alien status in the U.S., is required to meet only the application deadlines specified for domestic students.

A student seeking an F-1 or J-1 visa must also submit the financial statement and demonstrate adequate financial resources before an I-20 or IAP-66 form will be issued.

The TOEFL Bulletin of Information and registration form can be obtained in a number of cities outside the United States. They are often available at American embassies and consulates, or at offices of the United States Information Service (USIS). Students who cannot obtain a TOEFL bulletin and registration form locally should write well in advance for them to: Test of English as a Foreign Language, CN 6151, Princeton, New Jersey 08541-6151, U.S.A.

A comprehensive orientation program is provided by the International Student and Faculty Office for new students from abroad. This begins when the student, before arriving in this country, is granted admission to the university, and continues after the student’s arrival on campus. The program includes dissemination of information and materials concerning the university, the university community, and U.S. immigration rules and regulations; a week of intensive orientation activities at the beginning of the first semester of attendance; and follow-up activities during the remaining period of residency and study. A one-time orientation fee is charged for this program. As part of this orientation program, new international students whose native language is not English will be given further tests of their English language skills.

Examinations Required for Admission

Required examinations may be taken through Northern Illinois University’s Office of Testing Services, or at other testing locations. For testing dates at this university and other locations, write to Educational Testing Service, Princeton, NJ 08541, regarding the GRE; Graduate Management Admission Council, P.O. Box 6106, Princeton, NJ 08541, regarding the GMAT; and TOEFL/TSE Services, P.O. Box 6151, Princeton, NJ 08541, regarding the TOEFL.

Up to eight weeks may be required for the Graduate School to receive scores after the administration of the tests. An applicant should plan to take the tests early enough so that scores may reach the Graduate School before the final application deadline for a given semester.

With the approval of the applicant’s prospective major department, the requirement to submit official scores on the Graduate Record Examinations (GRE) or the Graduate Management Admission Test (GMAT) may be waived for an applicant who has already earned a graduate degree from an accredited institution. In special cases, if an applicant who has already taken one of these standardized tests is applying for admission to a program that requires the other, the department may agree to accept scores on either the GRE or the GMAT.

Graduate Record Examinations (GRE)

In order to be admitted to the Graduate School, all applicants, other than those applying to programs in the College of Business or to the M.F.A. degree program with specialization in acting within the Department of Theatre Arts, must have provided official scores on the General Test of the Graduate Record Examinations to the Graduate School.

In addition, the scores on the Biology Subject Test of the Graduate Record Examinations are required as an admission credential for applicants to the Department of Biological Sciences. These scores must be no more than five years old.

NOTE: The Educational Testing Service (ETS), which administers the Graduate Record Examinations program on behalf of the Graduate Record Examinations Board, has announced its intention of reporting student scores only if they are no more than five years old. Students who are unable to obtain their GRE scores from ETS because of this policy should contact the Graduate School about possible alternative means to satisfy the GRE requirement.

1 Unless otherwise specified, the term "international student" as used in this catalog includes all students or applicants who are not U.S. citizens.
Graduate Management Admission Test (GMAT)

Applicants for graduate study in business must submit official scores on the Graduate Management Admission Test to the Graduate School. Applicants to the College of Business are not required to take the General Test of the GRE.

Test of English as a Foreign Language (TOEFL)

An applicant whose native language is not English must present a score of at least 550 for the Test of English as a Foreign Language (TOEFL), where the score is for an examination administered no more than 24 months prior to the beginning of the academic term for which admission is sought. At the discretion of the intended major department, possession of a baccalaureate or higher degree from an accredited institution in the U.S., the U.K., or Canada, at which the language of instruction was English, may serve in lieu of the TOEFL score. The TOEFL requirement is waived for a student already enrolled and in good academic standing in a degree program at Northern Illinois University.

Notification of Admission

Admission decisions may be made within a few weeks following the receipt of all credentials. For programs in which space is limited, however, admission decisions may be made only at certain times during the academic year. Accordingly, notification of decisions may not be mailed until some time after the formal deadline for applications has passed. Applicants should consult individual program descriptions or contact departments directly for particular admission decision schedules that may be applicable.

A student must be admitted to the Graduate School in order to be admitted to a graduate degree program. The official notification of admission, and of any conditions attached to that admission, is a letter sent to the applicant by the Graduate School.

When a student already enrolled in the Graduate School is admitted to an additional graduate degree program, any department to which the student is already admitted will be notified of the new admission.

A student must be admitted by the close of the first week of an academic term in order for the admission to be effective for that term. If the admission process is completed after the deadline, whether because the file was not completed or because departmental action was not taken earlier, the admission will be effective for the following academic term. The term for which the applicant is admitted is stated in the official admission letter from the Graduate School.

Provisional Admission

A person whose application file is incomplete because certain required application materials have not been received in the Graduate School, but who otherwise meets departmental and Graduate School requirements for admission, may, at the request of the major department, be granted provisional admission, for one term only, pending a final decision on his or her application for admission. Provisional admission may be considered in the absence of such materials as official transcript(s), letter(s) of recommendation, or subject test scores of the Graduate Record Examinations; provisional admission will not be granted in the absence of scores from the GRE general test or the GMAT, as applicable. A person admitted provisionally is not a student-at-large. If the conditions of the provisional admission are not satisfied by the end of the term of admission, admission to the Graduate School will be terminated. Students whose provisional admission is terminated for failure to satisfy the conditions of the provisional admission must reapply for admission to the desired degree program, and are expected to remedy the previous deficiencies in the application file before admission will be granted.

Provisional status is a courtesy to persons who have not achieved full admission. The degree-seeking applicant who enrolls as a provisional student accepts the risk of termination of admission. Graduate assistantship appointments for students with provisional admission status are limited to the one academic term of that status, though they may be extended if the student subsequently is fully admitted to the Graduate School.

Provisional admission may not be deferred; the student should instead arrange to provide the missing credentials to permit consideration for unconditional admission in a subsequent term.

Admission with Stipulation

Graduate students may be admitted with stipulation. Such a stipulation is specified by the particular department or program to which admission is sought. A student who fails to meet the stipulation may have their admission status dropped from the program at the end of the time period specified, at the discretion of the department. Admission to the Graduate School is also terminated, unless the student has been admitted to another graduate program. However, such a student may seek admission to another graduate program and readmission to the Graduate School through the normal processes. Graduate assistantship appointments for students admitted with stipulation may be limited to the time period specified under the stipulation.

Tentative Admission

The admission of a student who will have completed a baccalaureate degree prior to matriculation as a graduate student at Northern Illinois University, but who has not yet provided an official transcript verifying completion of that degree, is considered a tentative admission. The same is true of an applicant to a post-master's program who is admitted upon the condition that a master's degree must be completed prior to matriculation in a post-master's degree program. The student is expected to provide the requisite degree transcript within one month of matriculation in the program to which tentative admission has been granted, and will not be permitted to enroll in that program for more than one term if the required transcript is not provided.

If a student is granted tentative admission upon the presumption of a completed baccalaureate degree, and it is subsequently discovered that the baccalaureate degree was not completed prior to the start of the term for which tentative admission was granted, the student will lose any graduate credit earned during that term.

Early Admission of NIU Undergraduates

Early admission to the Graduate School is available to seniors in their final term of enrollment at Northern Illinois University who wish to take courses for graduate credit. Students who apply for early admission may take approved 400-level courses and 500- and 600-level courses for graduate credit. The student granted early admission must inform the Graduate School in writing, prior to the start of the final undergraduate term, which such 400-level courses are being taken for undergraduate credit to complete the requirements for the baccalaureate degree.

Application for early admission is made through the Graduate School. A student applying for early admission must meet Graduate School application deadlines and must also have
Matriculation; Deferral of Admission

In order to establish their admission, graduate students must enroll in the semester or summer session for which they are admitted. At the discretion of the office of the dean of the Graduate School and with permission of the major department, matriculation may be deferred up to but not beyond two calendar years. The request for deferral of admission must be submitted to the Graduate School, in writing, no later than the end of the academic term for which admission has been granted. If students do not request a deferral of admission, and fail to matriculate (enroll in the term of admission) as required, their admission to that program is canceled. If the student was not already admitted to another graduate program, admission to the Graduate School is also canceled as a result. Provisional admission may not be deferred; the student should instead arrange to provide the missing credentials to permit consideration for unconditional admission in a subsequent term.

U.S. Social Security numbers are required for registration purposes. New international students, and any students who cannot initially provide a U.S. Social Security number, are assigned temporary identification numbers by the Graduate School, in writing, no later than the end of the academic term for which admission has been granted. If students do not request a deferral of admission, and fail to matriculate (enroll in the term of admission) as required, their admission to that program is canceled. If the student was not already admitted to another graduate program, admission to the Graduate School is also canceled as a result. Provisional admission may not be deferred; the student should instead arrange to provide the missing credentials to permit consideration for unconditional admission in a subsequent term.

Change of Major/Specialization

A student who wishes to change from one degree program (major) or specialization to another must submit a completed application for this change to the Graduate School. The faculty of the prospective new program will be given the opportunity to review the student’s original Graduate School application and supporting credentials, and any materials relevant to the student’s subsequent academic progress at NIU. The prospective new program may request new letters of recommendation and/or a new goals statement specific to the new program the student desires to enter. If the change of degree program is approved, admission to the original program will be canceled, and the student will be notified of the change. If the student is not admitted to the desired new program, the student’s original admission will stand. A person must have matriculated as a graduate student before a change of degree program can be requested.

Concurrent Pursuit of Multiple Graduate Programs

A student may be admitted to two (or more) degree programs (majors) or specializations concurrently. A new application form must be completed for each degree program to which the student desires admission. As above, each intended program may review the student’s existing Graduate School academic file and may require letters of recommendation and/or a goals statement pertinent to the particular program. When a student already enrolled in the Graduate School is admitted to an additional graduate degree program, the department(s) to which the student is already admitted will be notified of the new admission. A student admitted to more than one graduate degree program may be pursuing each one independently in the sense that each degree can be awarded as all requirements for it are satisfied. See also “Dual Credit for Graduate Course Work.”

Termination of Admission; Retention

A student failing to maintain good academic standing may be academically dismissed from the Graduate School, as described under “Academic Standing” in the “General Regulations” section that follows. In addition, a student in good academic standing may be dismissed from a graduate program for various academic reasons, including falsification of application materials, failure to satisfy stipulations imposed upon admission to the program, and failure to satisfy other program or Graduate School requirements in timely fashion according to established policies.

If a student has been admitted to a graduate degree program, and does not complete any course work applicable to that program for 24 consecutive months, then, at the discretion of the department, the student’s admission to that program may be terminated. Satisfactory academic progress in a program also involves maintaining the standards of academic and professional integrity expected in a particular discipline or program; failure to maintain these standards may result in termination of the student’s admission to the program.

Admission to the Graduate School is contingent upon admission to a particular degree program. Therefore, when admission to a program is terminated, the student’s admission to the Graduate School is also terminated (unless the student is already admitted to another graduate degree program). A student whose admission to the Graduate School is terminated because of dismissal from or termination of admission to a program may apply for admission to another degree program (if in good academic standing overall), or may apply for student-at-large status, in order to continue graduate-level study.

A student who has been academically dismissed while a graduate student or student-at-large at NIU is not eligible for admission or reentry but must petition the Graduate Council Appeals Committee for academic reinstatement.

Readmission/Reentry

A student who earns a graduate degree at NIU retains the status of “graduate student” thereafter, unless academically dismissed from the Graduate School. Such a student may enroll in further course work as a graduate student (rather than as a student-at-large) if further course work is desired.

A student previously enrolled in a graduate degree program at NIU who did not graduate from that program, and who has not been enrolled for 24 consecutive months, will have that admission canceled. If the student still wishes to undertake a graduate degree program (the same or a different one), she or he must apply for admission to the Graduate School to pursue the desired degree program. If the student no longer wishes to pursue a degree, and did not previously complete a graduate degree at NIU, but does wish to undertake further graduate course work, she or he should apply for student-at-large status.

All other graduate students and students-at-large who interrupt their studies for more than 60 consecutive months must notify the Graduate School of their intentions to reenter the university by submitting a completed application for reentry prior to registration, or supplying the necessary information during telephone registration. The reentry application serves as a notice of the student’s intention to resume registration, so that institutional records can be brought up to date.

Graduate students and students-at-large who have been academically dismissed are not eligible for admission or reentry; they should see the section entitled “Academic Reinstatement” elsewhere in this catalog.
Enrollment for Graduate Study as a Student-at-Large

Persons who have not applied for regular admission to the Graduate School, who have applied but have not yet been admitted, who were previously admitted but whose admission lapsed or was terminated prior to the completion of a degree, or who have been denied admission may be permitted to register for graduate work as students-at-large. In order to receive further registration, or for issuance of NIU transcripts, until the transcript is not provided. The student will remain ineligible for registration. If it is subsequently discovered that the necessary degree transcript is received, and cannot expect any credit for work undertaken during the period of ineligibility for registration. If it is subsequently discovered that the necessary degree was not earned prior to the start of the term for which student-at-large status was granted, the student will lose any graduate credit earned during that term.

Student-at-large status is primarily for the purpose of taking graduate-level classes; persons with a baccalaureate degree wishing to take only undergraduate classes or to pursue another baccalaureate degree at NIU should do so through one of the student categories designed for that specific purpose (e.g., the "postgraduate" classification). Information about such categories is available from the Undergraduate Admissions Office.

Permission to register as a student-at-large should not be confused with admission to the Graduate School. A person seriously considering pursuing an advanced degree should apply to the Graduate School. However, even if admission is achieved, the graduate credit earned while in postgraduate status is not be used in fulfillment of the residence requirement for the doctorate.
General Regulations

Student Responsibility

It is the responsibility of students to know and observe all regulations and procedures relating to the program they are pursuing, as well as those of the university and Graduate School. In no case will a regulation be waived or an exception granted because students plead ignorance of, or contend that they were not informed of, the regulations or procedures. Questions on regulations and their interpretation pertaining to studies at the graduate level should be addressed to the office of the dean of the Graduate School.

Students planning to graduate should familiarize themselves with the dates relating to application for graduation and other pertinent deadlines. (See Graduate School Calendar.) It is necessary to apply for graduation by the specified deadline in order to graduate in a particular term, whether or not the student plans to attend the commencement ceremonies.

Students must satisfy the degree requirements of the catalog in force during the term for which they have been admitted to and begin course work in a degree program; or they may, with the consent of their advisers, meet graduation requirements by complying with the provisions of a later catalog. Students readmitted to a degree program must meet degree requirements of the catalog in force at the time of the later admission (or of a subsequent catalog, as provided above). Aside from degree requirements, all students are subject to the regulations and policies stated in the catalog currently in force. Exceptions to regulations contained in the Graduate Catalog require the written approval of the office of the dean of the Graduate School, unless otherwise stated in the catalog.

Student Responsibility for Obtaining Current University Information

The university reserves the right to make changes in admission requirements, fees, degree requirements, and other specifications set forth in this catalog. Such changes may take precedence over catalog statements. While reasonable effort is made to publicize such changes, students should remain in close touch with departmental advisers and appropriate offices, because responsibility for complying with all applicable requirements ultimately rests with the student.

Academic Integrity

Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Students are considered to have cheated, for example, if they copy the work of another or use unauthorized notes or other aids during an examination or turn in as their own a paper or an assignment written, in whole or in part, by someone else. Students are guilty of plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging those sources or if they paraphrase ideas from such sources without acknowledging them. Students guilty of, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university.

A faculty member has original jurisdiction over any instances of academic misconduct that occur in a course which the faculty member is teaching. The student shall be given the opportunity to resolve the matter in meetings with the faculty member and the department chair. If the facts of the incident are not disputed by the student, the faculty member may elect to resolve the matter at that level by levying a sanction no greater than an F for that course. The faculty member shall notify the student in writing whenever such action is taken, and the University Judicial Office shall receive a copy of the Academic Misconduct Incident Report indicating final disposition of the case, which will be placed in the student's judicial file. In all matters where the charge of academic misconduct is disputed by the student or if the faculty member feels a sanction greater than an F in the course is appropriate (such as repeated offenses or flagrant violations), the faculty member shall refer the matter to the University Judicial Office, making use of the Academic Misconduct Incident Report. Additional sanctions greater than an F in a course can be levied only through the University Judicial System. Suspension or dismissal from the university for academic misconduct will result in a notation of that action on the transcript of a graduate-level student.

The university has adopted policies and procedures for dealing with research misconduct among its students, faculty, and staff. The guidelines, which are available in department offices and in the office of the dean of the Graduate School, pertain to the intentional commission of any of the following acts: falsification of data, improper use of authorship, claiming another person's work as one's own, unprofessional manipulation of experiments or of research procedures, misappropriation of research funds.

If a graduate student fails to maintain the standards of academic or professional integrity expected in his or her discipline or program, the student's admission to the program may be terminated.

Registration

Registration procedures as well as class offerings are published in the Schedule of Classes for each semester. Students will not receive credit for any course for which the registration is not completed according to university procedures.

Students who have any obligation to the university (such as unpaid fines, tuition, fees, dormitory charges, missing admission documents) will not be allowed to register for classes in subsequent terms until all obligations are met and should not expect retroactive enrollment for a period of time during which they were not eligible to register. (See "Encumbrances.")

Registration is not complete until all tuition and fees are paid. Individuals who have not paid tuition and fees by the applicable deadlines may have their registration canceled. However,
Immunization Policy

Illinois state law and university policy require that all students born on or after January 1, 1957 provide written evidence of current immune status with respect to certain communicable diseases, or evidence of exemption from this requirement. Currently, the diseases to which students must show immunity are measles (rubella, "10-day measles"), German measles (rubella, "3-day measles"), tetanus, diphtheria, and mumps. Students whose first enrollment at NIU was in the fall 1989 semester or later are required to comply with the policy; previously enrolled students are exempt. Students enrolled only in classes offered for credit at locations other than the NIU main campus in DeKalb, the engineering facility in Sycamore, or the Lorado Taft Field Campus are also exempt.

Evidence of immunization, if required, should be provided no later than the beginning of the student's first term of enrollment at NIU. Failure to provide this documentation will result in the placing of an encumbrance on the student's record, which will prevent further enrollment. Students not in compliance with the immunization law by the first day of their first term will be assessed a $25.00 late processing fee.

Forms for documenting immune status, and for exemption, and further information may be obtained from the University Health Service.

Encumbrances

A record encumbrance is a restriction placed on a student’s official academic record. Academic records may be encumbered under a number of circumstances, examples of which are the following:

1. Past-due obligation to the university (such as unpaid tuition, fees, fines, or residence hall charges).
2. Incomplete admission requirements (such as missing transcripts or other academic credentials).
3. A disciplinary action by the university or the Student Judicial Office.

Students may not be allowed to register or to have transcripts or diplomas issued after an encumbrance has been placed on their academic record. Students who have had an encumbrance placed on their record may direct inquiries to the office that requested the encumbrance or to the Office of Registration and Records. Only the office placing an encumbrance may authorize its removal. Students who are ineligible to register by reason of an encumbrance should not participate in courses and should not expect registration in course work to be effected retroactively for a period during which they were ineligible to register.

For immediate release of monetary encumbrances, all past-due obligations to the university must be paid with a cashier’s check, certified check, or money order.

English Proficiency

Graduate students whose native language is not English are required to take university examinations of their English language skills, unless they have earned a baccalaureate degree from an accredited institution in the U.S., the U.K., or Canada, at which the language of instruction was English. Those whose English appears deficient or marginal for purposes of graduate study and scholarly communication will be required to improve their competence in the language. They will then be required to take and pass either the two-course sequence of ENGL 451 and ENGL 452, or the single course ENGL 453, depending on the results of competency testing. A student’s major department may also require completion of other course work in English if deemed necessary for success in graduate study in the student’s chosen field.

ENGL 451. ESL RHETORIC AND COMPOSITION I (3). Only for graduate students whose native language is not English. Exploration of academic discourse in a cross-disciplinary context. The writing and revising of essays with special support for grammar and mechanics. Reading of academic prose. Weekly writing assignments. Not available for graduate credit. PRQ: Placement by testing and consent of department.

ENGL 452. ESL RHETORIC AND COMPOSITION II (3). Only for graduate students whose native language is not English. Exploration of critical strategies and documented writing in the disciplines. Documented writing required in all sections. Special support for grammar and mechanics. Not available for graduate credit. PRQ: ENGL 451 and consent of department.

ENGL 453. ESL RHETORIC AND COMPOSITION (3). Only for graduate students whose native language is not English. A concentrated approach to disciplinary writing with special support for grammar and mechanics. Reading of academic prose. Documented writing required in all sections. Not available for graduate credit. PRQ: Placement into ENGL 453 and consent of department.

Course Load

A graduate-level student’s course load includes all courses for which the student is registered, graduate or undergraduate, whether taken for credit or audited. A full-time load for a graduate student or student-at-large in a fall or spring semester is 9 semester hours, and in summer session is 6 semester hours. A graduate-level student on academic probation may not enroll for an overload. A student in good academic standing considering an overload should seek academic advice and must obtain approval to carry more than 12 hours in the fall or spring semester or 9 hours in the summer session. For a graduate student in a degree program, this approval must be obtained, in advance, by the student’s major department; for a student-at-large, or a graduate student without a major department, the prior approval of the office of the dean of the Graduate School is required.

Graduate students holding assistantships during a fall or spring semester are to enroll in 9 semester hours of course work. In the summer session, students on such appointments are to enroll for 6 semester hours. Reductions of up to 3 semester hours in the expected course load, and any overload, must be approved in advance by the appointee’s major department. Any greater reduction must be approved in advance, in writing, by the appointee’s department chair and the office of the dean of the Graduate School. Graduate students holding fellowships, internships, or similar appointments are bound by the above regulations unless the conditions of their appointments specify otherwise and the exception has the approval of the Graduate School.

An international graduate student on an F1 or J1 visa is required to carry 9 semester hours in the fall and spring semesters. Such a student is not required to be enrolled in the summer session to be in compliance with immigration regulations, but may be required to be registered in the summer under other university regulations; see “Continuous Enrollment.” Permission to take fewer than 9 semester hours in the fall or spring must be obtained in advance from the office of the dean of the Graduate School.
A student pursuing a program that requires a thesis, dissertation, or similar activity offered under course number 599 or 699 who has completed all other required course work for the program may, upon recommendation of the major department, be granted approval to carry a reduced course load for the balance of the time required for completion of the degree program.

Students may obtain certification that they are pursuing their studies full-time only if they are enrolled in a full course of study as defined above for their particular situation. A student with an approved underload is, by definition, not enrolled for a full course load. Therefore, such a student cannot expect to obtain official verification of full-time status, for purposes such as deferment of educational loans, for example.

**Graduate Credit for 400-level Courses**

Some 400-level courses are available for graduate credit in a given academic term. These courses are starred in the Schedule of Classes. Graduate students may also enroll in these courses. When students enrolled for undergraduate credit and students enrolled for graduate credit are in the same course, additional course requirements for the latter group may be imposed. In any section of a 400-level course that is available for graduate credit, graduate students and students-at-large will be enrolled for graduate credit unless otherwise provided for that particular course in the Graduate Catalog. Not more than 50 percent of the minimum semester hours required for a master's degree may be earned in courses numbered 400-499; not more than 9 semester hours of the credit counted toward the Ed.S. degree may be earned in courses numbered 400-499, and not more than 24 semester hours in courses numbered 400-499 may be applied in doctoral programs.

**Eligibility to Enroll in Courses Numbered 599 and 699**

Thesis and dissertation research, and other scholarly and creative activities offered under courses numbered 599 and 699, are intended as culminating academic experiences in the respective graduate programs. Therefore, in order to be eligible to enroll in a course numbered 599 or 699 a student must be admitted to the corresponding degree program; students-at-large are not eligible to enroll in such courses.

**Auditors**

An instructor may agree to permit auditors in a class. A student who enrolls as an auditor in a course cannot expect to submit all course assignments to be graded by the instructor and will not receive credit for the course. In order to have a satisfactory audit (grade of O) recorded on the transcript, the student must satisfy audit requirements as determined in advance between the student and the course instructor. A student who registers to audit a course and fails to meet such requirements may be asked to withdraw from the auditor course and to pay the credit hours as the student wishes to participate in the course. A student enrolled for credit who wishes to change that enrollment from credit to audit after the drop deadline must do so by the credit-to-audit deadline specified in the Schedule of Classes, and must have the approval of the instructor, the department, and the office of the dean of the Graduate School.

Tuition and fees are charged for audit hours on the same basis as for hours taken for credit. Audit hours are included in the calculation of the total course load.

**Graduate Students in Undergraduate Courses**

Graduate students and students-at-large may enroll in undergraduate courses. Students admitted with undergraduate deficiencies are encouraged to remove these deficiencies at the earliest possible date in their course of study. Tuition for such classes is charged at the same rate as for graduate-level classes.

While undergraduate course grades are not included in the graduate grade point average, they are a part of the permanent record of the graduate student or student-at-large and appear on the transcript. Undergraduate hours are included in the calculation of academic load. For graduate students and students-at-large the deadlines and other conditions of enrolling in, dropping, or withdrawing from an undergraduate class are the same as those pertaining to a graduate class.

**Undergraduates in Courses for Graduate Credit**

Seniors in their final term at Northern Illinois University who want to take courses for graduate credit (approved 400-level and 500- and 600-level courses) must apply for and receive early admission to the Graduate School, which requires the same documents and approvals as regular admission. No student may enroll more than one term under early admission status. (See "Early Admission of NIU Undergraduates.")

**Undergraduates in Graduate Courses for Undergraduate Credit**

Northern Illinois University undergraduate students may complete a maximum of 6 semester hours of 500- or 600-level course work for undergraduate credit, if they have completed 90 semester hours of credit towards their baccalaureate degree with a GPA of at least 3.00 or have previously completed a baccalaureate degree. They must also obtain, in advance, written approval from the instructor and from the office of the dean of the Graduate School to enroll in the course for undergraduate credit. In addition, for a 600-level course, the approval of the department offering the course is required.

**Law Students in Graduate Courses**

A student in the Northern Illinois University College of Law may enroll in graduate courses, provided that he or she has earned a baccalaureate or graduate degree from an accredited institution and has obtained all necessary approval of the College of Law. A law student not also admitted to the Graduate School must obtain permission to register as a student-at-large. Enrollment of a law student in graduate courses will be for graduate credit.

**Graduate Students in Law Courses**

With the approval of the student's major department and the office of the dean of the Graduate School, up to 9 semester hours of course work from the Northern Illinois University College of Law may be applied toward a graduate degree program. A graduate student not simultaneously pursuing a degree in the College of Law must petition the dean of the College of Law for permission to enroll in any law course. Such permission will only be granted in special circumstances. Grades earned in courses taken in the College of Law will not contribute to the student's graduate grade point average. Credit hours in law
courses will be counted as transfer credit in determining the maximum amount of student-at-large and transfer credit allowable toward a graduate degree.

Variable Course Hours; Repeatability of Courses

The number of semester hours of credit indicated parenthetically for each course in this catalog denotes the credit that may be earned in that course in a given academic term. A course description may indicate that the course may be repeated to a specified maximum number of semester hours. There may be a lower or upper limit to the number of hours in a particular course that may be applied toward meeting the credit-hour requirements for a graduate degree. Unless otherwise specified in the catalog, courses may be repeated only under the following circumstances:

1. If the student meets the requirements for the non-penalty repeat option, the course may be retaken under that option.
2. In a case where, to satisfy a program requirement, a student must achieve a certain grade as specified in the Graduate Catalog, the course may be repeated once. If the student again fails to achieve the required grade, the student’s admission to that program will be terminated.
3. If a course taken to complete the requirements for a graduate degree does not fail within the period of time allowed for that degree, the course may be retaken for credit with approval of the student’s major department.

A variable-hour course may be taken only once, unless the catalog description specifies that it may be repeated or unless one of the conditions listed immediately above is met.

Where a course is repeatable, maximum credit limits may be stated in the course description. The statement, "May be repeated to a maximum of [number] semester hours," means that the semester hours earned both from the initial enrollment and any permitted subsequent enrollments cannot exceed that maximum.

These limitations on repeatability of courses do not restrict which courses may be taken under the nonpenalty repeat option described below, for under the nonpenalty repeat option credit is granted for only one of the two times the course is taken. Restrictions on repeatability of courses apply only to registration for credit, not registration for audit.

Nonpenalty Repeat Option

The nonpenalty repeat option is available only for graduate courses in which a grade below B was attained. In order to repeat a course on a nonpenalty basis, a student in a graduate program other than a doctoral program must have written approval of the student’s major department; students-at-large and others not in degree programs must have written approval of the office of the dean of the Graduate School. When a course is repeated on a nonpenalty basis, only the higher of the two grades earned for the course is computed in the grade point average (GPA). Enrollments resulting in recorded grades of IN, W, or NR, which are not instructor-assigned, and enrollments for audit (no credit), cannot be counted as “repeats” under this policy. If the grades are identical, either (not both) is computed in the GPA. No student may repeat more than 6 semester hours of courses on a nonpenalty basis; no course may be repeated more than once under this option. The nonpenalty repeat option is not available to a student admitted to a doctoral degree program.

Drop or Withdrawal from a Course

All drops of or withdrawals from courses must be accomplished before the applicable deadlines. For courses conforming to the standard academic calendar, drop and withdrawal procedures and schedule-change deadlines are indicated in the Schedule of Classes for the particular term. Information on deadlines for courses with unusual schedules may be obtained from the Office of Registration and Records.

It is possible for a student to drop a course prior to or early in the course. When a course is dropped, no record of the enrollment appears on the student’s record. After the drop deadline, a period is specified during which the student may withdraw from the course; the course will appear on the student’s record with a grade. For each course in which a student is doing passing work (C or better in a graduate course) at the time of withdrawal, as assessed by the instructor, a W will be received. A grade of W is not included in the computation of the graduate GPA. For any course in which a student is not doing passing work, an F will be received. Students who fail to notify the Graduate School in writing of their intent to withdraw from the university, when required to do so according to the schedule booklet, or who fail to withdraw from a course or from the university in accordance with established procedure and by the established withdrawal deadline, may receive an F in that course. If withdrawal is accomplished early enough in the term, as defined in the schedule booklet, there may be a reduced liability for tuition and fees. Later withdrawal may leave the student wholly liable for tuition and fees.

Continuous Enrollment

Most students, both full- and part-time, prefer to pursue an advanced degree without interruption in time. Those students who interrupt their studies should especially note the maximum time period allowed to fulfill all requirements for the degree sought. (See the sections entitled “Limitation of Time” elsewhere in this catalog.)

Students availing themselves of the services of the academic staff or the facilities of the university in any way that directly or indirectly relates to fulfilling degree requirements or receiving course credit must be enrolled. For example, a student must be enrolled in the term in which a comprehensive examination is taken. Also, once a student has begun work on a thesis, dissertation, or similar activity under course number 599 or 699, it is expected that such work progress each academic term, and enrollment must be continuously maintained in course number 599 or 699 until a final grade is received for the activity and the required documentation of the activity is formally approved by the Graduate School, unless a leave of absence is obtained, as described in the section "Requirements for Graduate Degrees." If such continuous enrollment is not maintained, and a leave of absence is not granted, then upon recommendation of the department the student is subject to dismissal from the program. This will also effect dismissal from the Graduate School unless the student has been admitted to another graduate program.

A student is not required to be registered in the term of graduation simply in order to graduate, if the student is not otherwise required to enroll under the policies of the previous paragraph.

Grading System

The cumulative grade point average (GPA) is computed by dividing the total number of grade points by the total number of credit hours that a student has taken in NIU courses earning grade points.
Grades and their grade point values are as follows:

<table>
<thead>
<tr>
<th>Grades Earning</th>
<th>Grade Points Per Graduate Credit</th>
<th>Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>S (Satisfactory)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grades Not Earning</th>
<th>Grade Points Per Graduate Credit</th>
<th>Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>I (Temporary Incomplete)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN (Permanent Incomplete)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W (Passing at time of withdrawal)</td>
<td></td>
<td>from a course or from the university</td>
</tr>
<tr>
<td>O (Audit; no grade and no credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OW (Unsatisfactory Audit; requirements not completed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR (Grade not reported)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An NR is recorded when an instructor submits the grade roll for the section after the deadline for reporting grades at the end of the semester or when a grade is not submitted for a particular student in a course. The NR symbol may be changed to a grade specified by the instructor. A student may not graduate with a grade of NR on his or her record if the resolution of such a grade could render the student ineligible for graduation, whether or not the course involved is part of the student’s official program of courses.

The Graduate School grading system generally applies to every student admitted to the Graduate School and all students-at-large.

If eligible, undergraduate students may, with Graduate School approval, register for graduate course work for graduate or undergraduate credit; see “Undergraduates in Courses for Graduate Credit” and “Undergraduates in Graduate Courses for Undergraduate Credit.” Undergraduate students taking a course for graduate credit will be graded according to the Graduate School grading system; undergraduates taking a graduate course for undergraduate credit will be graded according to the undergraduate grading system; graduate students taking an undergraduate course will be graded according to the undergraduate grading system, except that graduate procedures and deadlines apply to grades of incomplete.

Pass/fail grading does not exist in the graduate grading system at Northern Illinois University. Therefore, a graduate-level student may not elect to be graded on a pass/fail basis in a course carrying graduate credit. A graduate student may elect the pass/fail option in undergraduate courses. This option may not be used in required undergraduate deficiency courses identified either in the student’s letter of admission or on the student’s program of courses. It may not be used in ENGL 451, ENGL 452, or ENGL 453 if the student whose native language is not English is required to take any of these courses. Some graduate schools and professional schools may require that actual grades in courses taken on a pass/fail basis be reported on the official transcript. If a student requests this restoration of grades for courses taken pass/fail, this will be done for all such courses, and all transcripts requested thereafter will report the actual grades earned.

Students doing less than satisfactory work will be assigned the grade of D, F, or U. Graduate credit is given only for those courses in which a grade of S, or C or better, is earned.

Certain graduate courses may be graded as S or U; such grading, however, is restricted to courses titled dissertation, externship, independent study/research, institute, internship, practicum, seminar, thesis, workshop; courses numbered 599 and 699 that reflect culminating experiences analogous to theses and dissertations; and courses that specify S/U grading in the course description in this catalog. In those courses to which the S/U grading basis is applicable, the use of S and U will apply to all students registered in any class section in which S/U grading is employed. Individual students may not elect S and U grading; S/U grading is not equivalent to the pass/fail option of the undergraduate grading system. If in doubt, graduate students should inquire from academic departments as to which of their courses are graded on the S/U grading basis. In a given term, all students in all sections of each course numbered 599 or 699 shall be graded on the S/U basis, or all will be graded otherwise.

Any change of grade (other than from temporary incomplete [I] or NR) submitted more than one month after the opening of the next academic term following the assignment of the original grade, and any change from a grade of D, F, or U to a grade carrying graduate credit or to an incomplete, requires a written explanation from the instructor and the approval of the office of the dean of the Graduate School.

Incompletes

When special circumstances prevent a student’s completing the requirements of a course, the instructor may, at her or his discretion, direct that the symbol I, indicating incomplete, be entered in the student’s record. When the I is assigned, the instructor will file in the departmental office a statement of the specific work, and by receiving a grade reflecting this work, either to fulfill this requirement. In no case may the deadline be later than the end of the next term, including the summer session as one term, after the enrollment period for which the incomplete had been assigned.

The incomplete must be removed within the following term (including summer session) whether or not the student is enrolled. If an extension in time is required to remove an I, an extension of up to one term may be granted on the recommendation of the instructor and with the approval of the office of the dean of the Graduate School. Only one such extension per course may be granted.

If the instructor does not change the incomplete to a regular letter grade before the expiration of the time permitted for doing so, the incomplete will be recorded permanently as IN. An IN is not counted in the computation of the grade point average. The IN symbol may not subsequently be changed to a regular letter grade. A student wishing credit in a course for which IN has been recorded must register again and complete the requirements then stipulated.

Incompletes in courses numbered 599 and 699 (thesis, dissertation, and analogous courses) are exempt from the above regulations. These incompletes must be removed by completing the specific work, and by receiving a grade reflecting this work, in accordance with the “Limitation of Time” indicated for each degree program. A student transferring out of a thesis or dissertation program (or other program requiring course 599 or 699) may, at the discretion of the major department, receive credit for some or all of the work already conducted under course number 599 or 699; otherwise, any grades of incomplete (I) in 599 and 699 will be changed to IN (permanent incomplete).

A student may not graduate with a grade of I (temporary incomplete) on his or her record if the resolution of such a grade could render the student ineligible for graduation, whether or
Grade Appeals
A description of procedures governing the appeal of allegedly capricious semester grades for graduate-level students may be secured in the offices of academic departments or in the office of the dean of the Graduate School.

Academic Standing
To remain in good academic standing a graduate student must maintain a minimum GPA of 3.00 in all graduate courses required on the student's program of courses as well as in all graduate courses taken. The GPA is computed on a cumulative basis, by dividing the total number of grade points by the total number of credit hours that a student has taken in courses earning grade points. The GPA includes any course work at Northern Illinois University for which a student earned graduate credit, but not graduate work taken at other institutions that is accepted toward meeting the requirements of an NIU graduate degree or certificate. Courses in which a student has received F, IN, W, OW, NR, S, or O are not included in this computation.

A graduate-at-large student who has accumulated 6 or more semester hours of D, F, or U in graduate course work at Northern Illinois University will be academically dismissed from the Graduate School, regardless of the student's GPA.

A graduate student who fails to maintain a GPA of 3.00 in his or her required program of courses for a particular degree may, upon recommendation of the department or program, be subject to termination of admission to that degree program.

A student-at-large must maintain a GPA of at least 3.00 in all graduate course work to be in good academic standing and is subject to the provisions of probation and dismissal as described above.

Although undergraduate course work is not included in the computation of the graduate GPA, it is also expected that graduate students achieve certain levels of competence in undergraduate courses pertinent to their graduate studies at NIU. If a graduate student fails to earn a grade of C or better in an undergraduate course specified as a deficiency course for the student's program, or in course work in English that is required as a consequence of the mandatory testing of English-language proficiency of students whose native language is not English, then upon the recommendation of the department, the student's admission to the corresponding degree program will be terminated. Some programs have higher performance expectations for undergraduate deficiency courses, which may be specified in this catalog or in the student's letter of admission to the Graduate School.

Graduate assistants shall be graduate students in good standing on the effective dates of their appointments. Assistants will have their appointments terminated if during the term of their appointments they (1) are academically dismissed or (2) fail to achieve good standing after one semester (excluding summer session) on probationary status. Any deviation from termination due to probationary status is possible only upon request of the major department and approval of the office of the dean of the Graduate School.

A student must be in good academic standing overall and in the degree program in question to be eligible for graduation.

Academic Reinstatement
A graduate student or student-at-large who has been academically dismissed may petition for academic reinstatement. Such petitions are acted upon by the Graduate Council Appeals Committee. To submit a request for reinstatement, or for more information about the appeals process, the dismissed student should contact the office of the dean of the Graduate School.

Graduate students or students-at-large who have been academically dismissed from Northern Illinois University, and who have been absent from the university for ten years or longer, may request consideration for reinstatement under the returning graduate student/student-at-large reinstatement policy. The cumulative grade point average of a student reinstated under this policy will be based only on course work attempted after the date of reinstatement. The reinstated student will be considered to be on final academic probation: if upon completion of 9 or more semester hours of graduate-level course work (exclusive of course work graded on an S/U basis including course work in which a grade of IN has been recorded), or upon enrollment in any course work in three subsequent terms, the new cumulative GPA is below 3.00, a final academic dismissal will be issued to the student. The student's status upon reinstatement will be governed by that held at the time of dismissal (i.e., graduate student or student-at-large) and prevailing Graduate School policy on reentering graduate students. A former graduate student reinstated to the Graduate School under this reinstatement policy must apply, or reapply, for admission to a desired degree program. All university regulations and program requirements in force at the time of reinstatement will apply to the reinstated student.

Graduate Council Appeals Committee
The Graduate Council Appeals Committee is authorized to review requests for exceptions to certain rules and certain kinds of appeals. The committee does not hear grade appeals, for which a separate procedure exists. Its primary authority lies in the sphere of Graduate School regulations—for example, admission, matriculation, and retention—but in special cases it may serve as an appellate body for academic matters deriving from the rules and practices of the departments and colleges. One major function of the committee is to review petitions for academic reinstatement from graduate students and students-at-large who have been academically dismissed. It will not review academic decisions that are based upon the disciplinary expertise of faculty in a particular field—for example, judgments of whether or not a student who has passed a comprehensive examination, or whether or not a student who meets the university’s minimum requirements should be admitted to the Graduate School to pursue a particular program. However, it may examine the equitable application of the process(es) by which such academic decisions have been arrived at. Similarly, if a student has requested an exception to a regulation (e.g., policy, procedure, deadline) at the appropriate level (departmental, college, etc.) and the request has been denied, the Appeals Committee may be asked to review the case only to the extent that the denial is alleged to be
“capricious”—that the appellant’s request was handled in a fashion substantially different from those of other students in similar situations.

A student wishing to bring some matter before the Graduate Council Appeals Committee should address a written request to the office of the dean of the Graduate School.

Dual Credit for Graduate Course Work

For a student pursuing a doctoral degree at NIU after completing one or more master’s or sixth-year degrees at NIU, an unlimited number of semester hours of graduate work from those prior NIU programs may be applied to meeting the credit-hour requirements of the doctoral program, provided that the NIU course work was not applied to meeting requirements of a graduate degree at another institution. However, any NIU graduate work already applied toward two graduate degrees (whether at NIU or elsewhere) may not be applied also toward doctoral program requirements. Also, a maximum of 9 semester hours of NIU course work that has been applied toward meeting graduate degree requirements at another institution may be used in an NIU doctoral program. The doctoral program in any case must conform to all other applicable requirements, including approval of the department and the Graduate School. For limitations on graduate transfer work acceptable in doctoral programs, see the section headed “Student-At-Large and Transfer Credit” under “Requirements for Doctoral Degrees.”

Any other student who pursues two distinct graduate degrees at NIU, either simultaneously or consecutively, may have up to 9 semester hours of graduate course work accepted for credit in both degree programs. A student who pursues a master’s or Educational Specialist degree at NIU after completing a graduate degree at another accredited institution may have up to 9 semester hours of graduate course work used in that other degree program accepted for credit in the NIU degree program, whether the courses were taken at NIU or at the other institution.

In taking advantage of these provisions, the student must complete all the stated requirements for each degree. Further, the course work applied to each degree must fall within the prescribed limitation of time for that degree. The written approval of the chair of both departments involved is required when the degrees are being pursued simultaneously. For consecutive degrees, only written approval of the chair in the department where the second degree is being pursued is required. In both situations the written approval of the office of the dean of the Graduate School is required. In no case may a course be accepted for credit in more than two graduate degree programs.

The Official Program of Courses

Upon receiving the official letter of admission to the Graduate School, students should plan their course selection for their first term at Northern Illinois University. Care should be taken that such selections conform with the requirements of the specific program they wish to pursue in their major department.

Students are urged to meet early in or prior to their first term with their academic advisers (named in the letter of admission) to plan an official program of courses. Prior to registering each term, students should consult with their advisers for the purpose of review and approval of all course selections. The Graduate Catalog outlines the minimum course requirements for each degree program, for a student fully prepared to begin that program. Departments may, and often do, require additional course work of individual students as necessary to address deficiencies of background or other specific needs for proper academic or professional preparation. At least 50 percent of the credit for graduate course work required on the program of courses, excluding courses identified as deficiencies, must be in the student’s major. Individual degree programs may require a program even more closely focused on the major field. For a student in a doctoral program who has a master’s degree, the requirement of 50 percent of graduate work in the major applies only to courses beyond the master’s degree. The official program of courses to be taken for the degree should be submitted to the Graduate School for review for conformity with departmental and university requirements as early in the student’s graduate studies as possible. The program of courses must be submitted no later than the graduation application deadline for the term for which the student applies for graduation.

Religious Observances and the Academic Schedule

The university recognizes that on occasion examinations or other scheduled academic activities may conflict with the religious observances of some members of the academic community, and accordingly encourages the instructional and administrative staff to make reasonable accommodations to minimize the resulting difficulties for individuals concerned. Students faced with such conflicts should notify the appropriate instructor or administrative area as much in advance of the examination or other activity creating the conflict as possible. Students believing that they have been unreasonably denied an educational benefit due to their religious beliefs or practices may bring the matter to the attention of the department chair for resolution; if for any reason, this route would not be appropriate, the matter may be brought to the college dean or dean’s designee.

Accommodations for Students with Disabilities

A student who believes that special accommodations with respect to course work or other academic requirements may be appropriate in consideration of a disability must (1) inform the faculty in charge of the academic activity either at the start of the course or as soon as the student becomes aware of the activity or requirement in connection with which accommodation is sought, (2) provide the required verification of the disability to the Center for Access-Ability Resources, and (3) inform the latter office from which faculty member accommodations have been requested. If contacted by the faculty member, the staff of the Center for Access-Ability Resources will provide advice about accommodations that may be indicated in the particular case.

A wide range of services can be obtained by students with disabilities, including housing, transportation, adaptation of printed materials, and advocacy with faculty and staff. Students with disabilities who need such services or want more information should contact the Center for Access-Ability Resources, University Health Service, at (815) 753-1303.

Protective Standards in Research

Protection of Human Subjects

Any Northern Illinois University student or faculty or staff member who proposes to undertake research involving human subjects is required by federal and university regulations to seek approval for the project from the Graduate School’s research compliance office. Research using questionnaires, evaluations, or surveys— mailed or otherwise conducted—or involving personal interviews is included in the category of human subjects research and must be reviewed by the Institutional Review Board or its chair. Each research project involving human subjects must receive formal approval or exemption from the Board or its chair.
The student must submit a completed departmental review form to the chair of the academic department under whose jurisdiction the research would be undertaken. The student should also ascertain from the department whether it requires completion of the longer Application for Approval to Use Human Subjects in Research form. The department chair, or a designee, will review the submitted human subjects form to determine if the project falls into a category requiring the approval of the NIU Institutional Review Board on the Protection of Human Subjects.

Departmental review forms and the Application for Approval to Use Human Subjects in Research may be obtained from most departmental offices or from the research compliance office within the Graduate School. Applicants are responsible for providing the information requested on the forms, for securing the required approval signatures, and for seeing that the completed, signed forms are received by the Graduate School. If research involving human subjects is part of a student’s degree requirements, then to ensure eligibility for graduation, the student is urged to complete these required forms as soon as possible after the topic and protocols of the research have been determined. Questions concerning human subjects review may be directed to the student’s faculty adviser or department chair, or to the research compliance office in the Graduate School.

Facilities for Experimental Animals or Recombinant DNA

A student or member of the faculty or staff who proposes to engage in research utilizing living animals or recombinant DNA should consult first with her or his academic department or the research compliance office in the Graduate School to determine the federal and university requirements for facilities in which such research subjects are to be housed and to obtain the approval forms required by the Institutional Animal Care and Use Committee or the Institutional Biosafety Committee, respectively.

Use of Radioactive Substances

A student who proposes to use substances emitting ionizing radiation must be supervised by a faculty member and must use such materials in a facility approved by the University Radiation Safety Committee; and such radioactive substances may be purchased only with the approval of the University Radiation Safety Officer.
Application for Graduation

A student who intends to graduate at the end of a particular term must have submitted a completed graduation application, including the receipt for payment of the graduation fee, by the graduation-application deadline for that term. This deadline is published in the Graduate School Calendar and in the Schedule of Classes for each term. The application form must be submitted and the fee paid only once for each degree earned.

If a student applies for graduation in a particular term and fails to graduate at the end of that term, the application will automatically be transferred once, to the next academic term. If the student also fails to graduate at the end of that next term, no further automatic transfer of application will occur. Thereafter, the student must notify the Graduate School, in writing, in order to reactivate his or her application for the anticipated graduation date, and must do so by the graduation-application deadline for the expected term of graduation in order to graduate at the end of that term.

After a student has applied for graduation and it has been verified that all degree requirements have been completed, an official "certificate of completion" can be issued by the Graduate School to the student or to another party designated in writing by the student. Such a certificate is commonly accepted as proof of completion in advance of issuance of the diploma and degree transcript.

Credit and Residence Requirements

Students in master's degree programs must earn a minimum of 30 semester hours of graduate credit with a minimum GPA of 3.00. This average must be earned over all NIU graduate courses required in the student's program of courses as well as over all graduate work taken at NIU. The minimum number of required semester hours and the minimum number to be earned in residence are determined by the student's major department.

Advisory System

Each student is assigned an adviser or advisory committee whose purpose is to guide the student's program and recommend him or her for the degree when the student is properly qualified.

The official program of courses is formulated by the student in consultation with the assigned adviser or advisory committee. This program should be submitted to the Graduate School for review and approval as early as possible. It must be submitted no later than the graduation-application deadline of the term for which the student submits a completed application for graduation from that degree program. When the program of courses has been approved by the Graduate School, a copy will be sent to the student and to the adviser. Any changes subsequently made to an approved program must also be submitted to and approved by the Graduate School.

Removal of Deficiencies

Courses may be listed as deficiencies either in the letter of admission to the Graduate School or on the program of courses. Students are encouraged to remove such deficiencies as early in the program of study as possible. A schedule for completing courses identified as deficiencies may be established by the adviser or advisory committee.

Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 carry credit toward the master's degree. At least 50 percent of the minimum number of semester hours required for the master's degree in the student's major (or specialization, if any) must be earned in courses numbered 500 and above.

Some courses numbered in the 400s carry only undergraduate credit. Graduate students registering for 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit and whether the particular class section in which they enroll is offered for graduate as well as undergraduate credit.
Northern Illinois University does not offer correspondence courses, which are courses other than independent-study courses that do not involve significant real-time interaction between students and faculty, when such interaction would normally be a part of the same course offering on campus.

Student-at-Large and Transfer Credit

With the approval of the student's major department and the office of the dean of the Graduate School, a maximum combined total of 15 semester hours of graduate credit for courses taken at other accredited institutions for which transfer credit is granted, plus credit earned in courses at Northern Illinois University as a student-at-large may be counted toward meeting the requirements for an advanced degree.

Master's degree students in the School of Music may not exceed 6 semester hours of combined transfer and student-at-large credit. In the School of Nursing no more than 9 semester hours earned from courses taken as a student-at-large may be applied to the master's degree. In the School of Art no more than 9 semester hours of transfer credit may be counted toward meeting the requirements for a master's degree, and in the Department of Theatre Arts, no more than 10 semester hours of transfer credit may be counted toward meeting the requirements for a master's degree. For students pursuing the M.S.Ed. degree in special education or the M.S.Ed. degree in counseling not more than 9 hours of student-at-large and transfer credit in combination may be applied to the master's degree.

The above semester-hour limits may be exceeded on a program of courses only by the use of transfer courses and only if the total semester hours on the program of courses exceeds the minimum requirements for that major by the same number of hours.

In evaluating transfer credit, three quarter hours are equivalent to two semester hours. If credit to be transferred was earned as quarter hours, it will be transferred in the ratio of two semester hours per three quarter hours. A grade of B- or better must have been earned in each graduate course accepted in transfer toward meeting degree requirements, and the overall GPA for all graduate transfer work accepted must be at least 3.00. None of these transfer hours may be in correspondence courses, which are defined above and in "A Guide to Reading This Catalog" at the front of this publication.

To receive consideration for work done elsewhere, the student must submit to the Graduate School an official transcript of the work to be considered for transfer. Transfer credit is considered to be accepted toward a degree program only at the time a student is cleared to graduate from the program.

Limitation of Time

The student must fulfill all requirements for a degree within the six consecutive years immediately preceding the date of the student's graduation from that degree program. This time limit applies to enrollment in all graduate course work in the student's program including work for which transfer credit is allowed.

If a course taken to complete the requirements for the master's degree does not fall within the six-year period allowed for the degree, the student must demonstrate current knowledge of the subject matter in a fashion approved by the department—by retaking the course for credit or through successful completion of an appropriate examination if available from the department offering the course; otherwise, other course work must be substituted in the program. Transfer courses falling outside the limitation of time may not be used in a graduate program.

In the College of Business, the six-year time limitation for course work applies only to Phase Two courses.

Language and Research-Tool Requirement

Certain departments require proficiency in a foreign language or a research tool for the master's degree. The departmental sections of this catalog should be consulted for such requirements. If applicable, proficiency in these skills is determined in the same fashion as described under "Requirements for Doctoral Degrees," unless specified otherwise in the program descriptions in this catalog.

Thesis

The thesis will be a scholarly contribution to knowledge. Its subject must be in the area of the student's major and be approved by the student's thesis director or thesis committee. The thesis presents research that has been conducted under the supervision of a graduate faculty member approved as the thesis director. The document may not have been published previously, and the research must be successfully defended in an oral examination.

When thesis research involves human subjects, experimental animals, recombinant DNA, or the use of radioactive substances, special approval is required before the research is undertaken, as explained under the heading "Protective Standards in Research."

A student who has formally begun the thesis or its equivalent must register in course number 599 in each subsequent term until the thesis or equivalent is submitted to and formally approved by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing progress on the work, a graduate student may request a leave of absence from the office of the dean of the Graduate School. If a student interrupts registration in a course numbered 599 without obtaining a leave of absence, then, upon recommendation of the major department, the student's admission to the degree program will be terminated. After a student has registered for the maximum number of hours of credit that can be earned in a course numbered 599, he or she should register as an auditor in 599 each term until the thesis or equivalent receives final Graduate School approval.

A student following a thesis program shall submit three copies of the thesis and four abstracts thereof, after approval by the appointed departmental committee. The thesis must be submitted according to the instructions in The Graduate School Manual for Theses and Dissertations, available at campus bookstores and must be approved by the Graduate School. Art documentaries and music recital tapes are treated much like theses, as explained in this manual.

A student must be in good academic standing, both overall and in the degree program, to be eligible to submit a thesis or other final product of a course numbered 599 for review and acceptance by the Graduate School.

Any student using the services of the academic staff or the facilities of the university must be registered for the period during which the services are rendered or the facilities are used.

After the thesis has received final Graduate School approval, the three approved copies are distributed one each to the Founders Memorial Library, the University Archives, and the student's major department.

Comprehensive Examination

Successful completion of a comprehensive examination is required in all master's degree programs described in this section except the Master of Accounting Science and the Master of Science degree programs in finance, in management information systems, and in nursing. The comprehensive examination may be either written or oral, or both, at the option of the department. These examinations are given by the major department. The
number of semester hours of course work which a student must complete before taking this examination shall be determined by the department. A student planning to take a comprehensive examination may be required to file a letter of intent with his or her department, and should consult the department concerning applicable procedures and deadlines for such notification.

A student must be registered in the term in which a comprehensive examination is taken. A student must be in good academic standing, both overall and in the degree program, to be eligible to take this comprehensive examination. The department may allow a student who fails this examination to repeat it after a period of time determined by the department. A student who fails this examination a second time, or is not permitted a second attempt, will not be permitted to continue work toward the master's degree in that program, and admission to that program will be terminated.

If the comprehensive examination is to be given to a group of students rather than being scheduled individually for each student, the department should post notices of the date, time, and place for each examination at least two weeks before it is to be administered.

Thesis and Examination Committees

The thesis committee and the final comprehensive examination committee shall each consist of at least three members. The majority of the committee must be regular faculty members at Northern Illinois University; a majority must be members of the graduate faculty; and the chair must be a graduate faculty member in the student’s major department.

Graduation

When nearing completion of requirements for a degree, a student must submit an application for graduation to the Graduate School. See "Application for Graduation."

Master of Business Administration

The Master of Business Administration program is designed to serve business and other organizations by preparing students to be leaders. The themes of a global view of business, leadership, ethics, and communication are important and integral parts of the program. The M.B.A. program consists of two phases. Phase One (up to 18 semester hours) is designed to compensate for deficiencies in undergraduate course work or experiences considered to be prerequisites for the Phase Two (30 semester hours) graduate course work. Electives within Phase Two consist of 9 semester hours and can be used either to focus within a particular business discipline or to obtain a broader background in a variety of graduate-level courses either inside or outside the College of Business.

Admission

Admission to the Master of Business Administration program is competitive and limited to those who can demonstrate high promise of success. The College of Business considers several indicators of success including, but not limited to, previous academic accomplishments, demonstrated leadership, communication skills, letters of recommendation, and scores on the verbal and quantitative sections of the Graduate Management Admission Test (GMAT). All candidates are expected to have some minimal competencies in computer, mathematics, and communication skills. Applicants whose native language is not English must submit results of the Test of English as a Foreign Language (TOEFL) (see "Examinations Required for Admission"). Applicants must also satisfy the admission requirements of the Graduate School (see "General Requirements for Admission to the Graduate School"). The College of Business requires additional material for the admission process. Contact the Office of Graduate Studies in Business for details.

Credit Requirements

For those with the minimum competencies mentioned above but without prior preparation in the business area, the Master of Business Administration may require a maximum of 48 semester hours. However, an individual student’s program may require fewer semester hours depending upon the student’s previous education in business and economics.

Phase One consists of nine 2-semester-hour courses. Phase Two typically consists of ten 3-semester-hour courses, seven required of all students and three electives. In addition to maintaining a minimum GPA of 3.00 in all graduate course work completed in the program at Northern Illinois University, the student must maintain a minimum GPA of 3.00 in all graduate course work completed in Phase Two. There is no program requirement for residency for the Master of Business Administration degree.

For detailed information concerning this program see the College of Business section of this catalog.

Student-at-Large and Transfer Credit

Students-at-large are normally prohibited from registering for graduate business courses.

The total credit transferred from other accredited institutions, plus credit earned at NIU as a student-at-large may not exceed 10 semester hours. No transfer credit from another institution may be in correspondence work, which is defined as course work other than independent-study courses, delivered via any medium, that does not involve significant real-time interaction between students and faculty. In transfer, three quarter hours are considered equivalent to two semester hours. A grade of B– or better must have been earned in each graduate course accepted in transfer toward meeting Phase Two requirements, and the overall GPA for all graduate transfer work accepted must be at least 3.00.

The above semester-hour limits may be exceeded on a program of courses only by the use of transfer courses and only if the total semester hours on the program of courses exceeds the minimum requirements for that major by the same number of hours.

Advisory System

Each student is assigned an adviser who will guide the student’s selection of courses and recommend the student for the degree when properly qualified.

The official program of courses is formulated by the student in consultation with the assigned adviser. This program should be submitted to the Graduate School for review and approval as early as possible and no later than the graduation-application deadline of the term for which the student submits a completed application for graduation. When the program of courses has been approved by the Graduate School, a copy will be sent to the student and to the adviser. Any changes subsequently made to an approved program must also be submitted to and approved by the Graduate School.

Removal of Deficiencies

Courses may be listed as deficiencies either in the letter of admission to the Graduate School or on the program of courses. Students are encouraged to remove such deficiencies as early as possible in their program of study as possible. A schedule for completing courses identified as deficiencies may be established by the adviser.
Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 carry credit toward the master’s degree. No more than 6 semester hours of credit earned in courses numbered 400-499 may be applied to Phase Two of the Master of Business Administration program. Some courses numbered in the 400s carry only undergraduate credit. Graduate students registering for 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit.

Limitation of Time

The student must fulfill all Phase Two requirements for the Master of Business Administration within the six consecutive years immediately preceding the date of the student’s graduation from that degree program. This time limit applies to all Phase Two graduate course work in the student’s program including work for which transfer credit is allowed.

If a course taken to complete the requirements of Phase Two does not fall within the time limitation indicated in the preceding paragraph, the student must demonstrate current knowledge of the subject matter in a fashion approved by the department—by retaking the course for credit or through a departmental proficiency examination. Transfer courses falling outside the limitation of time may not be used in a graduate program.

Graduation

When nearing completion of requirements for a degree, a student must file an application for graduation with the Graduate School. See “Application for Graduation.”

REQUIREMENTS FOR “SIXTH-YEAR” DEGREES AND CERTIFICATE

Educational Specialist Degree

Performer’s Certificate

The purpose of these programs is to permit students to attain greater mastery of their chosen fields than they can attain in formal study through the level of the fifth-year master’s degree.

Admission

For admission to an Educational Specialist (Ed.S.) degree program, an applicant must have a minimum GPA of 3.20 in graduate work at the master’s level and hold a master’s degree or equivalent from an accredited institution or be in the last semester of work leading to the master’s degree at Northern Illinois University.

For admission to a Performer’s Certificate program, an applicant must normally have completed work equivalent to that required for the Master of Music degree at Northern Illinois University. Other admission requirements are noted in the School of Music section.

Credit Requirements

A student in an Ed.S. degree program must earn a minimum of 30 semester hours beyond the master’s degree, with at least a 3.00 GPA in the degree program as well as in all graduate course work taken at NIU. Departmental sections of this catalog should be consulted for other requirements.

The Performer’s Certificate program requires a minimum of 24 semester hours of credit with a GPA of at least 3.00. In all cases, the minimum GPA of 3.00 must be earned over all courses required in the student’s program of courses as well as over all graduate courses taken. Additional information may be found in the School of Music section.

Advisory System

Each student is assigned an adviser or advisory committee whose purpose is to guide the selection of courses and recommend the student for the degree when properly qualified.

The official program of courses is formulated by the student in consultation with the assigned adviser or advisory committee. This program should be submitted to the Graduate School for review and approval as early as possible. It must be submitted no later than the graduation-application deadline of the term for which the student applies for graduation from that degree program. After the program has been approved by the Graduate School, a copy will be sent to the student and to the adviser. Any changes subsequently made to an approved program must also be submitted to and approved by the Graduate School.

Removal of Deficiencies

Courses may be listed as deficiencies either in the letter of admission to the Graduate School or on the program of courses. Students are encouraged to remove such deficiencies as early in the program of study as possible. A schedule for completing courses identified as deficiencies may be established by the adviser or advisory committee.

Courses for Which Credit Is Allowed

Only courses which are numbered 400-499, 500-599, and 600-699 carry graduate credit. Some courses numbered in the 400s carry only undergraduate credit. Graduate students registering for 400-level courses are responsible for ascertaining whether these courses have been approved for graduate credit.

Not more than 9 semester hours of the credit counted toward the Ed.S. degree may be earned in courses numbered 400-499. Credit for at least 21 semester hours must be earned in courses numbered 500-699.

Student-at-Large and Transfer Credit

With the approval of the student’s major department and the office of the dean of the Graduate School, a maximum combined total of 15 semester hours of graduate credit for courses taken at other accredited institutions for which transfer credit is granted, plus credit earned in courses taken at Northern Illinois University as a student-at-large may be counted toward meeting the requirements for an Ed.S. degree.

With the approval of the student’s major department and the office of the dean of the Graduate School, a maximum of 9 semester hours of transfer graduate credit may be accepted from other accredited colleges or universities to meet the hour requirements for an Ed.S. degree. None of these transfer hours may be in correspondence courses, which are defined as courses other than independent-study courses, delivered via any medium, that do not involve significant real-time interaction between students and faculty. A grade of B- or better must have been earned in each graduate course accepted in transfer toward meeting the requirements of an Ed.S. program, and the overall GPA for all graduate transfer work accepted must be at least 3.00.

The above semester-hour limits may be exceeded on a program of courses only by the use of transfer courses and only if the total semester hours on the program of courses exceeds the minimum requirements for that major by the same number of hours.
To receive consideration for work done elsewhere, the student must submit to the Graduate School an official transcript of the work to be considered for transfer. In transfer, three quarter hours are considered equivalent to two semester hours. If credit to be transferred was earned as quarter hours, it will be transferred in the ratio of two semester hours per three quarter hours.

No student-at-large or transfer credit is accepted as part of the program of courses required for the Performer’s Certificate.

Limitation of Time
The student must fulfill all of the requirements of an Ed.S. or Performer’s Certificate program within the six consecutive years immediately preceding the date of the student's graduation from that program. This time limit applies to enrollment in all graduate course work in the student’s program including work for which transfer credit is allowed.

If a course taken to complete the requirements for an Ed.S. or Performer’s Certificate program does not fall within the time limitation indicated in the previous paragraph, the student must demonstrate current knowledge of the subject matter in a fashion approved by the department—by retaking the course for credit or through successful completion of an appropriate examination if available from the department offering the course; otherwise, another course of equivalent semester hours must be substituted in the program. Transfer courses falling outside the limitation of time may not be used in a graduate program.

Thesis
The Performer’s Certificate program does not include a thesis option.

The writing of a thesis or field study is optional in some Ed.S. programs; the departmental section of this catalog should be consulted for details.

The thesis will be a scholarly contribution to knowledge. Its subject must be in the area of the student’s major and be approved by the student’s thesis director or thesis committee. The thesis presents research that has been conducted under the supervision of a graduate faculty member approved as the thesis director. The document may not have been published previously, and the research must be successfully defended in an oral examination.

When such research involves human subjects, experimental animals, recombinant DNA, or the use of radioactive substances, special approval is required before the research is undertaken, as explained in the section of this catalog titled “Protective Standards in Research.”

A student who has formally begun the thesis or its equivalent must register in course number 599 in each subsequent term until the thesis or equivalent is submitted to and formally approved by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing progress on the work, a graduate student may request a leave of absence from the dean of the Graduate School. If a student interrupts registration in course number 599 without obtaining a leave of absence then, upon recommendation of the major department, the student’s admission to the degree program will be terminated.

A student who has registered for the maximum number of hours and has been placed on academic probation will be required to file a letter of intent with his or her department chair, and should consult the department concerning applicable procedures and deadlines for such notification.

A student who fails this examination may, with the permission of the major department, repeat it no sooner than the following academic term. A student who fails this examination a second time will not be permitted to continue work toward the degree in that program, and admission to that program will be terminated.

Composition of Committees
The thesis committee, comprehensive examination committee, and Performer’s Certificate committee shall each consist of at least three members. The majority of the committee must be regular faculty members at Northern Illinois University; a majority must be members of the graduate faculty; and the chair must be a graduate faculty member in the student’s major department.

Graduation
When nearing completion of requirements for a sixth-year degree or certificate, a student must submit an application for graduation to the Graduate School. See "Application for Graduation.”

Master of Fine Arts Degree
The Master of Fine Arts degree in the School of Art is designed primarily for those students who plan to prepare themselves for college teaching in one of the studio areas or for a profession in the field of fine or commercial arts.

The Master of Fine Arts degree in the Department of Theatre Arts is appropriate for college teaching and/or entrance into the profession in the fields of acting, directing, design, and theatre technology.

Admission
The basic requirements for admission after the completion of the baccalaureate degree are those indicated in the section “General Requirements for Admission to the Graduate School.” Students holding the degree Master of Arts and wishing to continue in a Master of Fine Arts program must have a minimum GPA of 3.20 in graduate work to be admitted.
Students seeking admission to the Master of Fine Arts program in the School of Art or in the Department of Theatre Arts should consult that department's section in this catalog.

Slides should be sent to the Director, Graduate Programs in Art, School of Art; other application materials are to be submitted to the Graduate School.

General Requirements and Procedures

Requirements and procedures in general are the same as for other "sixth-year" degrees and certificates as detailed under the following headings: "Advisory System," "Removal of Deficiencies," "Courses for Which Credit Is Allowed," and "Graduation."

Credit Requirements

A student in the Master of Fine Arts program must earn 60 semester hours beyond a baccalaureate degree, exclusive of work taken to remove deficiencies, with a GPA of at least 3.00 in all graduate courses required in the student's program of courses as well as over all graduate course work taken.

For detailed information concerning the program see the section of this catalog concerned specifically with the School of Art or the Department of Theatre Arts.

Student-at-Large and Transfer Credit

With the consent of the School of Art and the office of the dean of the Graduate School, a maximum of 9 semester hours of graduate credit from an M.A. program completed at another institution may be accepted toward the M.F.A. degree in art. A maximum of 9 semester hours of graduate credit earned at NIU as a student-at-large may be accepted toward an M.F.A. degree in art. However, in meeting the requirements for a graduate degree in art, graduate credit accepted in transfer from other accredited institutions, plus that earned at NIU as a student-at-large, may not exceed 15 semester hours.

In meeting the requirements for the M.F.A. degree in theatre arts, the total graduate credit accepted in transfer from other accredited institutions, with the approval of the Department of Theatre Arts and the office of the dean of the Graduate School, plus credit earned at Northern Illinois University as a student-at-large, may not exceed 21 semester hours.

In transfer, three quarter hours are considered equivalent to two semester hours. If credit to be transferred was earned as quarter hours, it will be transferred in the ratio of two semester hours per three quarter hours. A grade of B- or better must have been earned in each graduate course accepted in transfer toward meeting requirements of an M.F.A. degree, and the overall GPA for all graduate transfer work accepted must be at least 3.00.

No transfer credit from another institution may be in correspondence work, which is defined in "A Guide to Reading This Catalog" at the beginning of this publication.

One-Person Show: Art

In the M.F.A. program in the School of Art, the student's work must culminate in a one-person show. Three copies of a pictorial documentation of the show must be submitted to the Graduate School as the equivalent of a thesis according to the instructions in The Graduate School Manual for Theses and Dissertations, available at campus bookstores. Additional instructions for documentation of the show are available from the School of Art. After the documentation has received final Graduate School approval, the three approved copies are distributed one each to the Founders Memorial Library, the University Archives, and the School of Art.

Approval of the one-person show is by a faculty committee, consisting of at least three members. The majority of the committee members must be regular faculty members at Northern Illinois University, a majority must be members of the graduate faculty in the School of Art, and the chair must be a graduate faculty member in the School of Art.

A student must be in good academic standing, both overall and in the degree program, to be eligible to submit this documentation for review and acceptance by the Graduate School.

Because the pictorial documentation of a one-person show is considered equivalent to a thesis, the student must register in ART 699B. Once registered in ART 699B the student is expected to continue to register in ART 699B up to and including the term in which the documentation is submitted to and formally approved by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing progress on the work, the student may request a leave of absence from the dean of the Graduate School. If a student interrupts registration in course number ART 699B without obtaining a leave of absence then, upon recommendation of the major department, the student's admission to the degree program will be terminated. After a student has registered for the maximum number of hours of credit that can be earned for the documentation (ART 699B), he or she should register as an auditor in ART 699B each term until the documentation receives final Graduate School approval.

Final Project: Theatre Arts

A student's work in the Master of Fine Arts program in the Department of Theatre Arts culminates in a final project. The project and a project paper must be reviewed and approved by a committee of the faculty consisting of at least three members. The majority of the committee members must be regular faculty members at Northern Illinois University; a majority must be members of the graduate faculty in the Department of Theatre Arts; and the chair must be a graduate faculty member in the Department of Theatre Arts. The project may be done in conjunction with an internship. To undertake the project, the student must register for THEA 697. Registration for this purpose may be in absentia. If circumstances prohibit continuing progress on the work, the student may request a leave of absence from the dean of the Graduate School. If a student interrupts registration in course number THEA 697 without obtaining a leave of absence then, upon recommendation of the major department, the student's admission to the degree program will be terminated. After a student has registered for the maximum number of hours of credit that can be earned for the project, he or she should register as an auditor in THEA 697 each term until the project receives final approval from the department. Additional instructions about the project and the written documentation are available from the Department of Theatre Arts.

Limitation of Time

All requirements for the degree Master of Fine Arts must be completed within the seven consecutive years immediately preceding the date on the degree and the student's graduation in the degree program. This time limit applies to enrollment in all graduate course work in the student's program including work for which transfer credit is allowed.

If a course taken to complete the requirements for a Master of Fine Arts degree does not fall within the seven-year period indicated in the preceding paragraph, the student must demonstrate current knowledge of the subject matter in a fashion approved by the department—by retaking the course for credit or through successful completion of an appropriate examination if available from the department offering the course; otherwise, other course work must be substituted in the program. Transfer courses falling outside the limitation of time may not be used in a graduate program.
REQUIREMENTS FOR DOCTORAL DEGREES

Doctor of Education
Doctor of Philosophy

The doctorate is the highest degree granted by the university and is conferred only for work of distinction in which the student displays powers of original scholarship.

Admission

Normally a student applying for admission to a doctoral program will be expected to have completed both baccalaureate and master's degrees. A student with a baccalaureate degree may, with the approval of the department, be admitted directly into a doctoral program. No student will be admitted to doctoral work unless the undergraduate and graduate records (including test scores) indicate ability to do work of high quality in the field chosen.

For admission to a doctoral program, a student must have at least a 3.20 GPA in any previous graduate work and approval of the department in which he or she plans to major.

At least three letters of recommendation (four for the program in special education) are required from persons who can write analytically about the applicant’s academic qualifications and ability to do graduate work.

Admission to doctoral work in a specific department may also require passing whatever entrance tests, screening devices, or interviews are required by the individual department.

Credit Requirements

Graduate students working for a doctoral degree must complete at least 90 semester hours of work beyond the baccalaureate degree with a minimum GPA of 3.00. This will include formal course work, independent study, research, and the dissertation. The minimum GPA requirement applies to all graduate courses required in the student's program of study as well as to all graduate course work taken. Transfer credit will be allowed at the discretion of the department concerned and the office of the dean of the Graduate School, subject to the limitations described below. Not more than 24 semester hours subsequent to the baccalaureate degree shall be in graduate courses numbered 400-499. Although most of the work will be in the student's major field, at the discretion of the major department some course work may be taken in related fields. The departmental sections of this catalog should be consulted for other requirements.

Ph.D. Language and/or Research-Tool Requirement

Specific language and/or research-tool requirements for the Ph.D. degree vary by department. These requirements may be found in the description of the doctoral program under each departmental heading.

The general Graduate School requirement for proficiency in foreign language(s) and/or other research tool(s) for the Ph.D. degree may be met by one of the following:

1. Two foreign languages with average reading proficiency.
2. One foreign language with a high level of proficiency.
3. One foreign language with average reading proficiency and one research tool with average proficiency.
4. Two research tools with average proficiency.
5. One research tool with a high level of proficiency.

Students wishing to demonstrate average proficiency in French, German, or Spanish may do so by achieving a grade of S (satisfactory) in FLFR 382, Reading Expository French II; FLGE 382, Reading Expository German II; or FLSP 382, Reading Expository Spanish II, respectively. These courses and their prerequisite courses are described at the end of this section.

Translation examinations in these and other languages are arranged through the Office of Testing Services. Details on the nature of the foreign language examination and how it is administered are available from the Office of Testing Services.

Average proficiency in a foreign language may also be demonstrated by the possession of a degree from a college or university at which that language was the language of instruction.

Course work to be used to satisfy research-tool requirements must be approved by the student's major department and the office of the dean of the Graduate School. Unless the major department specifies a higher grade, an undergraduate grade of C or better, or a graduate grade of B or better, must be received in such course. If course work from another university is to be applied toward meeting research-tool requirements, an official transcript showing satisfactory completion of the course(s) must be provided to the Graduate School.

Students should work closely with their advisers in coordinating efforts to satisfy the Graduate School and departmental language and research-tool requirements with their doctoral research objectives.

FLFR 381. READING EXPOSITORY FRENCH I (3). The development of reading skills through the study of grammar and vocabulary. Translation and discussion of representative texts in the humanities, sciences, and social sciences as appropriate. Open only to graduate students with no prior knowledge of French. Grading is on the S/U basis.

FLFR 382. READING EXPOSITORY FRENCH II (3). Continuation of the development of reading skills through the study of grammar and vocabulary. Translation and discussion of representative texts in the humanities, sciences, and social sciences as appropriate. Open only to graduate students with credit for FLFR 381. Grading is on the S/U basis.

FLGE 381. READING EXPOSITORY GERMAN I (3). The development of reading skills through the study of grammar and vocabulary. Translation and discussion of representative texts in the humanities, sciences, and social sciences as appropriate. Open only to graduate students with no prior knowledge of German. Grading is on the S/U basis.

FLGE 382. READING EXPOSITORY GERMAN II (3). Continuation of the development of reading skills through the study of grammar and vocabulary. Translation and discussion of representative texts in the humanities, sciences, and social sciences as appropriate. Open only to graduate students with credit for FLGE 381. Grading is on the S/U basis.

FLSP 381. READING EXPOSITORY SPANISH I (3). The development of reading skills through the study of grammar and vocabulary. Translation and discussion of representative texts in the humanities, sciences, and social sciences as appropriate. Open only to graduate students with no prior knowledge of Spanish. Grading is on the S/U basis.

FLSP 382. READING EXPOSITORY SPANISH II (3). Continuation of the development of reading skills through the study of grammar and vocabulary. Translation and discussion of representative texts in the humanities, sciences, and social sciences as appropriate. Open only to graduate students with credit for FLSP 381. Grading is on the S/U basis.

Residence Requirement

Residence for the doctorate is required to insure the involvement of the student for at least a minimum period of time in full intellectual activities of the university community. The residence requirement for the doctorate may be fulfilled by completing 27 semester hours of NIU graduate credit within five consecutive academic terms. Graduate assistants and part-time instructors at NIU may fulfill residence requirements by completing the number of semester hours of graduate credit considered a full
course load for a graduate assistant in each of two consecutive semesters. Instructors and other full-time university employees must complete a minimum of 18 semester hours of graduate credit in an 18-month period.

Alternate procedures for meeting the residence requirements may be recommended by the student’s advisory committee, and approved in advance by the department chair and the office of the dean of the Graduate School.

Departmental requirements may be more specific and/or stringent than those of the Graduate School.

A statement of how the student intends to satisfy the residence requirement should be submitted to the Graduate School together with the doctoral program of courses. This residency statement must be signed by the student and the department chair. All course work applied toward meeting the residence requirement must be course work in which graduate credit was earned. Further, hours earned as a student-at-large may not be used in fulfillment of the residence requirement.

**Student-at-Large and Transfer Credit**

At least 50 percent of the minimum number of credit hours required for the doctoral degree in the student’s major must be earned at Northern Illinois University as an admitted graduate student.

Up to a total of 30 semester hours of transfer credit from master’s degree programs completed at other accredited institutions may be applied to meeting the credit-hour requirements of the doctoral degree. A grade of B- or better must have been earned in each such graduate course accepted in transfer from a master’s degree program, and the overall GPA for all such master’s work accepted must be at least 3.00. In addition, with the approval of the student’s committee chair, major department, and the office of the dean of the Graduate School, up to 15 semester hours of credit for graduate courses taken subsequent to the master’s degree and completed with grades of B or better may be accepted in transfer from departments offering graduate programs above the master’s level at other accredited colleges and universities as credit toward a doctoral degree at Northern Illinois University.

In meeting the requirements for the doctoral degree, the total graduate credit accepted in transfer from other accredited institutions, plus credit earned at Northern Illinois University as a student-at-large may not exceed 15 semester hours beyond the master’s degree.

For a student who has not completed a graduate degree at another institution, in meeting the credit-hour requirements for the doctoral degree, the total credit transferred from accredited institutions plus that earned at Northern Illinois University as a student-at-large may not exceed 30 semester hours, with the combined total of credit earned at NIU as a student-at-large and by proficiency examination not to exceed 15 semester hours.

None of the transfer credit accepted toward meeting the requirements of a doctoral program may be in correspondence courses, which are defined in “A Guide to Reading This Catalog” at the beginning of this publication.

The above semester-hour limits may be exceeded on a program of courses only by the use of transfer courses and only if the total semester hours on the program of courses exceeds the minimum requirements for that major by the same number of hours.

In accepting courses in transfer, three quarter hours are considered equivalent to two semester hours. If credit to be accepted in transfer was earned as quarter hours, the transfer credit will be computed in the ratio of two semester hours per three quarter hours.

**Limitation of Time**

Except as indicated below, the student must fulfill all requirements for a doctoral degree within a specified number of consecutive years immediately preceding the date of the student’s graduation from that degree program. The number of years allowed depends on the highest degree held by the student at the time of admission to the program:

1. Baccalaureate degree: ten years
2. Master’s degree: nine years
3. Post-master’s degree: eight years

At the discretion of the student’s major department, the doctoral residence requirement may be met by using course work that falls outside the limitation of time for the doctoral degree, and Ph.D. language/tool requirements may be satisfied with course work and/or examinations falling outside this time limit.

Graduate work taken as part of a previously completed graduate degree program, and additional graduate courses taken at the same institution while enrolled in that degree program, are exempt from this limitation of time. The time limit applies to enrollment in all other graduate course work in the student’s program including work for which transfer credit is allowed. If any such course does not fall within the time limit defined above, the student must demonstrate current knowledge of the subject matter in a fashion approved by the department—by retaking the course for credit or through successful completion of an appropriate examination if available from the department offering the course; otherwise, other course work must be substituted in the program. Transfer courses falling outside the limitation of time may not be used in a graduate program.

**Qualifying Examination**

The student may be required, at the discretion of the major department, to take a qualifying examination. This may be written or oral, or both, testing the competence of the student in the major and related fields. The department may allow a student who fails this examination to repeat it after a period of time determined by the department. A student who fails this examination a second time, or is not granted permission for a second attempt, will not be permitted to continue work toward the doctorate, and admission to that doctoral program will be terminated. A student must be registered in the term in which the qualifying examination is taken.

**Candidacy Examination**

When students have completed most or all of the doctoral course work (except dissertation research), they will take written candidacy examinations. Departments may also require an oral examination. These examinations will cover work in the student’s major department and related fields. The examining committee may allow a student who fails a candidacy examination to repeat it after a period of time determined by the committee. A student who fails a candidacy examination a second time, or is not granted permission for a second attempt, will not be permitted to continue work toward the doctorate, and admission to that doctoral program will be terminated.

A student must be admitted to the doctoral program and must be enrolled in the term in which the candidacy examination is taken. A student must be in good academic standing, both overall and in the degree program, to be eligible to take the candidacy examination.

**Admission to Doctoral Degree Candidacy**

A student must be admitted to doctoral degree candidacy before the doctoral degree can be awarded. The student is admitted to candidacy by the Graduate School following successful
completion of the candidacy examination in the student's major department and upon the recommendation of that department, which may have established additional requirements that must be satisfied before admission to candidacy is recommended.

**Dissertation Requirements**

The dissertation will be a substantial contribution to knowledge in which the student exhibits original scholarship. Its subject must be in the area of the student's major and be approved by the student's dissertation director or dissertation committee. The dissertation presents research that has been conducted under the supervision of a senior member of the graduate faculty from, and nominated by, the major department and approved as the dissertation director by the dean of the Graduate School. The document may not have been published previously, and the research must be successfully defended in an oral examination.

Credit-hour requirements for the dissertation and research are determined by the major department. The dissertation is to be submitted in accordance with the Graduate School regulations found in *The Graduate School Manual for Theses and Dissertations*.

When dissertation research involves human subjects, experimental animals, recombinant DNA, or the use of radioactive substances, special approval is required, as explained under the heading "Protective Standards in Research."

Once a student has begun registration in course number 699 (doctoral dissertation), the student must continue to register in course number 699 in each subsequent term until the dissertation is submitted to and formally approved by the Graduate School. Registration for this purpose may be in absentia. The designation of a dissertation adviser should be approved by the conclusion of the term in which a student first registers for 699. A student who fails to complete this procedure will, upon recommendation of the department, have all accumulated hours in the dissertation course converted to audit (no credit). After the student has registered for the maximum number of hours of credit that can be earned in dissertation research (course number 699), he or she should register as an auditor in 699 each term until the dissertation receives final Graduate School approval.

Any student using the services of the academic staff or the facilities of the university must be registered for the period during which the services are rendered or the facilities are used.

If circumstances prohibit continuing progress on the dissertation, a graduate student must request a leave of absence from the office of the dean of the Graduate School. If a student interrupts registration in course number 699 without obtaining a leave of absence then, upon recommendation of the major department, the student's admission to the degree program will be terminated.

After the dissertation has received final Graduate School approval, the three approved copies are distributed one each to the Founders Memorial Library, the University Archives, and the student's major department. Arrangements have also been made for all NIU doctoral dissertations to be microfilmed by University Microfilms International (UMI). The student is required to complete either the UMI microfilming contract or the UMI publish-abstract-only contract (both available from the Graduate School) and pay the applicable fee. This is a graduation requirement for all doctoral students. In most cases, the student is advised to enter into the full-microfilming contract, under the provisions of which the whole dissertation is microfilmed and made available for distribution through UMI and the abstract is published in *Dissertation Abstracts International* (DAI). This facilitates wide dissemination of the scholarship to other interested parties. In the event that the nature of the work is such that the student may wish to pursue its publication in unit form such as a monograph, the student is designated to the Graduate School, or to have a dissertation defense.

**Composition of Committees**

Committees to conduct the candidacy examination and the oral defense of the dissertation will be nominated by the chair of the student's major department and appointed by the dean of the Graduate School. Membership of candidacy and dissertation examining committees will include representatives of major and minor fields. The number of members on such committees normally will be three to five, and at least three are required. The majority of the committee members must be regular faculty members of the Northern Illinois University; a majority must be members of the graduate faculty; and at least one-half of voting members of each committee must be senior members of the graduate faculty. A person who is not a member of the Northern Illinois University faculty may be a member, but no more than one voting member may be without NIU graduate faculty status. In addition, the dean of the Graduate School will serve as an ex officio, nonvoting member of all committees to conduct the oral defense of the dissertation. The dean or a dean's designee may be present at the defense and may question the candidate.

**Graduation**

When nearing completion of requirements for a degree, a student must submit an application for graduation to the Graduate School. See "Application for Graduation."
Tuition and Fees

Tuition and fees are subject to change at any time. The following statements, which apply specifically to graduate-level students, should be used only as a general guide to expenses. The official charges are those billed by the Bursar's Office during the fee payment period for each term.

### Fall or Spring Semester

#### 12 or More Semester Hours

<table>
<thead>
<tr>
<th></th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$1051.80</td>
<td>$3155.40</td>
</tr>
<tr>
<td>Fees¹</td>
<td>$348.48</td>
<td>$348.48</td>
</tr>
<tr>
<td>Health insurance²</td>
<td>$126.95</td>
<td>$126.95</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1527.23</td>
<td>$3630.83</td>
</tr>
</tbody>
</table>

#### Fewer than 12 Semester Hours

<table>
<thead>
<tr>
<th></th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition per semester hour</td>
<td>$87.65</td>
<td>$262.95</td>
</tr>
<tr>
<td>Fees per semester hour¹</td>
<td>$29.04</td>
<td>$29.04</td>
</tr>
</tbody>
</table>

### Summer Session

#### 12 or More Semester Hours

<table>
<thead>
<tr>
<th></th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$1051.80</td>
<td>$3155.40</td>
</tr>
<tr>
<td>Fees¹</td>
<td>$305.40</td>
<td>$305.40</td>
</tr>
<tr>
<td>Health insurance²</td>
<td>$0-$</td>
<td>$0-$</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1359.20</td>
<td>$3460.80</td>
</tr>
</tbody>
</table>

#### Fewer than 12 Semester Hours

<table>
<thead>
<tr>
<th></th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition per semester hour</td>
<td>$87.65</td>
<td>$262.95</td>
</tr>
<tr>
<td>Fees per semester hour¹</td>
<td>$25.45</td>
<td>$25.45</td>
</tr>
</tbody>
</table>

### Special Fees

- **Application fee**: $30.00
- **Orientation fee for new international students**: $125.00
- **Graduation fee** (nonrefundable): $30.00
- **Late payment fee**: $25.00
- **Off-campus course delivery fee**: $25.00 per semester hour
- **Transcript fee**: $5.00
- **Enrollment certification fee**: $3.50
- **Replacement identification card** (after the first is issued): $10.00
- **Doctoral dissertation (microfilming) fee**: $50.00
- **Nursing thesis (microfilming) fee**: $35.00
- **Examination fees**
  - General Test of the Graduate Record Examinations
    - Paper-and-Pencil Test: $56.00
    - Computer-Based Test: $96.00
  - Subject Test of the Graduate Record Examinations
    - Paper-and-Pencil Test: $56.00
    - Computer-Based Test: $96.00
  - Graduate Management Admission Test: $70.00
  - Special foreign language translation examinations:
    - Average proficiency: $30.00
    - High proficiency: $50.00

Class material fees, where applicable, will be billed as part of the total billing. See the current *Schedule of Classes* regarding those courses that require additional fees.

Upon written request, the Office of Registration and Records will issue transcripts of students' records; a fee of $3.50 is charged for each copy. Transcripts are not issued for persons who have an encumbrance on their record.

---

¹A complete listing of each fee amount and its designated use will be supplied upon request to the Office of Student Affairs.

²Insurance is charged when a student is enrolled for 9 or more on-campus hours.

³Beginning with the summer of 1991, a health insurance fee will not be charged to students during the summer session. Students enrolled in the spring semester who pay the health insurance fee will have coverage through the summer session. New students enrolling in the summer session for 6 or more on-campus semester hours may purchase the insurance.

⁴This fee is established by an outside agency; in the case of microfilming fees, or examinations administered through NIU, the fee is collected by NIU for transmission to that agency.
Payment of Fees

It is the policy of Northern Illinois University to open a Revolving Credit Plan account for each of its students for the purpose of charging tuition and fees, room and board, student book plan purchases, and residence hall long-distance telephone calls. These and similar charges, other debits, payments, and credits for financial aid will appear on periodic statements.

The amount due the university must be settled no later than the payment due date shown on the periodic statement. The account must be paid in full, except that qualifying students will be offered the opportunity to spread the cost of attending the university over a number of payments during an academic term. In general, there are three payments for a fall semester, four payments for a spring semester, and two payments for a summer session. Whenever the account (new balance shown on statement) is not paid in full by the due date, a finance charge is assessed.

You should understand the important information about the NIU Revolving Credit Plan that follows.

<table>
<thead>
<tr>
<th>Annual Percentage Rate</th>
<th>13%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum finance charge</td>
<td>$.50 whenever a finance charge is imposed</td>
</tr>
<tr>
<td>Grace period</td>
<td>If the new balance is paid in full within 14-18 days of the statement date, no finance charge will be assessed. *</td>
</tr>
<tr>
<td>Method of computing balance</td>
<td>Average daily balance (including current transactions during the last interest cycle) **</td>
</tr>
<tr>
<td>Late payment fee</td>
<td>$25.00 ***</td>
</tr>
<tr>
<td>Returned check fee</td>
<td>$15.00</td>
</tr>
</tbody>
</table>

*The exact number of days is determined each month by the Bursar. The payment due date will appear on each periodic statement.

**The finance charge is calculated by applying the periodic rate to the average daily balance of an account (including current transactions during the last interest cycle). The average daily balance is determined by dividing the sum of all daily balances from the interest cycle by the number of days in the interest cycle. The daily balance is computed by adding the new charges and other debits to the account's beginning balance and subtracting any payments, credits, and unpaid finance charges for that day of the interest cycle. The interest cycle begins the day following a payment due date and continues through the next payment due date.

***Late payment may also result in the cancellation of your class schedule. If you reside in university housing, refer to your housing contract for additional information pertaining to penalties and assessments. Refer elsewhere in this catalog for other information pertaining to your enrollment at the university.

The information about the NIU Revolving Credit Plan is accurate as of January 1, 1995. This information may have changed after that date. You should contact the Bursar's Office, Northern Illinois University, DeKalb, Illinois 60115 regarding any changes to the plan.

Tuition and fees are due at the time of registration, unless the Revolving Credit Plan is used. Under certain circumstances, liability for tuition and fees may be reduced, as described below.
Fee Coverage

Activity and athletic fees may be used to support services and privileges such as the following: use of the University Health Service; use of gymnasium facilities and participation in intramural activities; admission to athletic events, concerts, dramatic productions, lectures, and speeches; and subscriptions to certain student publications. Additional charges for such services and privileges may be imposed as necessary.

Refund Policies

In the following discussion of policies governing refunds of tuition and fees it should be understood that "refund" refers to "refund of monies paid" only in cases in which a student has already paid the full balance due. Where payment in full has not yet been made, an equivalent adjustment may be made on the total amount due. If only a partial reduction in tuition or fee liability occurs, a student on the installment plan may still owe an additional amount beyond that already paid. If no reduction in liability occurs, not only will funds paid not be refunded, but the student will be liable for the unpaid balance.

Tuition and fees, due at the time of registration, include tuition, general student fees, material fees, course delivery fees, and health insurance fees. Refunds can be applied for at the Bursar's Office, unless otherwise noted. The following provisions govern refunds of tuition and fees. Note that in this section, the term "refund" is strictly applicable only if all tuition and fees for which the student is liable have already been paid. Otherwise, any refund due will take the form of a corresponding reduction in the total liability on the bill.

1. A student who has registered and officially withdraws from the university may receive a refund of tuition and fees including any advance deposit thereon, according to the following schedule:
   a. If withdrawal is prior to the first regularly scheduled class day—all tuition and fees.
   b. If withdrawal is within the 60 percent point in time of the period of enrollment—a refund equal to the portion of the period of enrollment remaining, rounded downward to the nearest whole percent. If no reduction in liability occurs, not only will funds paid not be refunded, but the student will be liable for the unpaid balance.
   c. If withdrawal is after the 60 percent point in time of the period of enrollment—no refund shall be made.
   d. The university may designate shorter refund periods for special courses, short courses, and other enrollments of a limited nature.

2. Students may receive a refund of tuition and fees if the university declares them ineligible for enrolled status prior to the first day of regularly scheduled classes.

3. Students who reduce the number of credit hours carried to less than a full-time load (but remain enrolled) beginning with the first regularly scheduled class day may receive a refund of tuition and all fees not applicable to their new part-time status, excluding student health insurance. If the number of credit hours is reduced to less than six, the student health insurance may be refunded.

4. Students who reduce the number of credit hours carried to less than a full-time load (but remain enrolled) after the first 15 calendar days beginning with the first regularly scheduled class day may receive a refund of 25 percent of the difference in tuition only. If the number of credit hours is reduced to less than six, the student health insurance may be refunded.

5. Students who have paid tuition and fees may receive a refund if they later receive scholarships which cover tuition and fees. The application for refund must be made no later than 60 days after the close of the term.

6. Students enrolled in courses of study over 15 miles from the campus which require their absence from the campus for the entire semester and who are residing over 15 miles from the campus may receive refunds of activity, student bus, health service, and athletic fees, if their account is paid in full. To receive such a refund, students must apply to the Bursar within the first 15 calendar days beginning with the first regularly scheduled class day.

7. Students who receive financial assistance and withdraw from the university before the midpoint of a term may be required to repay a portion of their award(s) from any university refund which they may have been eligible to receive. The exact amount to be repaid to financial aid accounts will be determined by the amount of aid received, the educational costs incurred, and the length of time attended during the semester.

8. Students enrolled in foreign study programs must adhere to the refund regulations stipulated by the Office of International Programs.

For answers to questions on tuition and fee payment refunds call (815) 753-1885, 8:15 a.m. to 4 p.m.

The above refund policies are subject to change.

University Housing Fees

Costs for university housing vary from $1638 per semester for a 14-meal plan in a double room in one of the "low rise" residence halls to $2168 per semester for a single room with a 21-meal plan in one of the "high rise" residence halls.

Illinois Residence Regulations

The tuition fee for in-state students is charged according to the definitions of residence below. Length of university attendance or continued presence in DeKalb during vacation periods is not considered proof of Illinois residence. The following is based upon Regulations of the Board of Regents, a copy of which is available upon request in the Office of Registration and Records.

1. Adult students. Students 18 years of age and over are considered residents for tuition purposes, if they have been bona fide residents of the state for at least six consecutive months preceding the first class day of the term and continue to maintain that residence. An adult student whose parents are Illinois residents and who lives with them or elsewhere in the state also will be regarded as a resident.

2. Minor students. The residence of a student under 18 years of age is considered to be and follow that of the parents. Self-supporting minors are subject to the same regulations as adults.

3. Exceptions:
   a. Marriage. If a nonresident student marries a resident, the nonresident can request reclassification as a resident.
   b. Armed forces personnel. The nonresident portion of the tuition will be waived for a person on active duty who is stationed and present in the state in connection with that service and who submits evidence of that service and station. Spouses and dependent children who live in the state are also eligible for waivers.
   c. University staff and faculty members. Non-hourly staff members of the university and faculty members of Illinois state-supported institutions of higher education, employed at least one-quarter time, and their spouses and dependent children are considered residents. This includes students employed as graduate assistants.
   d. Teachers. Teachers in the public and private elementary and secondary schools of Illinois are considered residents if they are employed at least one-quarter time.
   e. International students. To be considered a resident, a student who is not a United States citizen must have "Permanent Resident" status or "Refugee" status with
the U.S. Immigration and Naturalization service and must also comply with all other requirements of these regulations.

Students who take exception to the residence status assigned shall pay the tuition assessed, but may file a petition in writing to the Office of Registration and Records for a reconsideration of residence status.

The written claim must be filed within 30 calendar days from the date of assessment of tuition, or the first class day of the term for which tuition is payable, whichever is later, or the student loses all right to a change of status and adjustment of the tuition assessed for the term in question.

**Tuition Waivers for Senior Citizens**

Anyone 65 years of age or older whose annual income is less than $14,000 is eligible to take credit courses tuition free. The student must pay all general university fees and any course-related fees. Available classroom space must exist and tuition-paying students enrolled must constitute the minimum number of required students for the particular class except for credit courses designed specifically for senior citizens. Interested senior citizens should contact the Student Financial Aid Office or the Gerontology Program.
Assistantships, Fellowships, Loans, Scholarships, and Student Employment

Assistantships

Graduate teaching assistantships, graduate research assistantships, and graduate staff assistantships are available to qualified graduate students. Students not admitted to the Graduate School are not eligible to receive graduate assistantships. Assistantship stipends vary among the units offering them, but they may be as much as $9180 for the nine-month academic year, with a few positions exceeding this figure. Assistantships may be extended through the summer session with additional remuneration. Application forms are available from the Graduate School.

The 1986 Immigration Reform and Control Act mandates that any person beginning employment at Northern Illinois University after November 6, 1986, must either be a U.S. citizen or possess current employment authorization from the U.S. Immigration and Naturalization Service. All such employees, including graduate assistants, must be prepared to present original documentation to the employing department/cost center within three days of the reporting date on their employment contract or risk cancellation of the contract. Specific terms of employment and verification procedures must be included in the assistantship offering letter. Further information is available from the Graduate School.

In accordance with State statute, teaching assistants engaged in oral instruction in the classroom shall be persons who possess adequate competence in spoken English (unless the language of instruction is not English). For students whose native language is not English, this competence may be demonstrated by achieving a score of at least 220 on either the Speaking Proficiency English Assessment Kit (SPEAK) administered at Northern Illinois University or on the Test of Spoken English, or a higher score if required by the employing department.

State law also prohibits a person from accepting or retaining a graduate assistantship if that person is in default on the repayment of any educational loan from any public source for a period of six months or more and in the amount of $600 or more, unless a satisfactory loan repayment arrangement is made no later than six months after the start of employment.

The Rhoten A. Smith Assistantship Program has been established at Northern Illinois University to help provide graduate assistantships to minorities and women enrolled in graduate programs in which these groups are underrepresented. The program, named in honor of the university's sixth president, represents part of the institution's commitment to increasing access to graduate education. A Rhoten A. Smith assistantship typically pays a stipend between $495 and $990 monthly and includes a full waiver of tuition. Only U.S. citizens are eligible.

Assistantships are normally awarded to begin in the fall semester. Prospective students wishing to be considered for assistantships are urged to complete their applications for admission to the Graduate School and submit the "Application for Graduate Assistantship" form well in advance of the June 1 deadline, preferably prior to February 15, since many departments make their assistantship offers early in the spring for the following academic year. Further information should be sought from the department in which students wish to major or from any other area in which they wish to work. Students who have received provisional admission to the Graduate School, or tentative admission, early admission, or admission with stipulation, may hold an assistantship during the time of that admission status. Consult the section of this catalog on academic standing for information on how academic probation and dismissal affect assistantship appointments.

Tuition is waived, via a tuition-waiver scholarship, for students during the period of their appointment to assistantships. In addition, tuition is waived for the summer session adjacent to (preceding or following) the assistantship appointment period providing the student is an admitted graduate student during that summer.

Assistantships do not normally provide payment of students' fees. Students who hold assistantship appointments should be prepared to pay the full amount of fees in accordance with published university procedures.

A graduate assistant is obligated to perform at least 20 hours of work per week as specified in the assistantship contract. A student who accepts and later resigns an assistantship (whether or not the term of appointment has begun) may accept another assistantship only if its term of appointment begins no sooner than the start of the academic term following the effective date of the resignation or at least one month after the effective date of the resignation, whichever is the later date, unless the written consent of the former employing unit is submitted to the Graduate School. A resignation should be submitted in writing to the employing unit and to the Graduate School. The effective date of resignation is considered to be the date on which the written resignation is received by the Graduate School. For purposes of this policy the fall term is considered to begin on August 16; the spring term is considered to begin on January 1; and the summer term is considered to begin on May 16.

An appointment to a graduate assistantship shall be for a specified period of time and is accepted by the graduate assistant with the understanding that such an appointment entails no assurance or implication that it will be renewed or extended. The employing unit or the Graduate School may terminate a graduate assistantship by the employing unit, unless that unit has agreed, in writing, to a later starting date. If an assistantship appointment is terminated during an academic term, the student should expect that there will be a proration of any associated tuition waiver scholarship with a concomitant tuition payment liability. Detailed
Graduate assistantships are intended to support students pursuing graduate degrees. A student may hold a graduate assistantship for not more than one academic term beyond graduation from a graduate degree program, unless the student is admitted to and enrolled in an additional graduate program.

Fellowships and Other Awards

Graduate School Fellowships are available to a limited number of outstanding students. They pay stipends of $6,000 for ten months. Tuition (whether in-state or out-of-state) is waived for recipients via a tuition-waiver scholarship. Selection is based upon academic achievement and departmental recommendation—not financial need. Recipients must enroll for 9 semester hours each semester. Students at the master's and “sixth-year” levels are eligible. There are no application forms for Graduate School Fellowships. A student must notify the chairperson of her or his major department, and these awards should contact the chair of her or his major department. NIU Graduate School Fellowships are awarded in the spring for the following academic year.

The Graduate School Minority/Jeffrey T. Lunsford Fellowships are awarded to superior minority students fully admitted to the Graduate School. (Provisionally admitted students are not eligible.) These fellowships enable minority students to pursue a master’s or sixth-year degree. The stipend for this fellowship is $6,000, and the fellowship includes a tuition-waiver scholarship. Support is available only to U.S. citizens who are members of the following underrepresented groups: African Americans, Latinos, and American Indians. Awards are made by the Graduate School with the concurrence of major departments and the Graduate School Minority Fellowship Committee.

Dissertation Completion Fellowships are available for a limited number of doctoral students finishing their dissertations. These nine-month awards carry a stipend of $6,000 plus a tuition-waiver scholarship and modest funds to defray the costs of the student's research. A student applies for one of these awards by submitting a dissertation research proposal to her or his major department, which may recommend the student to the Graduate School for this support.

Carter G. Woodson Scholars are outstanding minority students enrolled in full-time study in doctoral programs in which minorities are underrepresented. The Carter G. Woodson Scholars Program enables current minority teachers/scholars to undertake study for doctoral degrees and in the process achieve greater recognition in their fields and develop professional associations for more effective and productive academic careers. The stipend for these scholars is $14,300 per year plus a one-time $500 travel and relocation allowance; and a tuition-waiver scholarship is provided for the duration of the award. Support is available only to U.S. citizens. Awards are made by the Graduate School with the concurrence of major departments.

For information on externally funded fellowships, the graduate student should contact the Graduate School Grants and Fellowships Office which has organized files on over 600 federal, state, and private funding programs, as well as on each of the internally funded programs listed above; detailed synopses of these have been compiled into a grants and fellowship directory. Individual descriptions include the name, type of support, purpose, eligibility requirements, award amounts, application information, and deadline dates of the granting institution or agency. Directories are currently available for review in the Graduate School and in each department and college office. Graduate School staff are available to assist students in using the directory and in preparing and submitting applications for externally based fellowships. In addition, some academic departments maintain information on external fellowship and student grant support in their specific fields of study.

Loans

Information on student loan programs may be obtained from the Student Financial Aid Office.

Federal Perkins Loan Program

Northern Illinois University participates in the Student Loan Program of the National Defense Act of 1958. Students who demonstrate exceptional need for financial assistance to commence or continue their college education may be able to borrow through this loan program up to a total of $30,000 aggregate for undergraduate and graduate study.

Borrowers at the graduate level must be full-time graduate students and must be, as determined by the university, capable of maintaining good standing in their chosen course of study. Financial need must be determined through application to the Federal Student Aid Programs.

All students applying for a Federal Perkins Loan must submit a Free Application for Federal Student Aid (FAFSA) to the address on the application, preferably by March 1 prior to the academic year financial aid is needed. In addition to submitting the FAFSA, applicants must submit the NIU Financial Aid Application to the Student Financial Aid Office along with signed copies of the prior year’s federal income tax returns; Application forms are available from the Student Financial Aid Office.

Federal Stafford Loan Program

Eligibility for the Federal Stafford Loan Program is based on financial need as determined through application to the Federal Student Aid Programs. Eligible students may borrow from $100 to $8500 per year, up to a $65,500 combined undergraduate and graduate maximum. A student applicant must be:

1. A citizen of the United States or eligible non-citizen;
2. Attending school at least half time (6 semester hours or more);
3. A person capable of recognizing and accepting the responsibility of ultimate repayment of any loan indebtedness; and
4. Not in default on any previous loans and not owing a refund on any Title IV financial aid.

(NOTE: Application should be made by March 1 to receive priority. Loan funds will not be disbursed until the beginning of each semester.)

Students must identify an Illinois lender by code number on the NIU Financial Aid Application. If other than an Illinois lender is preferred, a separate loan application must be obtained from the lender. All applicants must file an FAFSA with the Federal Student Aid Programs. The NIU Financial Aid Application must be submitted along with copies of the prior year’s tax returns to the Student Financial Aid Office.

Federal Unsubsidized Stafford Loan

A Federal Unsubsidized Stafford Loan has been established, with the same terms and conditions as the Federal Stafford Loan Program except that the borrower is responsible for paying interest which accrues during the in-school period. This program is open to students who do not qualify for fully subsidized Federal Stafford Loans. Borrowers may receive both subsidized and unsubsidized Federal Stafford Loans, totalling up to the applicable Federal Stafford Loan limit (if they do not qualify for the full amount permitted under the subsidized Federal Stafford Loan).
The maximum loan amount that can be borrowed per year through both Subsidized and Unsubsidized Federal Stafford Loan programs is $18,500 up to a total borrowing of $138,500 (including undergraduate loans) for a graduate student. The amount of the loans and all other financial aid cannot exceed the cost of education. Interest on loans must be paid every quarter while the student is in school.

**Short-Term Loan Funds**

The Student Financial Aid Office makes available short-term loans to students who encounter unforeseen or emergency expenses during the course of the academic year. (NOTE: Students must be in good academic standing and up to date on payments to the university.) Short-term loans are not available for the payment of tuition and fees. Generally loans are made on a 30-day-repayment basis. The amount of the loan depends on the student's needs and the amount of loan funds available but generally does not exceed $100. Applications may be obtained from the Student Financial Aid Office.

**Scholarships**

The Student Financial Aid Office supervises the awarding of an unlimited number of scholarships funded by private donors for undergraduates. Graduate scholarships are limited. Many of the awards have specific requirements for major academic classification and grade point average. The information for private scholarships can be obtained in the Student Financial Aid Office (SFAO). Scholarship funds are disbursed in two equal amounts, half for the fall semester and the other half for the spring semester, unless the donor indicates in writing that the funds should be disbursed differently. To qualify for NIU awarded endowment scholarships, an applicant must be currently admitted as an NIU student and submit an NIU Financial Aid Application to the SFAO, submit a Financial Aid Form (FAFSA) to the College Scholarship Service by March 1, and submit an individual scholarship card to the SFAO (which is available from the SFAO) by April 1 prior to the academic year for which the scholarship is desired.

**Student Employment**

A variety of part-time employment is available to NIU students, including employment in the Federal Work-Study Program for persons who are eligible on the basis of financial need. Jobs on campus are available in many academic departments as well as in the University Libraries, the University Food Service, the Holmes Student Center, and other university offices. All students who wish to work on campus must register through the Student Employment Office, Swen Parson 245. Assistance in finding part-time off-campus employment is also provided by the Job Development and Location Office.
Scholarly Activities at Northern Illinois University

Creative Work: Research and Artistry

Original research and artistic endeavors are integral to the intellectual life at Northern Illinois University. Members of the graduate faculty are scholars who are expected to engage in research or artistry as part of their regular responsibilities, and thus be aware of, and contribute to, advancements in their fields of expertise. Graduate students, through theses, dissertations, and other independent studies, become introduced to the processes of scholarly inquiry and expression in their academic disciplines. These activities continually confirm the university as an institution dedicated to the pursuit and transmission of knowledge, both basic and applied. The Graduate School is responsible for the general encouragement of research and artistry.

Presidential Research Professorships and Distinguished Research Professorships

The NIU Presidential Research Professorships were established in spring 1982 in recognition and support of the research and artistic mission of the university. Recipients of this award are selected on the basis of significant and sustained scholarly or creative work, including the achievement of national or international reputation in their individual fields. Three such professorships are granted each year, providing budgetary support and released time for research or artistic activities. After four years as a Presidential Research Professor, each of these eminent faculty members is designated a Distinguished Research Professor. Currently, the following are Distinguished Research Professors:

- Carl H. Albright, Department of Physics
- Jan M. Bach, School of Music
- James E. Erman, Department of Chemistry
- Arnold E. Hampel, Departments of Biological Sciences and Chemistry
- Zdenek Hurych, Department of Physics
- Martin F. Kaplan, Department of Psychology
- Stephen R. Kern, Department of History
- Dennis N. Kevill, Department of Chemistry
- Clyde W. Kimball, Department of Physics
- Paul J. Kleppner, Departments of History and Political Science
- W. Bruce Lincoln, Department of History
- Hsin Yi Ling, Department of Geology
- Benjamin L. Mahmoud, School of Art
- John L. A. Mitchell, Departments of Biological Sciences and Chemistry
- Alan C. Repp, Department of Educational Psychology, Counseling, and Special Education
- Thomas D. Rössing, Department of Physics
- Jordan A. Schwarz, Department of History
- Charles W. Spangler, Department of Chemistry
- Bruce H. White, School of Art

Presidential Research Professors are:

- Jonathan H. Berg, Department of Geology, 1991-95
- Cecil H. Brown, Department of Anthropology, 1994-98
- Stephen Foster, Department of History, 1993-97
- C. Michael Gelven, Department of Philosophy, 1993-97
- Samuel Kinser, Department of History, 1994-98
- Joel S. Milner, Department of Psychology, 1992-96
- Marvin A. Powell, Jr., Department of History, 1991-95
- Ross D. Powell, Department of Geology, 1994-98
- Sean N. Shesgreen, Department of English, 1992-96
- Fred H. Smith, Department of Anthropology, 1993-97
- Patricia S. Vary, Department of Biological Sciences, 1991-95
- James F. Willott, Department of Psychology, 1992-96

Presidential Teaching Professorships and Distinguished Teaching Professorships

The NIU Presidential Teaching Professorships were established in 1991 to recognize and support faculty who excel in the practice of teaching. Recipients of this award have demonstrated over time their commitment to and success in the many activities associated with outstanding teaching. Three such professorships are granted each year, providing budgetary support and release time for the enhancement of their teaching activities. After four years as a Presidential Teaching Professor, each of these eminent faculty members is designated a Distinguished Teaching Professor. Currently, the following are Distinguished Teaching Professors:

- Richard E. Baker, Department of Accountancy
- William C. Johnson, Department of English
- Robert F. Wheeler, Department of Mathematical Sciences

Presidential Teaching Professors are:

- Frank Bazelli, Department of Curriculum and Instruction, 1993-97
- Roger W. Cliffe, Department of Technology, 1994-98
- Phyllis Cunningham, Department of Leadership and Educational Policy Studies, 1994-98
- Laszlo Hanzely, Department of Biological Sciences, 1993-97
- Jerry L. Johns, Department of Curriculum and Instruction, 1992-96
- John Niemi, Department of Leadership and Educational Policy Studies, 1992-96
- Mary S. Schriber, Department of English, 1992-96
- Linda R. Sons, Department of Mathematical Sciences, 1994-98
- Sherman Stanage, Departments of Philosophy and Leadership and Educational Policy Studies, 1993-97
External Support for Research and Development

The Office of Sponsored Projects provides a wide range of assistance in the development of proposals for external project funding. The office staff is available by appointment to discuss research projects and to advise applicants concerning strategies and procedures for obtaining grant or contract support.

The Technology Commercialization Office provides assistance in the assessment and screening of new technology, and for the development and testing of prototype inventions. These services are offered to inventors and businesses outside the university as well as to members of the university community.

The office of the associate provost for graduate studies and research serves as the university's intellectual property office, administering institutional policies pertaining to patents, copyrights, and licensing. This office, together with the Office of Sponsored Projects and the Technology Commercialization Office, can assist researchers in dealing with such matters.

The Graduate School maintains a Grants and Fellowships Office specifically to provide information on external support available for graduate students.

University Research Facilities and Resources

To facilitate faculty and graduate student research, the university maintains a wide range of research facilities and resources.

Academic Computing Services

Academic Computing Services (ACS) provides extensive support for research, instructional, and individual computer use to the university community. In addition to walk-in or phone-in consulting, ACS also offers regular workshops and documentation on the use of computers and software on campus. Manuals and audio and video tapes for popular software packages are also available on loan. ACS also provides software under site licenses and volume purchase agreements to departments.

The environments that ACS supports include MVS/Superwylbur, VM/CMS, Unix, MS DOS, Windows, and Macintosh. MVS/Superwylbur and VM/CMS are available on an Amdahl 5890/300E computing system. Unix is available on a parallel-processing Sun SPARCserver 1000 for computer science, a Hewlett Packard 9000/835S in the College of Business, and numerous Sun, Silicon Graphics, and Apollo work stations. There are several DEC VAX/VMS systems in physics. All of these systems are available from offices on and off campus on the packet-switched Ethernet network with access to Internet and systems at other campuses and on the Micom circuit-switched network. All major buildings on campus are connected by optical fibers.

The MVS/Superwylbur system on the Amdahl is the primary central computing resource on campus. Programming languages, including FORTRAN, COBOL, PL/1, Pascal, and IBM 370 Assembler, and statistical analysis software, including SAS, SPSS, and BMDP, are available under MVS/Superwylbur. Electronic mail and file transfer to addresses on BITNET and Internet are available. Department-sponsored accounts are also available through the Computer Center at Swen Parson 120.

MS DOS and Macintosh personal computers are available in several laboratories across campus to students, faculty, and staff during each semester for a nominal subscription fee. The fee covers the cost of maintenance, operation, and staffing. Software for word processing, statistical analysis, numerical presentation, illustration, desktop publishing, database management, and program development is generally available. All laboratories provide access to laser printers. Policies and hours for use are posted in the laboratories. Please contact ACS for further information.

Center for Biochemical and Biophysical Studies

Gordon C. Kresheck, Ph.D., director

The Center for Biochemical and Biophysical Studies encourages and coordinates biochemical and biophysical research and studies within the university at the graduate level. A student earning a graduate degree may, with the consent of his or her department adviser and the approval of the center's director, take a graduate concentration of courses in biochemistry or biophysics. Completion of the concentration will be noted on the student's transcript.

For more specific information, see "Center for Biochemical and Biophysical Studies" in the "Other Academic Units" section of this catalog.

Center for Governmental Studies

Charles E. Trott, Ph.D., director

The Center for Governmental Studies is a multidisciplinary research and public service organization. It is charged with promoting, coordinating, and administering research programs concerned with public affairs and policy issues, and with providing public service to state and local governments, private enterprises, and public-private partnerships. The center cooperates closely with a number of academic departments in the university. Through its externally funded projects, the center provides graduate students from a wide variety of disciplines with unique opportunities to become involved with research and technical assistance programs.

Center for Plant Molecular Biology

Marvin J. Starzyk, Ph.D., director

The Plant Molecular Biology Center is an autonomous unit affiliated with the Departments of Biological Sciences and Chemistry. The center promotes and coordinates graduate study and research in plant molecular biology. Interaction among faculty members enhances the development of interdisciplinary approaches to the solution of specific research objectives. Faculty in the center utilize state-of-the-art equipment in elucidating molecular mechanisms influencing gene expression in plants. Activities of the center link the university's biotechnology research to the needs of local and national businesses and industries. The transfer of technology from the laboratory into industrial and commercial applications constitutes the conclusion of the center's research process.

Center for Southeast Asian Studies

Michael Aung-Thwin, Ph.D., director

The Center for Southeast Asian Studies coordinates academic courses dealing with Southeast Asia and develops and administers other programs in the university which are concerned with this area. A student earning a graduate degree may, with the consent of her or his department adviser, take a concentration of courses in Southeast Asian studies. Completion of the concentration will be noted on the student's transcript.

For more specific information, see "Center for Southeast Asian Studies" in the "Other Academic Units" section of this catalog.
Center for Burma Studies

Richard M. Cooler, Ph.D., director

The Center for Burma Studies was established in 1987 as a repository for multivariable materials on Burma (Myanmar). Included in the collection are an extensive library, the Burma art collection, and the bequest of the late Paul Bennett, a large and most selective private collection of Birmanica that includes rare translations, manuscripts, and objects of art.

All accessioned articles and books are available for scholarly research, subject to the usual conditions.

The center works in coordination with the Center for Southeast Asian Studies in assisting those students who wish to include Burma Studies as part of a concentration in Southeast Asian studies which may then be listed on the student’s transcript. There are 25 courses taught at NIU with significant content on Burma.

For further information see “Center for Burma Studies” in the “Other Academic Units” section of this catalog.

Regional History Center and University Archives

Glen A. Gildemeister, Ph.D., director

The Regional History Center has as its basic goal to acquire, preserve, and make available to the public the most significant historical records of the northern Illinois region. The center actively collects historical material from the 18 northernmost counties of Illinois, excluding Cook County. Since 1964 the center has evolved from a small university archival unit to a multi-faceted research center containing three related sets of historical records available to researchers: Regional Collections, University Archives, and Local Government Records.

Holdings in the Regional Collections include original manuscripts and records generated by private individuals, institutions, and organizations from throughout the area, with particular emphasis on several major themes in the region’s history: agriculture, politics, ethnic heritage, commerce and industry, the role of women, and urban expansion. University records that have permanent historical or administrative value are housed in the University Archives. These materials include Illinois Board of Higher Education and Board of Regents proceedings, records of university administrative offices, faculty papers, records of student government and organizations, a range of publications, and extensive photographs of campus life. The Local Government Records collection, as part of the Illinois Archives Depository system administered by the Illinois State Archives, has the responsibility of preserving local public records and making them available to researchers.

inter-university Consortium for Political and Social Research (ICPSR)

Northern Illinois University is a member institution in the Inter-university Consortium for Political and Social Research (ICPSR). The Consortium was founded in 1962 as a partnership between the Center for Political Studies of the University of Michigan and some 190 other universities, colleges, and nonprofit research organizations in the United States and abroad. It is committed to interdisciplinary inter-university research and training for the social sciences. Its objectives are (1) to maintain archives of machine-readable social and political data sets that will serve a variety of research and training needs; (2) to develop and distribute computer-based systems for the analysis of these data sets; and (3) to conduct training in the use of quantitative methods for social science investigations.

ICPSR is based at the Center for Political Studies at the University of Michigan. A liaison office in the Social Science Research Institute (SSRI) at NIU provides a link for the campus to Consortium archives and other services. Research areas are international in scope. The data sets range from U.S. election returns and U.S. Census data to public opinion surveys. A substantial number of data files on social structure, public policy, economics, health, and political life in over 130 other countries are also available. These data sets lend themselves to comparative research, particularly on modernization processes and social change in many nations. Access to these data is generally via Superwylbur; however, some data files are now available for PC use. For detailed holdings of data available from ICPSR, faculty and students are encouraged to consult copies of the ICPSR Guide to Resources and Services that the SSRI provides to chairs of all social sciences departments on campus.

For further information regarding the ICPSR data may be obtained from Cynthia Nelson, Social Science Research Institute (753-1910).

The Roper Center

Established in 1946, the Roper Center is the oldest and largest archive of sample survey data in the world. The raw data and supporting documentation from thousands of individual studies, carried out in more than 70 countries, have been deposited in the center through the cooperative efforts of the world’s major survey research organizations. Center services include data set duplication, information retrieval, and computer data analysis.

Northern Illinois University is a member institution of the International Survey Library Association, which is an active partnership between the Roper Center and the academic community. This affiliation provides NIU faculty and students with access to center data services, usually at no cost to the individual.

Included in the center’s holdings are surveys by Gallup, Harris, Roper, Yankelovich Clancy Shulman, the National Opinion Research Center (NORC), the Opinion Research Corporation, CBS News/New York Times, ABC News/Washington Post, NBC News/Wall Street Journal, CNN/USA Today, Los Angeles Times, Canadian Gallup, Social Surveys LTD (Gallup) in the UK, and Brule Ville Associes in France. Questions and marginals from the surveys archived at the center can be accessed online and frequently the data sets themselves can be obtained.

Additional information regarding the center and access to its holdings may be obtained from Ellen Dran, Social Science Research Institute, 753-0918.

Social Science Research Institute

J. Harvey Smith, Ph.D., director

The Social Science Research Institute is a multidisciplinary research organization that develops and administers social science research and public service programs. The institute’s staff competes for external research awards and service contracts from federal, state, and local government agencies and from private foundations. The institute specializes in a range of public policy, social assistance, and government management assessment services. The institute cooperates closely with the university’s academic departments, awards research assistantships, and offers instruction in methodology and computer skills to faculty and to students enrolled in degree programs. The institute is the central support office that supervises and coordinates the activities of a number of centers and projects that it houses. These centers and projects contribute substantially to the university’s mission in both applied and basic research and in public service.

For further information, see “Social Science Research Institute” in the “Other Academic Units” section of this catalog.
University Libraries
Arthur P. Young, Ph.D., director

The Northern Illinois University Libraries system consists of Founders Memorial Library and branch libraries which include the Faraday Library, the Hoffman Estates Education Center Library, the Lorado Taft Instructional Materials Center, the Map Library, and the Music Library. The University Libraries collections contain over 1.3 million volumes as well as periodicals, government publications, microforms, maps, recordings, and audiovisual materials. There is also a library located at NIU's Hoffman Estates Education Center. In addition, the Regional History Center houses historical materials on the Northern Illinois region.

Founders Memorial Library, the main library, has five levels with 290,000 square feet of space and seating capacity for 2,200 students. The Faraday Library serves faculty and students in the disciplines of chemistry and physics. Similarly, the Music Library serves the music curriculum; the Map Library contains maps and atlases important to research in geography; and the Instructional Materials Resources Center complements the outdoor teacher education program at the Lorado Taft Field Campus. The Hoffman Estates Education Center Library services the information needs of library users at that site.

For further information, see "University Libraries" in the "Other Academic Units" section of this catalog.

University Press
Mary L. Lincoln, Ph.D., director

The Northern Illinois University Press was founded in 1965, with the general mission of facilitating the advancement of knowledge and disseminating the results of scholarly inquiry. In carrying out its role, the press publishes both specialized scholarly work and books of general interest to the informed public. Most of its titles are in the humanities and social sciences, but it has also published in various fields of science, education, and the arts. As one of three state-supported presses in Illinois, it has an interest in publications that advance understanding of the history, nature, and culture of the region. At present, there are approximately 200 titles in print.

Decisions regarding publication are made by the University Press Board, a faculty committee made up of representatives of the colleges and the University Libraries and chaired by the associate provost for graduate studies and research and dean of the Graduate School. The main function of the board is to assure high standards of quality in all the publications of the press.

The press has been a member of the Association of American University Presses since 1972.
NIU offers a rich variety of recreational, social, and cultural activities and services for the university community.

Organized activities such as intramurals, University Theatre, campus communications media, clubs and organizations, residence hall activities, musical ensembles, forensics, and varsity athletics are plentiful, and welcome student participation. Traditional annual events at NIU (Homecoming, Family Weekend, Springfest, and Unity in Diversity) provide additional opportunities for involvement in campus activities.

There is also a potpourri of individual activities for students to enjoy at their leisure, including mall and lagoon concerts, free music and theatre department performances, dances, films, art exhibits, and lectures. Through the Office of Campus Recreation, one may receive information on recreational sports, informal and outdoor recreation, creative arts, aerobics and other classes, and club sports, as well as schedule the use of gymnasiums, swimming pools, handball, tennis, and basketball courts, and intramural fields. The community’s parks offer opportunities for diversion, all within walking or biking distance from the campus. Public fee golf courses and state parks are also within easy access of the campus.

Activities and Organizations

The Student Association

Each fee-paying student becomes a member of the NIU Student Association (SA) upon entering the university, and all fee-paying students in good academic standing are eligible to run for any elected position or to apply to serve on any of the numerous committees that work within the SA and the university. Established in 1969, the student government is composed of three branches: the executive board, the Senate, and the SA Supreme Court.

The executive branch of the SA consists of the president, vice-president, and treasurer, who are elected every spring, and a staff of student advisers for the following areas: community affairs, welfare, financial aid, minority relations, political action, public relations, academics, and mass transit. Senators are elected every fall and serve as the legislative arm of the SA.

The SA is involved in all facets of student life; its contributions include the campus transit systems, the student legal assistance program, a comprehensive recreation program, campus child care, and a recycling center for the NIU DeKalb area community.

A major function of the SA is to provide students with a voice in the university decision-making process. Through the SA concerns of students are channeled to the university administration, particularly in the areas of academic reform, housing policy, and student services.

Campus Activities Board

The Campus Activities Board (CAB) is a student-run programming organization that provides a variety of activities and entertainment for the NIU campus and community. CAB is made up of several volunteer coordinators and student executives. Each coordinator is assisted by a committee which is responsible for the planning and production of activities in areas such as Unity in Diversity, Comedy Week, Family Weekend, Homecoming, Northern Nite Life, Springfest, special events, coffeehouses, concerts, films, visual arts, speakers, travel, and recreation. CAB has sponsored trips to numerous places such as Europe, Daytona Beach, South Padre Island, Steamboat Springs, Colorado, and several trips to Chicago for shopping, special events, and sporting activities. Supporting committees include advertising, public relations, and corporate relations. These committees help promote CAB and all of the programs it offers.

All students are welcome to join CAB and have the opportunity to gain career-related experience, develop leadership skills, meet new people, and have fun while being involved in programming for the campus.

Student Organizations

Approximately 175 programming organizations, entertainment committees, religious groups, residence hall organizations, fraternities and sororities, service groups, professional organizations, and various special-interest organizations are active on campus. Participation and leadership in these areas can be beneficial to personal and professional growth. Students may obtain more information about a particular club or organization by contacting the respective department or calling the Office of University Programming and Activities, 753-1421.

Honorary Societies

Students with outstanding achievement in various academic and leadership areas are invited into honorary societies and organizations. The objectives of these honor societies are to encourage and record scholarship and accomplishment among
students, to promote the advancement of learning, and to foster meaningful communication between students and professionals.

- Alpha Delta Sigma—advertising
- Alpha Epsilon Rho—broadcasting and speech
- Alpha Eta—allied health
- Alpha Kappa Delta—sociology
- Alpha Pi Mu—industrial engineering
- Beta Alpha Psi—accounting
- Beta Gamma Sigma—business and management
- Delta Pi Epsilon—business education
- Delta Psi Kappa—physical education
- Epsilon Pi Tau—technology
- Eta Kappa Nu—electrical engineering
- Financial Management Association Honor Society—finance
- Gamma Theta Upsilon—geography
- Golden Key National Honor Society—junior and senior honorary
- Kappa Delta Phi—education
- Kappa Omicron Nu—human and family resources
- Lambda Sigma—sophomore honorary
- Mortar Board—senior honorary
- Omicron Delta Epsilon—economics
- Omicron Delta Kappa—junior/senior honorary
- Phi Alpha Theta—history
- Phi Kappa Phi—junior/senior honorary
- Phi Lambda Upsilon—chemistry
- Phi Sigma Iota—foreign languages
- Phi Sigma Kappa—biological sciences
- Phi Sigma Tau—philosophy
- Pi Alpha Alpha—public administration
- Pi Kappa Delta—forensics
- Pi Lambda Theta—music
- Pi Mu Epsilon—mathematical sciences
- Pi Rho Chi Sigma—communicative disorders
- Sigma Delta Pi—Spanish
- Sigma Iota Epsilon—management
- Sigma Pi Sigma—physics
- Sigma Tau Delta—English
- Sigma Theta Tau—nursing

**Campus Communications Media**

The Northern Star, the campus student newspaper, is published Monday through Friday during the academic year. The Star provides NIU with news of the university, community, state, nation, and world. The Star is managed, written, edited, and produced by students, for whom it serves as a professionally oriented working experience.

Towers is the student-run literary magazine. Its contents—poems, short stories, essays, and art work—are chosen from work submitted by students.

Northern Public Radio operates the university's two public radio stations, serving the people of northern Illinois and southern Wisconsin by extending the cultural and educational services of NIU to a wide audience. WNUI 89.5 broadcasts classical music, while WNIU 90.5 airs contemporary jazz and in-depth news and information programming. A third program service is NIRIS, the Northern Illinois Radio Information Service, a radio reading and print-handicapped. Northern Public Radio is operated by a professional staff as part of the Division of Development and University Relations.

WKDI is a student-funded and student-operated commercial radio station. A cable FM stereo system, the station serves nearly 55,000 students and residents of DeKalb and Sycamore. WKDI operates 24 hours a day, seven days a week on 93.5 FM in the residence halls and on the DeKalb/Sycamore cable system. Daily newscasts produced at the Northern Television Center offer students practical experience in the gathering, writing, presenting, and producing of television news and entertainment programs which are aired on Channel 8 of the DeKalb-Sycamore cable television system. Students in art, communication studies, journalism, and meteorology earn academic credit for their work at the television facility on the west campus.

**Music Activities**

The School of Music offers a broad program of activities open to all students, regardless of academic major. Membership in ensembles ranging from small chamber groups to large choral groups is open by audition. More than 200 concerts are presented annually by faculty members, chamber music groups, and large student music organizations.

**Forensics**

Forensics is a voluntary program sponsored by the Department of Communication Studies and designed to provide training in the skills of advocacy through intercollegiate competition (with over 200 colleges in 30 tournaments) using propositions of public policy, societal values, and law. This program also provides experience in other communication skills through individual speaking events such as oratory, extemporaneous speaking, and oral interpretation of literature. In addition, Forensics hosts several annual high school and college tournaments, and sponsors public forums on the campus and in the community. All students are invited to participate regardless of major or prior experience.

**Intercollegiate Athletic Competition**

NIU participates in extensive intercollegiate athletic programs for both men and women. Both the men and women compete in Division I of the National Collegiate Athletic Association (NCAA). The men's and women's programs offer eight sports each.

**Varsity Sports for Men**
- Baseball
- Basketball
- Football
- Golf
- Soccer
- Swimming and diving
- Tennis
- Wrestling

**Varsity Sports for Women**
- Basketball
- Golf
- Gymnastics
- Soccer
- Softball
- Swimming and diving
- Tennis
- Volleyball

**Student Housing**

**University Residence Halls**

Northern Illinois University offers several residence hall options which may appeal to graduate students attending the university. Several floors are designated for students 21 years and older and graduate students. These floors are designed for mature students and should be characterized by an appropriate study atmosphere at all times. In addition, graduate students may apply for either a 21-meal- or 14-meal-per-week plan. Upon acceptance by the Graduate School, a student may apply for an assignment to a university residence hall. All university residence hall contracts are for the full academic year (August-
May, and the fee includes both room and board. Graduate students wishing to apply for an assignment to a university residence hall should contact the Office of Student Housing Services. Application should be made as soon as the notification of acceptance from the Graduate School has been received.

All assignments to university residence halls are made without reference to race, religion, or national origin.

Disabled students who find they may require special residence hall accommodations should contact Student Housing Services, Neptune East (753-1525).

University Family Apartments

Eighty apartments are available on campus for occupancy by family units only. This complex is located immediately north of Lincoln Residence Hall at 501 Annie Glidden Road. There are 40 efficiency and 40 one-bedroom units which are offered furnished with all utilities provided. Cable T.V. service and telephone service are the responsibility of the tenant. Further information and applications for assignment are available from the Office of Student Housing Services.

Off-Campus Housing for Graduate Students

The Office of Student Housing Services maintains listings of rooms, apartments, and houses which are available in the DeKalb area for occupancy by students. Since listings are maintained in card form and change rapidly, they are not mailed but may be used in the Office of Student Housing Services. This office is located in East Neptune Hall, and is open from 8 a.m. to 4:30 p.m., Monday through Friday.

Services

Holmes Student Center

The Holmes Student Center provides recreational facilities, informal gathering places, eating places, meeting and conference rooms, and hotel rooms for members of the university community and guests of the university. Facilities include the Blackhawk Cafeateria, the Center Cafe, the Pheasant Room Restaurant, the Duke Ellington Ballroom and Sandburg Auditorium for major performances and lectures, Diversions—a multipurpose facility for coffeehouse and club-style live entertainment—and the Center Gallery, which displays the works of many student artists. There is also the Huskies Den, which offers electronic games, billiard tables, and a 16-lane bowling center, and an 81-room hotel facility which is available for the university community and guests of Northern Illinois University. The Bookstore sells textbooks, general books, school and art supplies, and personal items.

Tickets to most campus events may be acquired or purchased in the center. The facility provides coin operated copy machines and Automatic Teller Machines for banking services. Students can cash checks, study in the Browsing Room, or relax in the television lounges. At the Holmes Center information desk, students can purchase newspapers, candy, and novelties and get directions and information on events and activities in the center. At the Campus Assistance and Information Center desk, located on the main level, information is available to answer questions on university events and activities on campus and in the DeKalb area. Tours of the campus can be arranged at this desk throughout the year.

University Health Service

The University Health Service (UHS) provides a wide variety of primary health care services to help students maintain and improve their health. The UHS also provides health education and illness prevention programs as well as advocacy and support services for persons with disabilities. The UHS is available to all students, full or part time, who are registered and have paid on-campus tuition and fees. By presenting a valid NIU photo ID, students have access to quality health care that is conveniently located on campus. The general student fee covers most of the services provided at the UHS.

Fall and Spring Semester Hours:
- Regular full-service clinic: Monday-Friday, 8 a.m.-4:15 p.m.
- Acute Care Clinic: Monday-Friday, 8:00 a.m.-6:45 p.m.; and Saturday, 10 a.m.-2 p.m.
- Pharmacy: Monday-Friday, 8 a.m.-7 p.m.

Summer Session Hours:
- Regular full-service clinic: Monday-Friday, 8 a.m.-4:15 p.m.
- Pharmacy: Monday-Friday, 8 a.m.-4:30 p.m.

To meet students' health needs and concerns, UHS offers a wide variety of physician-supervised clinical services including laboratory, pharmacy, physical therapy, and x-ray:
- Acute Care Clinic—available for all injuries including sports-related injuries and acute illnesses, as well as minor surgical procedures. An appointment is not necessary for acute care.
- Allergy Clinic—administration of allergy injections.
- Gynecology Clinic—family planning sessions and services, examination for and treatment of gynecological illnesses.
- Immunizations/travel and related services—immunizations, tuberculosis testing, anonymous HIV testing, contagious disease testing and follow up, and travel immunizations and counseling.
- Jiffy Care: Self-Serve Cold Stop—self-care service which allows self-diagnosis and treatment of colds.
- Medical Clinic—assessment and treatment of acute or chronic medical conditions. Students are encouraged to call 753-9594 so the UHS nurse can schedule an appointment.
- Nutrition counseling—on an individual basis.
- Psychiatric care—available with a psychiatrist.

In addition to clinical care, the following services are available at the Health Service:
- Center for Access-Ability Resources (formerly Services for Students With Disabilities)—provides advocacy and support services for students with mobility impairments, hearing impairments, vision loss, learning disabilities, diabetes, epilepsy, severe asthma, and other special needs.
- Health Enhancement Services (HES)—provides information, media training, and policy recommendations to promote health and prevent disease among well students.

The UHS does not pay for medical care received elsewhere; students are responsible for payment. This policy applies both to students who have been referred by the UHS to a local area specialist, dentist, health care facility, or hospital emergency room for care, and to students who require health care services during hours that the UHS is closed. Students are advised to check their health insurance coverage to determine if some or all of the expenses are reimbursable.

A separate student health insurance plan is available for off-campus care. However, students may still use the UHS at no additional charge even if they do not carry the NIU insurance plan. For more information about the student health insurance plan, phone (815) 753-0122.

For additional information regarding the UHS, call (815) 753-1311.

Student Health Insurance

The student health insurance plan provides benefits 24 hours a day, anywhere in the world, for covered medical expenses including hospitalizations and office visits for accidents and illnesses. All undergraduate and graduate students who have registered for 9 or more on-campus semester hours by the thirtieth calendar day of the fall or spring semester are
automatically charged the fee for student health insurance on their tuition account through the Bursar’s Office.

Students registered for 6-8 on-campus semester hours are eligible for coverage but are not charged the fee automatically on their tuition account. These students may apply for coverage in person at the Student Insurance Office within the first 15 calendar days of the semester to enroll and pay for coverage. All international students are assessed the student health insurance fee regardless of the number of hours for which they are enrolled.

Eligible dependents of insured students, including spouse and unmarried children who depend on the student for support and are under 19 years of age, may also be insured. The insured student may apply and make payment for dependent coverage at the Student Insurance Office within the first 15 calendar days of the semester.

Students who have been assessed the student health insurance fee and can provide proof of equal or better coverage may apply for cancellation of insurance fee. To apply for cancellation, students must complete a cancellation form and submit it with proof of other coverage to the Student Insurance Office by the 15th calendar day of the semester. Acceptable proof of other coverage includes a copy of an insurance I.D. card or an eligibility letter from the employer or insurance carrier. Students who cancel their insurance during the fall semester are not charged an insurance fee for the spring semester.

Students and their dependents who are insured for the spring semester are automatically covered through the summer whether or not they enroll in the summer session. New students entering the university for summer session who are registered for 6 or more on-campus semester hours may elect to purchase student health insurance for themselves and their dependents by making application at the Student Insurance Office during the first four days of the regular summer session.

Students who withdraw from the university during the first 30 calendar days of the semester due to medical reasons must immediately contact the University Health Service and Office of the Vice President for Student Affairs as well as their college advisement office if they have paid for and wish to retain their student health insurance coverage.

A booklet with information concerning the student insurance plan may be obtained from the Student Insurance Office located at the University Health Service building, lower level.

**Campus Information Center**

The Campus Information Center provides information about campus and community events and referral services for students, parents, faculty, staff, and visitors by telephone and in person.

Additional services include course registration information, information about class closings during severe weather, a system for relaying family or medical emergency information to individual students in class, and a system for reporting student absences of at least five consecutive class days to instructors. The center also offers COMPOOL, a matching service for commuting students interested in forming carpools to campus, a rider’s driver’s board for one-time ride sharing, and campus tours.

A person needing more information or wishing to make use of the above services should contact the Campus Information Center, (815) 753-1157.

**Center for Access-Ability Resources (Services for Students with Disabilities)**

In concordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, the university provides support services for students with a variety of disabilities.
Career Planning and Placement Center

The university helps its students identify and secure employment through the Career Planning and Placement Center (753-1641), a centralized office serving all departments.

Services available for students include:
1. Individual counseling about job-related concerns;
2. Workshops and seminars focusing on job search strategies, resume writing, interviewing, and related topics;
3. On-campus opportunities to interview with employers;
4. Assistance in locating part-time/temporary off-campus employment;
5. Permanent credentials files for students in education, nursing, and social services;
6. Current job vacancy listings and bulletins;
7. Alumni resume referral service; and
8. A library of job search publications, employer information, and a variety of specialized directories.

The center is open Monday through Friday during regular university office hours. Staff members are available for students and alumni on an individual basis during these hours. Special arrangements can be made for workshops and seminars for student groups and classes during regular office hours or at other times.

Office of Campus Recreation

Located in the Student Recreation Center, the Office of Campus Recreation provides a broad-based recreation program for the entire university community. Activities include intramural sports (organized tournament play), creative arts, fitness/weight training opportunities, aerobics, sports clubs, and outdoor adventures such as canoeing, backpacking, kayaking, caving, and rock climbing. In addition to organized activities, the student recreation center and swimming pools are open for self-directed pursuits: facilities for basketball, volleyball, badminton, table tennis, tennis, pickleball, and a three-lane jogging track are available. Tennis racquetball/handball/wallyball courts, five with viewing walls, are also included. In addition, there is available a weight training room fully equipped with free weights and a fitness room with hydrafitness machines, exercise bikes, rowers, ski trainers, and stairmasters. Locker and shower facilities with sauna are provided. The Student Recreation Center will be constructing an addition to the facilities. Two additional multipurpose courts, along with a 6000 square foot cardio-weight room with all of the latest fitness equipment and a fitness assessment area will be added to the center. This will provide even greater availability of equipment and space for students. The Student Recreation Center will be fully operational during the construction of the addition. The anticipated date of opening the addition is fall 1995. For more information call 753-0231. Equipment for outdoor pursuits is available for checkout through the Outing Centre located on the west end of the student recreation center. For more information call 753-9423.

The Creative Art Centre, located at the east end of the recreation center, is fully equipped with a woodshop, ceramic, and jewelry laboratory. The Photo Lab is a fully equipped darkroom located in Neptune Hall North, lower level. For more information call 753-9425.

Cars on Campus

Any student may drive a car on campus, but parking facilities are limited and controlled. Parking lots are color-coded; all vehicles, including motorcycles and mopeds, must display an appropriate permit. Campus Parking Services is located on the corner of Normal Road and Lincoln Terrace. Brown, orange, and yellow parking permits are available to any student. Brown parking is on the extreme edge of campus (and in many staff lots after 4 p.m.); orange parking (near the residence halls) is limited to students living in university-owned housing; yellow parking is for commuting students. Additional parking privileges may be extended to physically handicapped students.

Fifteen-minute loading and unloading spaces are scattered throughout campus and require no special identification other than the use of the vehicle’s emergency flashers.

Campus Transportation

NIU maintains the largest university bus system in Illinois. The 13-bus system, governed by the Student Association Mass Transit Board, provides free transportation for all fee-paying students to campus and the DeKalb-Sycamore communities. The Huskie buses are in operation seven days a week while school is in session during the fall and spring semesters, and for limited hours during summer school. All Huskie buses are equipped with chair lifts to provide all students easy access to and from campus, shopping, and entertainment areas. For more information, call the Student Association at (815) 753-9922.

In conjunction with the University Police, the Mass Transit Board runs Late Nite Ride Service, which provides safe passage home for students. The service operates Friday and Saturday nights from 2 a.m. to 6 a.m. and can be reached at 753-2222.

Through the Huskie Bus System and the Center for Access-Ability Resources, the NIU Student Association operates the FREEDOMMOBILE which provides transportation around the campus and vicinity for disabled students. During winter months class-to-class transportation is available. For more information, call the Center for Access-Ability Resources at (815) 753-1303.

Employment for Spouses of Students

The university encourages students’ spouses who are interested in full-time or part-time employment to contact the Operating Staff Services Office in the Human Resource Building. The university employs approximately 1,850 nonteaching employees in approximately 400 different types of professional, clerical, secretarial, and service jobs. Northern Illinois University is an equal opportunity/affirmative action employer.

Child Care

The Campus Child Care Center at NIU is a licensed facility which is accredited through the National Academy of Early Childhood Programs. The center provides a supportive service for families of students, faculty, and staff and is staffed with a director and qualified degreed teachers who design an educational program for children from 2 through 6 years of age. Each child has the opportunity to express his or her own ideas and feelings through a well-rounded curriculum including activities in the areas of art, language, large and small motor development, literature, science, math, dramatic play, music, and creative movement. Nutritious breakfasts, lunches, and snacks are served each day.

The center is located in Gabel Hall 170 and operates between the hours of 7:30 a.m. and 5:30 p.m., Monday through Friday. Additional information may be obtained by writing the Campus Child Care Center, or calling 753-0125.

Veterans’ Educational Benefits

The Veterans Assistance Office provides a liaison between the Veterans Administration and student veterans and the dependents of deceased veterans regarding their educational benefits. The office assists veterans, their widows or widowers, and their minor dependents in the processing of their applications and certification of their enrollment. Assistance is also provided when difficulties arise concerning receipt of the benefits for which students are eligible. Applications are also available for the Illinois Veterans’ Grant, the Illinois National Guard Grant, and the Illinois MIA/POW Scholarship.
Incoming veterans are advised to contact the Veterans Assistance Office 45 days prior to the start of the semester to complete paperwork to receive their benefits. Veterans receiving benefits must complete a program card each semester and notify the Veterans Assistance Office of all changes in enrollment. Inquiries concerning educational benefits for veterans and their dependents may be directed to the Veterans Assistance Office, Northern Illinois University, DeKalb, Illinois 60115-2872. Telephone: (815) 753-0691. Office hours are 1-4:00 p.m., Monday through Friday.

**Students' Legal Assistance Office**

Two Illinois attorneys and their staff provide legal information and assistance to eligible fee-paying NIU students. The office handles a large variety of cases including landlord-tenant, criminal misdemeanor, traffic, consumer, discrimination, tort, public benefits, employment, and domestic relations.

The operation is funded by the Northern Illinois University Student Association. The attorneys are prevented by their contracts and the Code of Professional Ethics from handling matters relating to Northern Illinois University and matters between Northern Illinois University students. Persons able to procure private counsel are not eligible for litigational representation.

In addition to direct legal services, the lawyers have instituted a mediation service to handle problems between students and have developed an extensive "preventative-law" program designed to prevent problems through community education. Handout materials include a Tenant/Landlord Handbook, Roommate Survival Guide, Sexual Assault Handbook, Used Car Buyer's Guide, a Traffic Ticket Handbook, and legal forms including subleases, room condition reports, and roommate agreements.

Since the lawyers are extraordinarily busy, it is preferred that appointments be made. The offices are located in the Holmes Student Center and can be reached by calling 753-1701.

**Office of the Ombudsman**

The Office of the Ombudsman exists to provide members of the university community neutral and confidential assistance and advice regarding concerns related to the university. The staff of the office is prepared to provide information designed to address any concerns or grievances.

The services of the ombudsman are available to every member of the university community—students, staff, and faculty. Any type of concern may be brought to the attention of this office: academic, financial, housing, consumer, work-related, or personal. The ombudsman will listen to your concern, help you explore options, offer suggestions and advice, and assist you in the resolution of your concern.

Mediation services, direction and referral to appropriate individuals and offices, and clarification of university policies and procedures are distinctive services of the office. All communications with the Office of the Ombudsman are held in strict confidence.

The Office of the Ombudsman is located in the Holmes Student Center, Room 709. Appointments may be made by calling 753-1414.

**International Student and Faculty Office**

The International Student and Faculty Office provides a variety of services for international (foreign) students and faculty. For further information see the "International Programs" section of this catalog.

**Assistance for Hearing Impaired Students**

In conformance with Section 504 of the Rehabilitation Act of 1973, the university provides support services for students who are deaf or hard of hearing. Students may request such services at Room 313, Adams Hall, or write to: Services for Higher Education of the Hearing Impaired, Department of Communicative Disorders, Northern Illinois University 60115-2854.

**Office of University Resources for Women**

The Office of University Resources for Women serves to coordinate and expand university programming and services for women. It cooperates with appropriate campus offices and organizations in the design and implementation of programs, support services, research, recruitment, and social activities related to women, particularly those reentering higher education.

**Center for Black Studies**

The Center for Black Studies is an academic and research center that collects and analyzes data on all aspects of minority experiences, particularly those of blacks. The center also coordinates an interdisciplinary undergraduate minor in black studies. In addition, the center seeks to stimulate students' professional and career interests through the sponsorship of various distinguished speakers and cultural events.

**Center for Latino and Latin American Studies**

The Center for Latino and Latin American Studies facilitates the study of Latinos in the United States and their countries of origin. The center administers the undergraduate minor in Latino and Latin American Studies, sponsors colloquia, funds research, and offers additional support services to graduate students and faculty with research interests in these fields.

**Office of University Resources for Latinos**

The Office of University Resources for Latinos offers a variety of programs and activities designed to assist, encourage, stimulate, and motivate Latino students. Some of the services available include the provision of cross-cultural counseling, career information, referral to the appropriate university office so students may obtain the administrative and academic assistance they require, a peer mentor program, and other general support services.

**Office of Testing Services**

The Office of Testing Services, located in Altgeld Hall 125, provides a variety of services to students and faculty. This office administers many of the tests associated with course placement, departmental qualification requirements, university graduation requirements, and admission to graduate and professional schools. Testing Services maintains files of test scores and serves as the campus location to which scores on tests taken at other institutions or test centers may be directed.

**External Programming**

Graduate credit courses are offered off campus by the Colleges of Business, Education, Engineering and Engineering Technology, Liberal Arts and Sciences, Professional Studies, and Visual and Performing Arts. For a list of off-campus graduate course locations, students should consult the spring, summer, and fall Schedule of Classes. In addition, the Illinois Board of Higher Education has authorized several NIU graduate degree programs to be offered in a number of specific areas, primarily in the Hoffman Estates, DuPage, and Rockford areas. These programs include:
College of Business: Master of Business Administration
College of Education: Master of Science in Education with majors in adult continuing education, counseling, curriculum and supervision, early childhood education, educational administration, elementary education, outdoor teacher education, reading, school business management, secondary education, and special education.
College of Liberal Arts and Sciences: Master of Public Administration and Master of Science with a major in computer science.

Students admitted to the NIU Graduate School or accepted as students-at-large may enroll in off-campus (as well as on-campus) classes for graduate credit. Adult students who are exploring various disciplines before formal commitment to a degree program may enroll under the student-at-large status in off-campus classes. Others may wish to pursue noncredit courses for personal or professional development. Students should consult with graduate advisers in their chosen field, and should become familiar with the regulations in this catalog, to determine the amount of credit earned as a student-at-large that may be applied to their graduate degree programs.

The university also provides professional development experiences in a variety of appropriate formats, such as one-day workshops, seminars, conferences, training programs, short courses, guided individual study courses, and consultations. Enlisting the instructional and research expertise of the diverse university faculty, the university matches these resources with the articulated needs of practicing professionals. Many of these short courses are tailored to meet the professional needs of a particular agency or business. Others are offered more broadly, attracting participants from across professions, communities, and employers.

The Illinois Council on Economic Education coordinates the continuing education activities of ten university centers for economic education throughout the state. The council’s activities involve inservice and preservice teacher training in economics and the development, distribution, and evaluation of economic education materials. The council also offers services for students, adults, employee groups, and other interested community and professional groups.

A regional Office for Economic Education provides services, materials, and consultation to school systems throughout 15 counties in northern Illinois. Thirty-six school systems in this region are formally committed to economic literacy through the Economics America Schools Program. Graduate-level courses for teachers, workshops and awareness programs, curriculum review, and classroom materials for teaching economics are among the offerings available through the Office for Economic Education.

Cooperative Education/Internship Program

The Cooperative Education/Internship Program provides an opportunity for students to apply their advanced skills to a position within the career field of their choice during their academic training. The Cooperative Education/Internship Program assists graduate students in fulfilling the practicum/internship requirements of their academic programs. Cooperative education positions and internships are typically paid and located with approved employers. Academic credit may be arranged through the appropriate academic department. Participation in the Cooperative Education/Internship Program requires students to enroll in a degree-granting program, to have career goals related to the type of work experience available through the program, and to obtain the approval of the appropriate cooperative education coordinator. Information about the Cooperative Education/Internship Program may be obtained from the Cooperative Education/Internship Program office, Campus Life Building, Room 240, 753-7138.

Development and University Relations

The Division of Development and University Relations is responsible for increasing awareness, interest, and support of Northern Illinois University.

Offices within the division are responsible for fund raising and development projects as well as for promoting the university to its constituent groups through events and internal and external communications.

The Office of the Vice President for Development and University Relations provides administrative direction to the Offices of Alumni Relations, Corporate/Foundation Relations, Development, Publications, Printing, and to the News Bureau and Northern Public Radio, the university’s public radio service. The office also coordinates the efforts of the Alumni Association and the NIU Foundation boards.

Each year, alumni and friends of Northern Illinois University make gifts totalling more than $2 million that benefit scholarships, academic programs, facilities, and athletics, as well as other endeavors. This support is in the form of direct gifts, wills and bequests, insurance plans, trust funds, or property. Gifts to the university from private sources are channeled through the Office of Development and the Northern Illinois University Foundation.

Alumni Association

The Northern Illinois University Alumni Association is an organization of graduates and other former students which fosters a continuing relationship with the university. The association is dedicated to serving NIU and its alumni by providing a program that enhances communication and support by alumni for the university.

The Alumni Association helps to publish Northern Now, which is mailed to all graduates, interested former students, and friends of the university. The association offers programs throughout the year, on campus and off, designed to appeal to the diverse interests of alumni. Through its Annual Fund, the Alumni Association provides merit scholarships to outstanding students, supports NIU libraries, and assists financially with special university and academic departmental activities. All graduates are members of the Alumni Association, and active membership is conferred upon those alumni who assist the university and the Alumni Association with a financial contribution of any amount.

The Alumni Association is in the NIU Broadcast Center and is part of the Division of Development and University Relations. The director of alumni programs works with a policy-making body of elected alumni who serve on the board of directors and with alumni volunteers who serve the university in many roles. The Alumni Association works closely with the NIU Foundation, which is established to receive major gifts for Northern Illinois University’s development as an institution of higher education.
Northern Illinois University Foundation

The Northern Illinois University Foundation is a nonprofit, tax-exempt corporation that assists to develop and increase the facilities and programs of the university and to encourage gifts of money, property, works of art, or other material having educational and historical value. It receives and administers such gifts to support university programs with supplemental resources where state funding is non-existent or inadequate.

The foundation is governed by a board of directors consisting of elected representatives of alumni and friends. This board is empowered to transfer to the university any property assigned or conveyed to it. The foundation provides educational fund-raising for the university.

One of the foundation's major projects is the support of the Outstanding Scholar awards, which provide scholarships to outstanding high school graduates. The foundation also provides departmental and general university support.

Additional information may be secured through the Office of Development.
College of Business

David K. Graf, Ph.D., dean
Peter F. Kaminski, Ph.D., acting associate dean
Wayne L. Albrecht, M.S., assistant dean

Accountancy
Finance
Management
Marketing
Operations Management and Information Systems
ADMISSION TO GRADUATE PROGRAMS IN BUSINESS

Admission to the various graduate programs in business is competitive and limited to those candidates who can demonstrate high promise of success in a graduate business degree program. In addition to compliance with the policies of the Graduate School, the College of Business considers several indicators of potential for success in graduate business studies including, but not limited to:

1. a minimum cumulative grade point average (GPA) of 2.75 (based on a 4.00 system) at the baccalaureate institution, or a minimum cumulative GPA of 2.75 in the last 60 hours of the baccalaureate program, or the completion of 15 or more semester hours of graduate work at an accredited institution with a minimum GPA of 3.20.

2. The total score and verbal and quantitative percentiles on the Graduate Management Admission Test (GMAT) standards set by the individual graduate programs in business.

3. Work experience at the post-baccalaureate level, where applicable.

4. Leadership and communication skills as documented in a goals statement and resume.

5. A minimum of two letters of recommendation.

6. Submission of results on the Test of English as a Foreign Language (TOEFL) for all applicants whose native language is not English.

At the discretion of the respective program directors, candidates may be required to come in for an interview or to submit additional materials deemed important in assessing potential for success in graduate business studies.

GRADUATE STUDY IN BUSINESS

The College of Business offers the following master’s degree programs: the Master of Business Administration (M.B.A.); the Master of Accounting Science (M.A.S.), with an area of study in general accounting or accounting systems or with a specialization in taxation; and Master of Science (M.S.) programs in finance and management information systems. These programs are accredited by the American Assembly of Collegiate Schools of Business (A.A.C.S.B.).

All master's degree programs consist of two phases. Phase One (a minimum of 18 semester hours) is designed to compensate for deficiencies in undergraduate course work or experiences considered to be prerequisites for the Phase Two (30 semester hours) graduate course work. The M.A.S. and M.S. in management information systems programs have additional requirements which are discussed in the sections describing these programs.

Whether enrolled on or off campus, all students must have access to business library material and a personal computer with spreadsheet and word processing software.

Limitation of Time

All Phase Two requirements must be met within six consecutive years. This time limitation commences with entry into the first Phase Two course, including work for which transfer credit is allowed. If a course taken to complete the requirements for Phase Two does not fall within the six-year period allowed for the degree, the student must demonstrate currency by examination or by repeating the course.

Students-at-Large

Students-at-large are normally prohibited from registering for graduate business courses.

Phase One

Phase One requirements must be included in a student's program of courses unless a grade of C or better has been earned in corresponding undergraduate courses, or a grade of B or better has been earned in equivalent graduate courses elsewhere, or a "Pass" has been achieved on the first and only attempt of the Phase One exemption examinations. Phase One courses may not be used as Phase Two electives; credit earned in Phase One will not count toward the 30-semester-hour degree requirement in Phase Two.

The Phase One program consists of:

ACCY 505, Financial Accounting Concepts (2)
FINA 505, Fundamentals of Financial Management (2)
MGMT 505, Principles of Management (2)
MGMT 511, Legal Aspects of Business (2)
MKTG 505, Graduate Survey of Marketing (2)
OMIS 500, Survey of Business Economics (2)
OMIS 505, Principles of Operations Management (2)
OMIS 507, Business Information Systems (2)
OMIS 524, Business Statistics (2)

Total: 18 semester hours

The pre-program prerequisite of finite mathematics or a first course in calculus should be completed prior to entering a graduate program in business.

Phase Two

Phase Two consists of an advanced core and electives. See the respective master's degree program sections for specific Phase Two requirements. Students must file and follow an approved program of courses.

MGMT 672, Strategic Management and Policy, must be completed by all M.B.A. students, and by all M.A.S. students who have not completed a capstone course in strategic business problems and decision making.
Master of Business Administration (M.B.A.)

The primary mission of NIU’s M.B.A. program is to serve business and other organizations by preparing students to be leaders. The themes of a global view of business, leadership, ethics, and communication are important and integral parts of the program. Students are encouraged to integrate these themes into term papers, case presentations, and classroom discussions.

Phase One

See Phase One requirements listed under “Graduate Study in Business.”

Phase Two

Phase Two consists of seven required core courses (21 hours) and three electives (9 hours). The Phase Two required courses are:

- ACCY 630, Managerial Accounting Concepts (3)
- FINA 607, Financial Analysis (3)
- MGMT 635, Organizational Behavior (3)
- MGMT 672, Strategic Management and Policy (3)
- MKTG 654, Marketing Management (3)
- OMIS 627, Operations Analysis (3)
- OMIS 640, Management of Information Systems Technology (3)

Electives (9)

Total: 30 semester hours

Elective courses may be selected from among the graduate course offerings in the College of Business, or elsewhere in the university with the prior approval of the student’s M.B.A. academic adviser, and should be used to meet particular career objectives. Students are required to take a minimum of 24 semester hours of Phase Two course work in classes reserved exclusively for admitted graduate students. Upon approval of the office of graduate studies in business, a maximum of 6 hours of 400-level courses offered for graduate credit may be included in a student’s Phase Two program of courses.

Executive Master of Business Administration

The executive M.B.A. program is designed to meet the needs of working executives who desire to earn the degree while continuing to work full time in an organization. Students must have had five or more years of previous managerial experience and be sponsored by their employer. While participating in the executive M.B.A., students continue working full time. Courses are offered on Saturdays for four semesters. Students may begin the executive M.B.A. only in the fall semester. For further information contact the executive M.B.A. office, (815) 753-0257.

Master of Accounting Science (M.A.S.)

The objective of the Master of Accounting Science program is to provide its graduates with technical expertise and competence for advancement in industrial, public accounting, government, and nonprofit organizations. The courses emphasize analysis of alternative theory structures and integrate practical problems, case studies, and studies of socioeconomic phenomena involving uncertainty.

The educational experience enables students to develop further their intellectual, interpersonal, and communication skills and professional orientation. Additionally, the educational experience enables graduates to develop the motivation and ability to learn throughout their careers.

Admission standards for the Department of Accountancy are:
1. a baccalaureate degree from a regionally accredited institution;
2. appropriate quality of prior academic achievement;
3. a minimum 3.00 GPA in undergraduate accountancy courses; and
4. satisfactory scores (verbal, quantitative, and total) on the Graduate Management Admission Test (GMAT).

Phase One

See Phase One requirements listed under “Graduate Study in Business.”

Phase Two

The graduate Phase One requirements must be included in the student’s program unless a grade of C or better has been earned in the corresponding undergraduate courses. A student with a baccalaureate degree in business and acceptable undergraduate grades may have already satisfied Phase One requirements.

In addition to Phase One, the student must show proficiency in the following accountancy courses. This requirement must be satisfied for specific courses in one of two ways:
1. credit with a grade of C or better, or
2. acceptable performance on a proficiency examination.

However, the GPA earned for all courses in the group must be 3.00 (a B average) or above.

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)
- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

None of the above courses may be counted as accountancy electives in Phase Two.

The writing of a thesis is optional. It is recommended that MATH 211 or MATH 229 be taken in addition to MATH 210.

Phase Two

Students pursuing the Master of Accounting Science will select one of the following two alternatives: (1) with no specialization but one of two areas of study or (2) with a specialization in taxation.

Master of Accounting Science: No Specialization

The student is required to complete a minimum of 30 semester hours of work beyond Phase One and the baccalaureate degree. Of these 30 semester hours, 21 must be in classes reserved exclusively for admitted graduate students and 15 of the 21 hours must be in accounting.

To facilitate pursuit of an area of study within the field of accounting, the department offers courses in two areas of study: general accounting and accounting systems. Each student will fulfill the requirements of one of these areas of study.

Core Requirements (9 hours)

- Corporate Tax: ACCY 644, Survey of the Taxation of Business Entities (3), or ACCY 647, Corporate Taxation (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)

- ACCY 440, Auditing Theory (3)
- ACCY 455, Individual and Business Taxation (3)

- ACCY 314, Intermediate Accounting I (3)
- ACCY 315, Intermediate Accounting II (3)
- ACCY 330, Intermediate Cost Accounting (3)
Research: ACCY 603, Professional Research Methodology (3), or ACCY 645, Professional Tax Research (3)
Seminar: ACCY 663, Seminar in Accounting (3)

Additional Accounting Requirements (6-9 hours)
Choose one area of study
General Accounting:
ACCY 632, Cost Management Theory (3)
Accounting electives in courses reserved exclusively for admitted graduate students (3-6)
Accounting Systems:
ACCY 632, Cost Management Theory (3), or ACCY 643, Advanced Theory of Auditing (3)
Accounting electives in courses reserved exclusively for admitted graduate students (3-6)

Accounting Electives (0-15 hours)

Related Areas (0-15 hours)

Required Courses for the Area of Study
in Accounting Systems (9 hours)
OMIS 651, Business Systems Analysis and Design (3)
Electives in computer science or operations management and information systems (6)

Recommended for Both Areas of Study
Computer Simulation and Business Information Systems
Organizational Behavior and Theory
Quantitative Analysis
Economics or Finance
Public Administration

Total: 30 semester hours (minimum)

Master of Accounting Science: Specialization in Taxation
The specialization in taxation is based on a minimum of 30 semester hours (Phase Two) beyond Phase One of the Master of Accounting Science and the baccalaureate degree. Of these 30 semester hours, 27 must be in classes reserved exclusively for admitted graduate students: 21 of these 27 hours must be in tax courses.

Core Requirements (9 hours)
Corporate Tax: ACCY 647, Corporate Taxation (3)
Research: ACCY 603, Professional Research Methodology (3), or ACCY 645, Professional Tax Research (3)
Seminar: ACCY 663, Seminar in Accounting (3)

Tax Requirements (6 hours)
ACCY 646, Tax Administration and Practice (3)
ACCY 649, Partnership Taxation (3)

Tax Electives (9 hours)

Other Electives (6 hours)
Six semester hours of graduate credit from either accounting or a related field, subject to the approval of the student’s adviser.

Total: 30 semester hours (minimum)

The following fields of related study are highly recommended: law, political science, and public finance.

Master of Science Degree in Finance (M.S.)
The purpose of the M.S. in finance program is to provide preparation for careers in corporate financial management, investments, banking and other financial institutions, real estate, and insurance. In addition, the M.S. in finance might be chosen by those students interested in a career in teaching or pursuing a doctoral degree in finance.

Phase One
See Phase One requirements listed under "Graduate Study in Business."

Phase Two
Students pursuing the Master of Science in finance will meet the following additional requirements:
The student is required to complete a minimum of 30 semester hours of work beyond Phase One and the baccalaureate degree. Of these 30 semester hours, 21 must be in classes reserved exclusively for admitted graduate students.

Analytical Foundations (6 hours)
ACCY 640, Financial Statements Analysis (3)
OMIS 628T, Management Science Techniques for Managerial Analysis (3), OR OMIS 671, Business and Economic Forecasting (3)
(The above 6 hours should be completed in the first 12 semester hours of Phase Two)

Major Area (18-24 hours)
FINA 603, Seminar in Financial Research (3)
FINA 607,3 Financial Analysis (3)
FINA 662, Financial Management Strategies (3)
Finance elective (3)
A minimum of one course must be taken in two of the following three advanced finance topic areas:
Financial Markets
FINA 651, Seminar in Financial Institution Management (3)
International Finance
FINA 585, International Business Finance (3)
Investments
FINA 622, Security Analysis (3), OR FINA 623, Investment Management (3)

Related Area (0-6 hours)
2 electives as approved by the department adviser (6), OR FINA 599, Master's Thesis (0-6)

TOTAL: 30 semester hours (minimum)

Master of Science Degree in Management Information Systems (M.S.)
The Master of Science program in management information systems combines the technical area of computer science with business administration. The purpose of the program is to prepare students to assume administrative and managerial roles in the field of management information systems.

Phase One
See Phase One requirements listed under "Graduate Study in Business."

1The specific courses in these areas must be approved by the graduate adviser.
2If approved by the graduate adviser, up to three 400-level courses may be taken in Phase Two, except for the specialization in taxation in which a maximum of 6 semester hours of approved 400-level credit may be taken in Phase Two.
3A student with a strong background in finance may, with approval of his or her adviser, select an alternative finance course.
4ACCY 354, or its equivalent, will be accepted as meeting the Phase One requirement of OMIS 507 for entering M.A.S. students.
In addition to Phase One requirements, the following competency must be fulfilled by work experience or the satisfactory completion of appropriate course work:

Proficiency in a business applications oriented computer programming language acceptable to the management information systems faculty (COBOL for example).

Any course that satisfies the proficiency listed above may not be counted as an elective in Phase Two.

Phase Two
Students pursuing the Master of Science degree in management information systems will meet the following additional requirements:

The student is required to complete a minimum of 30 semester hours of work beyond Phase One and the baccalaureate degree. Of these 30 semester hours, 21 must be in classes reserved exclusively for admitted graduate students.

With the approval of the adviser or chair of the Department of Operations Management and Information Systems, other courses may be substituted for a maximum of 9 semester hours of Phase Two course work.

Required Courses (21 hours)
OMIS 649, Business Computer Operating Systems (3)
OMIS 651, Business Systems Analysis and Design (3)
OMIS 652, Business Applications of Data Base Management Systems (3)
OMIS 660, Business Telecommunications (3)
OMIS 661, Business Decision Support Systems (3)
OMIS 690, Information Systems Management (3)
OMIS 697, Research Methods for Information Systems (3)

Electives (9 hours)
A minimum of 9 semester hours must be selected, with the approval of the student's adviser, from among relevant graduate offerings in the Department of Operations Management and Information Systems, the College of Business, or elsewhere in the university.

TOTAL: 30 semester hours

INTERNATIONAL BUSINESS

The College of Business, through its courses dealing with international marketing, international finance, international management, travel seminars, and similar topics, is prepared to meet the needs of students who have interest and aptitude in the broad area of international business.
Course Offerings

431. ADVANCED COST MANAGEMENT (3). Advanced study of the information required in management planning and control systems. The theory and application of product costing, operational control, cost allocation, and performance evaluation for manufacturing and service organizations are covered. Topics include transfer pricing, competitive costing, division performance measurement, and regression analysis of costs. PRQ: ACCY 330 or consent of department.

441. ADVANCED AUDITING (3). An in-depth analysis of advanced topics in auditing with special attention to professional standards, the impact of SEC on auditing, the objectives in planning an audit, and current topics in auditing. Students may not receive credit for both ACCY 441 and ACCY 643. PRQ: ACCY 440 with at least a C or consent of department.

454. ADVANCED ACCOUNTING INFORMATION SYSTEMS (3). An in-depth analysis of advanced accounting information systems. Special emphasis is placed on applied topics such as general ledger systems, on-line processing, data base approaches, and internal accounting control. Coverage of various industries’ accounting information systems and different information systems platforms are stressed. PRQ: ACCY 354 or consent of department.

456. ADVANCED FEDERAL TAXES (3). A study of federal taxes imposed on business entities with emphasis on corporations, partnerships, and S corporations. Also includes an overview of tax research techniques. Not available for credit in the Master of Accounting Science program’s specialization in taxation. PRQ: ACCY 455 or consent of department.

457. GOVERNMENTAL AND NONPROFIT ACCOUNTING (2). A study of accounting and external financial reporting for state and local government, colleges, hospitals, voluntary health and welfare organizations, and other nonprofit organizations. Budgeting, financial statement analysis, and auditing issues specific to these organizations will also be covered. PRQ: ACCY 314 or consent of department.

471. ADVANCED ACCOUNTING (3). The study of financial accounting theory and practice relating to accounting for long-term investments, business combinations under the purchase and pooling methods, and consolidated financial statements. Segment and interim reporting standards, corporate insolvency, and partnership accounting are also examined. PRQ: ACCY 315 or consent of department.

475. C.P.A. PROBLEMS (3). The analysis and review of accounting principles and practices as developed and illustrated in complex selected problems. Discussion of selected problems and theory. Laboratory practice in the solution of typical problems encountered in the C.P.A. examination. PRQ: Consent of department.

505. FINANCIAL ACCOUNTING CONCEPTS (2). An introduction to the nature, uses, and limitations of financial accounting information. Financial accounting concepts are presented from the viewpoint of the user. Problems and cases are used to emphasize the kinds of financial accounting information relevant for decision making. Open to students with fewer than 6 semester hours in accounting, or by consent of department.

557. ACCOUNTING FOR PUBLIC ADMINISTRATION (3). A survey of governmental and other public sector accounting for nonaccounting majors. Topics include an introduction to accounting, budgeting, auditing, and financial statement analysis as applied to state and local governments, hospitals, colleges, universities, and other nonprofit organizations. Designed for M.P.A. students, but other graduate students may be admitted with consent of department.

589. FEDERAL TAXATION: PLANNING AND CONTROL (3). A study of the basic rules of federal income taxation as they relate to the planning and control opportunities that exist in the conduct of business and nonbusiness transactions. Not open to students with credit in either ACCY 389 or ACCY 455. PRQ: ACCY 505 or its equivalent completed within the past five years with a grade of A or B, or consent of department.

595. INTERNSHIP IN ACCOUNTANCY (3-6). Designed primarily for students lacking full-time business experience. The student will work full time for a summer or a semester as an intern in a business firm under the supervision of a coordinator from the Department of Accountancy. No more than 3 semester hours may be applied to Phase Two Program requirements. Graded on S/U basis only. PRQ: Consent of department.

599. MASTER'S THESIS (1-6). Open to students writing a thesis under the M.A.S., M.S., or M.B.A. program. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours.

603. PROFESSIONAL RESEARCH METHODOLOGY (3). An examination of the methods of inquiry and research and development of competence in professional writing. Includes outside readings in those areas and written critiques of selected accounting literature. A major paper is also required. PRQ: 18 semester hours of accounting or consent of department.

604. INDEPENDENT STUDY IN ACCOUNTING (1-3). Open to students qualified to do individual study in accounting. Not for credit on the thesis. May be repeated to a maximum of 6 semester hours. PRQ: 21 semester hours of accounting and consent of department.
630. MANAGERIAL ACCOUNTING CONCEPTS (3). The uses of accounting information in interpreting, coordinating, and implementing management's policies, in measuring and evaluating performance, and in tactical and strategic planning for future business activity. Not open to students with more than 9 semester hours of accounting except by permission of the department. PRQ: ACCY 505 or equivalent, or consent of department.

632. COST MANAGEMENT THEORY (3). A study of the theory underlying management planning and control systems. Readings and cases are used to examine product costing, operational control, cost allocation, and performance evaluation in manufacturing and service organizations. PRQ: 9 semester hours of accounting, including ACCY 330 or equivalent, or consent of department.

640. FINANCIAL STATEMENTS ANALYSIS (3). Analysis and interpretation of financial reports with particular reference to the construction of statements, the meaning of accounts, ratios, and other evaluating indices. PRQ: ACCY 630 or equivalent, or consent of department.

643. ADVANCED THEORY OF AUDITING (3). An examination of the theoretical framework of auditing with emphasis upon the development and analysis of the philosophy, methodology and concepts of auditing. Students may not receive credit for both ACCY 443 and ACCY 643. PRQ: 21 semester hours of accounting, including ACCY 440, or consent of department.

644. SURVEY OF THE TAXATION OF BUSINESS ENTITIES (3). A study of the federal income taxation of business entities. Emphasizes corporations, partnerships, and S corporations and includes an introduction to tax research. Students may not receive credit for both ACCY 456 or equivalent and ACCY 644. Not available for credit in the Master of Accounting Science, specialization in taxation. PRQ: ACCY 455 or equivalent, or consent of department.

645. PROFESSIONAL TAX RESEARCH (3). An examination of tax research methodologies with particular emphasis on the legal research methodology. Includes several independent research projects designed to emphasize the evaluation of various tax authorities. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

646. TAX ADMINISTRATION AND PRACTICE (3). A study of the structure, powers, and procedures of the Internal Revenue Service, including the IRS audit process. Rules governing tax practice and professional ethics are also examined. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

647. CORPORATE TAXATION (3). A study of federal income taxation of corporations and shareholders with emphasis on transactions between the corporation and its shareholders. Topics include corporate contributions, distributions to shareholders, stock redemptions, corporate liquidations, penalty taxes, and special rules for S corporations. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

648. ADVANCED CORPORATE TAXATION (3). A study of the federal income taxation of corporate reorganizations, including mergers, acquisitions, corporate divisions, and the carryover of tax attributes, and the tax rules concerning consolidated tax returns. PRQ: 24 semester hours of accounting including ACCY 455, or consent of department.

649. PARTNERSHIP TAXATION (3). A study of the federal income taxation of partnerships, with emphasis on the tax laws related to the formation, operation, and liquidation of partnerships. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

651. FEDERAL ESTATE AND GIFT TAXATION (3). A study of the federal estate and gift tax laws with emphasis on tax-planning techniques designed to minimize transfer taxes and ensure the orderly transfer of assets to succeeding generations. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

652. TAXATION OF ESTATES AND TRUSTS (3). A study of federal taxation of income from estates and trusts, and the use of trusts in tax planning to minimize income, estate, and gift taxes. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

654. TAX SEMINAR (3). An intensive study of selected topics of current interest. May be repeated to a maximum of 6 semester hours. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

655. INTERNATIONAL TAXATION (3). A study of the U.S. laws that have tax implications for international transactions. Primary emphasis is given to the U.S. taxation of multinational operations and the taxation of foreign persons in the U.S. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

656. TAXATION OF BUSINESS AND INVESTMENT DECISIONS (3). A study of selected topics including the tax rules that underlie accounting periods and methods, the taxation of property transactions, and the taxation of security transactions. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

657. DEFERRED COMPENSATION (3). A study of tax rules and reporting requirements related to qualified pension, profit-sharing, and stock bonus plans. Other topics include individual retirement accounts, retirement accounts for self-employed individuals, and the taxation of different forms of compensation. PRQ: 21 semester hours of accounting including ACCY 455, or consent of department.

663. FINANCIAL ACCOUNTING THEORY (3). A study of the conceptual and theoretical aspects of financial accounting and the economic environment of accounting. Students will analyze the existing conceptual framework of accounting and apply that framework to current significant accounting problems. PRQ: 21 semester hours of accounting or consent of department.

665. SEMINAR IN ACCOUNTING (3). The study of theories, principles, practices and procedures in all areas of accounting. Students will investigate, independently and in groups, problems of special interest in the field of accounting. May be repeated to a maximum of 6 semester hours with departmental approval. PRQ: 21 semester hours of accounting or consent of department.
GRADUATE FACULTY

Robert E. Miller, chair, professor, Ph.D., University of Kansas
Richard J. Dowen, professor, C.M.A., Ph.D., State University of New York, Binghamton
John J. Dran, associate professor, D.B.A., Kent State University
Mai E. Iskander, associate professor, Ph.D., University of Missouri
Gerald R. Jensen, associate professor, Ph.D., University of Nebraska at Lincoln
James M. Johnson, professor, Ph.D., Ohio State University
Jeffrey A. Mercer, assistant professor, Ph.D., Texas Tech University
Joseph A. Newman, assistant professor, Ph.D., University of Tennessee
Donald E. Weiss, associate professor, Ph.D., University of Wisconsin

Course Offerings

430. CAPITAL BUDGETING AND LONG-TERM FINANCING (3). An analysis of financial decisions involving investment in capital assets and the selection of internal and external sources of long-term funds. Cases and problems are used to illustrate the decision-making process. Topics include capital budgeting techniques, risk analysis, debt and equity financing, dividend policies, mergers, and acquisitions. PRQ: Consent of department.

455. FUTURES AND OPTIONS MARKETS (3). The risk allocation function of options and futures markets studied from the perspective of market users. Hedging strategies and equilibrium pricing models are investigated. The roles of government regulation and international developments are examined. PRQ: MATH 211 or equivalent, or consent of department.

505. FUNDAMENTALS OF FINANCIAL MANAGEMENT (2). For graduate students with little formal background in finance. Financial theory and activities connected with the organization and operation of a business enterprise. The relationship of these financial activities to other aspects of business administration. Financial planning and control, working capital considerations, capital budgeting, sources and use of funds, valuation of enterprise, and the financial environment in which the firm operates. PRQ: ACCY 505, or equivalent, and OMIS 524, or consent of department.

520. INVESTMENT FUNDAMENTALS (3). Conceptual foundations and strategies for investment analysis and management. Focus is on the following: functions, structure, and efficiency of securities markets; an overview of risk and return; introduction to analysis and valuation of common stocks, fixed-income securities, and other alternative investments; and an introduction to the portfolio management process. Not open to students with credit in FINA 340. PRQ: FINA 505 and OMIS 524, or consent of department.

550. FUNDAMENTALS OF FINANCIAL MARKETS (3). The structure, operations, goals, and strategies of banking and nonbanking financial intermediaries. Attention will be given to the financial markets with emphasis directed to financial instruments including futures contracts. Not open to students with credit in FINA 350. PRQ: FINA 505 and OMIS 550, or consent of department.

585. INTERNATIONAL BUSINESS FINANCE (3). The methods, practices, and institutions for financing international and foreign business firms including direct and indirect investments. Current developments relating to specific finance and monetary problems. PRQ: FINA 320 and FINA 350, or consent of department.

595. INTERNSHIP IN FINANCE (1-6). Designed primarily for students lacking full-time experience in finance. The student will work for a summer or a semester as an intern in a business firm. No more than 3 semester hours may be applied to Phase Two program requirements. Graded on S/U basis only. PRQ: Consent of department.

599. MASTER'S THESIS (1-6). Open to students writing a thesis under the M.S. or M.B.A. program. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

603. SEMINAR IN FINANCIAL RESEARCH (3). Review and evaluation of current research in finance giving consideration to the implication of findings for the improvement of business practices. Not for thesis credit. PRQ: OMIS 524 or consent of department.

604. INDEPENDENT STUDY IN BUSINESS (1-3). Open to students qualified to do individual study in business. Not for credit on the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

607. FINANCIAL ANALYSIS (3). This course deals with the analysis of current and future financial position that serves as the foundation for decision making by creditors, managers, and owners. The material covered includes ratio analysis, sources and uses of funds, operating and financial leverage, capital budgeting under risk and uncertainty, the cost of capital, and the financial structure. The course is problem oriented but cases and reading may be utilized. PRQ: FINA 320 or FINA 505, or consent of department.

613. READINGS IN FINANCE (1-3). Special readings useful to a student's individual program and objectives, but not available in regular course offerings. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

622. SECURITY ANALYSIS (3). A detailed study of the methods utilized in analyzing the major types of securities. The greatest emphasis is given to equities. Economic, corporate, financial, and management factors are given due consideration. PRQ: FINA 520 and OMIS 524, or consent of department.

623. INVESTMENT MANAGEMENT (3). Institutional and individual strategies for portfolio selection, supervision, and performance evaluation will be emphasized. An examination of recent analytical and theoretical developments. PRQ: FINA 520 and OMIS 524, or consent of department.

651. SEMINAR IN FINANCIAL INSTITUTION MANAGEMENT (3). Topics include contemporary developments in the management of financial institutions; management problems of different classes of institutions including banks, thrift institutions, insurance companies, investment banks and companies; and effects of increased concentration of government regulation. PRQ: FINA 350 or FINA 550, or consent of department.

662. FINANCIAL MANAGEMENT STRATEGIES (3). Current developments in financial management, including critical evaluation of selected topics dealing with theoretical and applied aspects of the decision-making process in business finance. PRQ: FINA 607 and OMIS 524, or consent of department.

695. SEMINAR IN FINANCE TOPICS (3). Critical analysis and discussion of financial topics, empirical research, and applications. Review of evolving topics in the scholarly literature, including contemporary issues and controversies. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
Department of Management (MGMT, MGBE)

GRADUATE FACULTY

Terrence R. Bishop, associate professor, Ph.D., University of California, Los Angeles
Curtiss K. Behrens, associate professor, LL.M, DePaul University
Terrence R. Bishop, associate professor, Ph.D., University of Iowa
Ralph F. Catalanello, professor, Ph.D., University of Wisconsin
Luis G. Flores, associate professor, Ph.D., Texas Tech University
Charles R. Gowen, associate professor, Ph.D., Ohio State University
Ralph F. Catalanello, professor, J.D., Ph.D., University of Iowa
Marvin F. Hill, professor, J.D., Ph.D., University of Iowa
Albert S. King, professor, D.B.A., Texas Tech University
Luis G. Flores, associate professor, Ph.D., Texas Tech University
Ralph F. Catalanello, professor, Ph.D., University of Wisconsin
C. Lynn Neeley, associate professor, Ph.D., University of Tennessee
Alvar B. Pender, associate professor, Ph.D., University of North Dakota
Christine L. Scheck, associate professor, Ph.D., Arizona State University
Betty L. Schroeder, associate professor, Ph.D., Michigan State University
Jolene Scriven, professor, Ed.D., Northern Illinois University
David R. Wade, assistant professor, J.D., University of Michigan

Course Offerings

Management (MGMT)

413 LEGAL AND ETHICAL CONSTRAINTS ON BUSINESS CONDUCT (3). Study of legal and ethical constraints on conduct in the corporate setting. Includes a close examination of relevant statutes and discussion of current issues in the regulation of corporate behavior. PRQ: MGBE 217 or consent of department.

436 COMPENSATION AND BENEFITS ADMINISTRATION (3). Design and implementation of organizational compensation systems. Integration of internal equity and external market considerations in wage systems through use of job evaluations and market surveys. Compensation as a means of effective recruitment, motivation, and retention of employees. Benefits program design, cost containment, and program management. Performance appraisal processes and implementation of merit systems. Statutes affecting compensation practices (e.g., minimum wage laws, unemployment compensation, worker's compensation). PRQ: MGMT 433 or consent of department.


487 MULTINATIONAL BUSINESS MANAGEMENT (3). An analysis of the problems and practices of multinational business management activities. The issues covered include American management technology in foreign countries; comparative management among different countries, and complexity introduced by the management of multinational organizations with specific focus on objectives, strategies, policies, and organizational functioning. The course is designed to allow for cross-fertilization of ideas from students to gain a diversity of views and sensitivity to cultural differences. PRQ: MGMT 333 or consent of department.

498 EQUAL OPPORTUNITY AND EMPLOYMENT (3). An in-depth presentation of management, union, and individual perspectives of the causes and remedies of employment-based discrimination. Topics discussed include recruitment, promoting, seniority, discrimination, affirmative action, and testing. PRQ: MGMT 433 or consent of department.

505 PRINCIPLES OF MANAGEMENT (2). An introduction to the role of manager in interaction with superiors, subordinates, associates, and staff; theories of leading, organizing, planning, and controlling; and skills in communicating, coordinating, and directing. PRQ: Consent of department.

511 LEGAL ASPECTS OF BUSINESS (2). A general seminar in legal problems affecting business in the areas of contracts, partnership, taxation, property, and government regulation of business.


538 EMPLOYMENT LAW (3). Review, analysis, and evaluation of the National Labor Relations Act as amended. Primary emphasis includes an in-depth analysis of employment law; rights to organize and undertake concerted activity; legal framework of labor-management relations, selection and representation of unions; union member rights; etc. Current legislative and judicial developments as well as an extensive review and analysis of court and NLRB decisions are stressed. PRQ: MGMT 505 or consent of department.

555 INTERNSHIP IN MANAGEMENT (3-6). Designed primarily for students lacking full-time business experience. The student will work full time for a summer or a semester as an intern in a business firm under the supervision of a coordinator from the Department of Management. No more than 3 semester hours may be applied to Phase Two program requirements. Graded on S/U basis only. PRQ: Consent of department.

598 SEMINAR IN LEADERSHIP AND EMPLOYEE TRAINING (3). Special attention given to training as an integral part of employee development. Examination of new ideas in organizational development and leadership. PRQ: MGMT 505 or consent of department.

604 INDEPENDENT STUDY IN MANAGEMENT (1-3). Available to graduate students of demonstrated capability for specialized independent study in management. May be repeated to a maximum of 6 semester hours. PRQ: MGMT 505 and consent of department.

611 BUSINESS ETHICS AND STRATEGIC MANAGEMENT (3). Responses of organizations to environmental expectations and analysis of external and internal variables affecting the legal and ethical implications of strategic decisions. The role of general managers as mediators between organizational and societal interests and study of the firm as a corporate citizen. PRQ: MGMT 505 or consent of department.

619 MANAGERIAL COMMUNICATIONS (3). Communication techniques and strategies relevant to managerial positions. Application of communication techniques and strategies in leadership roles. Development of organizational communication skills.

620 HUMAN RESOURCE MANAGEMENT AND LABOR RELATIONS (3). Management's problems, opportunities, and policy alternatives in personnel management and labor relations. Examination of recruiting, selection, compensation, training, and career development and day-to-day personnel issues. PRQ: MGMT 505 or consent of department.

633 ORGANIZATION THEORY (3). Traces historical development of organization theory from preclassical through contemporary theories. Analysis of organizational structure and behavior ranging from systems...
in the steady state to complex, dynamic social systems concerned with adaptation, growth, and conflict. PRQ: MGMT 505 or consent of department.

635. ORGANIZATIONAL BEHAVIOR (3). A critical evaluation of theory, research, and practice related to individual and group behavior in organizational settings. Motivation, leadership, communication, decision-making, diversity, and other processes are examined in terms of their influence on individual, group, and organizational outcomes. PRQ: MGMT 505 or consent of department.

638. SEMINAR IN HUMAN RESOURCES AND LABOR RELATIONS (3). Synthesis of existing diverse philosophies relating to the growth of organized labor, with particular focus on the patterns of relationships between labor and management and the impact of these relationships on the socio-political environment of the community and the nation. Strong emphasis is placed on research and the use of current literature. PRQ: MGMT 505 or consent of department.

650. STRATEGIC ENVIRONMENTAL ANALYSIS (3). Development of methodological approaches to the study of the formulation of corporate strategy, strategic planning, and resource allocation processes. Analysis of relevant variables and their effects on strategic business behavior. Contingency theories of corporate strategy and strategic patterns for corporate success. PRQ: MGMT 505 or consent of department.

661. STRATEGIC PLANNING SYSTEMS (3). Development and analysis of the strategic management function. The design and organization of strategic planning systems, strategic organizational structures, and processes for strategy and implementation. PRQ: MGMT 505 or consent of department.

666. SEMINAR IN HUMAN RESOURCE MANAGEMENT RESEARCH (3). A review and evaluation of current research in human resource management giving consideration to implications of findings for the improvement of human resource management practices. PRQ: Completion of 15 semester hours of Phase Two courses or MGMT 505, or consent of department.

672. STRATEGIC MANAGEMENT AND POLICY (3). Integrating course analyzing the firm in its environment with emphasis on formulation of policies and strategies and application of concepts through case studies and/or simulation exercises integrating all functional areas. Designed to develop skill in problem identification, analyses, solutions, and making oral and written presentations. Must be taken in final semester or last 6 semester hours of master's program. PRQ: MGMT 505 and FINA 607, or consent of department.

697. SEMINAR FOR EXECUTIVES (1). The purpose of the seminar is to offer executives the opportunity to broaden their interest in general problems of management as well as to enrich the background of participants. Lectures and discussions on economics, literature, philosophy, art, music, science, history, and world affairs. May be repeated to a maximum of 3 semester hours. PRQ: MGMT 505 or consent of department.

Business Education (MGBE)

492. ORIENTATION TO BUSINESS TEACHER EDUCATION (1). An orientation to the teaching profession with special emphasis on business teacher education. The course includes philosophical foundations, curriculum structures, foundations of methodology, instructional materials and media, employment requirements, career opportunities, and mainstreaming. The course includes 30 clock hours of preclinical teaching experience, 15 of which will be general experiences with different age groups, cultures, and subjects outside of business education.

500. PRINCIPLES AND PROBLEMS OF BUSINESS EDUCATION (3). The characteristics of present-day business education in terms of its basic principles and typical practices, problems, and trends. Open only to M.S.Ed. students majoring in business education or by consent of department.

501. INTRODUCTION TO RESEARCH IN BUSINESS EDUCATION (3). Designed to acquaint students with significant research in business education and to develop competence in research methodology through an intensive study of the methods, techniques, and procedures used in research in business education. Open only to M.S.Ed. students majoring in business education or by consent of department.

502. STRATEGIES IN TEACHING INFORMATION PROCESSING (1-3). Strategies for improving the techniques of teaching courses in information processing through an examination of current research and the discussion of such problems as information processing in the curriculum; objectives of curriculum, testing and grading for typewriting/keyboard; word processing; business communications; data processing; dictation systems; computer-related business courses; and human dimensions of information processing in the workplace.

522. STRATEGIES IN TEACHING ACCOUNTING AND BASIC BUSINESS (1-3). Strategies and concepts of teaching accounting and basic business subjects, with special emphasis on curriculum planning, teaching, and evaluation of instructional materials and media available; application of research findings; and current thought, trends, and issues.

525. METHODS OF TEACHING BUSINESS SUBJECTS (3). Objectives, content, materials, specific presentation methods, and evaluation as applied to teaching accounting, basic business, business communication, computer education, entrepreneurship and marketing education, shorthand, typewriting/keyboard, and word processing. Special attention is paid to teaching students in a multicultural and mainstreamed setting. This course includes a preclinical component. PRQ: MGBE 492 and 6 semester hours in graduate professional education, or consent of department.

536. STRATEGIES IN TEACHING ENTREPRENEURSHIP EDUCATION (1-3). A study of the instructional strategies and materials used in entrepreneurship education and evaluation of research. Content areas: contributions of entrepreneurship to the American economy, career orientation, implementation models, resources for program, student evaluation, and an overview of successful teaching strategies at various educational levels.

558. INTERNSHIP (3-7). For the student who has exhibited superior characteristics of leadership, business experience, or potential success as an educator. A full semester required under the supervision of a member of the university business education department in a junior high school, secondary school, community college, or similar institution. A maximum of 3 semester hours may be included in a master's degree program. May be repeated to a maximum of 7 semester hours. PRQ: Consent of department.

559. STUDENT TEACHING (SECONDARY) IN BUSINESS EDUCATION (1-3). A supervised teaching experience in a business education program. May be repeated to a maximum of 6 semester hours.

590. TOPICS IN BUSINESS EDUCATION (1-3). An in-depth study of an area of current emphasis in education for business. The topics will be explored through the use of a wide variety of instructional strategies and resources. May be repeated to a total of 6 semester hours.

591. WORKSHOP IN METHODS OF TEACHING BUSINESS SUBJECTS (1-3). For experienced teachers of business subjects in secondary and collegiate institutions. New developments in the teaching of various business subjects are studied through discussion, demonstration, and practice supplemented by presentations from specialists in the field. May be repeated to a maximum of 6 semester hours.

594. DIRECTED PARTICIPATION IN BUSINESS EDUCATION (1-3). Prospective business teachers will work with business teachers in public high schools or other educational institutions. Students will participate in all instructional activities available in the schools, including the actual organization and implementation of learning plans. Videotaping will be utilized as an analysis technique. PRQ: Consent of department.

599A. MASTER'S THESIS OR DIRECTED RESEARCH IN BUSINESS EDUCATION (3-6). Designed to utilize research skills and techniques, objectives of curriculum, testing and grading for typewriting/keyboard. Students must select, complete, and present in approved written form one or more projects or papers based on significant problems. May be repeated to a maximum of 6 semester hours. PRQ: MGBE 500, MGBE 501, or consent of department.

599C. INDEPENDENT STUDY IN BUSINESS EDUCATION (1-6). For students who wish to pursue individual study and analysis of problems in business education of particular interest and value to the student. May be repeated to a maximum of 6 semester hours.
600. SEMINAR IN BUSINESS EDUCATION (3). The forces, issues, principles, practices, procedures, and problems of establishing and maintaining quality business education at all levels. Investigation of problems of special interest to students within the field of business education. PRQ: Consent of department.

605. READINGS IN BUSINESS EDUCATION (3). Special readings useful to a student’s individual program and objective, but not available in regular course offerings. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.

639. SEMINAR IN TEACHING COLLEGE BUSINESS SUBJECTS (3). The teaching of business administration at the college level. The problems, principles and techniques of effective instruction in teaching college business subjects. Problems and cases covering objectives, instructional procedures, measurement, and evaluation.

640. BUSINESS EDUCATION IN POSTSECONDARY INSTITUTIONS (3). Program development and evaluation, instruction, and staffing in community colleges, four-year colleges and universities, and other postsecondary institutions.

645. RESEARCH IN BUSINESS EDUCATION (3). Advanced methods and techniques of research involving statistical analysis and data processing methods employed in the investigation of business education problems. Study and analysis of significant research in business education. PRQ: MGBE 501 and EPSY 522, or consent of department.

699. DOCTORAL RESEARCH AND DISSERTATION (1-12). Student must accumulate 24 semester hours prior to graduation. May be repeated to a maximum of 36 semester hours.
GRADUATE FACULTY

H. Lee Meadow, chair, professor, Ph.D., Virginia Polytechnic Institute and State University
Geoffrey L. Gordon, associate professor, Ph.D., University of Kentucky
Nessim Y. Hanna, professor, Ph.D., University of Illinois
Peter F. Kaminski, professor, Ph.D., Pennsylvania State University
Askari H. Kizilbash, professor, Ph.D., University of Nebraska
Terrence V. O'Brien, professor, Ph.D., Columbia University
Rick E. Ridnour, assistant professor, Ph.D., Iowa State University
Denise D. Shoebachler, assistant professor, Ph.D., University of Kentucky
Jay S. Wagle, professor, Ph.D., University of Nebraska
Dan C. Weilbaker, associate professor, UARCO Professor of Sales, Ph.D., University of South Carolina

Course Offerings

445. ADVANCED MARKETING RESEARCH (3). Involves the development and administration of various data collection instruments, the evaluation of the advantages and disadvantages of different data collection methods, the statistical and computer analysis of data, and the oral and written presentation of the results of surveys and/or experiments. PRQ: MKTG 443 or consent of department.

467. INTERNATIONAL BUSINESS (3). An examination of international marketing in the context of a firm's international operations, stressing organization, economic, and marketing analysis. Particular emphasis is given the multinational firm. PRQ: MKTG 310, MKTG 367, or consent of department.

475. BUSINESS MARKETING STRATEGY (3). Advanced concepts of business marketing management and decision-making. Focus on developing quality customer service relationships through planning, analysis, industrial research, computer information systems, and marketing technology. PRQ: MKTG 325 and MKTG 345, or consent of department.

490. CURRENT ISSUES IN MARKETING (1-3). A study of new developments in marketing, including current topics and issues. A research paper or project also is required. PRQ: Consent of department.

505. GRADUATE SURVEY OF MARKETING (2). A comprehensive survey analysis of marketing functions, institutions, policies, and problems designed specifically to serve the needs of graduate students with no previous formal marketing education.

550. PERSONAL SELLING FOR MANAGERS (3). Designed for students who have not had full-time sales experience and/or have not had a previous course in personal selling. Includes basic theories and techniques for the selling of self, ideas, and proposals within the firm as well as externally to customers and prospects; selling skills for both dyadic and group situations; and presentations by students in a variety of business related selling situations. PRQ: MKTG 505 and consent of department.

599. MASTER'S THESIS (1-6). Open to students writing a thesis under the M.S. or M.B.A. program. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: MKTG 625 or consent of department.

603. MARKETING RESEARCH AND ANALYSIS (3). Reviewing, evaluating, and analyzing research currently being reported in the literature, the development of research design, the use of research to improve managerial decisions, and the use of research at all levels within both profit and not-for-profit organizations. Ethical issues involving marketing research. PRQ: MKTG 505 and OMIS 524, or consent of department.

604. INDEPENDENT STUDY IN MARKETING (3). Available to graduate students of demonstrated capability for intensive independent study in marketing. PRQ: MKTG 505 and consent of department.

625. BUYER BEHAVIOR (3). Customer evaluation and description drawing on tools and concepts from psychology, sociology, economics, and related social sciences, as these aid in developing marketing strategies. PRQ: MKTG 505 and OMIS 500, or consent of department.

646. SALES ADMINISTRATION (3). Strategic planning, analysis, policy development, implementation, and coordination of corporate level sales responsibilities. Topics include sales organizational structures and supervision of the recruiting, selecting, testing, training, and managing of salespersons. Emphasis is on policy considerations at the sales director and vice president level. PRQ: MKTG 446 and MKTG 505, or consent of the department.

654. MARKETING MANAGEMENT (3). Analysis of the strategic marketing problems confronting managers in the evaluation of marketing opportunities, selection of target markets, development of marketing strategies, planning of marketing tactics, and implementation and control of the marketing effort. PRQ: MKTG 505 or consent of department.

655. PROMOTIONAL STRATEGY (3). Designing, implementing, and controlling promotional policies, including the elements of personal selling, sales management, advertising, sales promotion, publicity, and public relations. Planning and coordinating complete marketing campaigns. PRQ: MKTG 505 or consent of department.

656. SEMINAR IN INTERNATIONAL MARKETING (3). The role of international marketing operations in a firm's overall competitive strategy. Integration of international marketing responsibility with other functions of the firm. PRQ: MKTG 505 or consent of department.

660. MARKETING SEMINAR (3). Topics vary but usually focus on current issues in managing marketing functions or recent developments in knowledge or skills for marketing professionals. May be repeated to a maximum of 6 semester hours. PRQ: MKTG 505 or consent of department.

665. MARKETING STRUCTURES AND PRICE POLICIES (3). Comprehensive guidance for formulating pricing strategy. Emphasis on the actual pricing decision process and the procedures used for pricing consistent with the economics of profit maximization. Incorporates the psychological aspects of price sensitivity and acknowledges that managers have only limited, imprecise information as a basis for their pricing decisions. PRQ: MKTG 505 and OMIS 500, or consent of department.

675. STRATEGIC MARKETING PLANNING (3). Presents and integrates analytical techniques that facilitate marketing analysis and the development and implementation of marketing plans. Formal strategic marketing planning methods are detailed. PRQ: MKTG 654 or consent of department.
Course Offerings

449. COMPUTER OPERATING SYSTEMS FOR BUSINESS (3). A study of operating systems for various business computing environments. A comparison of microcomputer, minicomputer, and mainframe computer operating systems is presented for the purpose of selecting an appropriate environment and configuration. Laboratory experience with business operating systems is provided. PRQ: OMIS 351 and completion of an approved programming course, or consent of department.

477. LOGISTICS MANAGEMENT (3). An examination of the concepts, issues, and methodologies related to the analysis, design, and administration of the physical distribution system. Topics include logistics strategy, customer service, forecasting, order management, transportation, inventory management, logistics systems design, and warehousing. PRQ: MKTG 310 and OMIS 338, or consent of department.

478. LOGISTICS SYSTEMS (3). An intensive examination of decision systems for business logistics management. Logistics strategy, supply chain analysis, and interfunctional solutions to significant logistics problems are studied. The selection and use of information systems and decision models, and the effective presentation of results, are emphasized. PRQ: OMIS 477 or consent of department.

500. SURVEY OF BUSINESS ECONOMICS (2). Business economic concepts relevant to an analysis of the environment within which the business firm operates and those economic concepts basic to an analysis of a broad scope of business problems.

505. PRINCIPLES OF OPERATIONS MANAGEMENT (2). An examination of the issues, problems, and possible solutions for operations managers in the manufacturing and service environments. Topics include product planning, facility location, process design, capacity planning, quality management, inventory management, and operations planning and control systems. PRQ: OMIS 524 or consent of department.

507. BUSINESS INFORMATION SYSTEMS (2). An introduction to business information systems concepts, uses, and issues, including functional management information systems, end-user computing, technology, platforms, and systems analysis and design. The effective utilization of information system technology by business professionals will be emphasized.

524. BUSINESS STATISTICS (2). Descriptive statistics; probability, random variables, and probability distributions; sampling and sampling distributions; estimation and hypothesis testing; simple regression and correlation analysis. Applications to industry and business. PRQ: MATH 210 or consent of department.

559. BUSINESS DATA PROCESSING (3). General characteristics of data processing. Provides advanced treatment of computer applications in business and education. Laboratory assignments in using data processing concepts, writing computer programs, and use of time-sharing computer. Open only to graduate students who have not had a course in data processing. Not applicable toward Phase Two of the M.B.A. or M.S. in management information systems program.

604. INDEPENDENT STUDY IN OPERATIONS MANAGEMENT (1-3). Available to graduate students who have demonstrated the capability for specialized independent study in operations management. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

605. INDEPENDENT STUDY IN INFORMATION SYSTEMS (1-3). Available only to candidates for the M.S. degree in management information systems who have demonstrated the capability for specialized independent study in information systems. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.

610. STATISTICAL DECISION-MAKING IN BUSINESS (3). Payoff matrices; decision-making under certainty and under uncertainty; assessment of subjective probabilities; prior and posterior distributions, two-action decision problems; suspension of judgment; optimal sample size. PRQ: OMIS 524 or consent of department.

611. ADVANCED QUANTITATIVE METHODS FOR BUSINESS RESEARCH (3). This course provides the advanced graduate student with the quantitative tools necessary for conducting empirical research for advanced study and for the type of research currently undertaken in the scholarly literature of business. Emphasis is on business research applications, not on developing theory. PRQ: OMIS 625 or consent of department.

615. GRADUATE SEMINAR IN QUANTITATIVE ANALYSIS (3). Advanced topics in quantitative analysis and the more complex problems arising in the application of statistical theory in business decision making. Applications of the computer in problem solving. PRQ: One semester of statistics and MATH 210, or consent of department.

621. COMPUTER SIMULATION IN BUSINESS (3). An advanced course covering the concepts and techniques of computerized models. Emphasis is placed upon the practical application of computer simulation to business problem solving. Laboratory exercises and projects focus upon the design, construction, documentation, and application of computer simulation models. PRQ: OMIS 505 and OMIS 524, or consent of department.
624. EXPERT SYSTEMS IN BUSINESS (3). An examination of the new generation of expert systems and their impact upon management information technologies and business applications. Topics include a review of expert systems in use, the application of these expert systems to business decision making, and the structure of an expert system for business decisions. CRQ: OMIS 651 or consent of department.

625. APPLIED BUSINESS STATISTICS (3). Simple and multiple regression analysis; correlation; analysis of variance; and time series analysis. Applications to industry and business. PRQ: OMIS 524 or consent of department.

627. OPERATIONS ANALYSIS (3). An analysis of the conceptual and analytical approaches to the solution of significant operations problems. Case analyses and quantitative solutions within a global competitive environment will be emphasized. PRQ: OMIS 505 or consent of department.

628. MANAGEMENT SCIENCE TECHNIQUES FOR MANAGERIAL ANALYSIS (3). The development and application of quantitative methods such as linear programming, inventory, waiting line theory, simulation, and model building to provide a basis for rational decision-making in the allocation of resources within the various functional areas of the firm, with an emphasis on production. PRQ: OMIS 505 and OMIS 524, or consent of department.

640. MANAGEMENT OF INFORMATION SYSTEMS TECHNOLOGY (3). Applications of information systems in strategic decision making and organization leadership, management of information as an organizational resource, and global and ethical issues relating to information systems technology. PRQ: OMIS 507 or consent of department.

642. QUALITY MANAGEMENT (3). Detailed examination of the issues, techniques, and methodologies for planning and controlling continuous quality improvement in manufacturing and service organizations. A student project in continuous quality improvement will be required. PRQ: OMIS 505 and OMIS 524, or consent of department.

643. CONTINUOUS IMPROVEMENT SYSTEMS IN QUALITY MANAGEMENT (3). This course centers on continuous improvement in both service and manufacturing firms. The major focus of the course is on managerial problem solving, with particular emphasis on philosophies and methodologies in experimental design. Topics include the Shewhart Cycle, Deming, fractional factorials, Taguchi designs, EVOP, and response surfaces. PRQ: OMIS 524 or consent of department.

649. BUSINESS COMPUTER OPERATING SYSTEMS (3). A study of operating systems for various business computing environments. The course involves the study of single-processor operating systems as well as exploration of key differences in distributed operating systems. Key literature in the area is reviewed, and case analysis of current problems and trends is conducted. Laboratory experience with a variety of operating systems is provided.

650. SEMINAR IN MANAGERIAL ECONOMICS (3). Selected topics in managerial economics, emphasizing current literature on the theory and analysis of business. PRQ: OMIS 600 or consent of department.

651. BUSINESS SYSTEMS ANALYSIS AND DESIGN (3). A comparison of various methodologies and techniques used in the analysis and design of business systems with emphasis upon the selection of a design methodology that is appropriate to various business problems within different socioeconomic organizational environments. The course includes projects that require these analysis and design techniques in planning and developing business systems. PRQ: OMIS 507 or consent of department.

652. BUSINESS APPLICATIONS OF DATA BASE MANAGEMENT SYSTEMS (3). Several commercially available data base management systems are critically examined in terms of objectives, functions, types, and specifications in business. Research comparing and evaluating managerial applications of data bases is reviewed. Applications involve data base applications in accounting and finance, manufacturing, marketing, personnel, and other managerial and executive-level information systems. PRQ: OMIS 507 or consent of department.

660. BUSINESS TELECOMMUNICATIONS (3). The field of business telecommunications is examined from the perspective of business applications. Evaluation of hardware needed for effective business telecommunication. The course includes projects that require examination of communications systems requirements and selection of techniques suitable for meeting the system requirements. Not available to students with credit in OMIS 460 or equivalent. PRQ: OMIS 507 or consent of department.

661. BUSINESS DECISION SUPPORT SYSTEMS (3). The theoretical base for understanding business decision making is examined, followed by a review of commercially available decision support system software packages. Special attention is paid to concepts and tools for assisting managers in the decision process in semi-structured tasks. PRQ: OMIS 640 or OMIS 651, or consent of department.
College of Education

Charles E. Stegman, Ph.D., dean
Alfonzo Thurman, Ph.D., associate dean
Corenna C. Cummings, Ph.D., assistant dean

Curriculum and Instruction
Educational Psychology, Counseling, and Special Education
Leadership and Educational Policy Studies
Physical Education
College of Education

PROGRAMS OFFERED

The following degree programs are offered in the College of Education, with majors listed under each departmental title.

**Master of Science in Education Degree**

Department of Curriculum and Instruction
- Curriculum and instruction with specialization in curriculum and supervision
- Curriculum and instruction with specialization in outdoor teacher education
- Curriculum and instruction with specialization in secondary education
- Early childhood education
- Elementary education
- Reading

Department of Educational Psychology, Counseling, and Special Education
- Counseling
- Educational psychology
- Special education

Department of Leadership and Educational Policy Studies
- Adult continuing education
- Educational administration
- Foundations of education
- Instructional technology
- School business management

Department of Physical Education
- Physical education

**Educational Specialist Degree**

Department of Curriculum and Instruction
- Curriculum and instruction with specialization in curriculum and supervision
- Curriculum and instruction with specialization in elementary education
- Curriculum and instruction with specialization in secondary education

Department of Educational Psychology, Counseling, and Special Education
- Counseling

Department of Leadership and Educational Policy Studies
- Educational administration

**Doctor of Education Degree**

Department of Curriculum and Instruction
- Curriculum and instruction with specialization in curriculum and supervision
- Curriculum and instruction with specialization in elementary education
- Curriculum and instruction with specialization in reading
- Curriculum and instruction with specialization in secondary education

Department of Educational Psychology, Counseling, and Special Education
- Counseling
- Educational psychology
- Special education

Department of Leadership and Educational Policy Studies
- Adult continuing education
- Educational administration
- Instructional technology

**GENERAL REQUIREMENTS**

**Admission**

The College of Education offers programs leading to the Master of Science in Education degree, the Educational Specialist degree, and the Doctor of Education degree. Within these programs, the student may choose from a variety of major areas and specializations. Specific admission requirements are described in the departmental and program sections in the following pages. To be assured of consideration for admission, a prospective student must submit an application to the Graduate School no later than June 1 for the fall semester, November 1 for the spring semester, and April 1 for the summer session. Only complete applications containing all required data (application forms, official transcripts, GRE General Test Scores, and letters of recommendation) are considered.

Applicants denied admission may request reconsideration on the basis of additional evidence and/or information not previously submitted. Such requests shall be in writing and directed to the appropriate program admissions committee. Decisions of program admissions committees may be appealed to the Admissions, Retention, and Professional Standards Committee of the department. Such appeals shall be in writing and should explain the basis for the appeal.

**Retention**

In addition to complying with the retention requirements of the Graduate School, students are responsible for meeting the professional standards of the College of Education and its respective departments and programs of study. The following requirements apply to all students:

1. Students shall remain in good academic standing in the Graduate School.
2. Students are required to maintain high ethical standards and must demonstrate evidence of functional competency in fulfilling the professional roles required by the discipline.
3. Doctoral students must pass a candidacy examination which requires an ability to deal with more than individual course content. Satisfactory completion of comprehensive examinations requires analysis, synthesis, and integration of the content within a discipline.
4. Doctoral students must develop, complete, and defend an acceptable dissertation following the guidelines of the Graduate School and the program in which they are enrolled.

Please consult specific program sections of this catalog for any additional requirements.
STUDENT TEACHING IN THE COLLEGE OF EDUCATION

Regulations Governing Student Teaching Assignments

1. All assignments are limited by the programs and facilities available in the cooperating schools.
2. The amount of credit given is determined by the type of assignment.
3. Graduate students must have earned a minimum of 12 semester hours at NIU.
4. A student must have been admitted to teacher education and must maintain an overall minimum NIU grade point average (GPA) of 3.00 for graduate students.
5. A student must have satisfactorily completed pre-student-teaching clinical experiences.
6. A student must apply for a student teaching assignment in advance.
7. A student must have met the specific requirements in the subject matter department and must have maintained the required departmental GPA or better.
8. Students must be recommended for an assignment by the chair of their department or the designated departmental representative. Graduate applicants must be approved by the department offering their graduate degree and the department in which they will be doing their student teaching.
9. A student may not request a change once an assignment is confirmed by the cooperating school.
10. Graduate students must have been admitted to the Graduate School.

Retention

Admission to the program does not guarantee continued acceptance unless students maintain satisfactory grades and other qualifications. In recognition of its responsibility to the schools in which its graduates teach, the university maintains a program of selective retention of candidates for the teaching profession. Thus, the university seeks to avoid recommending a candidate for a student teaching assignment or certification unless the candidate has good character, sound mental and physical health, and academic competence in his or her overall studies, teaching field(s), and professional studies. Instructors involved in any of the undergraduate professional sequence of courses may request that a student be dropped from teacher education for deficiencies in grades, attitudes, or professional skill.

Retention in a student teaching assignment is dependent upon a student teacher's ability to demonstrate those competencies associated with effective teaching, including factors such as organization of materials, motivational techniques, classroom management, interpersonal relationships, and professional ethics. Assessment will be made by the student teacher's supervisors through observation and conferences with the student teacher in a clinical situation.

TEACHER CERTIFICATION

In order to be certified to teach or supervise in the public schools of the state of Illinois, a person must be of good character, in sound health, a citizen of the United States, and at least 19 years of age. The Illinois certification law also requires that an individual complete an approved teacher preparation program at a recognized institution.

The dean of the College of Education, as the university's certification officer, is responsible for reviewing the record of each graduate of an approved teacher education program and for recommending or withholding recommendation of that individual for certification by entitlement and endorsement. Certification is not an automatic procedure. In order to qualify for certification, each student in an entitlement program must complete an application for certification and provide evidence of having completed: (1) the general requirements, (2) courses in professional education appropriate to the program being followed, including a minimum of 100 clock hours of approved pre-student-teaching clinical experience prior to student teaching, and (3) a teacher education approved field of study: early childhood, elementary, special education, secondary (6-12), or special (K-12—art, music, physical education).

A listing of teacher education programs approved by the Illinois State Board of Education and the National Council for Accreditation of Teacher Education may be found in the Undergraduate Catalog under "Teacher Certification Requirements."

The following certification and endorsement programs are available at the graduate level only. The programs are approved by the Illinois State Board of Education and the National Council for Accreditation of Teacher Education.

Special K-12
- Media
- Reading

School Service Personnel
- Guidance
- Administrative
- General Supervisory
- General Administrative
- Superintendent
- Chief School Business Official

Questions about certification may be referred to the certification officer for graduate programs in Gabel Hall.

Other certification programs are:
- School Psychologist (Department of Psychology)
- Speech and Language Impaired (Department of Communicative Disorders)

OFFICE OF HUMAN RESOURCE DEVELOPMENT AND WORKFORCE PREPARATION

The mission of the Office of Human Resource Development and Workforce Preparation is to interpret as well as create knowledge that connects the realms of education and work. The mission is closely aligned with Northern Illinois University's role—the pursuit of excellence in teaching, research, and service. These complementary functions are the responsibility of the office as it strives to serve the continuing educational needs of human resource development professionals. Personnel in this office conduct research, disseminate findings, and provide other services to the human resource development community. Services provided by the office will regularly evolve to reflect the changing nature of the United States' workforce—one that is being redefined with increasing levels of complexity, uncertainty, and diversity.
Department of Curriculum and Instruction (CI- -)

GRADUATE FACULTY

Gloria Alter, assistant professor, Ed.D., Northern Illinois University
June E. Barnhart, associate professor, Ph.D., Northwestern University
Frank P. Bazeli, professor, Presidential Teaching Professor, Ed.D., Wayne State University
Pamela J. Farris, professor, Ph.D., Indiana State University
Jose Figueroa, assistant professor, Ph.D., Pennsylvania State University
Constance Goode, assistant professor, Ph.D., University of Wisconsin
Earl F. Hanson, associate professor, Ph.D., University of Chicago
Jerry L. Johns, professor, Presidential Teaching Professor, Ph.D., Michigan State University
Clifford E. Knapp, professor, Ph.D., Southern Illinois University
James H. Moss, associate professor, Ed.D., Ball State University
Judy F. Pickle, associate professor, Ph.D., University of Illinois
Donald J. Richgels, professor, Ph.D., University of Wisconsin
Carla C. Shaw, assistant professor, Ph.D., Southern Illinois University
Deborah A. Simmons, associate professor, Ph.D., University of Michigan
Rosemarie Slavenas, associate professor, Ed.D., Northern Illinois University
Norman A. Stahl, professor, Ph.D., University of Pittsburgh
Billie J. Thomas, associate professor, Ph.D., University of Minnesota
Thomas E. Thompson, associate professor, Ed.D., Oregon State University
Carl M. Tomlinson, associate professor, Ph.D., Florida State University
Alan M. Voelker, professor, Ph.D., University of Wisconsin
Robert L. Vogl, associate professor, Ph.D., University of Michigan
Sonia Vogl, associate professor, Ph.D., University of Michigan
Terry Whealon, associate professor, Ed.D., Indiana University

The Department of Curriculum and Instruction offers the degree Master of Science in Education, the Educational Specialist degree, and the degree Doctor of Education. A list of course requirements for each major is available in the department office.

Students may major in the following areas listed under each degree:

**Master of Science in Education**
Curriculum and instruction with specialization in:
- Curriculum and supervision
- Outdoor teacher education
- Secondary education
- Early childhood education
- Elementary education
- Reading

**Educational Specialist**
Curriculum and Instruction with specialization in:
- Curriculum and supervision
- Elementary education
- Secondary education

**Doctor of Education**
Curriculum and Instruction with specialization in:
- Curriculum and supervision
- Elementary education
- Reading
- Secondary education

**Departmental Admission Criteria**

The Department of Curriculum and Instruction seeks to select the best-qualified applicants for admission to its programs. When the number of applicants to any program exceeds its capacity, even qualified applicants may be denied admission and encouraged to reapply at a later date.

In addition to satisfying requirements for admission to the Graduate School, applicants for admission to the department's programs are expected to satisfy both department and program admissions criteria. For the Graduate School and program admissions criteria, see the appropriate sections of this catalog.

**Master of Science in Education**

Admission Criteria
An applicant for admission to a departmental program is generally expected to meet or exceed the following requirements:

1. Satisfactory scores on the verbal and quantitative sections of the Graduate Record Examinations (GRE) must be obtained.
2. Two letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant's professional qualifications.
3. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.

Prospective students who fail to satisfy either the GPA or the GRE criterion may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiencies, and should accompany the application for admission to the Graduate School. Decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual's qualifications. Appeals of a decision made by the program committee may be made to the department's Committee on Admissions, Retention, and Professional Standards. Appeals to this committee must be in writing and must explain the basis for the appeal.
Educational Specialist Degree

Admission Criteria
An applicant for admission to a departmental program is generally expected to meet or exceed the following requirements:
1. A minimum GPA of 3.20 in previous graduate work.
2. A combined score of 900 or better on the verbal and quantitative sections of the General Test of the Graduate Record Examinations (GRE). In addition, the score on the analytical ability subset of the GRE will be used as evidence of aptitude for all applicants who have taken the examination since October 1977.
3. Two letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant's professional qualifications.
4. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.
5. Following screening based on the above criteria, participation in a preadmission interview and demonstration of writing competencies may be required.

Prospective students who fail to satisfy either the GPA or the GRE criterion may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiencies, and should accompany the application for admission to the Graduate School.

Decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual's qualifications. Appeals of the decision made by a program committee may be made to the department's Committee on Admissions, Retention, and Professional Standards. Appeals to this committee must be in writing and must explain the basis for the appeal.

Doctor of Education

Admission Criteria
An applicant for admission to a departmental program is generally expected to meet or exceed the following requirements:
1. A minimum GPA of 3.20 in previous graduate work.
2. A combined score of 1000 or better on the verbal and quantitative sections of the General Test of the Graduate Record Examinations (GRE). In addition, the score on the analytical ability subset of the GRE will be used as evidence of aptitude for all applicants who have taken the examination since October 1977.
3. Three letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant's professional qualifications.
4. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.
5. For qualified applicants to doctoral programs, demonstration of writing competencies and participation in a preadmission interview before a final admission decision is made.

Prospective students who fail to satisfy either the GPA or the GRE criterion may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiencies, and should accompany the application for admission to the Graduate School.

Final decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual's qualifications. Appeals of the decision made by a program committee may be made to the department's Committee on Admissions, Retention, and Professional Standards. Appeals to this committee must be in writing and must explain the basis for the appeal.

Admission Procedures

Decisions about admission to programs in the department are ordinarily made at least once each term. To be assured of consideration, completed applications containing all required data (application forms, official transcripts, GRE scores, and letters of recommendation) must be received by the Graduate School no later than June 1 for admission for the fall term, November 1 for admission for the spring term, and April 1 for admission for the summer session.

Any applicant who is denied admission to a program may submit to the appropriate program admissions committee a written request for reconsideration that includes information not previously submitted. Final decisions of program admissions committees may be appealed to the department's Committee on Admissions, Retention, and Professional Standards. Appeals to this committee must be in writing and must explain the basis for the appeal.

Retention

In addition to the retention requirements of the Graduate School, students are responsible for meeting the professional standards of the College of Education and the Department of Curriculum and Instruction programs of study. Requirements are as follows:
1. Students shall remain in good academic standing in the Graduate School.
2. Students are required to maintain high ethical standards and must demonstrate evidence of functional competency in fulfilling the professional roles required by the discipline.
3. Doctoral students must pass a candidacy examination which requires an ability to deal with more than individual course content. Satisfactory completion of comprehensive examinations requires analysis, synthesis, and integration of the content within a discipline.
4. Doctoral students must develop, complete, and defend an acceptable dissertation following the guidelines of the Graduate School and the program in which they are enrolled.

Please consult specific program sections of this catalog for any additional requirements.

Master of Science in Education

General Requirements for Major in:
Curriculum and instruction with specialization in:
- Curriculum and supervision
- Outdoor teacher education
- Secondary education
- Early childhood education
- Elementary education
- Reading

Programs of study will include a minimum of 30-33 semester hours, of which a minimum of 18 semester hours must be within the major.

Option 1—Non-Thesis Option
One graduate-level course in research approved by the student's adviser (3)
One of the following graduate-level courses in educational foundations (3)
LEFE 500, Sociological Foundations of Education (3)
EPSY 501, Psychological Foundations of Education (3)
LEFE 510, Historical Foundations of Education (3)
LEFE 520, Historical Foundations of Education (3)
LEFE 521, Historical Foundations of American Education (3)
LEFE 530, Introduction to Comparative/International Education (3)
Two graduate core courses in curriculum and instruction selected from the following (6)

NOTE: This applies to curriculum and instruction majors.

CISC 500, Organization of Curriculum (3)
CISE 534, Improvement of Instruction (3)

A minimum of 18-21 semester hours of additional area and elective course work approved by the student's adviser. The successful completion of a comprehensive examination.

Option 2—Thesis Option
Same as Option 1 except that a minimum of 6 semester hours of program course work must be devoted to the master's thesis.

Objectives for Each Major and Specialization

Curriculum and instruction with a specialization in curriculum and supervision provides the student with information to develop competence in supervisory techniques, curriculum theory and practice, cooperative planning for improvement of instruction, coordination of educational media utilization, and evaluation of programs of curriculum improvement. This area is especially appropriate either for the person desiring to meet the requirements for the general supervisory endorsement to the administrative certificate in compliance with the State of Illinois School Code, or for those persons whose goal is the improvement of instruction, regardless of level of teaching.

Curriculum and instruction with a specialization in outdoor teacher education provides specialized study in utilizing community and natural out-of-classroom resources to enhance the school curriculum and informal education programs. This specialization is designed to prepare individuals for teacher or interpreter roles in a variety of outdoor instructional environments, and as specialists or administrators for outdoor programs and facilities in day-use or residential settings.

Curriculum and instruction with a specialization in secondary education is intended for entering or practicing teachers who wish to develop the teaching skills and the informed understanding of the major issues and trends in secondary education that mark the master teacher. This specialization concentrates on intensive clinical study of instructional and classroom dynamics models, and on study of conditions within the field.

Early childhood education offers focused study to strengthen and broaden the professional preparation of teachers of young children, birth through eight years. Students pursuing the M.S.Ed. may also choose course work to meet Early Childhood Illinois Type 04 Certification requirements to teach children from birth through grade 3 in Illinois public schools. Students may also elect course work to fulfill special education approval requirements for teaching exceptional children birth through age six.

Elementary education emphasizes focused study to strengthen and broaden the professional preparation of teachers for the elementary school. In addition to the basic requirements, course work will be determined on the basis of the individual student's undergraduate preparation, experience, and professional goals.

A major in reading trains experienced teachers in diagnosing reading problems and giving remedial treatment to individual pupils. Teachers with such training and experience are in demand to function as remedial reading teachers and, after broader experience, to serve as coordinators of reading programs in elementary and secondary schools.

Field Work
Supervised field work is sometimes required in a given program of study especially when, in the adviser's judgment, it is necessary to prepare the student in a chosen specialty.

Deficiency Study
In cases in which students' backgrounds in their chosen specialty are limited, they may be required to fulfill deficiency requirements.

Internship Programs
The Department of Curriculum and Instruction currently utilizes internship programs in the areas of community college, curriculum and supervision, elementary education, early childhood education, and reading. For further information and internship possibilities see course descriptions.

Certification at the Master's Level
The K-12 Reading Specialist Certification Program is designed for teachers who wish to gain additional competencies which will enable them to work effectively with learners, teachers, and K-12 school-community personnel in improving reading instruction in the schools. Students who wish to make application for the K-12 Reading Specialist Certification Program should contact the reading faculty for further information.

Application for Admission to Teacher Education by Graduate Students
All graduate students who have not qualified earlier for teacher certification in Illinois and who wish the approval of this institution for such certification are required to make formal application for admission to teacher education. Graduate students who seek further university preparation for teaching in the secondary school may (a) major in a subject for teaching offered by a department in one of several colleges, or (b) major in secondary education.

An application form for admission to teacher education must be submitted to the office of the dean of the Graduate School. This should be done early to permit appropriate counseling for those seeking certification and institutional approval. (The criteria for admission to teacher education are listed in a previous section of this catalog.) After the student's application has been approved by the dean of the Graduate School, the student will be informed of the procedure for becoming certified in Illinois and of the professional education prerequisites for student teaching at this institution. After completing all deficiencies for certification, except for student teaching, the student will be issued a card marked "graduate" for admission to student teaching.

For admission to student teaching, the student must possess a grade point average (GPA) of at least 3.00 in graduate courses taken at Northern Illinois University. No graduate of a college or university who has been rejected for admission to a teacher education program will be admitted at the graduate level. No student will be recommended by the institution for certification who has not met the above admission requirements and those of an approved professional curriculum.

Educational Specialist Degree

General Requirements
An applicant for admission into the Educational Specialist (Ed.S.) degree program must:
1. Apply to the dean of the Graduate School for admission to the Graduate School for the Ed.S. program.
2. Work with an interim adviser planning work for the first semester.
3. Arrange an interview with the chair of his or her advisory committee after receiving notification of acceptance by the departmental admission committee.
4. Confer with the advisory committee to plan a program of study. (Quadruplicate copies of the program shall be prepared.)
Curriculum and Instruction Specializations

Students may pursue an Ed.S. in curriculum and instruction with specializations in:

- Curriculum and supervision. This area is designed for students who wish to continue study in curriculum and supervision with emphasis on their relationship to the behavioral sciences, school-community relations, personnel management, and leadership skills pertaining to the curriculum. In addition, the student works on more advanced educational theory of a general nature. Advanced graduate students who are interested in reading as a field of study may select this major.
- Elementary education. This area is designed for experienced elementary teachers and others who are interested in further study of elementary education. Emphasis is on research approaches to the improvement of elementary education. Applicants must have a minimum of two years of successful teaching experience.
- Secondary education. This area is designed for practitioners who are interested in advanced preparation in instruction-related specialties at the secondary and post-secondary levels or in similar educational settings. The program focuses on the design of curriculum and instruction, instructional skills development, and the direct supervision of instruction.

Doctor of Education

General Requirements

The degree Doctor of Education, the highest professional degree offered by the Graduate School through the Department of Curriculum and Instruction, is awarded to those students who demonstrate superior qualities and attainment during their period of study and give clear evidence of exceptional promise.

Applicants for the Doctor of Education degree are expected to have a broad base of general education in the humanities, sciences, and social sciences, represented by a minimum of 75 undergraduate and graduate hours distributed equitably among the various fields. Where significant deficiencies are found by the student's advisory committee, additional semester hours above the 93 required for the doctoral degree may be prescribed. This degree is a professional degree intended to prepare superior teachers, administrators, service personnel, and scholars of education. In addition to other functions, the program provides individuals for teaching at the college level. Students majoring in curriculum and instruction may pursue specializations in curriculum and supervision, elementary education, reading, or secondary education. Preparation for research responsibilities both as producer and as consumer is an integral part of each program.

An applicant wishing to pursue the doctorate is required to present evidence of a minimum of three years of acceptable professional experience.

The procedures of initial application are similar to those listed for the master's degree and the Ed.S. However, the applicant will also be required to provide additional interviews and letters of recommendation, and will take aptitude tests, as stated elsewhere in this catalog.

Residence for the doctorate is required to insure the involvement of the student for at least a minimum period of time in full intellectual activities of the campus. The residence requirement for the doctorate may be fulfilled by completing 27 semester hours of graduate course work within five consecutive academic terms.

All general requirements and procedures referring to admission, residence credit, dissertation, final examination, and graduation as set forth by the Graduate School are to be satisfied.

The Department of Curriculum and Instruction requires the equivalent of at least three years of full-time academic work, or a minimum of 93 semester hours of graduate work beyond the baccalaureate degree including the dissertation. The 93 semester hours include the following:

1. A minimum of 15 semester hours of graduate-level course work in common requirements: (a) research understandings and skills, (b) learning and development theories, and (c) socio-cultural analyses of education.
2. A minimum of 18 semester hours of graduate-level work (excluding dissertation hours) in the major.
3. A cognate component selected from outside the major to provide a broader base of knowledge, a supportive professional skill, or more sophisticated research competencies. No specific number of semester hours is required.
4. A limitation of 30 semester hours on the amount of master's degree work that may be included in a doctoral program of studies.
5. A dissertation for 15-30 semester hours. A typical doctoral program includes study in a variety of disciplines within the university. Ordinarily, a minimum of 9 semester hours of course work is pursued in other colleges. These credits may be found within the common requirements, the cognate component, or the student's major.

The dissertation represents a substantial contribution to knowledge in the candidate's major field of study. Candidates are expected to demonstrate ability to conduct original scholarship appropriate to their major and to communicate effectively the results of their research.

Examinations

Candidacy examination. A written candidacy examination will be scheduled and administered at least twice each year. A graduate student eligible to take this examination, with the permission of the chair of the doctoral committee, will have completed at least two-thirds of his or her studies including the common requirements. Dates on which application for the examination can be made will be announced by the Department of Curriculum and Instruction. This examination will encompass both principal areas of professional knowledge, the common requirements and the special field. Any student who fails may, with the recommendation of the examination committee, be granted the opportunity to take a second examination. The second examination, however, will be final.

Final examinations. A final oral examination related to the dissertation is required and is conducted in accordance with the general requirements of the Graduate School.

Course Offerings

Curriculum and Supervision (CISC)

CISC 492. SPECIAL TOPICS IN CURRICULUM AND SUPERVISION (1-3).
A. Curriculum
B. Supervision
Study of special topics, announced in advance. May be repeated to a maximum of 9 semester hours when subject varies.

CISC 500. ORGANIZATION OF CURRICULUM (3). The assumptions underlying current curriculum organizations. Decision-making procedures regarding development and evaluation of educational programs.

CISC 502. SURVEY OF RESEARCH IN CURRICULUM (3). Analysis of curriculum research with emphasis on current research studies. PRO: CISC 500 or consent of department.
CISC 512. IMPROVEMENT OF INSTRUCTION FOR SUPERVISORS (3). An analysis and application of methods used in supervision for the improvement of instruction. Elements of effective teaching are investigated and applied.

CISC 524. ELEMENTARY SCHOOL CURRICULUM (3). A study of the elementary school curriculum, its relationship to society, and present practices in schools.

CISC 525. SECONDARY SCHOOL CURRICULUM (3). A study of the secondary school curriculum, its relationship to society, and present practices in schools.

CISC 535. SUPERVISORY BEHAVIOR (3). Crosslisted as LEEA 535X. The theoretical constructs underlying supervisory behavior in educational settings and applications of related principles to the supervision and management of education personnel.

CISC 550. SEMINAR IN THE COMMUNITY COLLEGE (3). The development of the junior college movement; its present status, purposes, functions, organization, and curriculum; and the characteristics of the emerging community college movement.

CISC 568. INTERNSHIP (3-9).
A. Curriculum
B. Supervision
C. Community College
Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 9 semester hours.

CISC 587. TEACHING PRACTICUM (1-6). For those actively engaged in teaching who are interested in improving their teaching skills. Clinical work with the guidance of experienced professionals and consultants in teacher education. Experiences arranged to meet the needs, concerns, and interests of each individual. May be repeated to a maximum of 6 semester hours. Does not fulfill the student teaching requirement. PRQ: Consent of department.

CISC 590. WORKSHOP (1-3).
A. Curriculum
B. Supervision
C. Community College
Workshop designed for teachers, supervisors, counselors, and administrators to study contemporary issues and problems of the public school. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

CISC 597. INDEPENDENT RESEARCH (1-3).
A. Curriculum
B. Supervision
C. Community College
Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.

CISC 599A. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

CISC 599B. ED.S. THESIS OR FIELD STUDY (3-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of the chair of the student's advisory committee.

CISC 601. DEVELOPMENT OF THE CURRICULUM FIELD (3). Study of significant educational events which led to the emergence of the field of curriculum. Implications for the current state of the field. PRQ: CISC 500 or consent of department.

CISC 603. CURRICULUM DESIGN (3). Interrelationships of various components of a curriculum design. Curriculum design as a basis for decision making in constructing instructional programs. PRQ: Consent of department.

CISC 604. RESEARCH SEMINAR IN CURRICULUM AND INSTRUCTION (3). Designed for the advanced student who is interested in planning and conducting a research study in curriculum and instruction. May be an exploratory or pilot study related to the doctoral dissertation. May be repeated to a maximum of 6 semester hours. PRQ: Admission to Ed.S. or doctoral program and consent of department.

CISC 606. CURRICULUM INQUIRY (3). Analysis of curriculum theories. Construction of new paradigms or models based on current curriculum thought. PRQ: Admission to Ed.S. or doctoral program; CISC 500 or consent of department.

CISC 608. PRINCIPLES OF CURRICULUM DEVELOPMENT (3). Application of curriculum principles to the development of educational programs. Assessment of current plans for organization of the curriculum. PRQ: CISC 500 or consent of department.

CISC 615. IMPROVEMENT OF INSTRUCTIONAL PROGRAMS (3). Analysis of supervisory functions, methods, and responsibilities of educational leadership. Group dynamics in inservice programs. PRQ: CISC 500 or consent of department.

CISC 633. SEMINAR: PROBLEMS IN CURRICULUM DEVELOPMENT (3). Students are required to undertake a curriculum project. PRQ: Standing as Ed.S. or doctoral student and CISC 500, or consent of department.

CISC 634. PRACTICUM IN CURRICULUM APPRAISAL (3). An analysis of the purposes, process, and types of curriculum appraisal with emphasis on conducting an on-site appraisal of a school's curriculum. PRQ: CISC 500 and CISC 502, or consent of department.

CISC 635. ANALYSIS OF SUPERVISORY THEORY AND PRACTICE (3). Advanced course in supervision which focuses on the work of the supervisor in both out-of-classroom and in-classroom settings. Emphasis will be placed on the relationship between theory and practice. PRQ: CISC 535 or consent of department.

CISC 640. FIELD STUDY IN CURRICULUM AND SUPERVISION (3-6). Methods of analyzing and evaluating educational programs through participation in curriculum and supervision studies in field settings. May be repeated to a maximum of 6 semester hours. PRQ: CISC 500 and CISC 535 or consent of department.

CISC 651. COMMUNITY COLLEGE STUDENT PERSONNEL SERVICES (3). A seminar on student personnel services and problems peculiar to the community (junior) college. Analysis of current practice and research in the field with emphasis on personnel practices and instruments, orientation procedures, counseling and record keeping, registration and test interpretation, placement, student activity programs, and institutional research on student characteristics. PRQ: CISC 550 and 6 semester hours of guidance and/or measurement, or consent of department.

CISC 657. SEMINAR IN HIGHER EDUCATION (3). Analysis of selected problems and issues in American higher education.

CISC 660. EDUCATIONAL CHANGE (3). Description and conceptualization of the process of fundamental change affecting the culture of the school community and various emerging educational forms.

CISC 686. ADVANCED INTERNSHIP (1-12).
A. Curriculum
B. Supervision
C. Community College or Higher Education
Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Ed.S. or doctoral program, or consent of department.

CISC 697. INDEPENDENT RESEARCH (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours.

CISC 699. DOCTORAL RESEARCH AND DISSERTATION (3-15). Student must accumulate 15 semester hours prior to graduation. May be repeated. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.

Early Childhood Education (CICE)

CICE 400. EARLY CHILDHOOD EDUCATION (3). Students will examine the procedures for planning, organizing, and interpreting the learning environment for young children. PRQ: EPSY 314 or consent of department.

CICE 410. TRENDS AND ISSUES IN EARLY CHILDHOOD EDUCATION (3). Focus on the philosophical and psychological aspects of early childhood education as related to contemporary society.
CICE 492. SPECIAL TOPICS IN EDUCATION (1-3). Study of special topics, announced in advance, in education. May be repeated to a maximum of 9 semester hours when subject varies.

CICE 500. ANALYSIS OF INSTRUCTION IN EARLY CHILDHOOD EDUCATION (3). A study of learning continuity in early years.

CICE 501. IMPROVEMENT OF INSTRUCTION IN EARLY CHILDHOOD EDUCATION (3). An investigation and analysis of common problems in teaching and supervision of early childhood programs.

CICE 510. AMERICAN PRESCHOOL MOVEMENT (3). A study of the development of the American preschool movement.

CICE 511. COMPARATIVE EARLY CHILDHOOD EDUCATION (3). A cross-cultural, multidisciplinary approach to the study of both formal and informal education of children. Emphasis on the content and context of learning in early childhood in contemporary industrial and preliterate societies.

CICE 521. EDUCATIONAL DIAGNOSIS AND ASSESSMENT OF PRESCHOOL EXCEPTIONAL CHILDREN (3). Special diagnostic procedures appropriate for preschool handicapped children. Emphasis on screening and assignment of handicapping conditions to provide recommendations for corrective procedures. PRQ: HFR 535 or consent of department.

CICE 522. DEVELOPMENT OF CURRICULUM MATERIALS FOR THE PRESCHOOL EXCEPTIONAL CHILD (3). Resource systems and materials available for the education of the preschool exceptional child. Focus on evaluation, adaptation, and development of curricula. PRQ: CICE 521 or EPSPE 540, or consent of department.

CICE 523. SEVERELY HANDICAPPED INFANTS AND PRESCHOOLERS (3). A review of the characteristics, identification, educational intervention systems, and adaptive and cognitive behavior of severely handicapped infants and preschoolers. PRQ: HFR 439 or consent of department.

CICE 526. CURRICULAR STRATEGIES FOR THE EDUCATION OF HANDICAPPED INFANTS (3). Curricular models for instructional intervention for developmentally delayed infants during their first two years of life. PRQ: CICE 523 or consent of department.

CICE 530. LANGUAGE ARTS IN EARLY CHILDHOOD EDUCATION (3). Focus is on language experiences as an integral part of the young child's growth and development.

CICE 531. SOCIAL LEARNING IN EARLY CHILDHOOD EDUCATION (3). Emphasis on social learning for the young child. Principles and procedures in the development of social experiences. Child growth and development, democratic values and processes, and common life problems are stressed.

CICE 560. SEMINAR: NEW DEVELOPMENTS IN EARLY CHILDHOOD EDUCATION (3). Philosophy and psychology of early childhood education as related to factors in the contemporary scene.

CICE 586. INTERNSHIP IN EARLY CHILDHOOD EDUCATION (1-9). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 9 semester hours.

CICE 587. TEACHING PRACTICUM IN EARLY CHILDHOOD EDUCATION (1-6). A course designed for those actively engaged in teaching who are interested in improving their teaching skills. Clinical work with the guidance of experienced professionals and consultants in teacher education. Experiences arranged to meet the needs, concerns, and interests of each individual. May be repeated to a maximum of 6 semester hours. Does not fulfill the student teaching requirement. PRQ: Consent of department.

CICE 590. WORKSHOP IN EARLY CHILDHOOD EDUCATION (1-3). Workshop designed to study contemporary issues and problems. Content varies. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

CICE 597. INDEPENDENT RESEARCH (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

CICE 599. MASTER'S THESIS (1-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

CICE 660. SEMINAR IN EARLY CHILDHOOD EDUCATION (3). Identification and analysis of problems and issues in early childhood education. May be repeated to a maximum of 6 semester hours.

CICE 666. INTERNSHIP (1-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Ed.S. or doctoral program, or consent of department.

CICE 697. INDEPENDENT RESEARCH (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours.

Elementary Education (CIEE)

CIEE 402X. MATHEMATICS CURRICULUM AND INSTRUCTION: GRADES K-9 (3). MATH 402. Methods of teaching mathematics with emphasis on developing the skills and understanding required for using different teaching aids. Attention given to the teaching of exceptional students and to planning for multicultural learning situations. Primarily for elementary education and special education majors. Not open for credit toward the major or minor in mathematical sciences. PRQ: MATH 201 or consent of department.

CIEE 403X. LANGUAGE DEVELOPMENT IN CHILDREN (3). CMD 403. An overview of oral language acquisition including phonological, morphological, syntactic, semantic, and pragmatic development in children from infancy through adolescence.

CIEE 411. UTILIZING HUMAN RESOURCES FOR ELEMENTARY SCHOOL PROGRAMS (3). The role of the elementary school teacher in developing and managing programs which involve parents and other people in the community.

CIEE 430. CONTEMPORARY LANGUAGE ARTS (3). An introduction to contemporary applied language arts programs. Emphasis on methods, materials, and instructional procedures for elementary school children.

CIEE 431. COMMUNICATION ARTS IN THE ELEMENTARY SCHOOL: NONVERBAL COMMUNICATION (3). Through direct experience students develop an understanding of nonverbal communication, including divergent expression and composition in the elementary school. Theory, principles, and codes of nonverbal communication.

CIEE 490. WORKSHOP IN ELEMENTARY EDUCATION (1-6). Suggestions for experiences suitable for children 6 to 12 years old. Total time devoted to new media and the construction of teacher-made materials. May be repeated to a maximum of 6 semester hours. S/U grading basis is used. PRQ: Consent of department.

CIEE 492. SPECIAL TOPICS IN ELEMENTARY EDUCATION (1-3). Study of special topics, announced in advance, in education. May be repeated to a maximum of 9 semester hours when subject varies.

CIEE 501. IMPROVEMENT OF INSTRUCTION IN ELEMENTARY EDUCATION (3). An investigation and analysis of common problems in teaching. Emphasis on the principles which apply at all levels of instruction.

CIEE 502. INDIVIDUALIZING LEARNING IN THE ELEMENTARY SCHOOL (3). Philosophy, models, and procedures for diagnosing and individualizing learning in the elementary school.

CIEE 504. TEACHING STRATEGIES FOR EXPERIENTIAL LEARNING (3). Existing and emerging theory and practice relating to experiential education. Focus on direct, active involvement of learners in developing their educational environment and outcomes.

CIEE 525. TEACHING FOR CAREER DEVELOPMENT IN THE ELEMENTARY SCHOOL (3). Planning, implementing and evaluating career development programs in the elementary school. Refocusing curricular areas to meet career development objectives.

CIEE 530. TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL (3). Emphasis on principles of instruction and curriculum development in the social studies; the examination and evaluation of issues in the teaching of social studies.

CIEE 531. YOUNG CHILDREN'S EXPLORATION OF THE PHYSICAL WORLD (3). Focus on quantitative and science learnings of the young child.
CIEE 532. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL (3). Identification and analysis of problems and issues in science, society, and education that have an influence on curriculum and instruction in the elementary school science program.

CIEE 533. DEVELOPING AN ELEMENTARY SCHOOL SCIENCE PROGRAM (3). Development of a conceptual framework and procedure for initiating and maintaining the currency of an elementary school science program; consideration of approaches from the perspective of the child, the teacher, the community and the subject area.

CIEE 534. IMPLEMENTING AN ELEMENTARY SCHOOL SCIENCE PROGRAM (3). A course designed to aid classroom teachers, unit leaders, department chairs, district supervisors and other leadership personnel in implementing, managing and revising an elementary school science program. Emphasis placed on converting philosophical structures into an operational program.

CIEE 535. GLOBAL PERSPECTIVES IN CITIZENSHIP EDUCATION (3). The implications of emerging global trends and problems for social education in the elementary and middle school. The creation of interdisciplinary activities and units to develop the global perspective. PRQ: CIEE 530 or consent of department.

CIEE 536. LANGUAGE ARTS RESEARCH IN ELEMENTARY EDUCATION (3). Detailed study of selected research in elementary school language arts with emphasis on principles, trends, methods, and materials. Focus on curriculum patterns and innovations. PRQ: EPSY 520 or consent of department.

CIEE 537. ACQUISITION OF SPOKEN AND WRITTEN LANGUAGE (3). Study of language development in young children (ages 0-8). Includes in-depth treatment of theories in developmental psycholinguistics. Emphasizes on parallels between oral development and literacy acquisition and on consequent preschool and elementary school teaching strategies.

CIEE 538. EVALUATING CHILDREN'S LITERATURE (3). Children's books considered in relation to literary merit and their potential for meeting developmental and ethnic needs of children. Attention given to classroom application. PRQ: CIEE 382 or consent of department.

CIEE 539. CHILDREN'S LITERATURE IN A MULTICULTURAL SOCIETY (3). A historical and current perspective of multicultural influences in children's literature. Implications for classroom programs are considered.

CIEE 540. TEACHING LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (3). Emphasis on principles of instruction and curriculum development in the language arts. PRQ: Consent of department.

CIEE 541. INQUIRY STRATEGIES IN ELEMENTARY SCHOOL SOCIAL STUDIES PROGRAMS (3). Adaptation to the learning styles of children of basic inquiry strategies drawn from theoretical models in the social sciences. Emphasis placed on the use of these strategies as methodology in the improvement of social studies learning. PRQ: CIEE 342 or consent of department.

CIEE 542. RELATED ARTS FOR THE TEACHERS OF CHILDREN (3). Designed for students who are interested in aesthetic education for children; an examination of trends, issues and aesthetic experience in the planning of learning in the fine and applied arts. May be repeated to a maximum of 12 semester hours.

CIEE 543. WRITING IN THE ELEMENTARY SCHOOL (3). Methods of developing writing skills of elementary students based on current theory and research.

CIEE 545. SEMINAR IN ELEMENTARY EDUCATION (3). A seminar on current concerns and trends in elementary education. May be repeated to a maximum of 6 semester hours.

CIEE 556. INTERNSHIP (3-9). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours, although typically only 6 semester hours may be applied to the program of study.

CIEE 557. TEACHING PRACTICUM IN ELEMENTARY EDUCATION (1-6). A course designed for those actively engaged in teaching who are interested in improving their teaching skills. Clinical work with the guidance of experienced professionals and consultants in teacher education. Experiences arranged to meet the needs, concerns, and interests of each individual. May be repeated to a maximum of 6 semester hours. Does not fulfill the student teaching requirement. PRQ: Consent of department.

CIEE 559. WORKSHOP IN ELEMENTARY EDUCATION (1-3). Workshop designed for teachers, supervisors, counselors, and administrators to study contemporary issues and problems of the public school. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

CIEE 559. SUPERVISION OF CLINICAL EXPERIENCES (1-3). Crosslisted as CISE 559. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

CIEE 559. INDEPENDENT RESEARCH (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

CIEE 559. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

CIEE 560. ANALYSIS OF INSTRUMENT IN ELEMENTARY EDUCATION (3). The use of theory in the analysis and interpretation of teaching-learning situations, as observed or recorded from preschool and elementary classrooms. Particular attention to (1) the identification and use of goals in education and (2) the application of knowledge in the areas of learning, human growth, group behavior, and curriculum.

CIEE 563. DOMAIN OF SCIENCE EDUCATION (3). A study of selected major dimensions of science education. Consideration of major problems and issues pertinent to each dimension and their association with school science programs. PRQ: Advanced graduate standing or consent of department.

CIEE 563. CHILDREN'S LITERATURE RESEARCH IN ELEMENTARY EDUCATION (3). Examination of selected research in children's literature and implications for instruction and curricular needs. Writing and publishing for children is emphasized. PRQ: Consent of department.

CIEE 563. APPLIED LINGUISTICS IN ELEMENTARY EDUCATION (3). The application of linguistic principles to the teaching of language arts in the elementary school. PRQ: Consent of department.

CIEE 565. ADVANCED SEMINAR IN ELEMENTARY EDUCATION (3). A. Language Arts B. Science C. Social Studies D. Urban Education E. General Identification and analysis of problems and current issues in elementary education. May be repeated to a maximum of 9 semester hours.

CIEE 566. PRACTICUM IN ELEMENTARY EDUCATION (3-12). A practicum in elementary education for those actively engaged in field work, clerical work and role modeling under the guidance of the staff. The examination of practice for the purpose of improvement. May be repeated to a maximum of 12 semester hours.

CIEE 567. ELEMENTARY TEACHER EDUCATION (3). A survey of selected undergraduate programs of preparation which have been designed to educate teachers for the public elementary schools. Intensive analysis of the program at Northern Illinois University involving supervised laboratory experiences. Internship concurrent with this course recommended. PRQ: Consent of department.

CIEE 568. INTERNSHIP (1-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Ed.S. or doctoral programs, or consent of department.

CIEE 569. 'SEMINAR IN THE SUPERVISION AND ADMINISTRATION OF CLINICAL EXPERIENCES (1-3). Crosslisted as CISE 569X. An advanced seminar dealing with the theory and practice of clinical experiences in professional education such as microteaching, observation, participation, simulation, student teaching and internships.
May be repeated to a maximum of 5 semester hours. PRQ: CIEE 595 or consent of department.

CIEE 697. INDEPENDENT RESEARCH (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours.

CIEE 699. DOCTORAL RESEARCH AND DISSERTATION (3-15). Student must accumulate 15 semester hours prior to graduation. May be repeated. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.

Outdoor Teacher Education (CIEE)

CIEE 500. PRINCIPLES AND CONCEPTS OF OUTDOOR EDUCATION (3). Basic concepts and the history of the outdoor education movement. Scope of contemporary programs in the U.S. and abroad. Examination of the teaching-learning processes relevant to outdoor education.

CIEE 503. INTRODUCTION TO EDUCATIONAL RESEARCH IN OUTDOOR EDUCATION (3). Basic course in educational research with emphasis on outdoor education. PRQ: CIEE 500 or consent of department.

CIEE 511. ADVANCED FIELD EXPERIENCES IN OUTDOOR TEACHER EDUCATION (3). For experienced teachers who wish to supplement and enrich their classroom teaching by including outdoor learning experiences. Ways and means of relating various outdoor learning activities to the various subject matter areas of the school curriculum. PRQ: CIEE 500 or consent of department.

CIEE 517. NATURE, ART, AND CRAFTS IN OUTDOOR EDUCATION (3). Using nature as inspiration and as a source of ideas and materials for artistic expression in outdoor programming. Integrating nature-focused craft projects in outdoor education.

CIEE 519. LEISURE AND THE OUTDOORS (3). Theories of leisure and recreation as applied to outdoor recreation and adventure activities. Emphasis on leadership technique, appropriate use of the environment, assessment, and personal skill acquisition.

CIEE 520. ENVIRONMENTAL QUALITY EDUCATION (3). Cultural, ecological, and educational implications of the environmental movement. Emphasis on factors and influences leading to environmental quality literacy.


CIEE 524. TEACHING ENVIRONMENTAL ETHICS (3). Designed for teachers and youth leaders to provide knowledge, attitudes, and skills for teaching the environmental ethics. Course content applicable in both indoor and outdoor settings including schools, camps, nature centers, and other related institutions.

CIEE 525. TEACHING PHYSICAL SCIENCE IN THE OUTDOORS (3). Study of selected aspects of the physical sciences as related to the outdoor environment. Emphasis on teaching and use of research techniques of scientific investigation. PRQ: One course in mathematics and one in natural science or consent of department.

CIEE 526. TEACHING NATURAL SCIENCE IN THE OUTDOORS (3). Developing and implementing strategies for teaching natural science in the outdoors. Emphasis on teaching the interrelationships among living organisms in their natural habitats.

CIEE 534. INTEGRATING COMMUNITY RESOURCES INTO CURRICULUM AND INSTRUCTION (3). Investigating natural, cultural, and human resources that can be effectively integrated into curriculum development.

CIEE 544. TEACHING ENERGY ALTERNATIVES AND ENERGY CONSERVATION (3). Theoretical and practical aspects of teaching basic concepts of energy alternatives and energy conservation. Learning experiences for awareness, understandings, skills, and attitudes designed for teachers and other youth leaders in schools, camps, homes, and other institutions.

CIEE 550. ORGANIZATION AND ADMINISTRATION OF OUTDOOR EDUCATION PROGRAMS (3). The initiation and administration of outdoor education experiences of varying lengths and the acquisition, development, and maintenance of outdoor education facilities. PRQ: CIEE 500 or consent of department.

CIEE 575. SEMINAR IN OUTDOOR EDUCATION (3). Identification and analysis of current problems, issues and practices in outdoor education. PRQ: Minimum of 12 semester hours of graduate courses in outdoor education and consent of department.

CIEE 586. INTERNSHIP IN OUTDOOR EDUCATION (1-12). An internship designed to provide supervised experiences in program planning and organization, outdoor instruction, supervision, and administration. May be repeated to a maximum of 12 semester hours of credit. Nine hours may be applied to the M.S.Ed. degree. S/U grading basis is used. PRQ: Consent of department.

CIEE 590. WORKSHOP IN OUTDOOR EDUCATION (1-3). The investigation and application of outdoor education principles to the particular needs and interests of the workshop participant. Participation in outdoor learning experiences and analysis of instructional materials and resources. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

CIOE 552. SPECIAL TOPICS IN OUTDOOR EDUCATION (1-6). Study of special topics, announced in advance, in outdoor education. May be repeated to a maximum of 9 semester hours when subject varies. PRQ: Consent of department.

CIOE 559. MASTER'S THESIS (1-6). Open only to the student writing a master's thesis under the Master of Science in Education program. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. S/U grading basis is used. PRQ: CIOE 503 or consent of department.

Reading (CIRE)

CIRE 401. PRACTICUM IN TEACHING DEVELOPMENTAL READING: ELEMENTARY LEVEL (3). Practical applications and experiences in developing diagnostic teaching techniques and strategies to improve the reading skills and needs of individual pupils. PRQ: CIRE 350 or consent of department.

CIRE 482. SPECIAL TOPICS IN READING (1-3). Study of special topics, announced in advance, in education. May be repeated when subject varies; however, no more than 6 semester hours may be applied toward the M.S.Ed. degree in reading. PRQ: Consent of department.

CIRE 500. IMPROVEMENT OF READING IN THE ELEMENTARY SCHOOL (3). Advanced course in the teaching of developmental reading at the elementary level. Criteria for a desirable reading program and a consideration of innovative procedures in relation to the findings of research. PRQ: CIRE 350 or consent of department.

CIRE 510. IMPROVEMENT OF READING IN THE SECONDARY SCHOOL (3). The extension of reading skills and interests for all learners in the junior and senior high school. The role of reading in the instructional process. PRQ: Consent of department.

CIRE 511. TEACHING READING IN THE CONTENT AREAS (3). Adaptation of materials, reading skills, and study strategies to the content areas. The role of reading personnel as learning facilitators within the school setting.

CIRE 516. EMERGING LITERACY DEVELOPMENT (3). Emphasis on children's developing literacy. Assessment techniques and organizational approaches to literacy instruction across the preschool and primary years. PRQ: CIEE 537 or consent of department.


CIRE 530. PRACTICUM IN DIAGNOSIS OF READING DIFFICULTIES (3). Case study techniques in the diagnosis of reading problems. The administration of various formal and informal tests and the interpretation of the test results. Making case studies, followed by the preparation of case reports. Written permission of department is required. PRQ: CIRE 500 or CIRE 510, and CIRE 520, or consent of department.

CIRE 531. PRACTICUM IN PROBLEMS OF TEACHING READING (3). Clinical experience in applying procedures with severely disabled readers at the elementary and/or secondary level. PRQ: Consent of department. Recommended: CIRE 530.
CIRE 540. PRACTICUM IN CORRECTIVE READING IN THE ELEMENTARY SCHOOL (3). Diagnostic techniques and corrective procedures suitable for testing and teaching the less severe reading disability cases among elementary school children. Supervised laboratory practice with children in a school setting required. PRQ: Consent of department. Recommended: CIRE 530.

CIRE 550. PRACTICUM IN CORRECTIVE READING IN THE SECONDARY SCHOOL (3). Diagnostic techniques and corrective procedures suitable for testing and teaching the less severe reading disability cases among secondary school students. Supervised laboratory practice with students in a school setting required. PRQ: Consent of department. Recommended: CIRE 530.

CIRE 586. INTERNSHIP (1-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Admission to postgraduate reading program. May be repeated to a maximum of 12 semester hours. PRQ: CIRE 510 or consent of department.

CIRE 586. INTERNSHIP (1-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Admission to postgraduate reading program. May be repeated to a maximum of 12 semester hours. PRQ: CIRE 510 or consent of department.

CIRE 591. READING INSTITUTE (1-3). Basic reading problems and issues at all levels of reading instruction. Guest instructors and regular staff members. May be repeated when subject varies; however, no more than 6 semester hours may be applied toward the M.S.Ed. degree in reading. PRQ: Consent of department.

CIRE 597. INDEPENDENT RESEARCH (1-3). Student's research at the master's level under faculty supervision. May be repeated when subject varies; however, no more than 6 semester hours may be applied toward the M.S.Ed. degree in reading. PRQ: Acceptance by the faculty member who will direct the research.

CIRE 599. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. Does not fulfill the student teaching requirement. PRQ: Consent of department. Recommended: EPSY 520.

CIRE 601. SUPERVISORY PROBLEMS IN READING (3). Procedures for developing a K-12 curriculum in reading and the supervisory responsibilities of administrators and reading consultants in improving reading instruction in the schools. PRQ: Consent of department. Recommended: 12 graduate-level hours in reading, including CIRE 500 and CIRE 510.

CIRE 601. SUPERVISORY PROBLEMS IN READING (3). Procedures for developing a K-12 curriculum in reading and the supervisory responsibilities of administrators and reading consultants in improving reading instruction in the schools. PRQ: Consent of department. Recommended: 12 graduate-level hours in reading.

CIRE 610. CORRELATES OF EFFECTIVE READING (3). The bases of methods in the teaching of reading and the reading process: word perception, reading readiness, personality and motivation variables, and other correlates. PRQ: CIRE 530 or consent of department.

CIRE 611. SEMINAR IN RESEARCH STUDIES IN THE FIELD OF READING (3). Designed for the advanced student who is interested in the study of research reports in education, psychology, linguistics, and other disciplines which have a bearing on the problems of teaching reading. PRQ: Consent of department. Recommended: EPSY 520 and EPSY 521; 12 graduate-level hours in reading.

CIRE 612. SEMINAR IN COMPARATIVE READING (3). A comparison of reading methods and related variables in different national and cultural groups. PRQ: CIRE 530 or consent of department.

CIRE 614. SEMINAR IN READING (1-3). Identification and analysis of issues and problems in reading at all levels. May be repeated to a maximum of 9 semester hours. PRQ: CIRE 500 or consent of department.

CIRE 618. ADULT READING INSTRUCTION (3). Emphasis upon the teaching of reading to adults; strategies applicable to meet the needs of the adult learner; functional alternatives for instruction; preparation of volunteers and the role of the reading teacher with adults. PRQ: CIRE 500 or consent of department.

CIRE 619. PRINCIPLES AND METHODS OF TEACHING POSTSECONDARY READING (3). Considers sequences of advanced reading skills, instructional materials, and model programs for postsecondary reading programs. Examines research on success of postsecondary reading and ways programs are planned and students are identified, tested, and taught. PRQ: CIRE 510 or consent of department.

CISE 422. MIDDLE AND JUNIOR HIGH SCHOOL ORGANIZATION AND INSTRUCTION (3). The development of middle and junior high school organizations and philosophy; forms of curricula; characteristics of early adolescent students; special concerns in instructional and activity planning. PRQ: CISE 424. METHODS AND MATERIALS IN THE SECONDARY SCHOOL (3). Modern principles of teaching and learning in relation to the guidance of learning activities in the high school class. PRQ: Consent of department.

CISE 450. SECONDARY SCHOOL CLASSROOM MANAGEMENT (3). Applications of motivation and management principles and procedures to maintain sound working climates in secondary school classrooms. PRQ: CISE 501. MULTICULTURAL EDUCATION: METHODS AND MATERIALS (3). Designed to aid students identify content materials and devise methods for implementing multicultural education content into curriculum. The relationship between ethnicity, culture, and educational policy is one of the major emphases of the course.

CISE 523. SEMINAR IN SECONDARY EDUCATION (3). A seminar concerned with professional and classroom problems of secondary school teachers.

CISE 533. INSTRUCTIONAL THEORIES APPLIED TO PRACTICE (3). Application of instructional theories to secondary and post-secondary personnel. May be repeated to a maximum of 9 semester hours. PRQ: CISE 501. MULTICULTURAL EDUCATION: METHODS AND MATERIALS (3). Designed to aid students identify content materials and devise methods for implementing multicultural education content into curriculum. The relationship between ethnicity, culture, and educational policy is one of the major emphases of the course.

CISE 534. IMPROVEMENT OF INSTRUCTION (3). An investigation and analysis of common problems in teaching. The principles which apply at all levels of instruction. PRQ: CISE 552. EVALUATING SECONDARY SCHOOLS (3). Focuses on the characteristics of quality and the processes of evaluating secondary schools. Attention is given to the development of reports of evaluation and models for their implementation. PRQ: CISE 534 and CISE 523, or consent of department.

CISE 586. INTERNSHIP (2-9). A. Secondary Education B. Community College Teaching Work individually or in small groups in a professional setting under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 9 semester hours. PRQ: CISE 557A. FIELD-BASED TEACHING PRACTICUM (3-6). A field-based, individualized course for practicing secondary educators and teaching teams. Concentrates on practical and immediately useful instructional improvement experiences and projects under the supervision of secondary education faculty. May be repeated to a maximum of 12 semester hours. PRQ: CISE 557A. FIELD-BASED TEACHING PRACTICUM (3-6). A field-based, individualized course for practicing secondary educators and teaching teams. Concentrates on practical and immediately useful instructional improvement experiences and projects under the supervision of secondary education faculty. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.
CISE 587B. PRACTICUM IN MULTICULTURAL EDUCATION (1-6). Selected field experiences and instructional design projects in multicultural education for those who are interested in improving professional skills. May be repeated to a maximum of 6 semester hours. Does not satisfy student teaching requirement. PRQ: Consent of department.

CISE 587C. CLINIC-BASED TEACHING PRACTICUM (3). A campus clinic-based practicum for secondary educators to develop master teaching skills. May be repeated to a maximum of 6 semester hours. Does not fulfill the student teaching requirement. PRQ: CISE 534 or consent of department.

CISE 588. ANALYSIS OF INSTRUCTION IN SECONDARY EDUCATION (3). Study of models and methods for the analysis and improvement of secondary level instructional procedures. PRQ: CISE 534 or consent of department.

CISE 590 WORKSHOP IN SECONDARY EDUCATION (1-3). Workshop designed for teachers, supervisors, counselors, and administrators to study contemporary issues and problems of the public school. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Acceptance by the director of the workshop.

CISE 595X. SUPERVISION OF CLINICAL EXPERIENCES (1-3). CISE 595. To provide cooperating teachers, administrators, and supervisors with a better understanding of the function of clinical experiences in the professional education of teachers. Discussion of the basic issues and techniques in supervising, directing and evaluating those clinical experiences. May be repeated to a maximum of 5 semester hours. PRQ: Consent of department.

CISE 597. INDEPENDENT RESEARCH IN SECONDARY EDUCATION (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

CISE 599A. MASTER'S THESIS (1-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

CISE 599B. ED.S. THESIS OR FIELD STUDY (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of the chair of the student's advisory committee.

CISE 623. SEMINAR: ISSUES IN SECONDARY EDUCATION (3). Integration and synthesis of the concepts, principles, and theoretical constructs in the secondary education field, including post-secondary teachers and teacher educators.

CISE 634. DESIGN OF INSTRUCTIONAL MODELS (3). The design and testing of innovative instructional methods and models. The primary intent is to participate in advancing knowledge in the field. PRQ: CISE 534 or consent of department.

CISE 652. SEMINAR IN EVALUATION OF SECONDARY SCHOOLS AND SECONDARY TEACHER EDUCATION PROGRAMS (3). Critical analysis of the models, materials, and practices used by accrediting agencies, associations, and consultant teams in the evaluation of secondary schools and secondary teacher education programs. PRQ: CISE 552 or consent of department.

CISE 662. SEMINAR: REVIEW OF RESEARCH IN SECONDARY EDUCATION (3). A review of current research in secondary education. Participants become familiar with research questions under investigation; the nature, extent, and application of findings; and some research tasks which require conceptualization and development. Possible contributions to research literature may be generated by seminar activities.

CISE 672. DOCTORAL COLLOQUIUM IN SECONDARY EDUCATION (3). Colloquium on special topics in secondary education. May be repeated to a maximum of 12 semester hours. PRQ: Admission to candidacy for the Ed.D. or consent of department.

CISE 686. INTERNSHIP (3-12). A. Secondary In-Service Staff Development
   B. Secondary Teacher Education
   Work individually or in small groups in a professional setting under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Ed.S. or doctoral program, or consent of department.

CISE 695X. SEMINAR IN THE SUPERVISION AND ADMINISTRATION OF CLINICAL EXPERIENCES (1-3). CISE 695. An advanced seminar dealing with the theory and practice of clinical experiences in professional education such as microteaching, observation, participation, simulation, student teaching, and internships. May be repeated to a maximum of 5 semester hours. PRQ: CISE 595X or consent of department.

CISE 697. INDEPENDENT RESEARCH IN SECONDARY EDUCATION (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours.

CISE 699. DOCTORAL RESEARCH AND DISSERTATION (3-15). May be repeated. Student must accumulate 15 semester hours prior to graduation. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.
The Department of Educational Psychology, Counseling, and Special Education (EP- -)

GRADUATE FACULTY

Raymond J. Dembinski, chair, professor, Ed.D., Indiana University
Andrew R. Brulle, professor, Ed.D., Northern Illinois University
William D. Bursuck, associate professor, Ph.D., University of Illinois
Lynette K. Chandler, assistant professor, Ph.D., University of Kansas
Corenna C. Cummings, associate professor, Ph.D., University of Pittsburgh
Denise H. Daniels, assistant professor, Ph.D., University of California, Los Angeles
Diane E. Deitz, associate professor, Ed.D., Northern Illinois University
Michael H. Epstein, professor, Ed.D., University of Virginia
Sharon M. Freagon, associate professor, Ph.D., University of Illinois
Norman S. Gilbert, professor, Ed.D., University of Illinois
Francesca Giordano, assistant professor, Ph.D., University of Virginia
Kirk Hallowell, assistant professor, Ph.D., University of Iowa
Fred J. Hanna, assistant professor, Ph.D., University of Toledo
Antoinette Heinzle, associate professor, Ed.D., University of Southern Mississippi
Barbara Henley, adjunct assistant professor, Ph.D., Ohio State University
Kathy Hotelling, adjunct assistant professor, Ph.D., University of Missouri
Irene H. Johnson, assistant professor, Ph.D., Purdue University
Gaylen G. Kapperman, professor, Ed.D., University of Northern Colorado
Diane Kinder, assistant professor, Ph.D., University of Oregon
Elliot Lessen, professor, Ph.D., University of Florida
Yona Leyser, professor, Ph.D., Indiana University
Richard G. Lomax, assistant professor, Ph.D., University of Pennsylvania
Carole W. Minor, professor, Ph.D., University of Maryland
Rick A. Myer, associate professor, Ph.D., Memphis State University
Robert J. Nejedlo, professor, Ph.D., University of Wisconsin
Robert T. Olber, professor, Ed.D., Wayne State University
Allen J. Ottens, associate professor, Ph.D., University of Illinois
Sarah Peterson, associate professor, Ph.D., Arizona State University
Jean W. Pierce, professor, Ph.D., Northwestern University
Alan C. Repp, professor, Presidential Research Professor, Ph.D., University of Florida
Thomas B. Roberts, professor, Ph.D., Stanford University
Karen Sealander, assistant professor, Ph.D., University of Florida
Gary D. Shank, assistant professor, Ph.D., Indiana University
M. Cecil Smith, assistant professor, Ph.D., University of Wisconsin
Charles E. Stegman, professor, Ph.D., University of Missouri at Kansas City
L. Ruth Stryuk, assistant professor, Ed.D., Utah State University
Harvey N. Switzky, professor, Ph.D., Brown University
Toni R. Tollerud, assistant professor, Ph.D., University of Iowa
James P. Van Hanehan, assistant professor, Ph.D., University of Maryland, Baltimore County
Susan A. Vogel, professor, Ph.D., Northwestern University

The Department of Educational Psychology, Counseling, and Special Education offers the degree Master of Science in Education and the degree Doctor of Education. A handbook, Graduate Programs in Education, and a list of requirements for each major are available in the departmental office and in the Education Advisement Office.

Students may major in the following areas:

Master of Science in Education
Educational psychology
Counseling
Special education

Educational Specialist
Counseling

Doctor of Education
Educational psychology
Counseling
Special education

Master of Science in Education

The Department of Educational Psychology, Counseling, and Special Education offers programs in educational psychology, counselor education, and special education leading to the degree Master of Science in Education.

Major in Educational Psychology

The focus of the Master of Science in Education program in educational psychology is on the major skills, principles, and research findings in significant areas of psychology as applied to the study of teaching and learning. The advanced courses offered are in the areas of human learning, human development, educational applications of microcomputers, educational research, and evaluation as they relate to the teaching-learning process in an educational setting. Specifically, perspectives, theories, and techniques essential for effective application to classroom practice and analysis of human behavior in educational psychology will be emphasized.

Admission

1. Students applying for graduate studies at the master's degree level in educational psychology must be accepted into the Graduate School.

2. From among the applicants satisfying the requirements for admission to the Graduate School, the faculty of educational psychology in the Department of Educational Psychology, Counseling, and Special Education select those most qualified, utilizing the verbal and quantitative scores on the General Test of the Graduate Record Examinations and ordinay requiring a GPA of 2.80 or higher for the last two years of undergraduate work.
3. Each prospective student must have three letters of recommendation from employers, supervisors, or professors.

4. Final decisions regarding admissions are made by the admissions committee of the department on the basis of a total profile of an individual's qualifications.

Those applicants who fail to meet these admission criteria may request special consideration from the admissions committee. If the student then fails to achieve admission, an appeal may be made to the Admissions, Retention, and Professional Standards Committee of the Department of Educational Psychology, Counseling, and Special Education.

Retention
In addition to the retention requirements of the Graduate School, students are responsible for meeting the professional standards of the College of Education.

Advisement
A student is assigned an adviser when admitted to the program. The adviser is a faculty member in the area of interest which the student intends to pursue. Courses of study are developed for each student. Students are required to take the comprehensive examination. It is always the responsibility of the student to be aware of university policies and regulations affecting his or her program. Students should, therefore, familiarize themselves with the Graduate Catalog, early in the program.

Program Requirements
Educational Psychology majors may earn the degree Master of Science in Education with a major in educational psychology by electing one of two options. Option 1 includes the writing of a thesis; Option 2 is a program of courses without a thesis. Both program options require a minimum of 33 semester hours which include:

Option 1
a. EPSY 501, EPSY 506 or EPSY 508, EPSY 520, EPSY 521, EPSY 530 or EPSY 533; and 3 semester hours of foundations to be selected from LEFE 500, LEFE 510, LEFE 520, and LEFE 521.

b. 9 semester hours to be selected in consultation with the student's major adviser.

c. EPSY 599, Master's Thesis (6).

Option 2
Same basic requirements as Option 1 except that the thesis is not required. Instead, 6 semester hours in the major field are selected with the approval of the student's adviser.

Major in Counseling
This is a nationally accredited (CACREP) 48-hour program that provides preparation in the theory, techniques, and information needed by the professional counselor. The academic requirements as set forth by the Illinois State Board of Education and the National Board for Certified Counselors are fully met by graduates of this program. Through individualized planning, a program may be designed to focus on one of the following areas of professional counselor preparation: school counseling, counseling in community and other agency settings, and student development in higher education (counseling).

Admission Criteria
An applicant for admission to the program is generally expected to meet or exceed the following requirements:
1. An applicant is required to submit scores on the General Test of the Graduate Record Examinations (GRE) and must complete the supplementary data forms and take the required tests. Applicants are to obtain the forms from the counseling office, Graham Hall 223, 753-1461. Applications and the other required material must be received by April 1 for summer and fall admissions and by November 1 for spring admission. Applicants are usually notified of an admission decision within two weeks of the pre-admission workshop.

Prospective students who fail to satisfy either the Graduate School's GPA requirement or the GRE criterion may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiencies, and should accompany the application for admission to the Graduate School.

Any applicant who is denied admission to the program may submit to the admissions committee a written request for reconsideration that includes information not previously submitted. Final decisions of program admissions committees may be appealed to the department's Committee on Admissions, Retention, and Professional Standards. Appeals to this committee must be in writing and must explain the basis for the appeal.

Student-at-Large and Transfer Credit
Student-at-large and transfer hours in combination may not exceed 9 hours for students pursuing the M.S.Ed. degree in counseling.

Retention
In addition to the retention requirements of the Graduate School, students are responsible for meeting the professional standards of the College of Education and undergo periodic evaluation by the counseling faculty.

Advisement
A student is assigned an adviser when admitted to the program. The adviser is a faculty member in the area of interest which the student intends to pursue. Courses of study are developed for each student. Students are required to take the comprehensive examination. It is always the responsibility of the student to be aware of university policies and regulations affecting his or her program. Students should, therefore, familiarize themselves with the Graduate Catalog, early in the program.

Certification in School Counseling
Candidates who hold a master's degree in an area other than counseling and who seek State of Illinois certification (Type 73) as a school counselor must be accepted in and satisfy requirements for the 48-hour M.S.Ed. program. Included in this program is an internship experience that must be satisfactorily completed at a school site under approved supervision. Candidates must also hold or be eligible for a standard teaching certificate. Candidates who fulfill these program requirements are eligible to receive faculty recommendation for State of Illinois school guidance and counseling certification.

Program Requirements
Students are required to take 48 semester hours in counseling and related areas, distributed as follows:

Option 1
a. EPSY 520, Introduction to Educational Research (3)

b. LEFE 500, Social Foundations of Education (3), and EPSY 501, Psychological Foundations of Education (3)

c. 39 semester hours, approved by the student's adviser

Option 2
Same basic requirements as Option 1 except that a thesis is required. If a thesis is written, the oral examination for the thesis will include the comprehensive examination.
Comprehensive Examinations
Satisfactory performance on a comprehensive examination is required for graduation. The examination should be taken in the student's last semester of course work before internship.

Major in Special Education
The Master of Science in Education program with a major in special education is designed to serve the needs of both experienced and beginning special education teachers who have baccalaureate degrees or are seeking career changes at the master's level. In addition to an on-campus program, the department offers off-campus master's degree programs. Information on these off-campus programs can be obtained from the departmental office.

Each student in this degree program will be required to select one of the following specializations:
- Administration and supervision
- Early childhood special education
- Learning disabilities
- Maladjusted
- Multiply handicapped, deaf or vision
- Rehabilitation teaching of the adult blind
- Visually handicapped

For students who already hold special education certification, the faculty of special education offers individualized programs of study. Advanced course offerings for these programs are in such areas as consultation, assessment, and supervision. The supervision course offerings lead to a supervisory endorsement in the area of specialization in which they are enrolled.

Admission
1. Students applying for graduate studies at the master's degree level in special education must be accepted into the Graduate School.
2. From among the applicants satisfying the requirements for admission to the Graduate School, the faculty of special education in the Department of Educational Psychology, Counseling, and Special Education select those most qualified, utilizing the verbal and quantitative scores on the General Test of the Graduate Record Examinations and ordinarily requiring a GPA of 2.80 or higher for the last two years of undergraduate work.
3. Students who are not already certified as teachers must take the Pre-Professional Skills Tests (PPST) within the first 9 hours used in their approved programs. Students may take the PPST prior to taking courses or as students-at-large. Students are required to pass the PPST prior to participating in any practicum experience. Students who enter the program with 9 transfer and/or student-at-large hours must take the PPST within their first semester of approved NIU course work.
4. Each prospective student must have three letters of recommendation from employers, supervisors, or professors.
5. Final decisions regarding admissions are made by the admissions committee of the department on the basis of a total profile of an individual's qualifications.

Retention
To be retained in the program, a student must demonstrate acquisition of specific information competencies and application of competencies, through practical experiences, that are requisite in the specialization in which the student is enrolled.

Students must have a B or better in assessment, instructional systems, and behavior modification courses in order to take the comprehensive examination and/or enroll in the graduate practicum. Students receiving lower than a B in any of these courses must retake the course. In concert with the university policy, students may retake a course only once. If this standard is not achieved, the student may be dropped from the program.

All other rules regarding academic regulations follow those described by the Graduate School. The only exception is that regarding incompletes. It is the policy of the faculty of special education that any grade of I that is not removed within the following semester or summer session, whether or not the student is enrolled, will be recorded as F and will be counted in the computation of the grade point average.

Advisement
A student is assigned an adviser when admitted to the program. The adviser is a faculty member in special education. Courses of study are developed for each student. Students are required to take the comprehensive examination. It is always the responsibility of the student to be aware of university policies and regulations affecting his or her program. Students should, therefore, familiarize themselves with the Graduate Catalog early in the program.

Program Requirements
All specializations require a minimum of 36 semester hours of study. It is advisable to check with the department as to the number of semester hours of study required for each specialization. A student who pursues a major in special education leading to the Master of Science in Education degree may select either of two options.

Option 1: Thesis Option
a. EPSY 520, Introduction to Educational Research (3)
b. EPSE 599, Master's Thesis (3-6)
c. 21-24 semester hours, approved by the adviser, in one of the specializations listed above.
d. 6-9 semester hours of electives approved by the adviser.

Option 2: Non-thesis Option
Same basic requirements as Option 1 except that EPSE 599 is not required. Instead, 6 semester hours in special education courses are selected with approval of the adviser.

Field Work
Supervised clinical experiences are required in all areas of special education. Students not seeking certification may not be required to engage in clinical experiences, depending on the area of specialization in which they are enrolled.

Deficiency Study
In cases in which students' backgrounds in their chosen specialty are limited, they may be required to fulfill deficiency requirements established by the department. Deficiency course hours are not counted toward the minimum 36 semester hours of the master's degree program.

Internship Programs
The Department of Educational Psychology, Counseling, and Special Education currently utilizes internship programs in some areas of special education. All internship placements are
arranged and supervised by the department. For further information and internship possibilities see course descriptions.

Certification at the Master's Level

A graduate student must plan a program of study with an assigned departmental adviser. A minimum of 36 semester hours of graduate credit is required for most degree programs. For an entitlement (certification) program the student must hold a standard teaching certificate or must have completed all requirements for it based on state evaluation of transcripts.

Provisions are made to assist noncertified persons who hold baccalaureate degrees in fields other than special education to acquire certification and a Master of Science in Education degree with a major in special education. In some cases more than 36 semester hours will be necessary to meet the requirements for both certification and the master's degree.

Application for Admission to Teacher Education by Graduate Students

All graduate students who have not qualified earlier for teacher certification in Illinois and who wish the approval of this institution for such certification are required to make formal application for admission to teacher education.

An application form for admission to teacher education must be completed. The reason for early application is to provide appropriate counseling for those seeking certification and institutional approval. (The criteria for admission to teacher education are listed in a previous section of this catalog.)

For admission to student teaching, the student must possess a grade point average (GPA) of at least 3.00 in graduate courses taken at Northern Illinois University. Students intending to be certified for secondary school teaching must also have a major for which there are student teaching assignments in public schools. No graduate of a college or university who has been rejected for admission to a teacher education program will be admitted at the graduate level. No student will be recommended by the institution for certification who has not met the above admission requirements and those of an approved professional curriculum.

Educational Specialist

Major in Counseling

This program offers professional preparation for the attainment of advanced competence and performance in counseling as set forth in the Standards Statement of the American Association for Counseling and Development. To qualify for study in this area, the student must have a master’s degree in counseling or satisfy any prerequisites set by the advisory committee. Through individualized planning with a major adviser and two members of the faculty, a program may be designed to focus on one of a variety of fields. Eighteen hours of course work must be in EPCO courses. Students must complete 30 semester hours of course work beyond the master’s degree and perform successfully on a comprehensive examination.

Admission Criteria

An applicant for admission is generally expected to meet or exceed the following requirements:

1. A GPA of at least 3.20 in previous graduate work.
2. An applicant is required to submit scores on the General Test of the Graduate Record Examinations (GRE).
3. Two letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant’s professional qualifications.
4. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.
5. Acceptable profile on the Minnesota Multiphasic Personality Inventory.
6. Following screening based on the above criteria, a pre-admission interview.

Prospective students who fail to satisfy either the GPA or the GRE criterion may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiencies, and should accompany the application for admission to the Graduate School. Final decisions regarding admissions are made by the admissions committee on the basis of a total profile of an individual’s qualifications. Where deficiencies exist, the Educational Specialist Admissions Committee may prescribe additional courses and recommend admission with stipulation.

Admission to the Educational Specialist program in counseling takes place twice each year. To be considered for admission in the summer session or fall semester, all materials must be received by April 1; to be considered for spring semester admission, all materials must be received by November 1.

Doctor of Education

The Department of Educational Psychology, Counseling, and Special Education offers programs in educational psychology, counseling, and special education leading to the degree Doctor of Education. The Ed.D. degrees in educational psychology and counseling are granted by Northern Illinois University. The doctoral program in special education is sponsored jointly by Illinois State University and Northern Illinois University, and the degree is granted by the Illinois Board of Regents.

Major in Educational Psychology

Program Objectives

The program leading to the doctoral degree with a major in educational psychology is designed to enable students to acquire a functional understanding of the psychological constructs and research processes which underlie learning and instruction at all age levels. In particular, the program has been planned to provide students with basic competencies in human development, human learning, measurement, statistics, and research design. It is expected that students will develop the ability to do original and creative thinking in these areas. The degree program is appropriate not only to education, but to a variety of other fields needing expertise in human learning, development, and research.

Admission and Retention Criteria

Applicants for the doctoral degree in educational psychology are expected to have a broad base of general education in the humanities, sciences, and social sciences. Where deficiencies are found by the advisory committee, additional courses for the doctoral degree may be prescribed.

Applicants are expected to satisfy the following criteria to be considered for admission:

1. A recommended minimum grade point average of 3.50 for the master’s degree, based on a 4.00 grading system.
2. An applicant is required to submit scores on the General Test of the Graduate Record Examinations (GRE).
3. At least three favorable personal recommendations from knowledgeable professors, employers, or supervisors.
4. Data providing evidence of appropriate personal and professional development.
5. A satisfactory undergraduate transcript.

In addition to departmental criteria, the admission and retention requirements of the College of Education and the Graduate School apply to all students. These requirements are stated elsewhere in the catalog.
Admission Procedures
Prospective students should apply to the Graduate School. Before applying for admission to the doctoral program in educational psychology, the student should consult the faculty chair in that area, who will serve as an interim adviser until the applicant has been admitted to Graduate School. Students seeking to take courses while admission papers to the Graduate School are being processed should receive approval of the faculty chair.

After all admission forms are completed and Graduate School requirements for admission are fulfilled, the applicant is considered by the admissions committee of the educational psychology faculty in the Department of Educational Psychology, Counseling, and Special Education. Applicants may be invited for an interview. The recommendation of the admissions committee is forwarded to the Graduate School, which informs the applicant of admission or rejection. Applicants who are rejected may petition in writing for reconsideration to the Admissions, Retention, and Professional Standards Committee of the Department of Educational Psychology, Counseling, and Special Education. Limited facilities and/or resources may necessitate the rejection of some students who meet the minimum requirements for admission.

Program Planning and Advisement
As soon as possible after admission the graduate student should make an appointment with the faculty chair in educational psychology, who as interim adviser assists the student in selecting a program advisory committee. This committee consists of a chair and two other graduate faculty members who advise the student in program planning. Advisement is given as to courses in the major, cognates, deficiencies, additional courses, prerequisites, and the general comprehensive examination. The student’s approved program is forwarded to the Graduate School for approval.

The doctoral program in educational psychology requires the equivalent of at least three years of full-time academic work, or a minimum of 90 semester hours of graduate work beyond the baccalaureate degree. The 90 hours include the following:
1. A minimum of 15 semester hours in the basic competencies of (a) human behavior, (b) educational systems, and (c) educational research.
2. A minimum of 18 semester hours in the major.
3. A minimum of 15 semester hours in a cognate outside educational psychology and educational research.
4. A dissertation, for 12 semester hours.

A maximum of 30 semester hours from a master's degree may be included in the doctoral program. These hours may be applied to prerequisites, cognates, or other requirements with the consent of the program advisory committee. (For time limitations see “Requirements for Doctoral Degrees.”)

Internship
An internship may be required as a part of the doctoral program. An internship is undertaken with the consent of the faculty chair and under the direction of a graduate faculty advisor.

Residence Requirement
A statement of how the student intends to satisfy the residence requirement should be submitted with the student’s approved program during the first semester after admission to the doctoral program. Details of this requirement may be found under “Requirements for Doctoral Degrees.”

Examinations
All doctoral students in educational psychology are required to pass two examinations prior to admission to candidacy. The first examination is a one-day general examination over the basic competencies in (a) human learning and development, (b) educational foundations, and (c) educational research. A student may apply to the faculty chair to take this examination as soon as course work in the basic competencies is completed. The student will have two opportunities to pass this examination, which must be successfully completed before the candidacy examination may be taken.

The second examination is the candidacy examination. This is a one-day written examination which covers advanced content in the student’s major; it is scheduled and administered at least twice a year. The student must receive approval from the faculty chair to take the examination. It is expected that the student will have completed at least 60 semester hours of graduate course work, including most or all course work in the area of study. The candidacy examination committee consists of the same members as the program advisory committee, unless the student in conference with the faculty chair elects otherwise.

Results of the candidacy examination are forwarded to the Graduate School. Satisfactory completion of the candidacy examination admits the student to candidacy for the doctoral degree. A student who fails the candidacy examination may be granted the opportunity to take a second examination. Failure on the second examination denies the student admission to candidacy.

A final oral examination related to the dissertation is required and is conducted in accordance with the general requirements of the Graduate School.

Candidacy
Upon satisfactory completion of the candidacy examination, the student is accepted as a candidate for the degree of Doctor of Education. The doctoral candidate must complete the course work and the dissertation, take the final examination over the dissertation, and meet all other requirements of the Department of Educational Psychology, Counseling, and Special Education and the Graduate School before the degree may be awarded. Once admitted to candidacy the student must continue registration in the dissertation course (EPSY 699) until all requirements for the degree are completed. The candidate must make application to the Graduate School for graduation early in the semester in which the student expects to graduate. (See also the general Graduate School statement on candidacy requirements.)

Dissertation
The dissertation in educational psychology is expected to make a substantial contribution to knowledge in the field. The dissertation director and committee are selected by the student in consultation with the faculty chair. The committee represents graduate faculty of the university with knowledge in the area of the candidate’s topic. At least two members of the committee are selected from the graduate faculty in educational psychology and at least one member from the graduate faculty outside the educational psychology faculty. The names of the dissertation director and committee members are forwarded to the Graduate School for approval. Official approval of a dissertation director must be effected by the conclusion of the first semester in which the student registers for dissertation credit. (See also Graduate School dissertation requirements.)

Major in Counseling
This program offers advanced professional preparation for those intending to become university professors and professionals in counseling and human development. Selected areas of professional preparation include counselor education and supervision as well as professional practice. The program includes study of a diverse group of counseling theories and courses in the counseling process. Counseling and Related Educational Programs (CACREP) is nationally accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP).

Admission Criteria
An applicant for admission is generally expected to meet or exceed the following requirements:
1. A master's degree in counseling or the equivalent.
2. A GPA of at least 3.20 in previous graduate work.
3. An applicant is required to submit scores on the General Test of the Graduate Record Examinations (GRE).

4. Three letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant’s professional qualifications.

5. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.

6. Acceptable profile on the Minnesota Multiphasic Personality Inventory.

7. Demonstration of writing competencies and participation in, a pre-admission interview before a final admission decision is made.

8. Evidence of potential for professional leadership.

Prospective students who fail to satisfy either the GPA or the GRE criterion may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiencies, and should accompany the application for admission to the Graduate School.

Final decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual’s qualifications. Where deficiencies exist, the Doctoral Admissions Committee may prescribe additional courses and recommend admission with stipulation.

Admission to the doctoral program in counseling is competitive and takes place twice a year. To be considered for admission in the summer session or fall semester, all materials must be received by April 1; to be considered for spring semester admission, all materials must be received by November 1.

Program Planning and Advisement

As soon as possible after admission, the graduate student should make an appointment with the interim faculty adviser in counseling, who assists the student in selecting a program advisory committee. This committee consists of a chair and two other graduate faculty members who advise the student in program planning. Advisement is given as to courses in the major, cognates, additional courses, prerequisites, and the comprehensive examination. The student's approved program is forwarded to the Graduate School for approval.

The doctoral program in counseling requires a minimum of 96 semester hours of graduate work beyond the baccalaureate degree. The 96 hours include the following:

1. A minimum of 15 semester hours (post master's degree) to include basic competencies in (a) socio-cultural analyses of education, (b) human development, learning, and behavior, and (c) research.

2. A minimum of 18 semester hours (post master's degree) in the major, excluding dissertation hours.

3. A cognate component may be selected from outside the major in order to provide a supportive professional skill. No specific number of semester hours is required.

4. A minimum of 15 semester hours for the dissertation.

A maximum of 30 semester hours from a master's degree may be included in the doctoral program.

Internship

An internship is a required part of the doctoral program. Opportunities exist for internships in a wide variety of settings. The internship is planned in consultation with the chair of the student's program advisory committee and the internship coordinator.

Residence Requirement

Same as Graduate School residence requirement.

Examinations

All doctoral students in counseling are required to pass two examinations prior to admission to candidacy.

The one-day general examination includes the basic competencies in (a) socio-cultural analyses of education, (b) human development, learning, and behavior, and (c) research. A student may apply to the faculty chair to take this examination as soon as course work in the basic competencies is completed.

The one-day candidacy examination includes the student’s selected area of study and, where applicable, the cognate area. A student may apply to the faculty chair to take this examination upon completion of most or all of the course work in the area of study. A student has eight weeks to type a 25-page response to student- and faculty-generated questions prior to an oral examination related to the contents of the paper.

Satisfactory completion of the candidacy examination admits the student to candidacy for the doctoral degree. A student who fails the candidacy examination may be granted the opportunity to retake it. Failure on the second attempt denies the student admission to candidacy.

A final oral examination related to the dissertation is required and is conducted in accordance with the general requirements of the Graduate School.

Dissertation

The dissertation represents a substantial contribution to the knowledge in the candidate’s major field of study. Candidates are expected to conduct original scholarship appropriate to their major and to communicate the results of their research effectively. Each student is required to register for three credit hours of EPCO 699 each semester subsequent to passing the candidacy examination. See “Dissertation Requirements” under “Requirements for Doctoral Degrees.”

The student's dissertation committee is selected by the student in consultation with the faculty chair. The committee represents graduate faculty of the university with knowledge in the area of the candidate’s topic. The number of committee members, including the chair, is normally three to five. At least two members of the committee must be senior members of the graduate faculty; no more than one member may be without graduate faculty status.

Major in Special Education

Program Objectives

The program leading to the doctoral degree with a major in special education is designed to prepare students for one of three professional roles: those of teacher educator, special education administrator, and researcher/evaluator. It is expected that students will develop teaching skills and understanding of the supervision process, as well as of principles involved in organizing and implementing effective educational services for the handicapped. Candidates for the Ed.D. in special education will be expected to demonstrate competencies in the following areas:

1. Ability to utilize knowledge in psychological, biological, and socio-cultural foundations in order to determine relevant aspects of specialized services appropriate for the handicapped.

2. Ability to utilize basic strategies for program development in special education.

3. Ability to implement program management processes relevant to special education programming.

4. Ability to implement research techniques needed to perform applied research in special education.

The student’s program will be designed on an individual basis emphasizing the understandings and skills unique to the student’s particular area of interest.

Admission and Retention Criteria

The applicant for the Illinois Regency degree Doctor of Education in special education is expected to satisfy the following criteria to be considered for admission:
1. A recommended minimum grade point average of 3.50 for the master's degree, based on a 4.00 grading system.
2. An applicant is required to submit scores on the General Test of the Graduate Record Examinations (GRE).
3. Two years of professional experience centering on the education of handicapped children.
4. At least four favorable personal recommendations from undergraduate professors, employers, or supervisors.
5. Examples of the applicant's professional writing or evidence of writing ability as required by the admissions committee.
6. Data providing evidence of appropriate personal and professional development.
7. A satisfactory undergraduate transcript.

Applicants who meet these criteria are invited for an interview by the admissions committee.

Applicants who do not meet all of the criteria may petition and submit evidence for special consideration. Such special consideration must receive not only the approval of the department and the Graduate School but also the approval of the Illinois Regency Joint Committee on Doctoral Programs (JCDP).

In addition to the departmental criteria listed above, the admission and retention requirements of the College of Education and the Graduate School apply to all students. These requirements are stated elsewhere in the catalog.

Admission Procedures
Prospective students should apply to the Graduate School. Before applying to admission to the Regency doctoral program in special education, the student should consult the faculty chair in special education, who serves as an interim adviser until the applicant has been admitted to the program. Students seeking to take courses while admission papers are being processed should receive the approval of the faculty chair.

After all admission forms are completed and Graduate School requirements for admission are fulfilled, the applicant is considered by the special education admissions committee in the Department of Educational Psychology, Counseling, and Special Education. The recommendation of the committee, if necessary, is forwarded to the Graduate School. Applicants who are rejected at this point are so informed by the Graduate School. Applicants acceptable to the department have their applications forwarded to the Regency Joint Committee on Doctoral Programs. The recommendation of the JCDP is then sent to the Graduate School, which notifies the applicant of acceptance or rejection.

Program Planning and Advisement
As soon as possible after admission the graduate student should make an appointment with the faculty chair in special education, who assists the student in selecting a doctoral program advisory committee. This committee consists of a chair and two other graduate faculty members who assist the student in program planning. The chair of the program advisory committee is a faculty member of the university of record (NIU or ISU). He or she assumes major responsibility for program assistance to the student and provides a liaison between the student and the program advisory committee. The committee must be approved by the Graduate School and the JCDP.

The student assumes responsibility for development of a program of study to be submitted to the Graduate School during the first semester after admission (or before 18 semester hours of the program have been completed). The program of study identifies the anticipated professional role, the competencies needed for that role, and the procedures (course work, independent study, research, field experience) the student expects to pursue in attainment of these competencies. The program advisory committee assists the student in assessing entrance competencies and advises the student on competencies needed to fulfill degree requirements. Before submission to the Graduate School for approval there, the program of study must be approved by both the faculty chair of special education and the chair of the Department of Educational Psychology, Counseling, and Special Education.

Field Experiences
An integral part of the doctoral program is the completion of field experiences. Field experiences will be individually programmed and designed to develop competencies defined by the student's advisory committee. Fifteen semester hours of credit may be devoted to field experiences.

Residence Requirement
A statement of how the student intends to satisfy the residence requirement should be submitted with the student's approved program during the first semester after admission to the doctoral program (or before 18 semester hours of the program have been completed). General procedures for meeting this requirement may be found under "Requirements for Doctoral Programs." However, alternate procedures for meeting the residence requirement may be recommended by the student's advisory committee, and approved in advance by the department chair, the dean of the Graduate School, and the Illinois Regency Joint Committee on Doctoral Programs.

Examinations
All doctoral students in special education are required to pass two examinations prior to admission to candidacy. The first examination is a two-day examination over basic competencies. Students may apply to the special education faculty chair to take the basic competency examination when readiness has been demonstrated through completing course work or meeting other criteria established in the program of study. The student will have two opportunities to pass this examination, which must be successfully completed before the candidacy examination is taken.

The second examination is the candidacy examination. This is given after the student has fulfilled needed competencies as judged by performance in courses, independent study, and field experiences, and demonstration of proficiency when applicable. The student in conjunction with the program chair requests the faculty chair to appoint a candidacy examination committee, which must be approved by the Graduate School. The committee prepares the examination and reviews the student's performance on it; the results are forwarded to the Graduate School. Satisfactory completion of the candidacy examination admits the student to candidacy for the doctoral degree. A student who fails the candidacy examination may be granted the opportunity to take a second examination. Failure on the second examination denies the student admission to candidacy.

After admission to candidacy a final examination related to the dissertation is required. This examination is conducted in accordance with the general requirements of the Graduate School and the JCDP.

Candidacy
Upon satisfactory completion of the candidacy examination, the student is accepted as a candidate for the degree of Doctor of Education. The doctoral candidate must complete the course work and the dissertation, take the final examination over the dissertation, and meet all other requirements of the Department of Educational Psychology, Counseling, and Special Education and the Graduate School before the degree may be awarded. Once admitted to candidacy the candidate must continue registration in the dissertation course (EPSE 699) until all requirements for the degree are completed. The candidate must make application to the Graduate School for graduation early in the semester in which the student expects to graduate. (See also the general Graduate School statement on candidacy requirements.)

Dissertation
The dissertation in special education is expected to make a substantial contribution to knowledge in the field. The dissertation...
director and committee are selected by the student in consultation with the faculty chair. The committee represents graduate faculty with knowledge in the area of the candidate's topic, and is charged with the supervision of the candidate in the development and completion of the dissertation.

The dissertation committee consists of at least five members. The chair and at least two other members of the committee come from the university of record; at least one member comes from the cooperating university. If feasible, a sixth member of the committee will be included from the field, representing the locale in which the investigation takes place. The committee must be approved by the Graduate School and the JCDP. Official approval of a dissertation director must be effected by the conclusion of the first semester in which the student registers for dissertation credit.

The dissertation procedure includes presentation of the proposal to the Regency faculty and doctoral students in the program, presentation of a summary seminar of the dissertation at the cooperating university, defense of the dissertation, and presentation of copies of the dissertation to the university of record, according to the regulations of that university. In addition, a library copy of the dissertation will be presented to the cooperating university.

Course Offerings

**Counseling (EPCO)**

EPCO 410. FOUNDATIONS OF CAREER EDUCATION (3). Concepts, evaluation, overview, and programs in career education. EPCO 490. WORKSHOP IN COUNSELOR EDUCATION (1-3). Contemporary issues and problems in the provision of human services. May be repeated to a maximum of 6 semester hours when subject varies. EPCO 500. ORIENTATION TO THE COUNSELING PROFESSION (3). The profession of counseling in a variety of settings, study of current trends and practices, and a survey of developmental needs and current problems of clients within a changing society.

EPCO 501. MENTAL HEALTH (3). Study of mental health concepts, research, and the dynamics of human behavior with emphasis on the use of these data by counselors. PRQ: EPCO 500 or consent of department. EPCO 509. CULTURE OF THE COLLEGE STUDENT (3). Concepts of culture, subculture, and societal participation with reference to college students.

EPCO 511. CAREER COUNSELING (3). Career theory and counseling techniques for those intending to be counselors in schools, agencies, colleges and universities, and organizational settings. PRQ: EPCO 500 or consent of department.

EPCO 512. ORGANIZATION AND ADMINISTRATION OF CAREER COUNSELING PROGRAMS (3). Development, organization, management, and evaluation of career counseling programs in educational, work, and community settings. Field visits and individualized projects. PRQ: EPCO 500 or consent of department.

EPCO 520. ELEMENTARY SCHOOL COUNSELING: PROGRAMS, ISSUES, AND PRACTICES (3). Principles of developmental guidance, role and function of the elementary school counselor, group guidance and case techniques, and parent and teacher consultation. PRQ: EPCO 500 or consent of department.

EPCO 521. COUNSELING WITH CHILDREN (3). Principles, assessment, and methods of counseling pertinent to working with children in schools, mental health facilities, and hospitals. PRQ: EPCO 500 or consent of department.

EPCO 522. STUDENT DEVELOPMENT IN HIGHER EDUCATION: PROGRAMS, ISSUES, AND PRACTICES (3). Focus on current programs, issues, practices, research, and trends in student development programming in higher education. Exploration of historical, philosophical, and theoretical foundations of student development related to practice.

EPCO 523. SECONDARY SCHOOL COUNSELING: PROGRAMS, ISSUES, AND PRACTICES (3). Effective secondary school counseling programming to include developmental curriculum, academic program planning, motivation, retention, consultation, and referral. Current issues and practices related to the concerns of adolescents.

EPCO 524. COMMUNITY AGENCY COUNSELING: PROGRAMS, ISSUES, AND PRACTICES (3). Principles of service delivery in community agencies including roles and functions of counselors, trends and problems, and specialized settings and populations.

EPCO 525. COUNSELING SKILLS AND STRATEGIES (3). Clinical preparation in counseling skill development. Provides an overview of the role of the counselor and the counseling process. Emphasizes counseling skills and techniques. PRQ: EPCO 500 or consent of department.

EPCO 530. COUNSELING THEORIES AND PRACTICES (3). Constructs, principles, and techniques of major counseling theories. PRQ: EPCO 525 or consent of department.

EPCO 533X. STANDARDIZED TESTING (3). EPSY 533. Principles of measurement as applied to group standardized measures of achievement, special aptitude, intelligence, personality and interest for use in educational personnel work. Administering, scoring, and interpreting these measures.

EPCO 540. GROUP COUNSELING THEORIES AND PROCEDURES (3). Constructs, principles, and techniques of major group counseling theories. Group dynamics and developmental programming. Practice with selected techniques. PRQ: EPCO 500 or consent of department.

EPCO 550. PRACTICUM IN COUNSELING (1-6). The practice of counseling in laboratory and field settings. Cases, tapes, role playing, and analysis of counseling process and counselor responses. May be repeated up to a maximum of 6 semester hours. PRQ: EPCO 500, EPCO 511, EPCO 525, EPCO 530, and EPCO 533X, or consent of department.

EPCO 551. SUPERVISED PRACTICE IN GROUP COUNSELING (3). The practical aspects of group counseling and developmental programming. Leadership and participatory experiences in the formation, maintenance, development, and closing stages of groups. PRQ: EPCO 540 or consent of department. PRQ or CRQ: EPCO 550 or consent of department.

EPCO 561X. HUMAN RESOURCE DEVELOPMENT (3). LEAC 551. The nature and function of programs for developing human resources in business, education, industry, government, social services, and voluntary organizations.

EPCO 566. BIOFEEDBACK IN COUNSELING AND EDUCATION (3). Techniques and theory related to biofeedback training in counseling and education. Emphasis on voluntary self-regulation as a tool for modifying behavior and development of human potential. PRQ: EPCO 550 or consent of department.

EPCO 567. DRUG DEPENDENCY COUNSELING (3). The pharmacologic and psychosocial effects of various drugs. Emphasis on counseling skills and techniques in working with problems of drug dependency and in the prevention of dependency. PRQ: EPCO 530 or consent of department.

EPCO 568. COUNSELING THE EXCEPTIONAL STUDENT (3). Alternate counseling strategies to be applied to the exceptional student. Emphasis on counseling skills and techniques in working with all behaviorally, emotionally and intellectually different persons. PRQ: EPCO 530 and EPCO 550, or consent of department.

EPCO 569X. ALTERNATIVES IN THE COUNSELING AND PLACEMENT OF ADULTS (1-3). LEAC 554. An examination and identification of promising alternatives in the facilitation of adult career development through guidance, counseling, and vocational placement. May be repeated to a maximum of 3 semester hours.

EPCO 570. ADMINISTRATION AND EVALUATION OF HUMAN SERVICES (3). The functions, basic elements, and effective management of human services systems in educational and agency settings. Planning, organizing, and administering human services; selection and professional development of staff; record-keeping, utilizing community resources; program evaluation. PRQ: EPCO 500 or consent of department.

EPCO 572. ASSESSMENT METHODS IN HIGHER EDUCATION (3). Crosslisted as EPSY 572X. Basic concepts and procedures in the assessment of applicants for admission and retention and use of assessment methods for counseling to support retention in institutions of higher education. PRQ: EPCO 500 or consent of department.
EPCO 586. INTERNSHIP IN COUNSELING (1-15). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 15 semester hours. PRQ: EPCO 550 or consent of department.

EPCO 590. WORKSHOP IN COUNSELOR EDUCATION (1-3). Workshop designed to study contemporary issues and problems in the provision of human services. May be repeated to a maximum of 12 semester hours when subject varies.

EPCO 592. SPECIAL TOPICS IN COUNSELOR EDUCATION (1-3). Study of special topics, announced in advance, in counselor education. May be repeated to a maximum of 9 semester hours when subject varies.

EPCO 593. CRISIS INTERVENTION (3). Role and responsibilities of counselors in crisis intervention. Assessment and case management for crisis situations.

EPCO 595. WOMEN AND CAREERS (3). An examination of the psychological, demographic, sociocultural, and interpersonal influences on the career development of women.

EPCO 597. INDEPENDENT RESEARCH IN COUNSELOR EDUCATION (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

EPCO 599A. MASTER'S THESIS (1-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

EPCO 599B. ED.S. THESIS OR FIELD STUDY (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of the chair of the student's advisory committee.

EPCO 600T. PROFESSIONAL SEMINAR IN COUNSELING (3). Philosophical and historical roots of the counseling profession, the systems which affect its functioning, and the ethical and legal standards which guide it. Orientation to the expectations of advanced graduate study in counseling and the responsibilities of professionals in the field.

EPCO 601. PERSONNEL SERVICES IN HIGHER EDUCATION (3). A comprehensive study of the organizational structure and administrative relationships of personnel services in the collegiate setting. Student personnel services included are admission, testing, records, housing, scholarships and loans, health and counseling, student activities, discipline, student government and placement. PRQ: A master's degree or its equivalent in guidance or a related area of personnel work, or consent of department.

EPCO 602. STUDENT DEVELOPMENT IN HIGHER EDUCATION: THEORY AND PRACTICE (3). Theories of late adolescent and adult development of counseling and psychotherapy. Seminar and application in designing student development programs and environments that support and are interactive with academic disciplines.

EPCO 603. PUPIL PERSONNEL ADMINISTRATION (3). Attendance, health, guidance, psychological and social work services. Organization patterns and problems of budget, staffing, supervision and program evaluation. PRQ: Master's degree or consent of department.

EPCO 610. THEORY IN CAREER DEVELOPMENT (3). A thorough grounding in current career development theories. PRQ: Master's degree in counseling or consent of department.

EPCO 630. THEORIES OF COUNSELING (3). A critical evaluation of theories of counseling. Review of research in the application of theoretical counseling constructs. PRQ: Master's degree in counseling or consent of department.

EPCO 631. SEMINAR IN COUNSELING AND PSYCHOTHERAPY (1-3).  
A. Adlerian Counseling  
B. Behavioral Counseling  
C. Gestalt Therapy  
D. Psychosynthesis  
E. Rational-Emotive Psychotherapy  
Advanced graduate seminars with concentrations on specific theories of counseling and psychotherapy. Separate sections, each focusing on a single theory. Credit is limited to a total of 3 semester hours per topic. PRQ: EPCO 630 or consent of department.

EPCO 634X. THEORETICAL FOUNDATIONS OF FAMILY COUNSELING (3). HFR 684. An examination and discussion of the theoretical foundations and historical development of family therapy, and of the various techniques currently employed in the field. PRQ: 6 graduate semester hours in the family or related areas, or consent of department.

EPCO 636. TRANSPERSONAL COUNSELING THEORY (3). Theory, research, and application related to the development of consciousness enabling individuals to utilize potential in self and others. Content will address the process of becoming a transpersonal counselor.

EPCO 640. GROUP LEADERSHIP (3). Study of leadership styles in task-oriented and personal growth groups. Emphasis on the analysis and attainment of leadership behaviors that are most facilitative of individual and group purposes and goals. PRQ: EPCO 630, EPCO 540, or consent of department.

EPCO 650. ADVANCED PRACTICUM IN INDIVIDUAL COUNSELING (3). Supervised practice of counseling. Focus on the development of skills in working with individual clients. PRQ: Master's degree in counseling or consent of department.

EPCO 651. ADVANCED PRACTICUM IN GROUP COUNSELING (3). Supervised practice of counseling. Focus on the development of skills in working groups. PRQ: Master's degree in counseling or consent of department.

EPCO 652. SUPERVISION IN COUNSELING (3). Theory and practical experience relating to supervision of counselors in elementary, secondary, or higher educational levels. PRQ: Master's degree in counseling or consent of department.

EPCO 660. CONSULTATION IN HUMAN SERVICES (3). Application of consultation strategies in working with individuals and groups. PRQ: Master's degree in counseling or consent of department.

EPCO 661. OUTREACH IN HUMAN SERVICE PROGRAMS (3). Application of outreach strategies in working with individuals and groups. PRQ: Master's degree in counseling or consent of department.

EPCO 664. PERSONALITY TESTING (3). Application of personality assessment instruments, including projective tests, in working with individuals. PRQ: Master's degree in counseling or consent of department.

EPCO 665. MULTICULTURAL COUNSELING (3). Alternate counseling strategies for counselors in a multicultural society. Analysis of traditional and contemporary experiences of ethnocultural and other population groups with emphasis on counseling skills and techniques in working with clients of diverse backgrounds. PRQ: EPCO 530 or consent of department.

EPCO 666. HUMAN SEXUALITY COUNSELING (3). Alternate counseling strategies to be applied to sexual concerns and problem areas. Emphasis on counseling skills and techniques in working with persons differing sexual values, needs, and backgrounds. PRQ: Master's degree in counseling or consent of department.

EPCO 667. COUNSELING OLDER PERSONS (3). Gerontological counseling models and techniques. PRQ: Master's degree in counseling or consent of department.

EPCO 668. INTERNSHIP IN COUNSELING (1-15). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. Open only to Ed.S. and doctoral students, or by consent of department. May be repeated to a maximum of 30 semester hours. PRQ: EPCO 550 or consent of department.

EPCO 669. DOCTORAL RESEARCH AND DISSERTATION (3-15). May be repeated. Student must accumulate 15 semester hours prior to graduation. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.
Special Education (EPSE)

EPSE 421. MICROCOMPUTING AND THE HANDICAPPED (3). Application of microcomputers and related technology to persons with learning, behavior, sensory, motor, and communication handicaps. Software evaluation and adaptation, alternative input and output devices, development and use of microcomputer-based educational materials. Introduction of microcomputing into the Individualized Education Program (IEP).

EPSE 441. CHARACTERISTICS OF MENTAL RETARDATION (3). A survey of the classification, diagnosis, characteristics, and education of the mentally retarded. PRQ: EPSE 240 or consent of department.

EPSE 448. INTRODUCTION TO PROBLEMS OF THE PHYSICALLY HANDICAPPED AND HEALTH IMPAIRMENTS (3). An introduction to educational difficulties of individuals with physical handicaps and/or health/medical conditions. Approached through medical understanding of the differences in physiological adaptation of handicapped individuals. Consideration given to planning for both students and their environment to meet their special needs. PRQ: EPSE 240 or consent of department.

EPSE 449. MEDICAL ASPECTS OF CRIPPLING CONDITIONS (3). Etiology, care, and treatment of crippling conditions and other types of special health problems. PRQ: Consent of department.

EPSE 450. INTRODUCTION TO THE EDUCATION OF THE VISUALLY HANDICAPPED CHILD (3). Introduction to educational programs, services, and rehabilitation procedures for visually handicapped children; exploration of historical background, literature, philosophy, and sociological and psychological aspects of blindness. PRQ: Consent of department.

EPSE 451. THE EYE AND VISION (3). Lectures and demonstrations of various pathologies. Includes study of parts of the eye and their function, normal visual development, abnormalities and conditions that result in visual loss, and general considerations which these losses require in program planning. PRQ: Consent of department.

EPSE 452. INTRODUCTION TO THE EDUCATION OF THE DEAF (2). An overview of the deaf and hard of hearing. Causes and effects of different types of hearing loss. The role of the teacher, speech and hearing therapist, audiologist, and others dealing with the problems of the acoustically handicapped. PRQ: EPSE 240 or consent of department.

EPSE 457. SYSTEMS FOR INTEGRATING THE EXCEPTIONAL STUDENT IN THE REGULAR CLASSROOM (3). Designed to provide preservice and inservice elementary, secondary, and vocational educators information and skills necessary to accommodate exceptional students placed in regular school settings. This course addresses itself to the establishment and implementation of individual educational programs and other concerns encompassed under the Individuals with Disabilities Education Act of 1990 (Public Law 101-476) and the Regulations of the Rehabilitation Act of 1973. Does not count toward a degree program in special education. PRQ: CIEE 282 or CIEE 403X, and successful completion of the Pre-Professional Skills Tests, or consent of department.

EPSE 464. INSTRUCTIONAL SYSTEMS FOR STUDENTS WITH PHYSICAL HANDICAPS (3). The curriculum, instructional methods, and materials appropriate for teaching students with physical handicaps, including objectives, evaluation, and class organization. PRQ: EPSE 365, EPSE 448, and successful completion of the Pre-Professional Skills Tests, or consent of department.

EPSE 466. SIGNED ENGLISH I (3). Development of receptive and expressive skills in signed English and fingerspelling. Practice in the simultaneous use of sign language and fingerspelling. Manual communication skills that are used in educational and social settings are emphasized.

EPSE 467. COMMUNICATION AND CURRICULUM FOR PRE-SCHOOL STUDENTS WITH HEARING IMPAIRMENTS (3). Designed to provide teacher candidates with experiences in the development of speech articulation, oral and/or manual language, and pre-reading and prewriting skills with preschool students with hearing impairments. Emphasizes the integration of communication (including auditory training and speech-reading) and cognitive curriculum. PRQ: COMD 403 or CIEE 403X and successful completion of the Pre-Professional Skills Tests, or consent of department.

EPSE 469. COMMUNICATION AND CURRICULUM FOR ELEMENTARY STUDENTS WITH HEARING IMPAIRMENTS (3). A focus on bilingual and bimodal language development and literacy attainment for elementary students with hearing impairments. Emphasizes the methods of teaching content subjects, speech, and auditory training. PRQ: EPSE 365 and COMD 403 or CIEE 403X and successful completion of the Pre-Professional Skills Tests, or consent of department.

EPSE 470. BEGINNING BRAILLE (3). Mastery in the reading and writing of braille. Development and use of special materials; slate and stylus techniques presented. PRQ: Consent of department.

EPSE 471. ADVANCED BRAILLE (3). Intensive study of the Nemeth Code for mathematics and science notation, music code, and braille textbook formats and techniques. Transcription and adaptation of print material for blind children. PRQ: EPSE 470 or consent of department.

EPSE 472. COMMUNICATION SYSTEMS FOR THE VISUALLY IMPAIRED (3). Techniques in teaching the use of communications systems developed or adapted for blind and visually impaired persons. These include braille, typing, script, notetaking, sound reproduction systems, and listening skills. Laboratory experience with electronic reading devices. PRQ: EPSE 470 and successful completion of the Pre-Professional Skills Tests, or consent of department.

EPSE 473. INSTRUCTIONAL SYSTEMS FOR TEACHING THE VISUALLY HANDICAPPED (3). Special methods, materials, and techniques employed in the assessment and instruction of visually handicapped learners. Emphasis on utilization of low vision, curriculum planning, and adaptation of subject matter areas. Preschool through high school and multiply handicapped learners included. PRQ: Successful completion of the Pre-Professional Skills Tests or consent of department.

EPSE 474. BASIC ORIENTATION AND MOBILITY FOR THE VISUALLY HANDICAPPED (3). Emphasis on concept development, sensory skills, orientation and mobility techniques, and range of mobility options and pre-cane skills. Blindfold and simulator experience included. PRQ: EPSE 450 or consent of department.

EPSE 475. TEACHING ACTIVITIES OF DAILY LIVING TO VISUALLY IMPAIRED AND MULTIPLY HANDICAPPED PERSONS (3). Methods of teaching grooming, eating, and personal and home management to visually impaired and multiply handicapped children, youth, and adults. Successful completion of six hours of laboratory per semester. Home, school, work, and leisure skills emphasized.

EPSE 476. STRATEGIES FOR INTERACTING WITH PARENTS AND SCHOOL PERSONNEL (3). Preparation in recognizing the attitudes, stages of acceptance, and behavior of parents of and professionals who work with exceptional learners. Focus on conferencing strategies to aid teachers in effecting productive adult-adult interactions and in meeting the needs of parents and professionals who work with exceptional learners.

EPSE 480. WORKSHOP IN SPECIAL EDUCATION (1-3). The investigation and application of special education principles to the particular needs and interests of the workshop participant. May be repeated to a maximum of 6 semester hours.

EPSE 513. INSTRUCTIONAL SYSTEMS FOR HIGH-INCIDENCE HANDICAPPED LEARNERS—ELEMENTARY (3). Instructional theories, curricula, methods, and materials as they relate to teaching elementary-aged high-incidence handicapped learners. Emphasis on instructional procedures, adaptations, and progress-monitoring systems. PRQ: EPSE 467, EPSE 547T, EPSE 534, CIEE 500, MATH 402, or consent of department.

EPSE 514. INSTRUCTIONAL SYSTEMS FOR HIGH-INCIDENCE HANDICAPPED LEARNERS—SECONDARY (3). Instructional theories, curricula, methods, and materials as they relate to teaching secondary-aged high-incidence handicapped learners. Emphasis on instructional procedures, adaptations and progress-monitoring systems. PRQ: EPSE 534, EPSE 540, EPSE 545, or CIEE 590, or consent of department.

EPSE 523. ASSESSMENT OF INFANTS AND PRESCHOOLERS WITH HANDICAPS (3). Identification and diagnosis of handicapped infants, toddlers, and young children (birth to six years) with special needs in developmental areas. PRQ: EPSE 540 or consent of department.
EPSE 524. INSTRUCTIONAL SYSTEMS FOR THE EDUCATION OF INFANTS AND PRESCHOOLERS WITH HANDICAPS (3). Curricular models for instructional intervention for infants and preschoolers (birth to six years) with handicaps. PRQ: EPSE 523 or consent of department.

EPSE 526. PARENT-YOUNG HANDICAPPED CHILD INTERACTION (3). Opportunities to develop parenting skills for fostering the growth of young handicapped children with an emphasis on how to communicate these skills to parents and help them help their handicapped child. PRQ: EPSE 540 or consent of department.

EPSE 527. ISSUES IN EARLY CHILDHOOD SPECIAL EDUCATION (1-3). Trends, issues, and concerns of early intervention and early childhood special education programs. In-depth analysis of current issues in the field. May be repeated to a maximum of 3 semester hours.

EPSE 534. EDUCATIONAL DIAGNOSTICS FOR EXCEPTIONAL LEARNERS (3). Diagnosis of exceptional learners. Special attention is given to the identification of exceptional learners and recommendations for special education procedures including nondiscriminatory testing. PRQ: EPSE 434 or consent of department.

EPSE 535. PSYCHOEDUCATIONAL DIAGNOSTICS FOR LEARNERS WITH HIGH-INCIDENT HANDICAPS (3). Advanced educational diagnosis of students with learning disabilities including administration of tests in diverse cultural settings and interpretation of specialized and nondiscriminatory testing instruments. PRQ: EPSE 534 or consent of department.

EPSE 540. FOUNDATIONS OF SPECIAL EDUCATION (3). The education of exceptional learners including contemporary changes in philosophy, objectives, teaching in diverse cultural settings, curriculum, methods, materials, and evaluation.

EPSE 544. PROBLEMS AND CHARACTERISTICS OF MODERATELY, SEVERELY, AND PROFONDLY MENTALLY RETARDED AND MULTIPLY HANDICAPPED (3). Generalized characteristics of the moderately, severely, and profoundly retarded and multiply handicapped will be summarized. Emphasis will be placed upon research methodologies used to identify these characteristics.

EPSE 545. CHARACTERISTICS OF STUDENTS WITH LEARNING DISABILITIES (3). Historical foundations, research, instructional perspectives, and current issues. PRQ: EPSE 540 or consent of department.

EPSE 546. CHARACTERISTICS OF STUDENTS WITH BEHAVIOR DISORDERS (3). A study of students with behavior disorders including causes, characteristics, and implications for educational planning. PRQ: EPSE 540 or consent of department.

EPSE 547T. ISSUES AND TRENDS IN SPECIAL EDUCATION (3). An analysis of current issues and trends affecting the field of special education. Course is the culminating seminar for the master’s program. PRQ: Minimum of 27 graduate program semester hours and consent of department.

EPSE 548. PROBLEMS OF THE MULTIPLY HANDICAPPED (3). An overview of the psychological, sociological and educational problems of the multiply handicapped. Definitions, prevalence and causes of multiple handicapping conditions are discussed.

EPSE 549. EDUCATIONAL PROBLEMS OF CEREBRAL PALSY (3). Problems in development, learning, and adjustment, multiple handicaps, study and development of materials to meet special educational needs; parent counseling; integration of services necessary to meet the child’s individual needs. PRQ: Consent of department.

EPSE 550. COUNSELING IN BLIND REHABILITATION (3). Foundations of personal-social counseling and vocational guidance with particular emphasis on problems created by blindness.

EPSE 552. EDUCATIONAL PROBLEMS OF THE HARD OF HEARING (3). The educational deficit produced by impaired hearing. Theories and research in teaching the hard of hearing. PRQ: Consent of department.

EPSE 555. PROGRAMS FOR SOCIALY MALADJUSTED ADOLESCENTS AND YOUNG ADULTS (3). Procedures for the identification and remediation of socially maladjusted adolescents and young adults. PRQ: Consent of department.

EPSE 557. BEHAVIOR MODIFICATION FOR THE CLASSROOM TEACHER (3). Principles and techniques of behavioral analysis applied to the learning and behavioral management of the student exhibiting learning and behavioral difficulties. Designed to enable the classroom teacher to implement environmental and contingency management principles in the classroom. PRQ: EPSE 447 or consent of department.

EPSE 558. VOCATIONAL PROGRAMMING FOR STUDENTS WITH HANDICAPS (3). The vocational training, evaluation, and placement of learning. Methods of overcoming the educational, multi-handicapped child and the role of work-study and sheltered workshop personnel. PRQ: EPSE 534, EPSE 557, and EPSE 545 or EPSE 546, or consent of department.

EPSE 561. INSTRUCTIONAL SYSTEMS FOR EDUCATING PERSONS WITH MODERATE, SEVERE, AND PROFUNDately Retarded and/or MULTIPLE HANDICAPS (3). Curriculum programs for persons with moderate, severe, and profound retardation and/or multiple handicaps. The function of ancillary programming personnel. Development of curricular packages in in- and daily living skill areas. The integration of content with teaching strategy and measurement. PRQ: Consent of department. Recommended: EPSE 557.

EPSE 566. PROBLEMS IN THE EDUCATION OF THE HEARING IMPAIRED/MULTIPLY HANDICAPPED (3). An orientation to the special problems involved in the care and education or training of persons who are hearing impaired and have other handicaps.

EPSE 569. THE EDUCATION OF PRESCHOOL DEAF CHILDREN (3). The rationale of preschool education of deaf children. Intensive training in the methods and procedures of teaching language, speech and basic reading readiness skills to preschool-aged deaf children.

EPSE 570. PRINCIPLES OF ORIENTATION AND MOBILITY TECHNIQUES FOR VISUALLY IMPAIRED, MULTIPLY HANDICAPPED CHILDREN (3). Techniques designed to assess the functional efficiency of kinesthetic, proprioceptive, auditory, visual, tactual, thermal, and olfactory senses of visually impaired, multiply handicapped children. Special adaptations in orientation and mobility techniques for use by visually impaired, multiply handicapped children.

EPSE 571. DYNAMICS OF INTERACTION AMONG INDIVIDUALS WORKING WITH VISUALLY IMPAIRED, MULTIPLY HANDICAPPED CHILDREN (3). Specific techniques related to parent training, inservice training, and demonstration teaching. Interrelationships between specific tasks and techniques; and the role of the visually impaired, multiply handicapped child and those in related fields. Attention is also directed toward awareness of appropriate human and nonhuman resources and how to utilize them.

EPSE 572. ELECTRONIC MOBILITY AIDS FOR THE BLIND (3). Principles and practices in the use of electronic mobility aids for the totally blind. PRQ: EPSE 570 and EPSE 574 or equivalents; consent of department.

EPSE 573. INSTRUCTIONAL SYSTEMS FOR UTILIZATION OF LOW VISION (3). Procedures in assessing functional residual vision of visually impaired persons. Instructional techniques in maximizing utilization of low vision based on principles of orthoptics and visual perception.
application of low vision aids and adaptations of educational and vocational material and equipment. PRQ: EPSE 451 or consent of department.

EPSE 574. ADVANCED ORIENTATION AND MOBILITY (3-6). Reinforcement of earlier skills and techniques, concentration on the long cane as a travel aid, and observation of a certified orientation and mobility specialist. Teaching materials, procedures, and program planning are reviewed and evaluated. May be repeated to a maximum of 6 semester hours.

EPSE 575. REHABILITATION OF THE BLINDED ADULT (3). Community resources, methods, and materials to assist the blinded adult through rehabilitation. Includes history, rehabilitation models, and legislation. Emphasis on team management, evaluation, concomitant handicaps, and vocational planning.

EPSE 576. INSTRUCTIONAL SYSTEMS FOR THE VISUALLY IMPAIRED, MULTIPLY HANDICAPPED (3). The course includes special methods, materials, and techniques used in the instruction of visually impaired, multiply handicapped individuals. Emphases include: sensory stimulation, visual functioning, motor development, self-help skills, communication skills, home and behavior management, and the use of specialists in related fields. PRQ: EPSE 540 or equivalent; consent of department.

EPSE 577. ADMINISTRATION AND SUPERVISION OF SPECIAL EDUCATION (3). Overview of the functions, responsibilities, and problems in the organization, administration, and supervision of special education programs at the federal, state, and local levels. PRQ: LEEA 500 or consent of department.

EPSE 586A. INTERNSHIP IN ORIENTATION AND MOBILITY FOR THE BLINDED (1-10). Supervised field experience in working with blind persons in activities of daily living. May be repeated for experience at both elementary and secondary levels to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587. PRACTICUM IN SPECIAL EDUCATION (1-10). Supervised field experience in working with exceptional learners in a variety of educational settings. May be repeated to a maximum of 12 semester hours. PRQ: EPSE 447 or consent of department.

EPSE 587A. ELEMENTARY OR SECONDARY PRACTICUM IN LEARNING DISABILITIES (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for elementary and secondary students with learning disabilities. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587B. ELEMENTARY OR SECONDARY PRACTICUM IN SEVERE AND PROFOUND RETARDATION (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for elementary and secondary students with severe and profound retardation. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587C. PRACTICUM IN PHYSICALLY HANDICAPPED (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for physically handicapped students. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587D. ELEMENTARY OR SECONDARY PRACTICUM IN EDUCABLE MENTAL HANDICAPS (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for elementary and secondary students with educable mental handicaps. May be repeated for experience at both elementary and secondary levels to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587E. ELEMENTARY OR SECONDARY PRACTICUM IN BEHAVIOR DISORDERS (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for elementary and secondary students with behavior disorders. May be repeated for experience at both elementary and secondary levels to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587F. ELEMENTARY OR SECONDARY PRACTICUM IN HEARING IMPAIRMENTS (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for elementary and secondary students with hearing impairments. May be repeated for experience at both elementary and secondary levels to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587G. ELEMENTARY OR SECONDARY PRACTICUM IN VISUAL IMPAIRMENTS (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for elementary and secondary students with visual impairments. May be repeated for experience at both elementary and secondary levels to a maximum of 12 semester hours. PRQ: Admission to Graduate School or consent of department.

EPSE 587H. ELEMENTARY OR SECONDARY PRACTICUM IN EARLY CHILDHOOD SPECIAL EDUCATION (1-10). Supervised field experience in special education programs in schools, homes, institutions, and other facilities for infants, toddlers, and preschoolers with handicaps. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School and consent of department.

EPSE 587I. PRACTICUM IN REHABILITATION TEACHING OF THE BLINDED (1-10). Supervised field experience in working with adult blind persons in activities of daily living. May be repeated to a maximum of 16 semester hours. PRQ: Consent of department.

EPSE 587J. PRACTICUM IN ORIENTATION AND MOBILITY TECHNIQUES FOR VISUALLY IMPAIRED, MULTIPLY HANDICAPPED INDIVIDUALS (1-10). Supervised practicum in assessment of sensory and motor skills as they relate to orientation and mobility. The student will also adapt basic orientation and mobility techniques to meet the individual needs of the visually impaired, multiply handicapped person and provide instruction under the direction of an orientation and mobility specialist. May be repeated to a maximum of 12 semester hours. CRQ: EPSE 570 or consent of department.

EPSE 587K. PRACTICUM IN INSTRUCTIONAL SYSTEMS FOR THE UTILIZATION OF LOW VISION (1-10). Supervised practicum in assessment of the functional vision of visually impaired persons and in use of instructional techniques for obtaining maximum benefit from low vision. May be repeated to a maximum of 12 semester hours. CRQ: EPSE 573.

EPSE 587L. PRACTICUM IN MULTIPROFICIENCY HANDICAPPED (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for multiply handicapped students. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School and consent of department.

EPSE 587M. PRACTICUM IN HIGH-INCIDENCE HANDICAPPED (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for high-incidence handicapped learners. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School and consent of department.

EPSE 590. WORKSHOP IN SPECIAL EDUCATION (1-3). Workshop designed for teachers, supervisors, counselors, and administrators to study contemporary problems of the public school. Content varies to provide the opportunity to study current problems and issues as they relate to exceptional children and youth. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

EPSE 591. INSTITUTE IN SPECIAL EDUCATION (1-3). A series of lectures, consultations, and discussion sessions on a relatively limited area of research or education. May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

EPSE 592. SEMINAR IN SPECIAL EDUCATION (3). To review and analyze current research in special education in terms of the special interests of the student. May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

EPSE 597. INDEPENDENT STUDY IN SPECIAL EDUCATION (1-3). Opportunity and challenge for self-directed, independent study in special education. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
EPSE 599. MASTER'S THESIS (1-6). Enrollment by special arrangement with the student's thesis director. To be taken for a minimum of 3 semester hours. May be repeated to a maximum of 6 semester hours.

EPSE 635. EDUCATIONAL ASSESSMENT FOR THE HANDICAPPED (3). Advanced study of symptomatology in relation to the nondiscriminatory diagnostic process, with attention to its significance for educational planning. PRQ: EPSE 534 or consent of department.

EPSE 640. COGNITIVE PROCESSES AND THE HANDICAPPED (3). A critical evaluation of the impact of handicaps on cognition, with consideration of the differences among the handicapping conditions. PRQ: Consent of department.

EPSE 641. THE BRAIN AND LEARNING (3). Detailed consideration of associations between brain function and aspects of behavior. Emphasis on the neurology of learning with focus on implication for education of the handicapped. PRQ: Consent of department.

EPSE 652. PERSPECTIVES IN BEHAVIOR DISORDERS (3). Examination of the development of the field of behavior disorders. Influence of past etiological theories, diagnostic practices, classification schemes, and treatment approaches on current practices. Service delivery approaches for youth and adults with mild, moderate, and severe behavior disorders. PRQ: Consent of department.

EPSE 653. CURRENT ISSUES IN BEHAVIOR DISORDERS (3). Analysis of issues in behavior disorders with the focus on literature within the current five-year period. PRQ: Consent of department.

EPSE 654. READINGS IN VISUAL HANDICAPS (3). Readings in the area of visual handicaps: blind, partially sighted, adult blind rehabilitation, orientation, and mobility.

EPSE 662. ADVANCED INSTRUCTIONAL SYSTEMS FOR HANDICAPPED LEARNERS (3). A study of theories, principles, and practices in the education of the handicapped with emphasis on current research on effective schools. PRQ: Consent of department.


EPSE 666. PERSPECTIVES IN HEARING IMPAIRMENT (3). Examination of the development of the field of deaf education. Influence of past etiological theories, diagnostic practices, classification schemes, and intervention approaches on current practices. Service delivery approaches for youth and adults with mild, moderate, and severe [aided] hearing impairment.

EPSE 667. DISORDERS OF WRITTEN AND READ LANGUAGE (3). Consideration of the written and read language systems as they relate to all areas of handicap. Emphasis on the associations among these disorders and psychology of learning in the sensorially impaired and those with dysfunctions of the central nervous system. PRQ: Consent of department.

EPSE 677. SPECIAL EDUCATION ADMINISTRATION (3). Advanced study of functions, responsibilities, and problems in the organization and administration of special education programs at the federal, state, and local levels. PRQ: EPSE 577 or consent of department.

EPSE 678. SEMINAR: SPECIAL EDUCATION ADMINISTRATION (3). Trends, issues, and concerns in administration of special education programs. One issue or trend will be selected for an in-depth independent library review and/or empirical study by each student. PRQ: EPSE 677 or consent of department.

EPSE 680. FIELD OBSERVATION OF SPECIAL EDUCATION PROGRAMS (1-8). Observation and evaluation of administrative programs in special education in federal, state and selected local programs. May be repeated to a maximum of 8 semester hours. PRQ: EPSE 577 and LEA 500, or consent of department.

EPSE 686. INTERNSHIP IN SPECIAL EDUCATION (2-12). Assignment as an intern in assessment, programming, and/or administration experiences. Participation in on-going programs in residential or public schools for handicapped learners; work as a student/staff member according to the assignment that has been undertaken. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

EPSE 687. LABORATORY PRACTICUM IN PREPARING SPECIAL EDUCATORS FOR HIGHER EDUCATION (1-6). Strategies for providing instruction and experiences for preservice and inservice special education teachers. Includes program and course development, field-based programs, seminars, workshops, institutes, practicum experiences, team teaching, specialized minicourses, programmed and computer-directed instruction, and other delivery systems. Also use of media and strategy evaluation. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

EPSE 691. SEMINAR: GROUP RESEARCH METHODOLOGIES IN SPECIAL EDUCATION (3). Concepts in the philosophy and methodology of the creative research. The preparation of students to evaluate critically ideas and practices in special education. Emphasis on understanding and employing group research designs. PRQ: Consent of department.

EPSE 692. SEMINAR: SINGLE-SUBJECT RESEARCH METHODOLOGIES IN SPECIAL EDUCATION (3). A consideration of the major concepts underlying single-subject research on handicapped children with analysis of the design, variables, and parameters most critical in study of children who have limited language, motor, and mental abilities. PRQ: Consent of department.

EPSE 696. LABORATORY FIELD STUDIES IN SPECIAL EDUCATION (3). Theoretical constructs, design, and procedures for laboratory research and field-based evaluation in special education. Participation in research projects required. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

EPSE 697. INDEPENDENT RESEARCH IN SPECIAL EDUCATION (1-3). Advanced study of specific problems related to the student's interest area, may cover any area of handicap. May be repeated to a maximum of 6 semester hours. PRQ: Standing as sixth-year student and consent of department.

EPSE 699. DOCTORAL RESEARCH AND DISSERTATION (1-15). May be repeated for additional credit to a maximum of 24 semester hours. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.

Educational Psychology (EPSY)

EPSY 430. CREATIVITY AND LEARNING (3). Preservice and inservice training for elementary and secondary teachers in the nature of creativity, the creative process, the creative person, and cultivation of the creative personality. Addresses the assessment of creative processes and products. Emphasis placed on the creative process as it relates to education and schools.

EPSY 450. TRANSPERSONAL EDUCATION (3). An exploration of the classroom applications of transpersonal psychology, and the educational implications of consciousness research.

EPSY 429. MICROCOMPUTERS IN CLASSROOM TEACHING (3). Crosslisted as LEIT 429X. A survey of the educational uses of the microcomputer. Emphasis on the role of the microcomputer in the educational environment, hardware selection, basic programming, review and evaluation of available educational software, and microcomputer
improvement and management. No previous experience in computer programming is required. Designed for students entering an educational environment. Not open to students with previous experience in data processing or information systems without permission of their major department.

EPSY 454. THE GIFTED STUDENT (3). Characteristics of the gifted. Emphasis given to identification, growth and development, creativity, motivation, guidance, and evaluation of the gifted.

EPSY 479. IMPROVING TEACHING TECHNIQUES THROUGH MICRO TEACHING (1-3). Individualized program for improving teaching skills through analysis of videotapes of the student's teaching. Each student contracts with the instructor to develop a program to improve teaching and lesson planning techniques. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.

EPSY 492. SPECIAL TOPICS IN EDUCATIONAL PSYCHOLOGY (1-3). Study of special topics, announced in advance, in educational psychology. May be repeated to a maximum of 9 semester hours when subject varies. MEQ: EPSY 501.

EPSY 501. PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (3). The broad fields of psychology as they relate to and provide foundations for educational practice. A constructive analysis of the principal areas, theories of motivation, perception, attention and intention, and learning. No previous experience in data processing or information systems without permission of their major department.

EPSY 505. THE ELEMENTARY SCHOOL CHILD (3). Theories of child development. Designed to acquaint the student with descriptive and theoretical knowledge of child development from preschool to adolescence. PRQ: EPSY 501.

EPSY 530. PSYCHOEDUCATIONAL DEVELOPMENT IN ADULTHOOD (3). The study of educational and psychological theories of adult development and aging with an emphasis on the evaluation of contemporary research in adult cognitive development. PRQ: EPSY 505.

EPSY 515. HUMANISTIC SOCIAL THEORY APPLIED TO EDUCATION (3). This course will investigate humanistic social theory and a brief survey of its origins in humanistic psychology, educational studies based on this approach, and relevant contributions from the social sciences. PRQ: EPSY 505.

EPSY 520. INTRODUCTION TO EDUCATIONAL RESEARCH (3). A basic course in methods of research in education; the planning and conducting of a research study; the developing of skills in problem identification, measurement, data collection, analysis, interpretation, and preparation of research reports. PRQ: EPSY 515.

EPSY 521. EDUCATIONAL STATISTICS I (3). Techniques necessary for understanding, analyzing, and interpreting data. Concepts and applications of basic descriptive methods. Tables and graphs, measures of central tendency and variability, the normal curve, standard scores, relationship, and prediction. Introduction to probability and inferential statistics. PRQ: EPSY 515.

EPSY 522. EDUCATIONAL STATISTICS II (3). Testing experimental hypotheses by use of t-tests, chi-square, analyses of variance procedures. Use of confidence intervals in estimating population parameters. Consideration of power and of control of errors in simple and complex designs. PRQ: EPSY 521 or consent of department.

EPSY 525. QUALITATIVE RESEARCH IN EDUCATION (3). Introduction to the role of qualitative research in education, with an emphasis on actual, hands-on research. Basic principles and focus of qualitative research will be discussed. Research methods will include case studies, ethnography, and interpretive research. PRQ: EPSY 521 or consent of department. Crosslisted as EPCO 533X.

EPSY 531. PROGRAM EVALUATION IN EDUCATION (3). Methods of evaluating educational programs using accepted models and data-gathering procedures. The rationale for and nature of educational evaluation, planning evaluation, evaluation models, large-scale assessment of programs, program monitoring and related strategies, data-gathering tools and techniques, data analysis, and reporting and interpreting evaluation results. PRQ: EPSY 520 or consent of department.

EPSY 532. EVALUATION OF TEACHERS AND TEACHING (3). Examination of major components of a comprehensive system for evaluating teachers and teaching and the related issues and teacher effectiveness literature. PRQ: EPSY 531.

EPSY 533. STANDARDIZED TESTING (3). Crosslisted as EPCO 533X. Principles of measurement as applied to group standardized measures of achievement, special aptitude, intelligence, personality, and interest for use in educational personnel work. Administering, scoring, and interpreting these measures. PRQ: EPSY 531.

EPSY 534. INDIVIDUAL EDUCATIONAL DIAGNOSIS (3). For training selected school personnel in the administration, scoring, and interpretation of individually administered tests used to diagnose the abilities of students in the classroom. Tests including the Wechsler Adult Intelligence Scale, the Revised Scale, Wechsler Intelligence Scale for Children, the Wechsler Pre-School and Primary Scales, and the Stanford-Binet will be used. PRQ: Consent of department.

EPSY 544. COMPUTER DATA ANALYSIS PROCEDURES (3). A survey of procedures for using the computer in text editing, data management, and statistical processing of research data. User-oriented computer languages such as SPSS, SAS, and BMD will be utilized in the context of statistical problem solving in batch, remote, and interactive modes. PRQ: EPSY 520, EPSY 521, or consent of department.

EPSY 554. PROCEDURES FOR EDUCATING THE GIFTED (3). Current practices, trends, and issues in curriculum development and instructional methods for the gifted. Procedures as they relate to cognitive functions, factors of intellect, and creative expression. PRQ: EPSY 454 or consent of department.

EPSY 560. COMPUTER DATA ANALYSIS PROCEDURES (3). A survey of procedures for using the computer in text editing, data management, and statistical processing of research data. User-oriented computer languages such as SPSS, SAS, and BMD will be utilized in the context of statistical problem solving in batch, remote, and interactive modes. PRQ: EPSY 520, EPSY 521, or consent of department.

EPSY 572X. ASSESSMENT METHODS IN HIGHER EDUCATION (3). EPCO 572. Basic concepts and procedures in the assessment of applicants for admission and retention and use of assessment methods for counseling to support retention in institutions of higher education. PRQ: EPCO 500 or consent of department.

EPSY 587M. PRACTICUM IN GIFTED (1-10). Supervised field experience in special education programs in schools, institutions, and other facilities for gifted students. May be repeated to a maximum of 12 semester hours. PRQ: Admission to Graduate School and consent of department. PRQ: Consent of department.

EPSY 599. MASTER'S THESIS (1-6). Enrollment by special arrangement with the student's major adviser. May be repeated to a maximum of 6 semester hours. PRQ: Consent of faculty member who will direct research.

EPSY 599. MASTER'S THESIS (1-6). Enrollment by special arrangement with the student's major adviser. May be repeated to a maximum of 6 semester hours. PRQ: Consent of faculty member who will direct research.

EPSY 599. MASTER'S THESIS (1-6). Enrollment by special arrangement with the student's major adviser. May be repeated to a maximum of 6 semester hours. PRQ: Consent of faculty member who will direct research.

EPSY 605. ADVANCED SEMINAR IN CHILD DEVELOPMENT (3). Theories of child development from conception to early adolescence. Critical analysis of theories with application to contemporary issues and problems in child development and behavior. PRQ: EPSY 505 or consent of department.

EPSY 606. RESEARCH IN CHILD DEVELOPMENT (3). An examination and analysis of recent research in child development. Focus on the development of skills for conducting research in child development applicable to all educational settings. PRQ: EPSY 605 or consent of department.
EPSY 610. ADVANCED SEMINAR IN HUMAN DEVELOPMENT (3). An in-depth study of the field of human development including child development, adolescent development, and a special emphasis on maturity and old age. The primary orientation will be toward theories of human development.

EPSY 613. ADVANCED EDUCATIONAL PSYCHOLOGY (3). Detailed analysis of modern learning theories and practices as they relate to education. Further development of major areas of human growth as they relate to the school. A detailed investigation of major research in educational psychology. PRQ: EPSY 501 or consent of department.

EPSY 614. INSTRUCTIONAL PSYCHOLOGY (3). Crosslisted as PSYC 544. Models and theories of instructional psychology as related to contemporary research in cognition. PRQ: EPSY 613, a course in cognitive psychology, or consent of department.

EPSY 615. EDUCATION AND HUMAN INFORMATION PROCESSING (3). Implications of human information processing and memory research techniques and their application to learning situations.

EPSY 616. LEARNING RESEARCH PRACTICUM (3). Extended study of learning theory and individual research focusing upon specific and persistent problems of design, translation and interpretation of learning research for educators. May be repeated to a maximum of 6 semester hours. PRQ: EPSY 521 and EPSY 613, or consent of department.

EPSY 618. RESEARCH SEMINAR IN MOTIVATION AND EDUCATION (3). Critical analysis of current motivation theories and research in educational settings. Emphasis on issues of research design and interpretation for educators. PRQ: EPSY 613.

EPSY 620. EDUCATIONAL RESEARCH PLANNING AND INTERPRETATION (3). An advanced course dealing with problems in criterion definition and various handicaps in deriving valid inferences. An analysis is made of how these handicaps can be resolved by study design and tool, data, and sample selection. PRQ: EPSY 520 and EPSY 521, or consent of department.

EPSY 621. NONPARAMETRIC STATISTICS (3). Application, computation, and interpretations of nonparametric statistical tests and correlation measures. Comparison of these tools and techniques with their parametric counterparts. PRQ: EPSY 521 and EPSY 522, or consent of department.

EPSY 622. METHODS OF CORRELATION (3). An intensive study of statistical techniques appropriate to analyzing the extent of relationships among two or more variables. Linear and curvilinear analysis, correlation with noncontinuous variates, single and multiple variate regression, and methods of multifactor analysis. PRQ: EPSY 521 and EPSY 522, or consent of department.

EPSY 625. BAYESIAN APPROACH TO EDUCATIONAL STATISTICS AND DECISION MAKING (3). Subjective probabilistic assessments of data using Bayesian analysis and inference. Implications for research problems, designs and interpretations. Computer applications. PRQ: EPSY 521 and EPSY 522, or consent of department.

EPSY 633. ORGANIZATION AND ADMINISTRATION OF THE SCHOOL TESTING PROGRAM (3). Procedures of establishing goals for the school testing program, selecting tests appropriate to stated goals, coordinating the testing program with other members of the school's professional staff, and using test results in curriculum analyses and in administrative decisions. PRQ: EPSY 530 or EPSY 533, or consent of department.

EPSY 634. CONSTRUCTION OF SCALING INSTRUMENTS (3). Techniques of scale construction for use in assessing attitudinal, interest, temperament, personality variables, and psychomotor skills; reliability and validity of each technique. PRQ: EPSY 522 or consent of department.

EPSY 635. THEORY OF MEASUREMENT (3). Analysis of theoretical approaches to reliability, validity, item analysis and factor analysis. Explanation of related measurement problems. PRQ: EPSY 521 and either EPSY 530 or EPSY 533, or consent of department.

EPSY 639. FIELDWORK METHODS IN EDUCATIONAL RESEARCH (3). Concentration on fieldwork methods in educational research. Concentration on studying examples of educational fieldwork and actual hands-on research. PRQ: EPSY 525 or ANTH 460.

EPSY 640. INTERPRETIVE METHODS IN EDUCATIONAL RESEARCH (3). Concentration on structuralist, poststructuralist, and semiotic theories and techniques in education to develop systematic hands-on interpretive projects. PRQ: EPSY 525.
Department of Leadership and Educational Policy Studies (LE- -)

GRADUATE FACULTY

L. Glenn Smith, chair, professor, Ph.D., University of Oklahoma
Keith M. Collins, professor, Ph.D., Michigan State University
G. Robb Cooper, associate professor, Ph.D., J.D., Loyola University
Phyllis M. Cunningham, professor, Presidential Teaching Professor, Ph.D., University of Chicago
Ronald E. Everett, professor, Ph.D., University of Utah
Frederick P. Frank, professor, Ph.D., State University of New York, Buffalo
Connie Lee Fulmer, assistant professor, Ph.D., Pennsylvania State University
Thomas E. Glass, professor, Ed.D., Wayne State University
Dennis D. Gooer, professor, Ph.D., University of Illinois
David G. Gourley, professor, Ph.D., Ohio State University
Paul J. Ilsley, associate professor, Ed.D., Northern Illinois University
Jorge Jeria, assistant professor, Ph.D., Iowa State University
Robert M. Lang, professor, Ed.D., Indiana University
James A. Lockard, professor, Ph.D., Iowa State University
Richard W. MacFeely, associate professor, Ed.D., University of Illinois
Muriel E. Mackett, professor, Ph.D., Ohio State University
Robert C. Mason, professor, Ed.D., University of Nebraska
Gary L. McConeghy, professor, Ed.D., Wayne State University
Wilma R. Miranda, associate professor, Ph.D., State University of New York, Buffalo
Jeffrey E. Mirel, associate professor, Ph.D., University of Michigan
Harriet B. Morrison, professor, Ed.D., Boston University
Diann Musial, associate professor, Ed.D., Northern Illinois University
John A. Niemi, professor, Presidential Teaching Professor, Ed.D., University of California, Los Angeles
Jeri M. Nowakowski, associate professor, Ed.D., Western Michigan University
Richard A. Orem, professor, Ed.D., University of Georgia
Byron F. Radebaugh, professor, Ed.D., University of Toledo
David B. Ripley, professor, Ph.D., University of Iowa
Rhonda S. Robinson, professor, Ph.D., University of Wisconsin
Amy D. Rose, associate professor, Ed.D., Teacher's College, Columbia
Gene L. Roth, associate professor, Ph.D., Southern Illinois University
Guy Senese, associate professor, Ph.D., University of Illinois
Homer C. Sherman, professor, Ph.D., University of Iowa
Edwin L. Simpson, professor, Ed.D., Indiana University
Charles A. Sloan, professor, Ph.D., University of Iowa
Sherman Stanage, professor, Presidential Teaching Professor, Ph.D., University of Colorado
Howard A. Swan, Jr., professor, Ph.D., University of Illinois
Manfred Thullen, professor, Ph.D., Louisiana State University
Alfonzo Thurman, professor, Ph.D., University of Wisconsin
Lucy F. Townsend, associate professor, Ph.D., Loyola University of Chicago
Brent E. Wholeben, professor, Ph.D., University of Wisconsin
William H. Young III, professor, Ed.D., Pennsylvania State University

The Department of Leadership and Educational Policy Studies offers the degree Master of Science in Education, the Educational Specialist degree (sixth year), and the degree Doctor of Education. A handbook, Graduate Programs in Education, and a list of course requirements for each major are available in the departmental office and in the Education Advisement Office.

Students may major in the following areas listed under each degree.

Master of Science in Education

Adult continuing education
Educational administration
Foundations of education
Instructional technology
School business management

Educational Specialist

Educational administration

Doctor of Education

Adult continuing education
Educational administration
Instructional technology

Departmental Admission Criteria

The Department of Leadership and Educational Policy Studies selects the best-qualified applicants for admission to its programs. When the number of applicants to any program exceeds its capacity, even qualified applicants may be denied admission and encouraged to reapply at a later date.

In addition to satisfying requirements for admission to the Graduate School, applicants for admission to the department's programs are expected to satisfy both department and program admissions criteria. For the Graduate School and program admissions criteria, see the appropriate sections of this catalog.

Admission Procedures

Decisions about admission to programs in the department are ordinarily made once each term. To be assured of consideration, completed applications containing all required data (application forms, official transcripts, GRE scores, and letters of recommendation) must be received by the Graduate School no later than June 1 for admission for the fall term, November 1 for admission for the spring term, and April 1 for admission for the summer session.

Any applicant who is denied admission to a program may submit to the appropriate program admissions committee a written request for reconsideration that includes information not previously submitted. Final decisions of program admissions committees may be appealed to the department's Committee on Admissions, Retention, and Professional Standards. Appeals to this committee must be in writing and must explain the basis for the appeal.
Field Work
Supervised field work is sometimes required in a given program of study especially when, in the adviser's judgment, it is necessary to prepare the student in a chosen specialty.

Deficiency Study
In cases in which students' backgrounds in their chosen specialty are limited, they may be required to fulfill deficiency requirements.

Internship Programs
The Department of Leadership and Educational Policy Studies currently utilizes internship programs in the areas of adult continuing education, educational administration, foundations of education, instructional technology, and school business management. For further information and internship possibilities see course descriptions.

Office of Research and Evaluation in Adult Continuing Education (RE/ACE)
The RE/ACE Office encourages and facilitates communication and shared research among the university's professional continuing education staff and the faculty of the graduate program in adult continuing education. This liaison between practice and research permits the sharing of teaching and research expertise of the adult continuing education faculty through off-campus courses, internships, and co-sponsorship of grants. In addition, faculty receive an opportunity to keep abreast of current practice and research needs in the field.

Master of Science in Education

Admission Criteria
An applicant for admission to a departmental program is generally expected to meet or exceed the following requirements:
1. An applicant is required to submit the scores on the General Test of the Graduate Record Examinations (GRE) [NOTE: Either GRE or Graduate Management Admission Test (GMAT) scores will be accepted for school business management students].
2. Two letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant's professional qualifications.
3. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.

Prospective students who fail to satisfy the GPA criterion for admission to the Graduate School may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiency, and should accompany the application for admission to the Graduate School. Final decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual's qualifications.

General Requirements for Major in:
Adult Continuing Education
Educational Administration
Foundations of Education
Instructional Technology
School Business Management

Education majors, except those in foundations of education, may earn the degree Master of Science in Education by electing one of two options. Foundations of education majors must select the thesis option. Option 1 includes the writing of a thesis; Option 2 is a program of courses without a thesis. In either option, the requirements are a minimum of 30 semester hours which are distributed as follows:

Option 1
1. One graduate-level course in research, normally 3 semester hours, approved by student's adviser
2. Two graduate courses in educational foundations (may include historical, philosophical, psychological, or sociocultural foundations courses), normally 6 semester hours, approved by student's adviser
3. 15 additional semester hours, approved by the student's adviser (15)
4. Master's thesis (3-6)

Option 2
Same basic requirements as Option 1 except that the thesis is not required. Instead, 6 semester hours in the major field are selected with the approval of the student's adviser.

Program Description and Special Admission Criteria for Each Major

Adult continuing education. This program offers practitioners improved theoretical and methodological bases for professional behavior while providing comprehensive preservice education for persons seeking careers in this field. The program provides opportunities for individualization to take into account the student's goals and needs. Usually it includes faculty-supervised internship in programming, teaching, counseling, or evaluating. It prepares adult educators for work in such settings as higher education, schools, business and industry, religious organizations, professional associations, libraries, government, correctional and other agencies concerned with physical and mental health, community problem solving, and the undereducated adult.

Educational administration. This is a 33-semester-hour program intended for the beginning student of school administration and should be of particular interest to persons who are entering administrative work. The emphasis is on areas of administrative responsibility, leadership skills, and technical and theoretical resources. The program is designed to fulfill educational requirements for the general administrative endorsement to the Illinois General Administrative Certificate.

Foundations of education. This program provides the student with a theoretical understanding of education—philosophical, historical, social and comparative—giving a meaningful context in the analysis of educational problems and controversies. A reflective, inquiring approach is the intended outcome for educators enrolled in the program. The foundations program serves students wishing to gain a broad-based knowledge of educational theory as well as those majoring in the field. Individual needs and goals of students are considered in the advisement process; courses may be selected from appropriate departments throughout the university.

Instructional technology. The 39-semester-hour program leading to the Master of Science in Education with a major in instructional technology was developed to provide specialized training to those persons who wish to be employed as school media specialists, as instructional developers in business and industrial training departments, or as producers of software in a variety of locations. Students will develop competencies in media administration, including selection and organization; in product evaluation and production; and in program evaluation.

School business management. This is a 39-semester-hour program intended to prepare persons to serve as school business managers. Students, under the direction of an adviser, will plan a program of studies which will include course work, internship, and field experiences directly related to the school business management function in elementary and secondary, or college educational systems. It is not necessary to have a teaching certificate to apply for this program. The program for chief school business officials in elementary and secondary schools is
approved by the Illinois State Board of Education and satisfies the educational requirements for the chief school business official endorsement to the Illinois General Administrative Certificate. Program flexibility permits elective courses which may be applied toward meeting minimal educational requirements for the general administrative endorsement.

Educational Specialist

This 33-semester-hour program of advanced study in educational administration is designed to prepare eligible graduate students for various administrative positions in school systems. It emphasizes the technical and specialized aspects of administration. In addition, it includes studies intended to refine the student's competence to deal with more general aspects of educational theory. This area is appropriate for the person who wants to fulfill the educational requirements for the superintendent endorsement to the Illinois General Administrative Certificate.

Admission Criteria

An applicant for admission to a departmental program is generally expected to meet or exceed the following requirements:

1. A GPA of at least 3.20 in previous graduate work.
2. An applicant is required to submit the scores on the General Test of the Graduate Record Examinations (GRE).
3. Two letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant's professional qualifications.
4. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.
5. Following screening based on the above criteria, possible participation in a preadmission interview.

Prospective students who fail to satisfy the GPA criterion for admission to the Graduate School may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiency, and should accompany the application for admission to the Graduate School. Decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual's qualifications.

Requirements for Admission

An applicant for admission into the Educational Specialist program must:

1. Apply to the dean of the Graduate School for admission to the Graduate School for the Ed.S. program.
2. Work with an interim adviser planning work for the first semester.
3. Arrange an interview with the chair of his or her advisory committee after receiving notification of acceptance by the departmental admission committee.
4. Confer with the advisory committee to plan a program of study. (Quadruplicate copies of the program shall be prepared.)

Two letters of recommendation are required from persons who can write analytically about the applicant's academic qualifications, ability to do graduate work, and other professional qualifications. A minimum of one such letter should be from a professor and one from an employer or supervisor. Additional information and materials related to the applicant's total profile of qualifications may be requested by the Faculty Admissions Committee and must be received by no later than June 1 for fall admission consideration, November 1 for spring admission consideration, and April 1 for summer admission consideration.

Doctor of Education

Admission Criteria

An applicant for admission to a departmental program is generally expected to meet or exceed the following requirements:

1. A GPA of at least 3.20 in previous graduate work.
2. An applicant is required to submit the scores on the General Test of the Graduate Record Examinations (GRE).
3. Three letters of recommendation from professors, employers, or supervisors which provide supportive evidence of an applicant's professional qualifications.
4. Satisfactory academic and professional progress as indicated by data included in the application for admission to the Graduate School.
5. For qualified applicants to doctoral programs, demonstration of writing competencies and participation in a preadmission interview before a final admission decision is made.

Prospective students who fail to satisfy the GPA criterion for admission to the Graduate School may request special consideration of their applications. Such a request must be in writing, must include compensatory evidence related to the deficiency, and should accompany the application for admission to the Graduate School. Final decisions regarding admissions are made by program committees of the department on the basis of a total profile of an individual's qualifications.

General Requirements

The degree Doctor of Education, the highest professional degree offered by the Graduate School through the Department of Leadership and Educational Policy Studies, is awarded to those students who demonstrate superior qualities and attainment during their period of study and give clear evidence of exceptional promise.

Applicants for the doctoral degree are expected to have a broad base of general education in the humanities, sciences, and social sciences, represented by a minimum of 75 undergraduate and graduate semester hours distributed equitably among the various fields. Where significant deficiencies are found by the student's advisory committee, additional semester hours above the 93 required for the doctoral degree may be prescribed. This degree is intended to prepare superior teachers, administrators, service personnel, and scholars of education.

In addition to other functions, the programs prepare individuals for teaching at the college level. Research skills are an integral part of each program.

Residence for the doctorate is required to insure the involvement of the student for at least a minimum period of time in full intellectual activities of the campus. The residence requirement for the doctorate may be fulfilled by completing 27 semester hours of graduate course work within a consecutive 18-month period or less. A statement of how the student intends to satisfy the residence requirement should be submitted to the Graduate School in the first semester of doctoral work, together with the doctoral program. This residency statement must be cosigned by the chair of the student's advisory committee. Hours earned as a student-at-large may not be used in fulfillment of the residence requirement.

All general requirements and procedures referring to admission, residence credit, dissertation, final examination, and graduation as set forth by the Graduate School are to be satisfied.

The Department of Leadership and Educational Policy Studies requires the equivalent of at least three years of full-time academic work, or a minimum of 93 semester hours of graduate work beyond the baccalaureate degree including the dissertation. The 93 semester hours include the following:
1. A minimum of 15 semester hours of graduate-level course work in common requirements: (a) research understandings and skills, (b) learning and development theories, and (c) socio-cultural analyses of education.

2. A minimum of 18 semester hours of graduate-level course work (excluding dissertation hours) in the major.

3. A cognate component selected from outside the major to provide a broader base of knowledge, a supportive professional skill, or more sophisticated research competencies. No specific number of semester hours is required.

4. A minimum of 63 semester hours beyond the master’s degree.

5. A dissertation for 15 or more semester hours.

A typical doctoral program includes study in a variety of disciplines within the university. Ordinarily, a minimum of 9 semester hours of course work is pursued in other colleges. These credits may be within the common requirements, the cognate component, or the student’s major.

The dissertation represents a substantial contribution to knowledge in the candidate’s major field of study. Candidates are expected to conduct original scholarship appropriate to their major and to communicate the results of their research effectively.

Program Description and Special Admission Criteria for Each Major

Adult continuing education. This program provides a flexible system of professional preparation in the field of adult continuing education. A required core of learning experiences is supplemented by additional course work in areas of instruction, administration, and research to prepare both generalists and specialists in the field. Major objectives are:

1. to prepare persons for leadership roles in adult continuing education and continuing professional education, graduate teaching, and administrative positions in adult education—for example, health fields, community schools, voluntary agencies, university extension, industrial training, community services, adult basic education, churches, and government.

2. to prepare persons as professional practitioners who address themselves successfully to the current and future problems related to adult learning and education of adults.

The program is intended to be flexible and is influenced by students as they meet with their advisory committees. Although each program will be designed around the individual needs of the student, taking into account his or her background and future professional interests, the requirements of the College of Education and Graduate School will be met.

Educational administration. The doctoral program is intended to prepare individuals who demonstrate superior qualities and attainment for administrative service in schools and other agencies or for college teaching. It synthesizes knowledge gained in the master’s program and Ed.S. program. The doctoral program provides instructional experiences designed for satisfactory development of conceptual, human, and technical skills and understandings required for successful school administration with emphasis on educational research, the place of the school leader in the social order, community power structure, and organizational theory.

Three letters of recommendation are required from persons who will write analytically about the applicant’s academic qualifications, ability to do graduate work, and other professional qualifications. A minimum of two such letters should be from professors and one from an employer or supervisor. Additional information and materials related to the applicant’s total profile of qualifications may be requested by the Faculty Admissions Committee and must be received no later than June 1 for fall admission consideration, November 1 for spring admission consideration, and April 1 for summer admission consideration.

Instructional technology. The program leading to the Doctor of Education with a major in instructional technology prepares administrators, designers, and instructors in the field of instructional technology. Graduates have been employed by universities, community colleges, businesses, industry, and government in positions associated with technological improvements and development.

Cognate in foundations of education. Several areas of cognate studies are offered in foundations of education, any of which can be taken in conjunction with doctoral programs in other fields. Cognates include history of education, philosophy of education, and foundations of education. Semester hours may range from 9 to 15.

Examinations

Candidacy examination. A written candidacy examination is scheduled and administered at least twice each year. A graduate student eligible to take this examination, with the permission of the chair of the doctoral committee, will have completed at least two-thirds of his or her studies including the common requirements. Dates on which application for the examination can be made are announced by the Department of Leadership and Educational Policy Studies. This examination encompasses major areas of professional knowledge. Any student who fails may, with the recommendation of the committee, be granted the opportunity to take a second examination. The second examination, however, is final.

Final examination. A final oral examination related to the dissertation is required and is conducted in accordance with the general requirements of the Graduate School.

Course Offerings

Adult Continuing Education (LEAC)

LEAC 400. THE NATURE OF ADULT CONTINUING EDUCATION (3). Designed for students studying in various departments and areas who wish to explore the field as it exists in basic education, high schools, community colleges, universities, private schools, businesses, governmental agencies, nonprofit organizations, and churches. The historical, philosophical, and sociological bases of adult education are examined with emphasis on present roles and future trends in the field.

LEAC 490. WORKSHOP IN ADULT CONTINUING EDUCATION (1-3). Opportunity provided to work cooperatively under the guidance and supervision of an experienced adult educator. An intensive analysis of specific programs of adult education. The literature of the field and the techniques of studying agency problems. Special projects assigned to each student for intensive study. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

LEAC 492. SPECIAL TOPICS IN ADULT CONTINUING EDUCATION (1-3). Study of special topics, announced in advance, in adult continuing education. May be repeated to a maximum of 9 semester hours when subject varies.


LEAC 502. EDUCATING THE DISADVANTAGED ADULT (3). Focus on economic, educational, and personal problems of low-income, culturally different adults, and on programs developed for them by agencies and institutions.

LEAC 530. INSTRUCTIONAL THEORY AND PRACTICE IN TEACHING ADULTS (1-3). The development of methods, techniques, and strategies for the instruction of adults.
LEAC 533. LEARNING HOW TO LEARN: APPLIED THEORY FOR ADULTS (3). Understandings and skills that enable adults to learn effectively in classrooms, small groups, and individually. Participation in training and self-directed education are explored in a laboratory setting. Implications for adult education agencies are identified.

LEAC 540. CURRICULUM AND PROGRAM DEVELOPMENT IN ADULT CONTINUING EDUCATION (3). The application of curriculum development and program planning principles to education and training programs designed specifically for the adult learner.

LEAC 544. ALTERNATIVES IN THE COUNSELING AND PLACEMENT OF ADULTS (1-3). Cursuisted as EPCO 569X. An examination and identification of promising alternatives in the facilitation of adult career development through guidance, counseling, and vocational placement. May be repeated to a maximum of 3 semester hours.

LEAC 545. PLANNING AND PROMOTING NONCREDIT ADULT CONTINUING EDUCATION (1-3). Strategies for needs assessment and marketing for noncredit adult continuing education; program models and techniques for reaching specific target audiences. Consider student-identified programming concerns through a practicum-workshop approach. May be repeated to a maximum of 3 semester hours.

LEAC 550. TEACHING ADULTS ENGLISH AS A SECOND LANGUAGE (3) (nec.).

A. Methods and Materials for Teaching Oral Skills
B. Methods and Materials for Teaching Literacy Skills
C. Organizing Instruction of English Language Skills
D. Influence of Cultural Backgrounds on English Language Development

LEAC 560. NONTRADITIONAL ADULT EDUCATION (3). The historical background, conceptual base, and literature of alternative approaches to the education of adults. Included are nontraditional movements such as open learning systems for adults, the free university, learning exchanges, folk schools, and field studies of current adult programs, their structure and content.

LEAC 561. HUMAN RESOURCE DEVELOPMENT (3). Cursuisted as EPCO 561X and LEIT 561X. The nature and function of programs for developing human resources in business, education, industry, government, social services, and voluntary organizations.

LEAC 565. CONTINUING EDUCATION FOR PROFESSIONAL GROUPS (3). Explanation and critique of frameworks for understanding the goals, processes, and outcomes of continuing education. Exploration of the design and development of continuing education programs for adults in professional roles.

LEAC 568. CONTINUING HIGHER EDUCATION (3). An analysis and critique of the current practices of continuing education in institutions of higher education with application to organization and administration, and development of educational settings. Consideration given to psychological, social, and cultural conditions surrounding the adult second language learner. Credit is limited to 3 semester hours per topic.

LEAC 560. NONTRADITIONAL ADULT EDUCATION (3). The historical background, conceptual base, and literature of alternative approaches to the education of adults. Included are nontraditional movements such as open learning systems for adults, the free university, learning exchanges, folk schools, and field studies of current adult programs, their structure and content.

LEAC 570. ORGANIZATION AND ADMINISTRATION OF ADULT CONTINUING EDUCATION (3). Organizing, financing, staffing, promoting, and evaluating programs of adult education. Teaching resources and the role of the adult education administrator.

LEAC 575. POLICY STUDIES IN ADULT CONTINUING EDUCATION (3). Critical analysis of the formation and implementation of adult continuing education policy within educational and other social institutions. Use of a variety of theoretical perspectives to examine selected case studies from the comparative adult continuing education literature and the students' own work experience, as well as alternative adult continuing education policies.

LEAC 586. INTERNSHIP IN ADULT CONTINUING EDUCATION (3-9). Work individually or in small groups in a practical situation under the guidance of a faculty member directing the thesis. May be repeated to a maximum of 12 semester hours when content varies. PRQ: Consent of department.

LEAC 590. WORKSHOP IN ADULT CONTINUING EDUCATION (1-3). Workshop designed for teachers, counselors, and administrators to study contemporary issues in adult continuing education. May be repeated to a maximum of 12 semester hours when content varies. PRQ: Consent of department.

LEAC 597. INDEPENDENT RESEARCH IN ADULT CONTINUING EDUCATION (1-6). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

LEAC 598. ISSUES IN ADULT CONTINUING EDUCATION (3). Integration and synthesis of the concepts, principles, trends, and issues in adult continuing education. Not open to doctoral students in the field of adult continuing education. PRQ: Completion of 24 semester hours in an approved master's level program, or consent of department.

LEAC 599. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

LEAC 600. SEMINAR IN ADULT CONTINUING EDUCATION (1-6). Advanced study and discussion of important issues relating to the field and profession of adult continuing education. Group and individual interests contribute to the design of the course. May be repeated when topic varies. PRQ: Consent of department.

LEAC 610. EVALUATING ADULT CONTINUING EDUCATION PROGRAMS (3). An advanced study of program design and evaluation methods necessary to analyze and improve programs in adult continuing education effectively.

LEAC 620. REVIEW OF RESEARCH IN ADULT CONTINUING EDUCATION (3). A comprehensive study of research literature in adult continuing education and related social science fields. Additional emphasis will be placed on examination of diagnostic instruments.

LEAC 622. ADULT CONTINUING EDUCATION IN SOCIAL CONTEXT (3). Cursuisted as LEFE 622X. Critical analysis of the relationships existing between adult continuing education and its various social contexts. Clarification of present and future purposes and practices of adult continuing education in light of trends in social science research.

LEAC 660. INTERNATIONAL ADULT EDUCATION (3). An examination of the present status of adult continuing education in selected foreign countries. Emphasis on scope, purposes and development of adult continuing education institutes and programs internationally.

LEAC 670. LEADERSHIP IN ADULT CONTINUING EDUCATION (3). This course relates administrative theory and research to current practice of leadership in the field of adult continuing education. Additional emphasis includes strategies planning, the development of public, institutional, or agency support, and the evolving roles of the adult education leader.

LEAC 686. INTERNSHIP IN ADULT CONTINUING EDUCATION (3-12). Work individually or in small groups in a practical situation under the guidance of a staff member from that setting and a university supervisor. Open only to Ed.S. and doctoral students, or by consent of department. May be repeated to a maximum of 18 semester hours, although typically only 12 semester hours may be applied to the program of study.

LEAC 697. INDEPENDENT RESEARCH IN ADULT CONTINUING EDUCATION (1-6). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 12 semester hours, although typically only 6 semester hours are applied to the program of study.

LEAC 698. RESEARCH SEMINAR IN ADULT CONTINUING EDUCATION (1-3). Designed for the advanced doctoral student interested in planning and conducting research studies in adult continuing education. Research project may be an exploratory or pilot study related to the doctoral dissertation. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

LEAC 699. DOCTORAL RESEARCH AND DISSERTATION (1-15). May be repeated. Student must accumulate 15 semester hours prior to graduation. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.

Educational Administration (LEEA)

LEEA 590. EDUCATIONAL ORGANIZATION AND ADMINISTRATION: PRINCIPLES, CONCEPTS, AND STRUCTURE (3). Development of an awareness and understanding of the social, political, and behavioral bases for educational administration.
LEEA 501. SCHOOL ORGANIZATION AND ADMINISTRATION: PROGRAMS AND PRACTICES (3). Examination of administrative problems in the areas of educational programs, staff and pupil personnel functions, physical plant, finance and business management, and school-community relations. PRQ: LEEA 500 or consent of department.

LEEA 511. THE PRINCIPALSHP (3). Basic performance patterns of elementary, middle, and secondary school principals in the organization and administration of the education process. Clinical experiences appropriate to each level of administration. PRQ: LEEA 500 and a minimum of 15 additional semester hours in the educational administration program, or consent of department.

LEEA 520. EDUCATION FINANCE I (3). Survey of social, economic, and political considerations in public financing of education. Examination of sources of revenues, federal-state-local allocation systems, and local educational agency financial planning and budgeting. Clinical experiences are included. PRQ: LEEA 500 or consent of department.

LEEA 525. EDUCATION LAW I (3). Survey course on legal problems in educational settings. Designed for students in master's degree programs. Clinical experiences are included.

LEEA 535X. SUPERVISORY BEHAVIOR (3). CISC 535. The theoretical constructs underlying supervisory behavior in educational settings and applications of related principles to the supervision and management of educational personnel.

LEEA 540. SCHOOL-COMMUNITY RELATIONS (3). The responsibility of the school to offer leadership in home-school-community relationships. The tasks of surveying and utilizing community resources, studying promising programs and practices, and evaluating educational criticism. Clinical experiences are included.

LEEA 550. SEMINAR PROBLEMS IN EDUCATIONAL ADMINISTRATION (3). Examination of individual investigation of fundamental problems in educational administration and business management, culminating in a research paper. Problems based largely on past or anticipated experience of the students. PRQ: LEEA 500 or consent of department.

LEEA 554. POLICY ANALYSIS FOR SCHOOL ADMINISTRATORS (3). Policy making, implementing, and evaluating at the school site and school district levels: the skills of policy analysis and policy development; the identification of issues appropriate for policy study in the school district and the school site, the principal in policy related roles. PRQ: LEEA 500 and LEFE 500 or LEFE 521, or consent of department.

LEEA 580. CLINICAL LABORATORY, BUILDING-LEVEL ADMINISTRATION (1). Laboratory-based clinical experiences including individual and group classroom exercises and simulations focused on building-level administrative tasks and functions. Required for general administrative endorsement. PRQ: LEEA 511 or consent of department. CRQ: LEEA 520, LEEA 525, or LEEA 535X.

LEEA 586. INTERNSHIP IN EDUCATIONAL ADMINISTRATION (3-12). Work individually or in small groups in a practical situation under the guidance of a staff member from that setting and a university supervisor. Minimum of 3 semester hours required for general administrative endorsement. May be repeated to a maximum of 12 semester hours, although typically only 3 semester hours may be applied to a graduate degree program. PRQ: LEEA 500, LEEA 511, and 15 additional semester hours in the educational administration program, or consent of department.

LEEA 590. WORKSHOP IN EDUCATIONAL ADMINISTRATION (1-3). Workshop designed for teachers, supervisors, and educational administrators to study contemporary issues and problems in education. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Acceptance by the director of the workshop.

LEEA 592. SPECIAL TOPICS IN EDUCATIONAL ADMINISTRATION (1-3). Study of special topics, announced in advance, in educational administration. May be repeated to a maximum of 12 semester hours when topic varies. PRQ: Consent of department.

LEEA 597. INDEPENDENT RESEARCH IN EDUCATIONAL ADMINISTRATION (1-6). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

LEEA 599A. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

LEEA 599B. ED.S. THESIS OR FIELD STUDY (3-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of the chair of the student's advisory committee.

LEEA 600. NATURE AND THEORY OF ADMINISTRATION (3). Analysis of relationships in organizational structures, decision making, and informal organization. Assessment and analysis of models and systems for the solution of problems in administration. PRQ: LEEA 500 or consent of department.

LEEA 610. THE SUPERINTENDENCY (3). The basic performance patterns of the superintendent and central office personnel in the organization and administration of the educational process. PRQ: Minimum of 18 semester hours in educational administration at the 600 level or consent of department.

LEEA 615. EDUCATIONAL FACILITIES (3). Educational facilities planning, facilities survey, population and utilization studies, and evaluation of existing facilities. Laboratory and field base clinical experiences are included. PRQ: LEEA 500 or consent of department.

LEEA 620. EDUCATION FINANCE II (3). Theoretical aspects of financial administration, state and local tax systems, cost-quality relationships, and operational finance. PRQ: LEEA 520 or consent of department.

LEEA 625. EDUCATION LAW II (3). Emphasis on case studies in education law. Clinical experiences are included. PRQ: LEEA 525 or consent of department.

LEEA 630. EDUCATIONAL ADMINISTRATION FIELD STUDIES (3). Methods of administrative planning in the areas of community background, evaluation of facilities, transportation, scheduling, utilization of staff, and financial analysis. Clinical experiences are included. PRQ: Consent of department.

LEEA 635. ADMINISTRATION AND SUPERVISION OF EDUCATIONAL PERSONNEL (3). The problems and issues associated with administration and supervision of personnel, collective negotiations, selection of personnel, and development of reward systems. Clinical experiences are included. PRQ: CISC 535 or LEEA 535X, or consent of department.

LEEA 636. COLLECTIVE BARGAINING IN EDUCATION (3). An educational administration perspective on basic processes of collective bargaining in educational settings. Consideration is given to history, theory, specific collective bargaining issues, planning, communication, and strategies required in the bargaining process. Clinical experiences are included. PRQ: LEEA 635 or consent of department.

LEEA 637. SEMINAR: MANAGEMENT OF NEGOTIATED CONTRACTS IN EDUCATION (3). A seminar for prospective educational administrators. Study and exploration of effective strategies for implementation, resolution, and management of negotiated contracts. Clinical experiences are included. PRQ: LEEA 636 or consent of department.

LEEA 640. SEMINAR IN SCHOOL-COMMUNITY RELATIONS (3). Current problems and issues as they affect administrative practices: emphasis on field-based practices and techniques. PRQ: LEEA 540 or consent of department.

LEEA 645. SURVEY OF RESEARCH IN EDUCATIONAL ADMINISTRATION (3). Survey of selected research studies in educational organization and administration. PRQ: LEEA 500 or consent of department.

LEEA 650. SEMINAR: EDUCATIONAL ADMINISTRATION (3). The identification and integration of the human and technical skills required for modern educational administration. May be repeated to a maximum of 6 semester hours. PRQ: LEEA 600 or consent of department.

LEEA 651. EXTERNSHIP IN EDUCATIONAL ADMINISTRATION (3). Designed expressly for practicing educational administrators and business managers and directly concerned with applied problems in educational administration and business management. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

LEEA 654. THE POLITICS OF EDUCATIONAL ADMINISTRATION (3). Methods and conceptualization of political power in educational administration; examination of policy making, the policymakers, and educational administrators in their policy making roles; ways of influencing policy processes and identification of current policy issues in educational administration. PRQ: LEEA 600 or consent of department.
LEEA 655. PLANNING AND DECISION MAKING IN EDUCATIONAL ADMINISTRATION (3). Extended study of decision making in education, focusing upon specific problems in planning, design, implementation, and evaluation. Clinical experiences are included. PRQ: Completion of master’s degree or equivalent and consent of department.

LEEA 670. THE ADMINISTRATION OF HIGHER EDUCATION (3). Various executive roles common to higher education administration. Decision theory, role analysis, accountability models, and principles of organizational behavior as applied to the administration of higher education institutions.

LEEA 671. LEGAL ASPECTS OF HIGHER EDUCATION ADMINISTRATION (3). Legal principles, legislation, and court rulings in such areas as employment, dismissal, contracts, tenure, civil rights, due process, student rights, and other issues of concern to higher education administrators.

LEEA 672. BUSINESS MANAGEMENT IN HIGHER EDUCATION (3). Analysis of issues and problems of business management in colleges and universities.

LEEA 680. CLINICAL LABORATORY, DISTRICT-LEVEL ADMINISTRATION (1). Laboratory-based clinical experiences including individual and group classroom exercises and simulations focused on district-level administrative tasks and functions. Required for superintendent's endorsement. PRQ: LEEA 600 and LEEA 610, or consent of department.

LEEA 686. INTERNSHIP IN EDUCATIONAL ADMINISTRATION (3-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. Minimum of 3 semester hours required for superintendent endorsement. May be repeated to a maximum of 12 semester hours, although typically only 3 semester hours may be applied to the program of study. PRQ: LEEA 610 or consent of department.

LEEA 697. INDEPENDENT RESEARCH IN EDUCATIONAL ADMINISTRATION (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours.

LEEA 698. RESEARCH SEMINAR IN EDUCATIONAL ADMINISTRATION (3). Designed for the advanced student interested in planning and conducting research studies in educational administration. Research project may be an exploratory or pilot study related to the doctoral dissertation. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 620.

LEEA 699. DOCTORAL RESEARCH AND DISSERTATION (1-15). Students must accumulate 15 semester hours prior to graduation. May be repeated. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.

Foundations of Education (LEFE)

LEFE 492. SPECIAL TOPICS IN FOUNDATIONS OF EDUCATION (1-3). Study of special topics, announced in advance, in foundations of education. May be repeated to a maximum of 9 semester hours when subject varies.

LEFE 500. SOCIAL FOUNDATIONS OF EDUCATION (3). Social forces influencing American education; basic educational traditions as reflections of American culture; the school and cultural change; educational issues and the sources of conflict in American culture.

LEFE 510. PHILOSOPHICAL FOUNDATIONS OF EDUCATION (3). Emphasis on the distinct nature of philosophic inquiry functioning within a sociocultural setting in the construction of educational theory.

LEFE 511. PHILOSOPHICAL ANALYSIS OF CURRENT EDUCATIONAL THOUGHT (3). Philosophical methods used in analyzing, refining, and criticizing educational theory and ideology in a multicultural society.

LEFE 520. HISTORICAL FOUNDATIONS OF EDUCATION (3). The history of education in Western society. Major educational figures, theories, institutions, and developments are emphasized and interpreted in their cultural contexts.

LEFE 521. HISTORICAL FOUNDATIONS OF AMERICAN EDUCATION (3). The history of education in the United States. The interrelation of culture and educational figures, theory, and developments.

LEFE 525. HISTORY OF WOMEN'S EDUCATION IN AMERICA (3). A survey of women's education in the context of the main currents of American history. Educational leaders, theories, institutions, and developments are analyzed in multicultural contexts.

LEFE 530. INTRODUCTION TO COMPARATIVE/INTERNATIONAL EDUCATION (3). An introduction to the purpose, methodology, and research in comparative/international education. Special reference to understanding and comparing systems of education in selected nation-states.

LEFE 540. SOCIOLOGICAL AND PSYCHOLOGICAL FOUNDATIONS OF PEACE EDUCATION (3). Social and psychological forces which influence human relationships and have implications for education for peace and the diminution of forces of aggression, fear, hostility, and violence.

LEFE 541. THE SCHOOL AS AN INSTRUMENT FOR PEACE (3). The role and responsibilities of the school in educating for peace. Instructional strategies and resources.

LEFE 556. INTERNSHIP IN EDUCATIONAL FOUNDATIONS (1-9). Application of foundations principles in a practical setting. Individual or small-group instruction under the guidance of local staff and a university supervisor. May be repeated to a maximum of 9 semester hours.

LEFE 590. WORKSHOP IN EDUCATION (1-3). Workshop designed for teachers, supervisors, counselors, and administrators to study contemporary issues and problems of the public school. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Acceptance by the director of the workshop.

LEFE 597. INDEPENDENT RESEARCH IN FOUNDATIONS OF EDUCATION (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 3 semester hours. PRQ: Admission to master's degree program and consent of faculty member who will direct research.

LEFE 599. MASTER'S THESIS (1-6). Open only to the students who are in the process of writing a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. Students must accumulate a minimum of 3 semester hours prior to graduation. PRQ: Consent of department. Recommended: EPSY 520.

LEFE 603. FOUNDATIONS OF FEMINIST EDUCATIONAL THOUGHT (3). The study of feminist educational scholarship with emphasis on epistemological, ethical, and critical arguments. Considers the respective implications of theories for women's professional education and development.

LEFE 610. SEMINAR IN PHILOSOPHICAL INVESTIGATION (2-3). Philosophic exploration of various educational doctrines and theories operating in a sociocultural context. May be repeated to a maximum of 9 semester hours.

LEFE 612. ETHICS AND EDUCATION (3). The study of educational policy and pedagogy from the perspective of theories in ethics. Critical analysis of the relationship of education to philosophic discussions of pertinent ethical issues related to education in a multicultural society.

LEFE 615. FOUNDATIONS OF EDUCATIONAL POLICY (3). A critical analysis of the generation, implementation, and outcomes of educational economics and history will be used to investigate the dynamics of policy formation and the relationship between educational policy and social trends.

LEFE 620. SEMINAR IN EUROPEAN EDUCATIONAL THOUGHT (3). European educational theories that have influenced Western culture. Educational ideas of selected theorists examined in their cultural contexts.

LEFE 621. SEMINAR IN AMERICAN EDUCATIONAL THOUGHT (3). Individuals, theories, and developments in American educational history examined in their historical, philosophic, social, and cultural contexts through discussion and research. PRQ: Admission to Ed.S. or doctoral program, or consent of department.

LEFE 623. HISTORY OF HIGHER EDUCATION (3). Critical analysis and interpretation of historical developments in American higher education from the colonial to modern periods. Emphasis on key institutions, episodes, people, and social trends illustrating the continuities, complexities, and changes in community colleges, colleges, and universities.

LEFE 630. SEMINAR IN COMPARATIVE/INTERNATIONAL EDUCATION (3). Advanced cross-cultural comparisons of educational systems in order to understand and compare international features in education. A detailed multifactor analysis of the educational systems under investigation.

LEFE 640. SEMINAR IN PROFESSIONAL EDUCATIONAL ORGANIZATIONS (1-3). Case studies of educational organizations, their history, purposes, and functions. Appraisal of the impact of these groups upon past, present, and future educational trends. May be repeated to a maximum of 3 semester hours.

Instructional Technology (LEIT)

LEIT 429X. MICROCOMPUTERS IN CLASSROOM TEACHING (3). EPSY 429. A survey of the educational uses of the microcomputer. Emphasis on the role of the microcomputer in the educational environment, hardware selection, basic programming, review and evaluation of available educational software, and microcomputer implementation and management. No previous experience in computer programming required. Designed for students entering an educational environment. Not open to students with previous experience in data processing or information systems without permission of their major department.

LEIT 430. SURVEY OF INSTRUCTIONAL TECHNOLOGY (3). Introduction to the design and development of educational software for microcomputers. Provides experience with programming languages and authoring systems commonly used in education. Open only to participants registered in a CFE program.

LEIT 450. INSTRUCTIONAL TELEVISION I (3). Crosslisted as COMS 450X. Practical methods for the use of television in educational settings. Studio experience in the preparation and presentation of televised instructional units. Not open to students with credit in COMS 357 or COMS 358 or equivalent.

LEIT 455. MEDIA DESIGN TECHNIQUES (3). Designing presentations for instruction. Emphasis on basic design, writing, and photographic techniques. Open to students entering a CFE program. Open only to participants registered in a CFE program.

LEIT 502. DESCRIPTIVE CATALOGING (2). Fundamentals of descriptive cataloging according to AACR2 and MARC standards; laboratory practice with OCLC.

LEIT 503. INTRODUCTION TO INFORMATION SCIENCE (3). Study of communication theory, information storage and retrieval systems, and standards for information representation; analysis of manual and machine capabilities for processing information.

LEIT 505. LIBRARY ORGANIZATION AND MANAGEMENT (3). Organization and management of libraries, with emphasis on theories, principles, and problems of governance, planning, staffing, communication, decision making, control, evaluation, information policy, and networking.

LEIT 507. COLLECTION DEVELOPMENT (3). Principles of building and maintaining library collections; current and retrospective selection aids, including national and trade bibliographies; current issues in intellectual freedom.

LEIT 508. REFERENCE THEORY AND PRACTICE (3). Evaluation and use of basic reference materials and information resources in various types of libraries; introduction to the theory and practice of professional reference services including the reference interview and online and CD-ROM searching.

LEIT 523. MEDIA FOR YOUNG ADULTS (3). Evaluation and selection of books and nonprint materials appropriate for middle school/junior high and high school students (ages 12-19 years); emphasis on uses of current media to meet students' needs, interests, and learning styles.

LEIT 525. READING INTERESTS OF ADULTS (3). Exploration of reading interest of adults, including demographic aspects; popular fiction and nonfiction (both print and nonprint) to meet the needs, interests, and learning abilities of children (ages preschool to 13 years); emphasis on whole language and curriculum integration.

LEIT 527. LIBRARY MATERIALS FOR CHILDREN (3). Evaluation, selection, and use of fiction and nonfiction (both print and nonprint) to meet the needs, interests, and learning abilities of children (ages preschool to 13 years); emphasis on whole language and curriculum integration.

LEIT 529. THEORIES OF COMPUTER-BASED EDUCATION (3). Emerging theories and models relating to computer-assisted instruction (CAI), computer-based training, computer literacy, and other uses of computers as instructional media. Topics include intelligent CAI, expert systems, implementation models, and simulation and gaming. PRQ: EPSY 429 (LEIT 429X) or consent of department.

LEIT 531. VISUAL LITERACY (3). An exploration of the historical background, conceptual base, and research involved in visual literacy; Reviews the use and design of various instructional media communications and develops understanding of the interpretation and creation of visual images in education.

LEIT 533. SCHOOL LIBRARY MEDIA CENTERS (3). Philosophy, functions, objectives, and current methods of developing curriculum-integrated media programs in elementary and secondary schools.

LEIT 539. COURSEWARE SYSTEMS DEVELOPMENT FOR MICROCOMPUTERS (3). Advanced design techniques for developing educational software. A systems approach will be applied to topics such as graphics, file management, simulation design, and video interfacing. PRQ: LEIT 439 or consent of department.

LEIT 540. SEMINAR IN LIBRARY/INFORMATION STUDIES (1-6). Specific content varies. Representative topics include current trends or issues, storytelling, international and comparative librarianship, and services to special populations. A maximum of 6 semester hours may be applied toward the master's degree.

LEIT 541. LIBRARY SERVICES FOR CHILDREN (3). Objectives, planning, organization, and evaluation of programs and services for children in school and public libraries.

LEIT 542. ACADEMIC LIBRARIES (3). History and analysis of community college, college, university, and research libraries; emphasis on current standards, services, and developments within the academic community.

LEIT 543. LIBRARY SERVICES FOR ADULTS (3). Analysis of library and information needs of adults and young adults in various communities and settings; planning, organization, and evaluation of library resources and services for individuals and for groups; emphasis on community analysis and library services for special groups.

LEIT 544. CATALOGING NONBOOK MATERIAL (3). Descriptive cataloging of nonbook material according to the 1980 Library of Congress classification and MARC practice; includes the principles underlying the classification. Each course may be taken. PRQ: LEIT 502 or consent of department.

LEIT 545. MARKETING AND PUBLIC RELATIONS FOR LIBRARIES (3). Examination of the components and principles of marketing and public relations in libraries as nonprofit organizations; the planning, establishing, maintaining, and evaluating of marketing/public relations efforts for libraries; various marketing/public relations techniques appropriate for libraries.

LEIT 546. LIBRARY CLASSIFICATION (2-3). A. Dewey Decimal Classification (2) B. Library of Congress Classification (3) History of and practice within a major American library classification; includes the principles underlying the classification. Both courses may be taken. PRQ: LEIT 502 or consent of department.

LEIT 548. INDEXING AND ABSTRACTING (3). Principles and procedures for indexing and abstracting; experience with manual and machine methods for indexing and abstracting.

LEIT 549. ONLINE SEARCHING (3). Translation of reference queries into formal search statements; laboratory practice in online access to information, emphasis on Bibliographic Search system (BIL), Dialog, and Wilsonline. PRQ: LEIT 503 or consent of department.

LEIT 550. ROLES OF THE INSTRUCTIONAL TECHNOLOGIST (3). The various roles of instructional technologists in both school and nonschool environments; to include field trips.
LEIT 551. INSTRUCTIONAL TECHNOLOGY FOR THE FUTURE (3). Planning for educational technologies and futures; educational forecasting strategies; new and potential instructional media or processes; and educational models based on low and/or high technology. PRQ: Consent of department.

LEIT 552. INSTRUCTIONAL TECHNOLOGY FOR DIVERSE CULTURES (3). Development, utilization, and evaluation of instructional media for varied cultures and countries. Topics include: appropriateness of standard instructional media for diverse audiences, creation of media for instructional environments with localized requirements, evaluation of innovative teaching technologies for multicultural learners. PRQ: Consent of department.

LEIT 553. TECHNICAL SERVICES (3). Introduction to organization and administration of acquisition, serials, cataloging, and circulation in all types of libraries; preservation of library materials.

LEIT 554. REFERENCE SERVICES (3). Reference function and process in terms of current developments and user needs; planning, managing, and evaluating reference services in all types of libraries and information centers; emphasis on topics in interpersonal communication, bibliographic instruction, career development, and lifelong learning. PRQ: LEIT 508 or consent of department.

LEIT 555. MEDIA DESIGN: MULTI-MEDIA (3). Designing presentations of instruction. Utilization of 35mm and multiscreen format. PRQ: LEIT 455 or consent of department.

LEIT 556. MEDIA DESIGN—AUDIO MATERIALS (3). Designing presentations for instruction. Emphasis on audio format. PRQ: LEIT 455 or consent of department.

LEIT 559. INSTRUCTIONAL TELEVISION II (3). Crosslisted as COMS 559X. Application of television production techniques to instructional activities. PRQ: LEIT 450 or consent of department.

LEIT 560. INSTRUCTIONAL DESIGN (3). The systematic design of instructional materials. Students will design a blueprint for a self-contained instructional product by applying an instructional design model. PRQ: LEIT 430 or consent of department.

LEIT 561X. HUMAN RESOURCE DEVELOPMENT (3). LEAC 561: The nature and function of programs for developing human resources in business, education, industry, government, social services, and voluntary organizations.

LEIT 562. PRODUCT DEVELOPMENT AND EVALUATION (3). Students will develop and evaluate a self-contained instructional module using systematic development models and established principles of text design. PRQ: LEIT 560 or consent of department.

LEIT 564. TRAINING AND PERFORMANCE TECHNOLOGY (3). Analysis of educational/training problems. By conducting an instructional needs assessment and performance audit, students will plan solutions to training problems including various forms of training, job aids, and non-training recommendations. PRQ: LEIT 560 or consent of department.

LEIT 569. PRACTICUM: INSTRUCTIONAL DESIGN (3). Instructional design methodology in an applied setting. May be repeated to a maximum of 6 semester hours. PRQ: LEIT 560 and either LEIT 562 or LEIT 564, or consent of department.

LEIT 570. INSTRUCTIONAL TECHNOLOGY ADMINISTRATION (3). Management of instructional technology services. PRQ: LEIT 430 or consent of department.

LEIT 571. INSTRUCTIONAL TECHNOLOGY PROMOTION AND DEVELOPMENT (3). Theories and methods for creating efficient and effective instructional technology centers and programs in education, business and industry.

LEIT 573. INSTRUCTIONAL TECHNOLOGY FACILITIES (3). Design and construction of instructional technology facilities.

LEIT 575. LIBRARY AUTOMATION (3). Survey of the automation of library operations and the introduction of new technologies; data processing concepts and planning for automation; study of current library systems.

LEIT 586. INTERNSHIP IN INSTRUCTIONAL TECHNOLOGY (3-15). Work in a practical situation under the guidance of a staff member from that setting and a university supervisor. May be repeated to a maximum of 15 semester hours, although typically only 3 semester hours may be applied to the program of study.

LEIT 590. WORKSHOP IN INSTRUCTIONAL TECHNOLOGY (1-3). The study of current issues related to media. May be repeated to a maximum of 12 semester hours.

LEIT 592. SPECIAL TOPICS IN INSTRUCTIONAL TECHNOLOGY (1-3). Study of special topics, announced in advance, in instructional technology. May be repeated to a maximum of 9 semester hours when topic varies.

LEIT 597. INDEPENDENT RESEARCH IN INSTRUCTIONAL TECHNOLOGY (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Consent of faculty member who will direct research.

LEIT 599. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

LEIT 640. SEMINAR: INSTRUCTIONAL TECHNOLOGY CURRICULA (3). Development of courses and programs at the college level.

LEIT 641. SEMINAR: INSTRUCTIONAL TECHNOLOGY THEORY (3). Applying concepts of educational communication, models, and theories to problem solving, attitude formation, and teaching.

LEIT 642. SEMINAR: INSTRUCTIONAL TECHNOLOGY RESEARCH (3). Research in organization, administration, and application of instructional technology.

LEIT 643. SEMINAR: INSTRUCTIONAL TECHNOLOGY PROBLEMS (3). The problems involved in the administration of instructional technology programs and services at all levels, and in areas such as finance, management of personnel, and facilities.

LEIT 655. MEDIA DESIGN PROJECT (3). Designing presentations for instruction with emphasis on individual student projects. PRQ: Consent of department.

LEIT 670. PRACTICUM: INSTRUCTIONAL TECHNOLOGY (3). Instructional media administration techniques in an applied setting. May be repeated to a maximum of 6 semester hours.

LEIT 686. INTERNSHIP IN INSTRUCTIONAL TECHNOLOGY (3-15). Work in a practical situation under the guidance of a staff member from that setting and a university supervisor. May be repeated to a maximum of 15 semester hours, although typically only 3 semester hours may be applied to the program of study. PRQ: Admission to doctoral program, or consent of department.

LEIT 697. INDEPENDENT RESEARCH IN INSTRUCTIONAL TECHNOLOGY (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Consent of faculty member who will direct research.

LEIT 698. RESEARCH SEMINAR IN INSTRUCTIONAL TECHNOLOGY (1-3). Designed for the advanced student interested in planning and conducting research studies in instructional technology. Research projects may be an exploratory or pilot study related to the doctoral dissertation. May be repeated to a maximum of 6 semester hours.

LEIT 699. DOCTORAL RESEARCH AND DISSERTATION (1-15). May be repeated. Student must accumulate 15 semester hours prior to graduation. PRQ: Candidacy for the doctoral degree and consent of chair of doctoral committee.

School Business Management (LEBM)

LEBM 501. SCHOOL BUSINESS MANAGEMENT (3). A summary of task areas such as management of auxiliary enterprises including accounting and financial control, maintenance of buildings and grounds, personnel and office management, transportation, insurance, investments, administration of supplies and equipment, and administrative relationships.

LEBM 511. PRACTICUM IN SCHOOL BUSINESS MANAGEMENT (1-6). A program designed to provide maximum experience with practitioners in the field. All phases of business management will be considered, and time will be provided for field experiences. May be repeated to a maximum of 6 semester hours. PRQ: LEBM 501, LEBM 521, and LEEA 520, or consent of department.
LEBM 521. ACCOUNTING, STATEMENT ANALYSIS, AND BUDGETING (3). Principles of school fund accounting including a study of budgeting, payroll administration, bonded indebtedness, accounting for receipts and expenditures, extracurricular funds and analysis of statements, and auxiliary enterprises such as cafeteria and store. PRQ: LEEA 500 or consent of department.

LEBM 530. MANAGEMENT OF BUSINESS SUPPORT SERVICES (3). Principles and procedures of purchasing, property accounting, risk management, food service programs, transportation, and school store operation. PRQ: LEBM 501 and LEEA 500 or consent of department.

LEBM 540. PERSONNEL AND FACILITIES MANAGEMENT (3). The problems and issues associated with managing personnel and operating and maintaining school sites and facilities: all aspects of the business office, noncertified staff, and legal and insurance problems. PRQ: LEEA 500 and LEBM 501 or consent of department.

LEBM 550. FINANCIAL PLANNING AND SCHOOL BUDGETING (3). Techniques and methods of estimating local, state, and federal revenues; alternative methods of school budget planning and control; and cost analysis. PRQ: LEEA 520 or consent of department.

LEBM 586. INTERNSHIP IN SCHOOL BUSINESS MANAGEMENT (3-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. Minimum of 9 semester hours required for chief school business official endorsement. May be repeated to a maximum of 12 semester hours, although typically only 9 semester hours may be applied to the program of study. LEBM 586 is ordinarily to be taken 3 semester hours per term for 3 consecutive terms for a total of 9 semester hours. PRQ: LEBM 501, LEEA 520 and LEBM 521, or consent of department.

LEBM 590. WORKSHOP IN SCHOOL BUSINESS MANAGEMENT (1-3). Workshop designed for teachers, supervisors, counselors, and administrators to study contemporary issues and problems of the public school. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

LEBM 592. SPECIAL TOPICS IN SCHOOL BUSINESS MANAGEMENT (1-3). Study of special topics, announced in advance, in school business management. May be repeated to a maximum of 9 semester hours when topic varies.

LEBM 597. INDEPENDENT RESEARCH IN SCHOOL BUSINESS MANAGEMENT (1-3). Independent research on the fifth-year level under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

LEBM 599. MASTER'S THESIS (3-6). Open only to the student who elects to write a thesis for the degree Master of Science in Education. The student enrolls with the faculty member directing the thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: EPSY 520.

LEBM 610. SEMINAR IN SCHOOL BUSINESS MANAGEMENT (3). The problems involved in the business administration of schools. Concentrated study and research concerned with all phases of school business management, such as accounting and finance, cafeteria management, purchasing, transportation, building planning and construction. PRQ: Consent of department.

LEBM 621. ADVANCED SCHOOL FUND ACCOUNTING AND BUDGETING (3). The application of data processing systems to school fund accounting, payroll, inventories, curriculum, personnel, registration procedures, budget, textbook accounting, and other business office functions. PRQ: LEBM 521 or consent of department.

LEBM 686. INTERNSHIP IN SCHOOL BUSINESS MANAGEMENT (3-12). Work individually or in small groups in a practical situation under the guidance of a staff member of that setting and a university supervisor. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

LEBM 697. INDEPENDENT RESEARCH IN SCHOOL BUSINESS MANAGEMENT (1-3). Independent research projects at the sixth- and seventh-year levels under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
Department of Physical Education (PH- -)

GRADUATE FACULTY

Judith A. Bischoff, chair, professor, Ph.D., University of Michigan
Thomas E. Ball, associate professor, Ph.D., University of Illinois
Robert J. Brigham, professor, P.E.D., Indiana University
Charles Carter, assistant professor, Ed.D., West Virginia University
Jerald D. Floyd, professor, Ed.D., University of Utah
Constance Fox, associate professor, Ed.D., University of Georgia
Clersida Garcia, assistant professor, Ph.D., Michigan State University
Danielle M. Jay, associate professor, Ph.D., Texas Woman's University
Daniel Klein, associate professor, Ph.D., Southern Illinois University
Keith W. Lambrecht, associate professor, Ph.D., Oregon State University
Marilyn A. Looney, associate professor, P.E.D., Indiana University
Pamela Macfarlane, associate professor, Ph.D., University of Iowa
James R. Marett, associate professor, Ph.D., Arizona State University
David C. Mason, associate professor, Ph.D., University of Illinois
Tony Pellet, assistant professor, Ed.D., Brigham Young University
Sharon A. Plovan, assistant professor, Ph.D., University of Illinois
M. Joan Popp, professor, Ph.D., University of Iowa
James H. Rimmer, associate professor, Ph.D., Texas Woman's University
Janet A. Rintala, associate professor, Ph.D., University of Iowa
Grethen Schlabach, assistant professor, Ph.D., University of Maryland
Linda Synoritz, assistant professor, Ph.D., Kent State University
Linda Szymanski, assistant professor, Ph.D., University of South Carolina
Yoshiaki Takei, associate professor, Ph.D., University of Southern California
Laurice Zittel, assistant professor, Ph.D., Oregon State University

The Department of Physical Education offers the degree Master of Science in Education. A Graduate Studies Handbook is available in the Department of Physical Education Office in Anderson Hall.

Master of Science in Education

Admission

The Department of Physical Education seeks the best qualified applicants for admission to the program leading to a Master of Science in Education degree with a major in physical education. To be considered for admission, applicants are expected to satisfy the following criteria:

1. A baccalaureate degree which included courses in physical education, health, recreation, dance, or equivalent courses. When these courses are lacking, a student normally will be required to make up deficiencies. It is expected that students will have had some undergraduate course work in science areas including anatomy, kinesiology, and physiology, and in motor performance activities. However, a student may be admitted to the program contingent upon successful completion of undergraduate deficiencies as determined by the department in accordance with the student's professional objectives.

2. A grade point average (GPA) of 2.75 or better on a 4.00 scale for their baccalaureate program, or have completed 15 or more semester hours of graduate work at an accredited institution with a GPA of 3.20 or better, and have filed their scores with the NIU Graduate School on the General Test of the Graduate Record Examinations. Students who do not meet the Graduate School and department requirements may be admitted on the basis of evidence of compensating abilities as determined by the department.

3. A minimum of two letters from professors, employers, and supervisors which attest to the applicant's academic and professional abilities.

Applicants to the master's degree program in physical education are normally notified of an admission decision as soon as administratively feasible following receipt of all credentials to complete the applicant's file. These credentials, to be submitted to the Graduate School, must include:

1. Official transcripts showing baccalaureate and graduate degrees obtained
2. GRE scores
3. Two letters of recommendation
4. Goal statement
5. Application form completed

Retention

1. Any undergraduate deficiencies, as determined by the department, must be removed before completion of 15 semester hours of graduate study.
2. Students who violate the standards of the profession may be eliminated from the program after review by a properly constituted committee of the graduate faculty.

Program Requirements

1. The student must successfully complete a minimum of 21 semester hours of graduate credit within the department. Nine semester hours of graduate credit in courses related to the student's degree objectives may be taken outside the Department of Physical Education.

2. In consultation with the adviser, students will select a minimum of 9 semester hours in one of the following areas of interest:
   a. administration and curriculum
   b. sport biomechanics
   c. coaching
   d. health education
   e. motor learning/motor development
   f. sociocultural aspects (including the history, philosophy, psychology, and sociology of physical education)
   g. psychology of sport and exercise

Requirements for those interested in adapted physical education, exercise physiology/fitness leadership, or sport management are listed under those specializations.

3. Students are required to complete successfully a comprehensive examination in accordance with established university and department policies.
4. In pursuing the degree a student may follow the thesis (30) or the non-thesis (33) option.

Core Requirements (12)
1. PHED 552, Methods of Research in Physical Education (3)
PHED 545, Evaluation in Physical Education (3) (non-thesis option) OR PHED 645, Application of Statistics to Research in Physical Education (3) (thesis option)
2. Scientific Basis—at least one course selected from:
PHED 451, Physiology of Exercise (3)
PHED 452, Applied Physiology of Exercise (4)
PHED 466, Principles of Motor Learning (3)
PHED 535, Analysis of Motor Skills (3)
3. Foundations—at least one course selected from:
PHED 507, History of Physical Education (3)
PHED 509, Philosophy of Physical Education (3)
PHED 582, Psychological Implications for Motor Activity (3)
PHED 583, Psychology of Coaching (3)
PHED 586, Sport in Society (3)

Additional Requirements for the Thesis Option (18)
1. Core Courses (12)
2. Electives (12)

Additional Requirements for the Non-Thesis Option (21)
1. Core Courses (12)
2. Electives (9)

Specialization in Adapted Physical Education
This specialization is designed to prepare teachers to deliver physical education services to students with special needs. Persons are trained to assume roles related to adapted or special physical education including teaching, assessment, IEP development, consulting, program planning, and research. Certified physical education teachers completing this specialization meet Illinois State Board of Education recommended guidelines for personnel reimbursement as an "approved" adapted physical education instructor for handicapped students.

Students selecting this specialization may choose either the thesis (30) or non-thesis (33) option; graduate assistants are expected to complete the thesis option. PHED 490, Adapted Physical Education, or equivalent, is a prerequisite for this specialization.

Requirements for Both Thesis and Non-Thesis Options (21-22)
PHED 552, Methods of Research in Physical Education (3)
PHED 578, Seminar in Motor Development (3)
PHED 590, Physical Education for Individuals with Physical and Sensory Disorders (3)
PHED 591, Assessment and Program Planning in Adapted Physical Education (3)
PHED 597K, Internship: Adapted Physical Education (3)
One course selected from:
PHED 451, Physiology of Exercise (3)
PHED 452, Applied Physiology of Exercise (4)
PHED 466, Principles of Motor Learning (3)
PHED 535, Analysis of Motor Skills (3)
PHED 635, Biomechanics (3)
PHED 652, Exercise Bioenergetics (3)
PHED 668, Seminar in Motor Learning (3)

Additional Requirements for the Thesis Option (9)
PHED 599A, Master's Thesis (6)
PHED 645, Application of Statistics to Research in Physical Education (3)

Additional Requirements for the Non-Thesis Option (12)
PHED 545, Evaluation in Physical Education (3)
Nine semester hours selected in consultation with the graduate adviser for the program.

Specialization in Exercise Physiology/Fitness Leadership
This specialization is designed to provide knowledge and skills to students in the area of exercise physiology and/or fitness leadership. Students with such a professional background are prepared to assume various roles related to exercise physiology: research, teaching, and fitness leadership in hospitals, corporations, and health clubs. There are both thesis (30 hours) and non-thesis (33 hours) options available. Graduate assistants are required to complete a thesis. Applied exercise physiology and a human anatomy course are prerequisites for this specialization.

Requirements for Both Thesis and Non-Thesis Options (15)
PHED 552, Methods of Research in Physical Education (3)
Three courses selected from:
PHED 453, Exercise Programs for Adult Special Populations (3)
PHED 458, Stress Testing (3)
PHED 514, Neuromuscular Aspects of Physical Performance (3)
PHED 652, Exercise Bioenergetics (3)
PHED 653, Cardiac Rehabilitation (3)
One course selected from:
PHED 507, History of Physical Education (3)
PHED 509, Philosophy of Physical Education (3)
PHED 582, Psychological Implications for Motor Activity (3)
PHED 583, Psychology of Coaching (3)
PHED 586, Sport in Society (3)

Additional Requirements for the Thesis Option (15)
PHED 599A, Master’s Thesis (6)
PHED 645, Application of Statistics to Research in Physical Education (3)
Six semester hours selected in consultation with the assigned graduate program adviser.

Specialization in Sport Management
This specialization is designed to prepare students for a management career in the sport industry. Students attain theoretical knowledge and practical skills in preparation for various sport managerial positions such as athletic directors, sport/fitness club managers, sport/athletic equipment merchandisers, and sport consultants. Students selecting this specialization may choose either the thesis (33) or non-thesis (33) option; graduate assistants are expected to complete the thesis option.
Requirements for Both Thesis and Non-Thesis Options (19-22)
PHED 538, Managing the Sport Enterprise (3)
PHED 540, Planning and Use of Facilities for Physical Education (3)
PHED 552, Research Methods in Physical Education (3)
One course selected from:
PHED 507, History of Physical Education (3)
PHED 509, Philosophy of Physical Education (3)
PHED 582, Psychological Implications for Motor Activity (3)
PHED 583, Psychology of Coaching (3)
PHED 586, Sport and Society (3)
One course selected from:
PHED 451, Physiology of Exercise (3)
PHED 452, Applied Physiology of Exercise (4)
PHED 486, Principles of Motor Learning (3)
PHED 535, Mechanical Analysis of Motor Skills (3)
Two courses selected from:
ACCY 505, Financial Accounting Concepts (2), or FINA 505, Fundamentals of Financial Management (2)
MKTG 505, Graduate Survey of Marketing (2), or MKTG 654, Marketing Management (3)
PHED 593, Sport and the Law (3)
Additional Requirements for the Thesis Option (12)
PHED 599A, Master's Thesis (6)
PHED 645, Application of Statistics to Research in Physical Education (3)
Three semester hours selected in consultation with the graduate adviser for the program (PHED 597M, Internship in Sport Management -3-6 is recommended).
Additional Requirements for the Non-Thesis Option (12)
PHED 597M, Internship in Sport Management (6)
PHED 645, Application of Statistics to Research in Physical Education (3), or PHED 545, Evaluation of Physical Education (3)
Three semester hours selected in consultation with the graduate adviser for the program.
Recommended electives:
MGMT 537, Entrepreneurship and Venture Management (3)
OMIS 500, Survey of Business Economics (2)
PHED 566, Public Relations for Physical Education (3)

Secondary Certification Program in Physical Education

The physical education entitlement program is designed for students interested in teaching physical education in Grades 6 to 12. The student will plan a program of study in consultation with the adviser for teacher certification. Upon completion of physical education deficiencies, the physical education professional program, professional education requirements for secondary certification, and fulfillment of appropriate general education requirements, the student may be recommended for admission to teacher education.

Deficiencies in Undergraduate Work
Candidates for the M.S.Ed. degree and 6-12 teacher certification must show proficiency in the following courses, or their equivalent, through transcript evaluation.
BIOS 311, Functional Human Anatomy (4)
EPSY 331, Measurement of the Cognitive Domain for Physical Education (1)
PHED 282, Standard First Aid (2)
PHED 313, Kinesiology (3)
PHED 314, Applied Kinesiology (4)
PHED 446, Measurement and Evaluation in Physical Education (3)
PHED 600, Seminar in Physical Education Curriculum (3)

PHED 545, Evaluation in Physical Education (3)
PHED 490, Adapted Physical Education (3)

Physical Education Professional Course Requirements

Knowledge and Skill Acquisition (6)
Minimum of 1 hour from each of the following areas:
Fitness, Dance, Individual Sports, Team Sports

Scientific Foundations (9)
BIOS 311, Functional Human Anatomy (4)
PHED 452, Applied Physiology of Exercise (4)
PHED 486, Principles of Motor Learning (3)

Curriculum and Instruction (9)
PHED 343, Elementary School Physical Education/Methods and Field Experience (3)
PHED 351, Analysis and Teaching Strategies of Team Sports (3)
PHED 352, Analysis and Teaching Strategies of Individual Sports (2)
PHED 535, Sport and the Law (3)

Professional Education and General Education Requirements

Students seeking secondary teaching certification must contact the secondary certification adviser in the Office of Student Services and Advisement in Gabel 146 regarding professional education and general education requirements.

Following completion of course work in the professional program in physical education, the professional education requirement, and general education requirement, students are eligible to attempt the Illinois Teacher Certification Examination. Students may earn the degree Master of Science in Education by completing the additional hours required for the degree (normally 9-18 semester hours).

Secondary Certification Program in Health Education

The health education entitlement program is designed for students interested in teaching health education. The student will plan a program of study in consultation with the director of health education. Upon completion of the 33 semester hours listed below, completion of the professional education requirement for secondary certification, and fulfillment of appropriate general education requirements, the student will have met the requirements for a 6-12 teaching certificate in health education. In addition to preparing the student for health education teaching positions in secondary schools, this program also can serve as a foundation for further academic work in school health services and instruction, and in maintenance of a healthful school environment.

PHED 490 or equivalent and courses in anatomy/physiology and personal health are prerequisites for admission to the program.

Students who meet the criteria for admission to graduate study in the Department of Physical Education may earn the degree Master of Science in Education by completing the additional courses required for the degree (normally 12-15 semester hours). Students should consult with the director of graduate studies within the department.
Health Education Certification Requirements (33)
PHHE 400, Methods and Materials in School Health Education (3)
PHHE 402, Community Health Programs and Issues (3)
PHHE 502, Curriculum Development in School Health Education (3)
PHHE 503, School Health Programs: Planning, Managing, and Evaluating (3)
PHHE 504, Special Topics in School Health Education (3)
PHHE 555, Clinical/Field Experience in School Health Education (3)
PHHE 671B, Directed Research in Health Education (3)

One course from each of the following areas:

Sexuality Education
PHHE 406, Human Sexuality (3)
PHHE 411, Sexuality Education (3)

Drug/Chemical Use and Abuse
PHHE 407T, Drug Dynamics (3)
PHHE 409T, Drug Education (3)

Two courses from the following:
PHHE 401, Current Issues: Health Education (1-3)
PHHE 407T, Drug Dynamics (3)
PHHE 408, Mental and Emotional Health (3)
PHHE 409T, Drug Education (3)
PHHE 410, Death Education (3)
PHHE 411, Sexuality Education (3)
PHHE 412, Consumer Health (3)

Total Hours for Health Education Secondary Certification: 33

Course Offerings

Physical Education (PHED)

420. CURRICULUM DESIGNS IN ELEMENTARY SCHOOL PHYSICAL EDUCATION (3). Introduction to elementary school physical education curriculum with attention to organization and implementation of programs. PRQ: Consent of department.

451. PHYSIOLOGY OF EXERCISE (3). Physiology of the skeletal, nervous, muscular, respiratory, cardiovascular, and endocrine systems, with the major emphasis upon the effects of physical exercise. PRQ: BIOS 311 or consent of department.

452. APPLIED PHYSIOLOGY OF EXERCISE (4). Cardiovascular, metabolic, and neuromuscular aspects of human function at rest, during exercise, and as a result of training. Three hours per week of lecture plus arranged laboratory experience. PRQ: BIOS 311 or consent of department.

453. EXERCISE PROGRAMS FOR ADULT SPECIAL POPULATIONS (3). Examination of the characteristics, physiological responses, and exercise adaptations of adult special populations. Includes exercise testing, physical activity prescription, and clinical experiences. Emphasis on exercise limitations, responses, and adaptations which differ from the non-disabled. PRQ: PHED 452 or consent of department.

454. EXERCISE GERONTOLOGY (3). Examination of the characteristics, physiological responses to exercise, and adaptations to exercise of older adult populations. Includes exercise testing and prescription, programmatic concerns, and exercise limitations for older adults. PRQ: BIOS 357 or PHED 452, or consent of department.

457. TRAINING AND CONDITIONING TECHNIQUES (1). Planning and implementing training and conditioning procedures. To be taken concurrently with or following PHED 451 or PHED 452, or by consent of department.

458. STRESS TESTING (3). Theory, techniques, and procedures of graded exercise stress testing for diagnostic and functional assessment of individuals. PRQ: PHED 452 with a grade of C or better and consent of department.

459. PHYSICAL FITNESS PROGRAMMING (3). Development, organization, implementation, and administration of physical fitness programs. Includes field experience. PRQ: PHED 457 and PHED 458, or consent of department.

480. PRINCIPLES AND PROBLEMS OF COACHING (3). Technical coaching information concerning personnel relationships with other coaches and players, organization and contest management, traveling rules, coaching ethics, and evaluation of personnel. Administrative aspects of budget, records, scheduling, and equipment.

486. PRINCIPLES OF MOTOR LEARNING (3). Principles of motor learning and the relationship of current learning theory and experimental research in motor learning to the teaching of motor skills in physical activity.

490. ADAPTED PHYSICAL EDUCATION (3). Modification of physical education activities to meet the needs of persons with disabilities. Includes instructional strategies for properly integrating students with special needs into the regular physical education program and a clinical experience.

491. THERAPEUTIC EXERCISE (3). Principles and application of exercises for selected skeletal and muscular dysfunction. PRQ: PHED 311 or consent of department.

507. HISTORY OF PHYSICAL EDUCATION (3). Historical background of physical education in relation to the cultural patterns of civilization and educational movements.

509. PHILOSOPHY OF PHYSICAL EDUCATION (3). Development of philosophical concepts paralleling educational philosophy. Current philosophical positions of physical educators with application to present day educational programs.

514. NEUROMUSCULAR ASPECTS OF PHYSICAL PERFORMANCE (3). Acute and chronic responses to short-term and intermittent physical activity, including prescription of resistance exercise. Focus on physiology of nervous and muscular systems. PRQ: PHED 452 or consent of department.

524. PREVENTION OF ATHLETIC INJURIES (3). Scientific approaches to the preventive aspects of trauma in athletics. PRQ: BIOS 311 or consent of department.

535. MECHANICAL ANALYSIS OF MOTOR SKILLS (3). An in-depth study of mechanical principles operative in the performance of motor skills. PRQ: PHED 313 or PHED 314, or consent of department.

538. MANAGING THE SPORT ENTERPRISE (3). Analysis of the sport industry with special emphasis given to the sport manager's role and functions. Concentration on planning, organizing, leading, and controlling functions as they apply to the sport manager. PRQ: Consent of department and a 3-semester-hour course in sport or physical education administration, management, or equivalent.

539. SPORT AND THE LAW (3). Study of the court and legal systems as they relate to sport. Analysis of administrative, antitrust, constitutional, contract, tort, labor, and collective bargaining laws as each applies to various sport management enterprises.

540. PLANNING AND USE OF FACILITIES FOR PHYSICAL EDUCATION (3). Principles, terminology, standards, functional layout, design, and construction features for indoor and outdoor facilities. Maintenance, use, scheduling, and supervision of facilities in terms of functional needs.

541. ORGANIZATION AND ADMINISTRATION OF INTERSCHOLASTIC ATHLETICS (3). The organization and administration of interscholastic athletics with special reference to national, state, and local control. Consideration given to philosophies of athletics, the place of athletics in the educational curriculum, the relationship between boys' and girls' programs, athletic budgeting and finance, facilities and equipment, personnel administration, contest management, athletics and the law, and public relations.

545. EVALUATION IN PHYSICAL EDUCATION (3). Application of measurement and evaluation theory to measures of human performance. Development of effective assessment programs for more objective decision-making in physical education. PRQ: PHED 445 or consent of department.

549. INDEPENDENT STUDY IN PHYSICAL EDUCATION (1-3). Individual investigation of special problems, areas, or topics in physical education planned in consultation with a department adviser. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department following approval of written proposal.

552. METHODS OF RESEARCH IN PHYSICAL EDUCATION (3). Introduction to methods and techniques, research design and development, resources, and the research project. Each student will develop a research project or thesis prospectus.
555. CLINICAL EXPERIENCE IN EXERCISE GERONTOLOGY (2). Assessing, planning, implementing, and evaluating exercise programs for older adults. Includes a one hour per week lecture and a 30-hour practicum. PRQ: PHED 452 or consent of department.

556. SEMINAR IN CURRENT ISSUES IN PHYSICAL EDUCATION AND SPORT (3). A study of current issues and problems in physical education and sport through examination and critical analysis of recent literature and research findings.

565. SEMINAR IN CURRENT ISSUES IN PHYSICAL EDUCATION AND SPORT (3). A study of current issues and problems in physical education and sport through examination and critical analysis of recent literature and research findings.

566. PUBLIC RELATIONS FOR PHYSICAL EDUCATION (3). Purposes, materials, and methods relevant to keeping the public informed and interested in the various aspects of the physical education and athletic programs. A term project for a real or simulated situation will be produced.

568. PRINCIPLES OF SUPERVISION OF PHYSICAL EDUCATION (3). Techniques and procedures of supervision in physical education programs, including responsibilities of those involved in clinical and preclinical experiences.

575. SEMINAR IN MOVEMENT EDUCATION (3). Theories of movement education as the core of physical education. Designed for teachers of kindergarten through college, including classroom teachers and specialists in physical education. PRQ: PHED 342 or PHED 343, or consent of department.

576. SEMINAR IN ELEMENTARY SCHOOL PHYSICAL EDUCATION (3). Present-day programs and problems related to elementary school physical education.

577. PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL (3). Planning and conducting physical education experiences for children, derived from the study of human movement and developmental needs of children. Designed for graduate students seeking elementary certification.

578. SEMINAR IN MOTOR DEVELOPMENT (3). Survey of research on motor behavior and development with emphasis on findings pertaining to growth patterns, adaptability, and specificity. Factors influencing the development of motor abilities with implications for physical education.

582. PSYCHOLOGICAL IMPLICATIONS FOR MOTOR ACTIVITY (3). Investigation of psychological theory and methods relative to the study of behavior resulting from involvement in sport and physical activity.

583. PSYCHOLOGY OF COACHING (3). The application of psychological principles to behavior of individuals and groups in competitive sports. Attention given to motivation and team compatibility.

586. SPORT IN SOCIETY (3). Sport and physical activity as a sociological phenomenon stressing the importance of various dimensions of sport and their social significance.

590. PHYSICAL EDUCATION FOR INDIVIDUALS WITH PHYSICAL AND SENSORY DISORDERS (3). Study of the physical and motor characteristics resulting from chronic and/or permanent physical and sensory disabilities. Curricular and teaching strategies for physical education and sport/recreation programs. PRQ: PHED 490 or consent of department.

595. WORKSHOP IN PHYSICAL EDUCATION (1-3). Workshop designed for study of special topics of interest in physical education, health education, or coaching. Content varies and may focus on attention to substantive material or operational problems. May be repeated; however, credit does not count toward the M.S.Ed. in physical education.

596. SPECIAL TOPICS IN PHYSICAL EDUCATION (1-3). Investigation of special topics, announced in advance, in physical education. May be repeated to a maximum of 6 semester hours when subject varies.

597. INTERNSHIP
   A. Physical Education (1-6). Internship for students in the Master of Science in Education program in physical education. Supervised participation in field-based professional development activities to supplement theoretical background. May be repeated to a maximum of 6 semester hours. PRQ: Acceptance into graduate program and consent of department.
   B. Adapted Physical Education (1-3). Supervised practicum experience for students in the adapted physical education specialization of the Master of Science in Education program. Planning, implementing, and evaluating adapted physical education for individuals with handicapping conditions. PRQ: PHED 490 and consent of department.
   M. Sport Management (1-6). Supervised practicum for students in the sport management area of study. Planning, organizing, leading, and controlling programs, activities, and tasks related to the management of a sport-related business. PRQ: PHED 538, PHED 540, and consent of department.

599A. MASTER'S THESIS (1-6). An investigation of an area or problem relating to physical education. The thesis must show that the student possesses the ability to attack successfully a genuine problem in physical education and to draw valid and significant conclusions from the data. May be repeated to a maximum of 6 semester hours. PRQ: PHED 552 or consent of department.

620. SEMINAR IN PHYSICAL EDUCATION CURRICULUM (3). A seminar in which individuals recognize, study, and propose solutions to immediate issues in physical education curriculum. Areas in which such problems may exist include curriculum construction, curriculum statements, liability possibilities, and administrative problems related to curriculum development.

635. BIOECONOMICS (3). Biomechanical principles in the analysis of human motion. Cinematography and other techniques used. PRQ: PHED 535 or consent of department.

640. ADMINISTRATIVE PROCEDURES OF PHYSICAL EDUCATION (3). The administration of physical education in schools and colleges. Includes case studies and consideration of group and individual administrative problems.

645. APPLICATION OF STATISTICS TO RESEARCH IN PHYSICAL EDUCATION (3). Application of descriptive and inferential statistics to research problems in physical education.

652. EXERCISE BIOENERGETICS (3). The processes involved in the production and utilization of energy in the human as these relate to exercise and training. Laboratory. PRQ: PHED 452 or consent of department.

653. CARDIAC REHABILITATION (3). Development and administration of cardiac rehabilitation programs, with special emphasis on exercise prescription and exercise training of cardiac patients. PRQ: PHED 452, PHED 458, PHED 459, or consent of department.

671A. DIRECTED RESEARCH IN PHYSICAL EDUCATION (1-3). Supervised research in a specialized area of physical education or recreation. Research topic must be approved by supervisor prior to registration. May be repeated to a maximum of 6 semester hours. PRQ: PHED 552 or equivalent; consent of department.

686. SEMINAR IN MOTOR LEARNING (3). Evaluation of the current motor learning research in physical education and the development of a specific motor learning topic for discussion. PRQ: PHED 486 or consent of department.

Dance Education (PHDN)

473. DANCE AS ART IN EDUCATION (3). The development of aesthetic and cultural theories of dance as an art form in education. An opportunity for the practical application of the elements of dance and related art forms in education to the elementary, secondary, or higher education levels and/or to students of various intellectual and physical abilities.

474. HISTORY OF DANCE: PRIMITIVE THROUGH RENAISSANCE (3). Historical development of dance from primitive to the renaissance period through the world focusing on cultural and religious trends.

475. HISTORY OF DANCE: 18TH CENTURY TO MODERN TIMES (3). Historical development of dance from the 18th century to modern times, considering cultural and artistic implications.

574. SEMINAR IN RHYTHMS AND DANCE (3). Rhythms and dance as a basic educational technique. Designed to assist in planning, teaching, and supervising rhythmic dance programs. PRQ: Consent of department.

Health Education (PHHE)

400. METHODS AND MATERIALS IN SCHOOL HEALTH EDUCATION (3). Health education programs in elementary and secondary schools. Materials and problems involved in teaching health; the promotion of a healthful environment. PRQ: PHHE 207 or consent of department.
401. CURRENT ISSUES: HEALTH EDUCATION (1-3). Investigation of special topics in health education, announced in advance. May be repeated to a maximum of 6 semester hours when subject varies. PRQ: Consent of department.

402. COMMUNITY HEALTH PROGRAMS AND ISSUES (3). Programs and resources of health agencies, including the role of governmental agencies. Emphasis on the relationship between community and school health education programs. PRQ: PHED 207 or consent of department.

406. HUMAN SEXUALITY (3). Emphasis directed toward clarification of values and attitudes regarding sexuality issues and development of healthful sexual behavior.

407T. DRUG DYNAMICS (3). Study of the emotional, physical, and financial influence of substance use and abuse on the individual and society. Emphasis on issues, techniques, and resources necessary for the health professional to interact with the school, community, and home environments. Includes pharmacology and legality of drugs.

408. MENTAL AND EMOTIONAL HEALTH (3). Study of personality traits and interpersonal relationships. Emphasis on development and maintenance of positive mental and emotional health.

409T. DRUG EDUCATION (3). Focus on the emotional, social, psychological, and pharmacological aspects of substances which modify mood and behavior. Examination of theories and methods of preventive and rehabilitative substance abuse programs.

410. DEATH EDUCATION (3). Study of death as an integral phase of the life cycle. Examination of values and coping behaviors related to death and dying.

411. SEXUALITY EDUCATION (3). Emphasis on understanding values and beliefs concerning sexuality and on developing and implementing educational programs in school and community settings.

412. CONSUMER HEALTH (3). Examination of issues, information, products, and services that influence the quality of life for the individual and community. Emphasis on skills necessary to assess and select appropriate products and services to maintain or improve health.

502. CURRICULUM DEVELOPMENT IN SCHOOL HEALTH EDUCATION (3). The application of fundamental principles and concepts of curriculum development to school health programs including health instruction, health services and healthful school environment.

503. SCHOOL HEALTH PROGRAMS: PLANNING, MANAGING, AND EVALUATING (3). An analysis of the principles of initiating, implementing, conducting, and maintaining effective school health education programs including pertinent supervision and staffing issues.

504. SPECIAL TOPICS IN SCHOOL HEALTH EDUCATION (1-3). Special topics in school health education of current importance. May be repeated as often as desired; however, degree-seeking students may count only 6 semester hours toward the degree and may not repeat topics.

550. INDEPENDENT STUDY IN HEALTH EDUCATION (1-3). Open to students who wish to do advanced study in health education. Study or clinical experience planned in consultation with an adviser. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department following approval of written proposal.

555. CLINICAL/FIELD EXPERIENCE IN SCHOOL HEALTH EDUCATION (1-6). Supervised clinical/field experience in school health education with emphasis on health instruction, health facilities, and a healthful environment. May be repeated to a maximum of 6 semester hours. PRQ: Admission to health education certification program or consent of department.

671B. DIRECTED RESEARCH IN HEALTH EDUCATION (1-3). Supervised research in a specialized area of health education. Research topic must be approved by supervisor prior to registration. May be repeated to a maximum of 6 semester hours. PRQ: PHED 552 or equivalent; consent of department.
College of Engineering and Engineering Technology

Romualdas Kasuba, Ph.D., P.E., dean
Dennis Stoia, M.B.A., P.E., acting associate dean

Electrical Engineering
Industrial Engineering
Mechanical Engineering
Technology
INTRA ENGINEERING AND ENGINEERING TECHNOLOGY

Course Offering

IEET 490. TOPICS IN ENGINEERING AND ENGINEERING TECHNOLOGY (1-3). Special selected interdisciplinary topics from various engineering or engineering technology disciplines not offered in regular departmental courses. May be repeated to a maximum of 6 semester hours. PRQ: Consent of the instructor.
Department of Electrical Engineering (ELE)

GRADUATE FACULTY

Alan P. Genis, chair, associate professor, Ph.D., Colorado State University
Ibrahim Abdel-Motaleb, assistant professor, Ph.D., P.E., University of British Columbia
James P. Bobis, associate professor, Ph.D., P.E., University of Illinois
Sing T. Bow, professor, Ph.D., Northwestern University
Reza Hashemian, associate professor, Ph.D., P.E., University of Wisconsin
Lili He, assistant professor, Ph.D., State University of New York, Buffalo
Xuan Kong, assistant professor, Ph.D., Johns Hopkins University
Sen-Maw Kuo, associate professor, Ph.D., University of New Mexico
Gerald Miller, associate professor, Ph.D., Northwestern University
Mansour Tahernezhadi, assistant professor, Ph.D., University of Oklahoma
Peng-Yung Woo, associate professor, Ph.D., University of Pennsylvania
Donald Zinger, assistant professor, Ph.D., University of Wisconsin, Madison

Master of Science with a Major in Electrical Engineering

The Department of Electrical Engineering offers graduate studies leading to the Master of Science degree with a major in electrical engineering. The program is designed to stimulate creativity, to provide an in-depth understanding of the basic physical phenomena involved in electrical systems, and to provide the student with the ability to use modern techniques in the analysis and design of electrical components and systems. Bulletins describing graduate studies in electrical engineering are available from the departmental office.

Admission to the graduate program in electrical engineering requires a baccalaureate degree in electrical engineering. Consideration may also be given to applicants with degrees in related areas.

A student seeking to qualify for the degree Master of Science with a major in electrical engineering shall satisfy the following departmental requirements in addition to satisfying Graduate School requirements.

The student with the support of his or her faculty adviser must submit to the department a program of graduate study approved by the student's graduate committee.

Students are to complete at least 30 semester hours of graduate work, not more than 40 percent of which may be in 400-level courses.

The 30 semester hours must include a minimum of 12 semester hours of course work within the department exclusive of ELE 597, ELE 598, and ELE 599.

Thesis option: All students admitted to the department are classified as thesis option students. The thesis option is designed to prepare students for graduate work at the doctoral level and concentrates on original research techniques. The graduate program of courses must include 6 semester hours of thesis, ELE 599, on a topic approved by the student's graduate committee. The thesis must be satisfactorily defended at an oral examination. Portions of the research work required by ELE 599 may be performed in off-campus facilities if approved by the student's graduate committee.

Non-thesis option: All students admitted to the department are classified as thesis option students. Students wishing to pursue the non-thesis option are required to petition the department's graduate committee upon admission to the department. The non-thesis option is designed for practicing professionals who wish to pursue advanced study in electrical engineering culminating in the Master of Science degree and who cannot pursue the traditional research experience of a thesis option. Students pursuing a M.S. degree under this option must earn a minimum of 30 semester hours of graduate credit including 3 semester hours of ELE 598, Special Topics in Electrical Engineering. The 3 hours of ELE 598 require significant original work which must be defended at an oral examination and submission of a written report.

Course Offerings

431. THEORY OF SEMICONDUCTOR DEVICES II (3). A continuation of ELE 335 dealing with complex semiconductor devices. The theory of operation of integrated circuits, solid state lasers, switching devices, and negative conductance microwave devices. PRQ: ELE 335 or consent of department.

432. SEMICONDUCTOR DEVICE FABRICATION LABORATORY (3). Design and fabrication of active semiconductor devices. Laboratory exercises include artwork and pattern generation, mask making, oxidation, photolithographic processing, diffusion, metallization, and device testing. PRQ: CHEM 211 or consent of department.

433. DESIGN OF GALLIUM ARSENIDE INTEGRATED CIRCUITS (3). Fundamentals of GaAs devices and logic families; fabrication processes; physical layout for VLSI circuits; interconnection and testing of high speed systems. PRQ: ELE 335 or consent of department.

435. INTEGRATED CIRCUIT ENGINEERING (3). Basic theory of integrated circuits including MOS processing technology. Principles of layout design, simulation, and design rule checking of large-scale integrated circuits. Introduction to design tools and techniques including utilization of available design software packages. Core course requirements include the design, simulation, and layout of an integrated circuit to the point of mask generation. PRQ: ELE 330 and ELE 350, or consent of department.

436. ANALOG MOS VLSI ENGINEERING (3). Analog MOS (nMOS and CMOS) circuits are introduced. MOS transistor is characterized both as a switch and a linear device. Different MOS circuits such as amplifiers, switches, comparators, sensors, D/A-A/D converters, multipliers, and neural networks are investigated. PRQ: ELE 330 or consent of department.

437. HYBRID CIRCUIT DESIGN (3). A lecture and laboratory course covering thick film processing techniques as they apply to the design and fabrication of miniature electronic circuits. Topics include minimum design rules, design of electronic components, artwork generation,
screen preparation, screen printing, drying and firing profiles, and trimming. PRQ: ELE 360 or consent of department.

438. THIN FILM ENGINEERING (3). A lecture and laboratory course designed to demonstrate the theory and principles of thin film processing including vacuum processing and deposition techniques. Topics include resistive evaporation, DC sputtering, RF sputtering, ion beam sputtering, electron beam evaporation, methods of achieving vacuum, and measurement techniques. PRQ: ELE 335 or consent of department.

451. DIGITAL FILTER DESIGN (3). Topics include difference equations, z-transform, Fourier representation of sequences, discrete-time system transfer functions, infinite impulse response discrete-time filters design. Includes implementation considerations and computer aided filter design. Practical examples and computer simulations. PRQ: ELE 415 or consent of department.

452. DIGITAL SIGNAL PROCESSORS (3). An in-depth presentation of the use of single-chip programmable signal processors. Hardware design aspects of digital signal processing (DSP) systems, architectural issues, and fixed versus floating point representations for implementing DSP algorithms. Applications to speech processing, adaptive filtering, and telecommunications. PRQ: ELE 356 and ELE 451, or consent of department.

457. MICROPROCESSOR II (3). Analysis of computer logic systems. Topics include computer instruction set, microprocessor instruction set, memory interface, and I/O interface; specific I/O devices such as keyboard, CRT, and disk are covered. PRQ: ELE 356 or consent of department.

458. DIGITAL SYSTEM DESIGN (3). Design of digital systems reflecting current industrial practices. Includes design methodology, processor design, control logic design, memory systems, and system organization. PRQ: ELE 356 or consent of department.

461. SYNTHESIS OF ACTIVE AND PASSIVE FILTERS (3). Principles of network synthesis are introduced. Synthesis techniques are used to design active and passive filters. PRQ: ELE 360 or consent of department.

464. SYSTEM DESIGN UTILIZING ANALOG INTEGRATED CIRCUITS (3). Basic theory for the utilization of special purpose integrated circuit amplifiers in application specific to circuit designs, including special differential and operational amplifier circuits. PRQ: ELE 330 or consent of department.

470. MICROWAVE CIRCUITS AND DEVICES (3). Wave equation; microwave waveguides and components; solid-state devices and circuits; microwave integrated circuits; microwave test equipment and laboratory measurements. PRQ: ELE 375 or consent of department.

475. ANTENNA THEORY AND DESIGN (3). Fundamentals of electromagnetic radiation from wire and aperture-type antennas; applications of field equivalence principles to aperture radiation, receiving antennas and noise evaluation of communication systems; antenna test equipment and measurement techniques. PRQ: ELE 375 or consent of department.

477. ADVANCED MICROWAVE AND MILLIMETER WAVE ENGINEERING (4). Analysis of various transmission-line media, including rectangular and circular waveguides, dielectric waveguides, finlines, and microstrip transmission lines; microwave/millimeter wave passive and active components; theory and design of integrated circuits, such as receiver front-ends; application of microwave systems and measurement techniques. PRQ: ELE 375 or consent of department.

480. CONTROL SYSTEMS II (3). Design and compensation of feedback control systems. The state variable approach to the analysis and design of feedback control systems. The use of digital controllers in modern control systems. PRQ: ELE 380 or consent of department.

481. DIGITAL CONTROL SYSTEMS (3). Introduction to digital and sampled-data control systems. Analysis and design of digital systems using z-transform and state-space methods. A study of the effects of quantization and sampling upon stability and performance. PRQ: ELE 380 or consent of department.

520. ADVANCED INTEGRATED CIRCUIT ENGINEERING (3). Design of large integrated circuits explored at transistor, gate, and register subsystem level. Mathematical abstractions related to parasitic effects and discussion of physics layout complications. PRQ: ELE 435 or consent of department.

532. VLSI ENGINEERING: DEVICE DESIGN (3). Special design considerations of NMOS, CMOS, and bipolar technologies. Topics include device simulation, application of graph theory to circuit layout, design rules and validation techniques, and strategies for layout of microcircuits and macrocircuits. PRQ: ELE 530 or consent of department.

533. VLSI ENGINEERING: CHIP DESIGN (3). Complete design of integrated circuits in MOS and bipolar technologies. Designs will be evaluated by computer simulation with the computer results utilized in an interactive manner to determine final design prior to mask generation. PRQ: ELE 532 or consent of department.

534. INTEGRATED CIRCUIT DESIGN FOR TESTABILITY (3). Current methodologies and techniques for design of VLSI systems are introduced. Topics include the introduction to integrated circuit design, modeling integrated circuits at functional, structural, and physical levels; fault modeling and fault detection; testing; design for testability; build-in self test; and test pattern generation. PRQ: ELE 435 or consent of department.


551. RANDOM SIGNAL PROCESSING (3). Statistical description of discrete and continuous signals in communication. Power spectrum analysis. Applications to filtering and interpolation problems. Detection and extraction of signals in noise background based on statistical decision theory. PRQ: ELE 360 or ELE 550, or consent of department.

553. DIGITAL SPEECH PROCESSING (3). The principles, techniques, and algorithms for speech signals. Emphasis on the representation of speech signals in digital form, the implementation of sophisticated processing techniques, and the classes of applications which rely heavily on digital processing. PRQ: ELE 551 or consent of department.

554. COMPUTER IMAGE PROCESSING (3). The principles, techniques, and algorithms for enhancements of degraded images; compression of pictorial information, recognition of patterns in scenes, the reconstruction of a picture from projections, and descriptions of objects in a scene. PRQ: ELE 551 or consent of department.

555. MICROPROCESSOR SYSTEM DESIGN (3). The principles and techniques required to design a microprocessor-based electronic system by treating the microprocessor as a component of the overall system. Hardware design aspects of systems including buses, memory system design, I/O, interrupts, DMA, and memory management will be examined. PRQ: ELE 457 or consent of department.

556. PATTERN RECOGNITION (3). Principles of approaches currently employed in pattern recognition; nonparametric classification, clustering analysis, nonsupervised learning, dimensionality reduction, feature extraction, shape recognition, curve fitting, polygon clipping, and graphic display generation. PRQ: CSCI 230, ELE 458, or consent of department.

557. PARALLEL PROCESSING (3). Fundamental concepts of parallel processor organization. Development of basic algorithms suitable for such systems. Parallel sorting and interconnection networks. Applications and discussion of specific processors. PRQ: ELE 458 or consent of department.

558. ARTIFICIAL INTELLIGENCE (3). Methodology in the design of a knowledge-based system using LISP or other appropriate computer language. Subjects and strategies including information base, forward chaining, testing and debugging, and dedicated hardware. Stages from initial problem definition to system implementation will be discussed. PRQ: Consent of department.

559. ADAPTIVE SIGNAL PROCESSING (3). The adaptive transversal filter with least mean square algorithm is introduced and compared with frequency-domain and lattice algorithms. Applications to modeling and system identification, inverse modeling, deconvolution, equalization, adaptive noise canceling, and adaptive array. Practical examples and computer simulations. PRQ: ELE 551 or consent of department.

560. DIGITAL AND ANALOG COMMUNICATION SYSTEMS (3). Theory of digital communication systems including digital transmission of analog systems. Digital communication in the presence of noise and the use of error correcting codes. PRQ: ELE 360 or consent of department.

and phase conjugate optics. PRQ: ELE 335 and ELE 360, or consent of department.

564. SPREAD SPECTRUM COMMUNICATION SYSTEMS (3). Concepts of spread spectrum digital communication and frequency hopped communication systems, including code tracking loops, synchronization of the receiver spreading code, and binary shift register sequence. PRQ: ELE 560 or consent of department.

571. MICROWAVE INTEGRATED CIRCUITS (3). Analysis and design of microwave/millimeter wave integrated circuits using various transmission-line media, such as microstrips, finlines, and dielectric waveguides. "Supercompact" will be used as a design tool. PRQ: Consent of department.

572. MICROWAVE SOLID-STATE DEVICES AND CIRCUITS (3). Theory of operation of passive and active microwave devices including beamlead detector and mixer diodes, switching and varactor diodes, Gunn and IMPATT diodes; use of these devices in various microwave circuits, such as receiver front-ends, Gunn and IMPATT oscillators, and voltage-controlled oscillators. Design of practical microwave/millimeter wave circuits. PRQ: Consent of department.

580. MICROPROCESSOR SENSORS AND CONTROL SYSTEMS (3). Application of microprocessors to various sensors including temperature, pressure, flow, and moisture measurements. Development of microprocessor based control systems. Includes laboratory experiments in microprocessor interface techniques. PRQ: ELE 360 or consent of department.

581. STATE SPACE ANALYSIS (3). Study of linear systems emphasizing state space analysis. Topics include signals and signal representation, mathematical description of continuous and discrete systems, matrices and linear spaces, state variables and linear continuous systems, state variables and linear discrete systems, system controllability and observability, and introduction to stability theory. PRQ: ELE 480 or consent of department.

582. NONLINEAR CONTROL SYSTEMS (3). A study of the methods used for the analysis and design of nonlinear feedback control systems. Emphasis on the phase-plane method, numerical techniques, describing functions, and the methods of Lyapunov. PRQ: ELE 480 or consent of department.

583. COMPUTERIZED CONTROL AND MODELING OF AUTOMATED SYSTEMS (3). Study of computerized control in automated systems for industries, emphasizing digital controllers and linear quadratic controllers (LQC). Topics include introduction to computer control, digital controller design, command generation for process control, process modeling, optimal design methods, finite-wordlength effects, and case studies. PRQ: ELE 480 or consent of department.

584. OPTIMUM CONTROL SYSTEMS (3). Introduction to the basic theory and methods for the optimization of control system problems. Topics include matrix calculus, optimization with and without constraints, calculus of variations, dynamic programming with applications, optimal control of continuous and discrete systems, state estimation, and Kalman filters with electrical engineering applications. PRQ: ELE 481 or consent of department.

585. CONTROL LAWS AND STRATEGIES FOR MULTI-LINK MANIPULATORS (3). Study of servo control for manipulators, emphasizing various control schemes currently active in the robotic field. Topics include single-link control, kinematics and dynamics of multi-link manipulators, computed torque technique, variable-structure control, nonlinear feedback control, resolved motion control, adaptive control, and force control. PRQ: ELE 480 or consent of department.

597. INDEPENDENT STUDY (1-3). Independent pursuit of advanced problems in electrical engineering under faculty supervision. A written report is required. May be repeated to a maximum of 3 semester hours. Combined credit in ELE 597 and ELE 598 may not exceed 3 semester hours. PRQ: Consent of department.

598. SPECIAL TOPICS IN ELECTRICAL ENGINEERING (1-3). Advanced study of electrical engineering topics. May be repeated to a maximum of 3 semester hours. Combined credit in ELE 597 and ELE 598 may not exceed 3 semester hours. PRQ: Consent of department.

599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

654. ADVANCED TOPICS IN DIGITAL IMAGE PROCESSING (3). Advanced treatment of image processing techniques; linear and nonlinear image restoration, image segmentation, image enhancement, image encoding, feature description, image understanding, computer projects. PRQ: ELE 554 or consent of department.

656. ADVANCED TOPICS IN PATTERN RECOGNITION (3). Advanced treatment of pattern recognition techniques; clustering analysis and non-supervised learning, symbolic representation, pictorial shape analysis and recognition, graphics and image understanding. PRQ: ELE 556 or consent of department.
Department of Industrial Engineering (IENG)

GRADUATE FACULTY
Mohamed Dessouky, chair, professor, Ph.D., Ohio State University
Ehsan Asoudegi, assistant professor, Ph.D., West Virginia University
Muralidharan Krishnamurthi, assistant professor, Ph.D., Texas A&M University
Kwan H. Lee, assistant professor, Ph.D., North Carolina State University
Hampton R. Liggett, assistant professor, Ph.D., North Carolina State University
Richard L. Marcellus, associate professor, Ph.D., University of Michigan

Master of Science with a Major in Industrial Engineering

The Department of Industrial Engineering offers the Master of Science degree with a major in industrial engineering with areas of study in manufacturing engineering, operations research, production control systems, human factors, and other areas of industrial engineering.

Industrial engineering is a system oriented discipline concerned with the design, installation, management, operation, and improvement of systems that produce goods and services. It follows an integrated approach that considers the entire life cycle of the product or service produced, from design through production, delivery, and customer support. Industrial engineers are involved in such functions as designing a complete production facility or a single workplace, setting operator performance standards, planning manufacturing process, planning and controlling production, designing quality control systems, analyzing system reliability, simulating system performance, and planning and evaluating large scale projects. Industrial engineers are employed in a broad variety of organizations, including manufacturing industries, utilities, transportation, health care systems, financial institutions, and all levels of government agencies.

Industrial engineering draws upon specialized knowledge and skill in mathematical, physical, and social sciences, together with the principles and methods of engineering analysis and design. The graduate work can thus be built upon a background in various disciplines. Students with a baccalaureate degree in engineering or science or other disciplines are encouraged to consider graduate study in industrial engineering. Students with a baccalaureate degree in disciplines other than industrial engineering may be admitted to the graduate program, but will be required to take additional courses to overcome any deficiencies, as indicated below.

At the time of admission to the Graduate School, each student must have completed MATH 229, Calculus I (4), and MATH 230, Calculus II (4), or their equivalents, and at least one course from two of the six categories below. Before registering for IENG 599A or IENG 599B, each student must have completed at least one course in each of the six categories below, or their equivalents.

1. MATH 232, Calculus III (4)
2. STAT 350, Introduction to Probability and Statistics (3)
3. CSCI 230, Computer Programming in FORTRAN (4), or IENG 280, Microcomputer Applications in Industrial Engineering (3)
4. IENG 370, Operations Research I (3)
5. One of the following:
   CHEM 210, General Chemistry (4)
   MEE 210, Engineering Mechanics I (3)
   PHYS 250A, General Physics (4)
6. One of the following:
   MATH 232, Calculus III (4)
   MATH 336, Ordinary Differential Equations (3)
   PHYS 251A, General Physics (4)

In addition to satisfying Graduate School requirements and eliminating deficiencies, students seeking to qualify for the Master of Science degree with a major in industrial engineering must satisfy the following departmental requirements.

1. Complete at least 25 semester hours of graduate work in courses at the 400-500 level. The 25 semester hours must include:
   12 semester hours of courses at the 500 level or above.
   At least 9 semester hours must be from IENG courses numbered 500-598 (excluding IENG 599A, IENG 599B).
   No more than 3 semester hours can be from IENG 597.
   At least 12 semester hours of courses at the 400 level or above.
   At least 6 semester hours must be from IENG courses numbered 400-498 and 500-555.
   1 semester hour of IENG 595.

2. Select one of the following options and satisfy its requirements:
   Thesis Option - Complete 6 semester hours of thesis, IENG 599A, on a topic approved by the student's graduate committee. The thesis must be satisfactorily defended at an oral examination. A portion of the research required by IENG 599A may be performed in off-campus facilities if approved by the student's graduate committee.
   Non-thesis Option - Complete 6 semester hours of additional graduate work in courses at the 400 level or above and 6 semester hours of graduate project, IENG 599B, on a topic approved by the student's adviser. The project details and results must be delivered at a public presentation.

3. Submit to the department, with the help of a faculty adviser, a program of courses which must be approved by the student's graduate committee.

Courses taken outside the department at the 400 level or above must be approved by the adviser and the department chair.
Course Offerings

410. HUMAN FACTORS ENGINEERING (4). Introduction to the principles of human factors engineering. Topics include modeling human-machine systems, human error, auditory systems, and visual systems. Analysis of psychomotor skills, speech communications, and control-display relationships. Human factors in computer programming, work space design, micro and macro environmental design. PRQ: STAT 350 or consent of department.

430. RELIABILITY ENGINEERING (3). Reliability analysis for the design, implementation, and operation of engineering systems, processes, and products. Fault trees, lifetime distributions, life testing, availability, and maintainability. PRQ: STAT 350 or consent of department.

440. PRODUCTION PLANNING AND CONTROL (3). Analysis, design, and management of production systems. Topics include productivity measurement, forecasting techniques, project planning, line balancing, inventory systems, aggregate planning, master scheduling, operations scheduling, and modern approaches to production management such as just-in-time production. PRQ: STAT 350 or consent of department.

450. INTEGRATED MANUFACTURING SYSTEMS (3). Introduction to automation. Detroit automation, computer-aided manufacturing (CAM), group technology, flexible manufacturing systems, and production systems. Problem analysis and solution. Applications of these concepts using the FMS laboratory. PRQ: MEE 230 or consent of department.

451. EXPERT SYSTEMS IN ENGINEERING (3). Basic concepts and techniques of expert systems as well as the applications of expert systems in engineering. Primary topics include expert systems building tools and languages, a review of expert systems in engineering, and building expert systems for engineering problems. PRQ: CSCI 230 or consent of department.

452. INDUSTRIAL ROBOTICS (3). Fundamentals of robotics and robotic applications. Topics include manipulator kinematics and dynamics, performance characteristics of robots, robot programming, robotic work cell design, and application of robots in industry. PRQ: MEE 211 or consent of department.

460. FACILITIES PLANNING AND DESIGN (3). Principles and practice of the planning of facility layout and material handling equipment for manufacturing and service systems. Topics include analytical approaches in site location, facility layout, material handling, and storage systems. Discussion of systematic procedures and computer-aided techniques. PRQ: IENG 370 and MEE 230, or consent of department.

472. QUEUEING METHODS FOR SERVICES AND MANUFACTURING (3). The behavior of queueing systems, focusing on mathematical models, and their application to service and manufacturing problems. Applications of queueing models, waiting line disciplines, bottlenecks, and networks. Reducing delay through control and design. PRQ: IENG 371 or consent of department.

475. INTRODUCTORY DECISION ANALYSIS FOR ENGINEERING (3). Elementary quantitative decision making when random factors are present. Decision trees, assessment of choices using expected utility, influence diagrams, and the value of information. PRQ: STAT 350 or consent of department.

480. SIMULATION MODELING AND ANALYSIS (3). Design and analysis of industrial systems using computer simulation models. Choice of input distributions, generation of random variates, design and construction of simulation models and experiments, and interpretation of generated output. PRQ: IENG 280 and STAT 350, or consent of department.

481. MICROPROCESSORS IN INDUSTRIAL CONTROL (3). Concepts of real time programming and its application in production and manufacturing systems. Topics include computer interfaces to industrial peripherals, inter-computer communication, computer-machines interactions, and the design of computer controlled machine operations.

482. ENGINEERING INFORMATION SYSTEMS (3). Basic concepts, design, development, and the use of engineering information systems. Topics include architecture and components of engineering information systems, engineering systems analysis, modeling, design, development, and validation of application systems. Theoretical and practical issues related to manipulation of engineering information and design of queries, examples of engineering information systems. PRQ: IENG 280 or CSCI 230, or consent of department.

498. CONTEMPORARY TOPICS IN INDUSTRIAL ENGINEERING (1-3). May be repeated to a maximum of 9 semester hours, with no more than 3 hours in the same topic area. PRQ: Consent of department.

520. ECONOMIC ANALYSIS OF INDUSTRIAL PROJECTS (3). Advanced topics in engineering economic analysis including equipment replacement studies, purchases versus lease problems, project selection under budgetary and other resource constraints, mathematical programming formulations for economic optimization under constraints, statistical methods of dealing with uncertainty, evaluation for sequential decisions, portfolio selection, and multiple attributes. Knowledge of probability and statistics and economic analysis is required. PRQ: Consent of department.

530. STATISTICAL QUALITY CONTROL (3). Advanced theory, principles, and procedures of statistical quality control. Mathematics of sampling plans. Acceptance sampling plans by variables. Rectifying control procedures, continuous sampling plans, cumulative sum control charts, special procedures. PRQ: IENG 330 or consent of department.


540. ADVANCED PRODUCTION AND INVENTORY CONTROL (3). Single and parallel-machine sequencing, job shop and flow shop scheduling, Mathematical theory of single and multicommodity inventory systems, Production planning for static and dynamic models. List modeling approach toward forecasting. PRQ: STAT 350 and IENG 571, or consent of department.

550. ADVANCED MANUFACTURING SYSTEMS (3). Advanced topics in computer-integrated manufacturing. Major topics include advanced manufacturing processes, geometric modeling, design for manufacture, computer-aided part programming, computer-aided process planning, communication networks, and flexible manufacturing systems. Applications of these concepts using the manufacturing laboratory. PRQ: IENG 450 or consent of department.

551. INTELLIGENT MANUFACTURING SYSTEMS (3). Application of artificial intelligence (AI) techniques to manufacturing. Major topics include heuristic search techniques, knowledge representation of manufacturing entities, and control and expert systems in manufacturing. Current research issues are also addressed. PRQ: IENG 451 or consent of department.

556. DISCRETE OPTIMIZATION (3). A study of the concepts, theories, and techniques of discrete optimization, both integer and combinatorial. Topics covered include polyhedral theory, theory of valid inequalities.
computational complexity, polynomial algorithms, nonpolynomial algorithms, and nonexact algorithms. Applications include problems in graphs, networks, transportation, and scheduling. PRQ: IENG 370 or consent of department.

580. ADVANCED SIMULATION TECHNIQUES (3). Advanced simulation concepts; event scheduling, process interaction, and continuous modeling techniques. Design and analysis of simulation experiments; probability and statistics related to simulation such as length of run, probability distribution interference, variance reduction, and stopping rules. PRQ: IENG 480 or consent of department.

591. OCCUPATIONAL ERGONOMICS (3). The development and use of the human-machines model to establish the effects of interface design, environment, and work organization on the performance, safety, and health of the workforce. Topics include anthropometry, work physiology, biomechanics, environments (thermal, auditory, vibratory, and visual), and design of controls, display and work spaces. PRQ: STAT 350 or consent of department.

595. GRADUATE SEMINAR (1). Techniques for planning, conducting, documenting, and presenting industrial engineering research. Requires attending lectures and discussions on current industrial engineering research. Should be taken during the first year of the graduate program. PRQ: Consent of department.

597. INDEPENDENT STUDY (1-3). Independent study and work to explore recent advances and innovative approaches to industrial engineering design, practice, and research. A written report is required. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.

598. ADVANCED TOPICS IN INDUSTRIAL ENGINEERING (1-3). Advanced topics of contemporary interest. May be repeated to a maximum of 9 semester hours provided no repetition of subject matter occurs. PRQ: Consent of department.

599A. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

599B. GRADUATE PROJECT (1-6). This course provides, through project work, experience in the application of industrial engineering to real world systems. May be repeated to a maximum of 6 semester hours. A written report is required. Not available for credit for the thesis option. PRQ: Consent of department.
GRADUATE FACULTY

Parviz Payvar, chair, professor, Ph.D., P.E., University of California, Berkeley
Behrooz Fallahi, assistant professor, Ph.D., Purdue University
Robert E. Field, assistant professor, Ph.D., P.E., Purdue University
Sengoda G. Ganesan, associate professor, Ph.D., P.E., Oklahoma State University
Abhijit Gupta, assistant professor, Ph.D., P.E., Pennsylvania State University
Romualdas Kasuba, professor, Ph.D., P.E., University of Illinois, Chicago
Meung J. Kim, assistant professor, Ph.D., P.E., Virginia Polytechnic Institute and State University
Milivoje Kostic, associate professor, Ph.D., P.E., University of Illinois, Chicago
Pradip Majumdar, associate professor, Ph.D., P.E., University of Nebraska, Lincoln
Algirdas Marchetas, professor, Ph.D., P.E., University of Oklahoma, Oklahoma City
Joy M. Pauschke, associate professor, Ph.D., P.E., Stanford University
Scott Short, assistant professor, Ph.D., P.E., University of Dayton

Master of Science with a Major in Mechanical Engineering

The Department of Mechanical Engineering offers a program leading to the Master of Science degree with a major in mechanical engineering. The program is designed to stimulate creativity, to provide an in-depth understanding of the basic physical phenomena involved in mechanical systems, and to provide the student with the ability to use modern techniques in the analysis and design of mechanical components and systems.

Each student in the M.S. degree program in mechanical engineering must meet all Graduate School requirements and must meet the following departmental requirements:

1. Complete at least 30 semester hours of graduate work, not more than 30 percent of which may be in courses numbered 400-499. All courses taken outside of the Department of Mechanical Engineering must have departmental approval in advance.

2. Complete a minimum of 6 semester hours of applied mathematics or advanced engineering analysis selected with the advice and consent of the student’s adviser.

3. Complete one of the following core groups of courses:
   A. Applied Mechanics—MEE 511 and MEE 512
   B. Dynamic Systems and Control—MEE 520 and MEE 521
   C. Materials and Manufacturing—MEE 531 and MEE 533
   D. Thermofluids—MEE 540 and MEE 555

Upon completion of the above requirements and prior to starting the thesis work a program will be designed by the student and his or her adviser and approved by the departmental graduate committee.

4. The graduate program must include 6 semester hours of thesis, MEE 599, on a topic approved by the student’s graduate committee. Employed students may use topics and facilities from their work if approved. The thesis must be satisfactorily defended at an oral examination.

Course Offerings

410. INTERMEDIATE MECHANICS OF MATERIALS (3). Buckling, unsymmetric bending, transverse loading, curved beams, thick-walled cylinders and rotating disks, torsion of thin-walled tubes, contact stresses, plastic behavior, strain energy and Castigliano’s theorem, strength theories and design equations, fatigue, and fracture. PRQ: MEE 212, MATH 336, and CSCI 230, and consent of department.


422. DESIGN OF ROBOT MANIPULATORS (3). Mathematics, programming, and control in the design of robot manipulators. Includes topics on kinematics, differential relationships and dynamics, motion trajectories, and control algorithms. PRQ: MEE 360 or consent of department.

423. MECHANICAL RELIABILITY (3). Basic probability, statistics, and reliability concepts applicable to mechanical systems. Probabilistic treatment of loads, stress, strength, safety indices, and fatigue. Mechanical equipment reliability; wear-out; reliability-based design, testing, and maintenance. PRQ: MEE 212 and CRQ: MEE 470, or consent of department.

424. MACHINERY VIBRATION (3). Machinery vibration analysis: signature analysis in time and frequency domains, fault detection, diagnosis, and correction; instrumentation; case studies; machine monitoring programs. PRQ: MEE 320 or consent of department. CRQ: MEE 470 or consent of department.


430. COMPUTER AIDED DESIGN AND MANUFACTURING (3). Computers for CAD/CAM, computer-aided design; numerical control, origin of CAM; industrial robots; group technology and process planning; computer control; computer-integrated manufacturing. PRQ: MEE 331 or consent of department.

431. COMPOSITE MATERIALS (3). Macromechanical behavior of a lamina; micromechanical behavior of a lamina; macromechanical behavior of a laminate; bending, buckling, and vibration of laminated plates. PRQ: MEE 212, MEE 330, and MEE 360, or consent of department.

451. REFRIGERATION AND AIR CONDITIONING (3). Refrigerants; vapor compression and absorption refrigeration systems; cryogenics; psychrometrics and humidity measurements; extended surface coils and transfer processes between moist air and water; solar radiation and heating and cooling loads of buildings and structures. PRQ: MEE 350 and MEE 352, or consent of department.

452. DESIGN OF THERMAL SYSTEMS (3). Application of principles of fluid mechanics, heat transfer, and thermodynamics in the component design of thermal systems. Examples are drawn from power generations, environmental control, and industrial processes. Students work on group
projects for integration of these components in the design of thermal systems. PRQ: MEE 350 and MEE 352, or consent of department.

453. PROPULSION (3). Aerodynamics and thermodynamics of gas turbine airbreathing and rocket engines; quasi-one-dimensional flow; ideal and real cycle analysis; component performance; engine operating off-design characteristics. PRQ: MEE 340 and MEE 350, or consent of department.

480. FINITE ELEMENT METHODS (3). Concepts of finite element methods, variational formulation and approximation; linear and quadrilateral elements; finite element formulation, error analysis; isoparametric elements; computer implementation; applications from solid mechanics, dynamics, heat transfer, and fluid mechanics. PRQ: MEE 320, MEE 352, and MEE 380, or consent of department.

510. EXPERIMENTAL STRESS ANALYSIS (3). Elementary elasticity; brittle-coating methods; strain measurement methods and related instrumentation; photoelasticity; Moire methods; residual stress analysis. PRQ: MEE 490 or consent of department.

511. CONTINUUM MECHANICS (3). Vectors and tensors; stress, deformation. Eulerian and Lagrangian strain; physical laws; constitutive equations; solid mechanics; fluid mechanics. PRQ: Consent of department.

512. ADVANCED MECHANICS OF MATERIALS (3). Stress-strain-temperature relations; failure criteria; energy methods; torsion; nonsymmetrical bending; curved beams; flat plates; beams and elastic foundations; rotating discs; contact stresses. PRQ: MEE 470 or consent of department.

513. FATIGUE AND FRACTURE MECHANICS (3). Yielding; brittle fracture mechanics; plasticity induced fracture; fracture toughness; fatigue testing and analysis; stress concentration and notch sensitivity; low-cycle, corrosion, acoustic, and thermal fatigue. PRQ: MEE 512 or consent of department.

514. THEORY OF ELASTICITY AND APPLICATIONS (3). Plane stress and plane strain in rectangular, polar, and curvilinear coordinates; analysis of stress and strain in three dimensions; torsion of bars; bending of bars and plates; axisymmetric problems; thermal stress; propagation of waves in elastic solid media. PRQ: MEE 511 or consent of department.

515. APPLIED FINITE ELEMENT ANALYSIS FOR MECHANICAL ENGINEERS (3). Implementation of analysis and interpretation of results for discrete and continuous systems; computational techniques; available computer software; selection of model parameters; model evaluation and determination of accuracy; applications in mechanical engineering problems. PRQ: MEE 480 or consent of department.

520. ADVANCED DYNAMICS (3). Newtonian mechanics; analytical mechanics; rotating reference frames; rigid body dynamics; geometric theory; stability of autonomous and nonautonomous systems; perturbation techniques; transformation theory; gyroscope. PRQ: MEE 421 or consent of department.

521. ADVANCED VIBRATIONS (3). Advanced principles of dynamics; discrete and continuous systems; free and forced vibrations; damped and undamped system response; approximate methods; wave solutions for continuous systems; random vibrations. PRQ: MEE 421 or consent of department.

522. EXPERIMENTAL METHODS IN MECHANICAL VIBRATIONS (3). Random vibrations; vibration pick-ups; dynamic strain measurements; beam vibrations; response analysis; modal analysis. PRQ: MEE 521 or consent of department.

523. ROBOT VISION CONTROL (3). Generalized images; segmented images; geometrical structures; relational structures; robot machine vision systems. PRQ: MEE 422 or consent of department.

524. ROBOT DYNAMICS AND CONTROL (3). Motion trajectories; principles of rigid body dynamics; robot dynamics; digital control systems; control of multiple link manipulators. PRQ: MEE 422 or consent of department.

525. ROBOT PROGRAMMING AND CONTROL (3). Task descriptions; structured programming; teaching; compliance and control; high level of robot language. PRQ: MEE 422 or consent of department.

530. STRUCTURE AND PROPERTIES OF POLYMERS (3). Molecular structure of amorphous, crystalline, and network polymers; theories of the glassy state; transition and melt temperatures; model prediction of viscoelastic properties; time-temperature superposition principle; theory of rubber elasticity. PRQ: MEE 430 or consent of department.

531. COMPUTER AIDED DESIGN OF MECHANICAL SYSTEMS (3). Finite element methods in structural analysis; computer aided design of symmetric and asymmetric machine elements under dynamic, impulsive, and thermal loadings; computer graphics; computer analysis and animation of kinematics of linkages. PRQ: MEE 480 or consent of department.

532. TRIBOLOGY (3). Surface topography and integrity; sliding and rolling friction; temperature in sliding contact; types, mechanisms, and theories of wear; antifriction and wear resistant material; boundary, hydrodynamic, and elastohydrodynamic lubrication; high pressure and wear resistant additives; solid lubricant; examples of tribology applied engineering design. PRQ: Consent of department.

533. COMPUTER AIDED MANUFACTURING (3). Manufacture of parts and assemblies; design for manufacturability; numerically controlled machine tools; robotics. PRQ: MEE 430 or consent of department.

534. EXPERIMENTAL METHODS IN MATERIALS SCIENCE (3). Structural evaluation of materials with X-ray techniques; scanning electron microscopy for image formation and use of column related techniques to characterize bulk specimens; transmission microscopy for image formation and defect analysis in materials science applications. PRQ: Consent of department.

540. ADVANCED FLUID MECHANICS (3). Fundamentals of fluid flow; plane irrotational and incompressible fluid flows; Navier-Stokes equations; hydrodynamic stability; turbulence; two-dimensional boundary layers in incompressible flow; flow separation. PRQ: Consent of department.

542. DYNAMICS OF VISCOUS FLUIDS (3). Fundamentals of viscous fluid; Navier-Stokes equations; exact solutions, boundary layer equations and their physical interpretations; mathematical techniques of similarity transformations, integral methods, perturbation methods and numerical solutions. PRQ: MEE 540 or consent of department.

550. ADVANCED THERMODYNAMICS (3). Thermodynamic postulates and conditions of equilibrium; the Euler equation and the Gibbs-Duhem relations; Legendre transformations and the extreme principle; Maxwell relations; stability of thermodynamic systems; the Nerst Postulate; chemical reactions and combustion; chemical equilibrium; irreversible thermodynamics. PRQ: Consent of department.

555. CONDUCTION HEAT TRANSFER (3). Fundamentals of heat conduction; approximate and exact analytical methods; finite and semi-infinite bodies, one-dimensional composite media; phase change problems; nonlinear problems; heat transfer in anisotropic solids. PRQ: Consent of department.

558. COMPUTATIONAL HEAT TRANSFER AND FLUID MECHANICS (3). Application of partial differential equations, finite difference methods, and finite element methods in heat transfer and fluid mechanics; stability analysis, convergence criteria, and accuracy of computational techniques. PRQ: Consent of department.

599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
Department of Technology (TECH)

GRADUATE FACULTY
Conard L. White, acting chair, professor, Ph.D., University of Illinois
Roger W. Cliffe, professor, Presidential Teaching Professor, Ed.D., University of Northern Colorado
Ronald J. Glogovsky, associate professor, Ed.D., University of Northern Colorado
Frank J. Gruber IV, associate professor, Ph.D., Michigan State University
Earl E. Hansen, associate professor, Ed.D., Oklahoma State University
Gary E. Lintereur, associate professor, Ph.D., Ohio State University
Jule D. Scarborough, professor, Ph.D., Ohio State University
Xueshu Song, assistant professor, Ph.D., Pennsylvania State University
James R. Stewart, assistant professor, Ph.D., P.E., Texas A&M University
Dennis V. Stoia, associate professor, M.B.A., P.E., University of Chicago
Promod Vohra, assistant professor, Ed.D., Northern Illinois University

Master of Science with a Major in Industrial Management

The Department of Technology offers graduate studies leading to the Master of Science degree with a major in industrial management. The objective of this graduate program is to build upon the competencies achieved at the baccalaureate level and to prepare students to assume managerial positions in technical fields in manufacturing industries.

Admission to the graduate program in industrial management requires a baccalaureate degree in engineering, technology, or industrial education. Consideration may also be given to applicants with degrees in related areas who have appropriate industrial experience. Students should review the admission and graduate degree requirements in this catalog. Admission decisions are normally made within three weeks of receipt of the completed application.

A graduate faculty adviser is appointed for each student seeking a master's degree, and together they plan a program of courses leading to the degree.

A student seeking to qualify for the Master of Science degree in industrial management must complete a minimum of 33 semester hours of graduate work, at least 50 percent of which must be in 500- and 600-level courses. Students without undergraduate course work in accounting fundamentals are required to complete ACCY 288 as a deficiency. Course work in which the student received both undergraduate credit and a grade of "B" or higher cannot be repeated to fulfill the 33 semester hour requirement.

Core Requirements (9)
TECH 500, Research in Industry and Technology (3)
TECH 550, Leadership Theories and Techniques (3)
TECH 562, Industrial Systems Management (3)
TECH 555, Case Studies in Manufacturing—Labor Relations (3)

Areas of Study (9-11)
Complete at least 3 courses from one of the following areas of study.
Automated Manufacturing - TECH 420 (3), TECH 425 (4), TECH 494 (4), TECH 560 (3), TECH 562 (3)
Industrial Hygiene - TECH 433 (3), TECH 437 (3), TECH 440 (3), TECH 531 (3)
Industrial Safety - TECH 436 (3), TECH 481 (3), TECH 482 (3), TECH 534 (3)
Industrial Systems - TECH 442 (3), TECH 443 (3), TECH 444 (3), TECH 456 (3)
Industrial Training - TECH 402 (3), TECH 406 (3), TECH 408 (3), TECH 502 (3)
Technology Education - TECH 405 (3), TECH 645 (3), TECH 658 (3), TECH 690 (3)
Technology of Quality - TECH 447 (3), TECH 452 (3), TECH 491 (3), TECH 548 (3)

Industrial Management Electives (7-9)
With the consent of adviser, complete one of the following:
A second area of study from the list above (9)
Graduate-level course work related to industrial management from any department(s) in the College of Engineering and Engineering Technology or the College of Business (7-9)
Six semester hours of TECH 599B, Master's Thesis, and 3 semester hours of graduate-level course work related to industrial management from any department(s) in the College of Engineering and Engineering Technology or the College of Business (9)

University Electives (6)
With the consent of adviser, complete 6 semester hours of graduate-level course work related to industrial management from any department(s) in the university.

Course Offerings

401. ETHICS IN TECHNOLOGY (3). An exploration from the point of view of ethical theory of a number of ethical problems in the work environment encountered by technologists and engineers. This course enables students to recognize the moral aspects of business decisions on the personal level and of business institutions on the social level.

402. INDUSTRIAL TRAINING AND EVALUATION (3). The history of employee training, kinds of training, training programs, instructional methods, and evaluation procedures.

404. SUPERVISION IN INDUSTRY (3). Principles, methods, and techniques for supervision of people in their work. For supervisory personnel and those preparing for such positions.

405. TECHNOLOGY, A HUMAN ENDEAVOR (3). An analysis of the study of technology for policy-oriented decision makers in various fields. The formative role of technology in the shaping of policy is stressed through lectures, readings, and field experiences.

406. OCCUPATIONAL ANALYSIS (3). Techniques and procedures in analyzing occupations to ascertain their basic elements.

407. INDUSTRIAL COOPERATIVE EDUCATION (3). Problems and procedures in the operation of cooperative part-time programs.
408. INDUSTRIAL CONFERENCE AND MEETING MANAGEMENT (3). Course focuses on purposes, advantages, and limitations of planning, leading, developing, and evaluating visual and written materials for conferences and meetings.

410. RESIDENTIAL DESIGN AND ARCHITECTURAL DRAWING (3). For students who wish to develop skills in, and become acquainted with, the general field of home planning and architectural drawing. The various techniques of representation are studied and applied in practical situations.

412. TECHNICAL ILLUSTRATION (3). Axonometric, oblique, perspective, and schematic drawing techniques including line and surface shading, exploded views, pictorial details, and assemblies. Special emphasis on illustrating for catalogs, advertising media, service manuals, and installation diagrams. Six periods a week. PRQ: TECH 212 or consent of department.

414. MACHINE DESIGN (3). Design principles of machine elements such as linkages, shafts, gears, cams, and fasteners. Factors influencing the selection of materials and their significance in design. Economy, loading conditions, stresses, and deformation related to satisfactory machine design. PRQ: TECH 260, TECH 314, and TECH 360, or consent of department.

415. COMMERCIAL BUILDING DESIGN (3). A study of architectural design, structure, utility service systems, building equipment, and aesthetic treatments as applied to small commercial buildings. Structural techniques such as reinforced concrete, laminated beam construction, and steel framing are applied in the solutions of problems. The course work includes the preparation of working drawings and specifications for a commercial building. PRQ: TECH 410 or consent of department.

419. AUTOMATIC IDENTIFICATION (3). A study of methods and systems used to identify objects automatically. Various forms of keyless data entry will be studied: bar coding, optical character recognition, and other systems. Laboratory experiences will emphasize industrial applications.

420. AUTOMATED MANUFACTURING SYSTEMS (3). A laboratory oriented course which involves the study of computer integrated manufacturing systems utilized by industry, including robotics, computer-aided manufacturing, computer-aided design/drafting, computer-aided testing/inspection, and computer-aided process planning. Emphasis is placed on laboratory experiences with automated technology. CRQ: TECH 111 and TECH 395, or consent of department.

425. PROGRAMMABLE ELECTRONIC CONTROLLERS (4). Basic concepts and skills needed to program and apply programmable electronics controllers in industry. Experiments in operation, programing, and industrial applications. PRQ: TECH 395 or consent of department.

426. FLUID POWER TECHNOLOGY (3). Fluid power principles, devices, materials, and failure analysis. Hydraulic systems are examined with emphasis on compressors, pumps, motors, actuators, fluids, fluid distribution, protective devices, and control components. PRQ: PHYS 250 and MATH 229, or consent of department.

429. PLANT LOCATION, LAYOUT, AND MATERIALS HANDLING (3). Analysis of plant location, layout, and material handling systems in achieving manufacturing/service goals. Different approaches to location, layout, and material handling systems are presented.

431. INDUSTRIAL VENTILATION (3). Application of principles of industrial ventilation for the safety professional. Emphasis will be placed on the design of ventilation systems to protect workers and the environment. PRQ: TECH 111, TECH 434, and TECH 437, or consent of department.

432. DISASTER PREPAREDNESS (3). Organization for survival from natural and human-made disasters. Warning and communication systems, radiological monitoring, shelter management. Fallout shelter experiences required.

433. TOXICOLOGY FOR INDUSTRY (3). Basic concepts of toxicity as it relates to chemicals used in industrial work places. Assessment of the hazards of chemicals and how to deal with them safely. PRQ: CHEM 210, TECH 434, and TECH 437, or consent of department.

434. HUMAN FACTORS IN INDUSTRIAL ACCIDENT PREVENTION (3). A survey of human factors principles and techniques used to minimize the frequency and severity of industrial accidents.

435. LEGAL ASPECTS OF SAFETY (3). A study of the development of federal and state legislation and programs relating to worker safety. Analysis of the implication of these laws and programs for industrial safety.

436. DESIGN AND ADMINISTRATION OF INDUSTRIAL SAFETY PROGRAMS (3). An analysis of current programs and trends in the design and supervision of model industrial accident prevention programs. PRQ: ECON 260 and TECH 434, or consent of department.

437. FUNDAMENTALS OF INDUSTRIAL HYGIENE (3). Application of principles of industrial hygiene for the safety specialist, whose role has been greatly expanded by recent federal legislation. Emphasis will be placed on stress-producing conditions including noise, ventilation, temperature, radiation, lighting, and their effect on human performance and productivity. PRQ: TECH 434 or consent of department.

438. SAFETY IN TRANSPORTATION SYSTEMS (3). The status of, and rationale for, improvements in safety practices and legislation for the commercial carriers (rail, highway, water and air transportation). Each student shall investigate one system in depth.

439. ADVANCED TRAFFIC SAFETY EDUCATION PRACTICES (3). A study of advanced driving performance capabilities, driving strategies, and tactics. Emphasis will be placed on administrative and instructional practices for advanced driver education programs. PRQ: TECH 331 or consent of department.


442. WORK SIMPLIFICATION AND MEASUREMENT (3). Techniques for improving and standardizing methods; procedures for measuring work and developing time standards in production and service activities.

443. ENGINEERING ECONOMY (3). Principles used in the systematic evaluation of the net worth of benefits resulting from proposed engineering and business ventures in relation to the expenditures associated with these undertakings.

444. MANUFACTURING CONTROL SYSTEMS (3). Implementation and operation of manufacturing systems including facility planning, quality improvement, labor measurement, production, and inventory control systems. Forecasting methods, the design of work measuring and scheduling, and bills-of-material; computer-based materials control, quality and productivity techniques within process and job-lot environments. PRQ: Consent of department.

447. TOTAL QUALITY CONTROL (3). Implementation of quality control systems. The design and organization of the quality assurance plan; computer-based process control, quality motivation and involvement, quality auditing. CRQ: TECH 491 or consent of department.

452. GRAPHIC ARTS QUALITY ASSURANCE (3). An in-depth study of printing controls, with particular emphasis on general principles of quality controls. A study of devices utilized in composition, typesetting; the use of computers in printing; operation of routing, typesetting; the use of computers in printing; operation of routing, and quality auditing. CRQ: TECH 491 or consent of department.

454. ELECTRONIC TYPE COMPOSITION (3). Tape operation in typography; the use of computers in typography; operation of typical photographic and electronic cold type machines. Field trips to study commercial installations. PRQ: TECH 150 and consent of department.


456. PRINTING ESTIMATING (3). Identification and determination of costs relative to materials, operations, and factors involved in the production of printed matter. PRQ: TECH 150 and consent of department.
458. PRINTING PLANNING AND CONTROL (3). Major issues of managing a printing firm, production, costing, purchases, and personnel. PRQ: TECH 452 or consent of department.

461. MECHANICAL DESIGN ANALYSIS (3). Analysis and synthesis of machine components such as fasteners, springs, gears, brakes, bearings, lubrication. Analytical methods for the study of impact, dynamic loading, and fatigue; comprehensive treatment of failure, safety, and reliability. PRQ: TECH 369 or consent of department.

463. HEATING, VENTILATING, AND AIR CONDITIONING (3). Psychometric principles; thermal comfort; calculation of heating and cooling loads; design of air distribution systems and selection of components. PRQ: TECH 368 or consent of department.


465. PRINTING PLANNING AND CONTROL (3). Analysis and synthesis of machine components such as fasteners, springs, gears, brakes, bearings, lubrication. Analytical methods for the study of impact, dynamic loading, and fatigue; comprehensive treatment of failure, safety, and reliability. PRQ: TECH 369 or consent of department.

466. ELECTRONIC OPERATIONAL AMPLIFIERS (3). An analysis of operational amplifiers in electrical circuits. Application of operational amplifiers, analysis of operational amplifiers and the theory of operation. PRQ: TECH 378 or consent of department.

473. SWITCHING THEORY (3). Topics, techniques, and applications of combinational and discrete methods to switching theory. Survey of topics for data structures and algorithm analysis. Fundamental concepts of rings, groups, functions, fields, sets, and Boolean algebra and their engineering application. Graphs, trees, optimization, and matching techniques as applied to computer networking and electrical networks. PRQ: MATH 230, TECH 377, and consent of department.

475. ANALYSIS OF MICROPROCESSORS (3). Analysis of microprocessors with emphasis on architecture, state transition, machine cycles, and timing diagrams; instruction set, and interface techniques. PRQ: TECH 377 or consent of department.

481. ERGONOMICS (3). A study of the basic human factors in engineering systems with the emphasis on human-machine systems in relation to equipment designs and the work environment. Analyses are made of organizational factors relevant to operators at work, including monotony, repetitive work design and selection. PRQ: TECH 434, MATH 210, and PHYS 250, or consent of department.

482. INDUSTRIAL SAFETY ENGINEERING ANALYSIS (3). The practical theories and applications of safety engineering in the industrial environment. Consideration is given to accident investigation and job safety analysis. PRQ: TECH 230, TECH 231, TECH 434, and PHYS 250, or consent of department.

491. INDUSTRIAL QUALITY CONTROL (3). Techniques of establishing and maintaining quality of product including statistical quality control applications.

493. MATERIALS ANALYSIS (3). Principles related to the behavior of materials and the examination and testing of these materials. PRQ TECH 393 or consent of department.

494. ENGINEERING AUTOMATION (4). Fundamental principles and applications of project management, team concept, and operations utilizing design and computer graphics, process control with computer logic, CAD/CAM, and automated systems. Team design project(s) required. PRQ: Consent of department.

495. INDUSTRIAL COMPUTER PROGRAMMING (3). Use and organization of computer systems. Application topics including models for decision making, and selection, human-machine communication, industrial information storage and retrieval, data collection and transmission, symbolic computation, and advanced computer languages. PRQ: TECH 395 or consent of department.

500. RESEARCH IN INDUSTRY AND TECHNOLOGY (3). Designed to acquaint the student with research methodology as it applies to technology and industrial education. Students will have the opportunity to develop competence in research design, interpretation of research results, and the application of statistical techniques to solving technical problems.

502. CONTENT AND METHODS OF INDUSTRIAL EDUCATION AND TRAINING (3). Interest and motivation of learning, skill development, teaching devices, methods and procedures, and facility and equipment management. Designed to improve the techniques of teaching technical subjects.

505. CURRICULUM CONSTRUCTION IN INDUSTRIAL EDUCATION (3). The concepts underlying course construction in industrial education. Problems in the selection and organization of instructional materials and course content.

511. INDUSTRIAL HYGIENE (3). Lectures and demonstrations covering evaluation and control of exposure to dusts, fumes, mists, vapors, gases, radiation hazards, noise, and abnormal temperatures. PRQ: TECH 437 or consent of department.

531. INSTITUTIONAL SAFETY PROGRAMS (3). The organization, supervision, and administration of institutional safety programs. Each student shall investigate one safety program in depth. PRQ: Consent of department.

534. BEHAVIORAL FACTORS IN SAFETY (3). Psychological, physiological, and sociological factors as they affect human safety. Each student shall identify and pursue a topic of interest. PRQ: Consent of department.

535. SEMINAR IN SAFETY (1-6). Current issues or problems in safety. May be repeated. A limit of 6 semester hours may be earned toward advanced degrees.

537. SYSTEMS ANALYSIS IN SAFETY (4). Systems analysis techniques applied to accident record systems, theories of accident causation, and effectiveness of safety programs. PRQ: Consent of department.

539. RESEARCH IN SAFETY (1-3). Open to qualified students who wish to do individual research in safety. May be repeated. A limit of 6 semester hours may be earned toward advanced degrees. PRQ: Consent of department.

541. TEACHING TECHNIQUES IN HOME REPAIRS AND MANIPULATIVE CRAFTS FOR THE VISUALLY IMPAIRED (3). Laboratory experimentation with simple home repairs and sampling of manipulative crafts using techniques employed by teachers of visually impaired people.

548. QUALITY DECISION METHODS (3). Problems and case studies utilizing the decision mathematical methods for quality analysis including on-line process control, design of experiments, regression analysis, and other mathematical tools. PRQ: TECH 481 or consent of department.

550. LEADERSHIP THEORIES AND TECHNIQUES (3). A study of leadership theories and managerial techniques used to accomplish predetermined results through others. This includes topics such as planning, motivation, communication, delegation, and employee selection as applied in industrial settings/situations. PRQ: TECH 404 or consent of department.

555. CASE STUDIES IN MANUFACTURING—LABOR RELATIONS (3). Using recent labor arbitration awards, the students will examine and analyze industrial relations from both the management and the union perspective. Each student will research and analyze multiple cases on an individually assigned topic as a final project. PRQ: TECH 404 or consent of department.


562. INDUSTRIAL SYSTEMS MANAGEMENT (3). Organizational structures; integrated systems management of product and process design, production, automation, technology, engineering, maintenance, and quality; technology/worker interface; implementation of change; international issues and case studies. PRQ: Consent of department.

573. ADVANCED ELECTRICAL SERVOMECHANISMS (3). The analysis and design of servomechanisms using analytical tools.

579. WORKSHOP IN INDUSTRY AND TECHNOLOGY (1-6). Workshop designed for technologists, supervisors, engineers, managers, and administrators studying contemporary technological problems in the public and private sectors. Content varies providing the opportunity to study current problems and issues related to industry and technology. May be repeated to a maximum of 6 semester hours.
598. TECHNICAL PROBLEMS (1-6).
A. General
B. Automation
C. Crafts
D. Drawing
E. Electronics
J. Graphic Arts
K. Industrial Supervision
M. Metals
N. Numerical Control
R. Mechanical Technology
U. Power Mechanics
V. Safety
W. Wood Technology

Advanced study of technical problems at the master's level under direct faculty supervision. May be repeated for a maximum of 6 semester hours. PRQ: Consent of faculty member who will supervise the study.

599A. DIRECTED STUDY (1-6). Directed study in independent research projects at the master's level. May be repeated for a maximum of 6 semester hours. PRQ: Consent of adviser and faculty member directing the study.

599B. MASTER'S THESIS (1-6). Open only to students who elect to write a thesis for the master's degree. May be repeated for a maximum of 6 semester hours. PRQ: Consent of adviser.

601. HISTORY AND PHILOSOPHY OF INDUSTRIAL EDUCATION (3). The leaders, organizations and movements that have contributed to the development of industrial education. Philosophies, issues, and problems relating to past and present.

603. EVALUATION IN INDUSTRIAL EDUCATION (3). The principles and techniques of evaluation of instruction as applied to courses in industrial education.

606. PROGRAMS AND ORGANIZATION OF INDUSTRIAL EDUCATION (3). The philosophy, objectives, organization, administration, and significant literature for vocational-industrial all-day, part-time, and evening programs, including apprenticeship and vocational rehabilitation. Special attention given to legislation and standards for state and federal aid to local vocational-industrial and technical programs.

607. TRENDS IN INDUSTRIAL EDUCATION (3). The evaluation and significance of trends from the viewpoints of theory and practice.

609. INDUSTRIAL INTERNSHIP (3-6). A department-approved work experience designed to provide the student lacking full-time industrial experience an opportunity to observe and participate in activities that are applications of principles and skills acquired previously. The learning situation is organized and supervised cooperatively by the Department of Technology staff and personnel of selected organizations. Learning experiences include obtaining, with the guidance and approval of the department's faculty coordinator, an acceptable type of wage-earning employment where intern-learning experiences are present. A minimum of nine 40-hour work weeks is required for each 3 semester hours of credit. May be repeated to a maximum of 6 semester hours. PRQ: Consent of major adviser and supervising instructor.

645. TECHNOLOGY IN INDUSTRIAL EDUCATION (3). Modern industrial developments such as automation, uses of new types of energy, and synthetic materials.

658. SEMINAR IN INDUSTRY AND TECHNOLOGY (1-3). Individual and group concerns related to industry and industrial technology. May be repeated. A limit of 6 semester hours may be applied for advanced degrees.

686. PRACTICUM IN TECHNOLOGY (1-12). Instruction arranged to meet the needs, concerns, and interests of individuals or groups in an appropriate setting under the guidance of a staff member of that setting and a university supervisor. Projects may include work/study in an appropriate setting and individual projects/research. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

690. INDUSTRIAL EDUCATION FOR THE IN-SERVICE TEACHER (3). Problems of inservice education in upgrading programs of industrial education. Special emphasis given to individual problems.
College of Liberal Arts and Sciences

James D. Norris, Ph.D., dean
Joseph E. Grush, Ph.D., associate dean
Donald A. Cress, Ph.D., associate dean
Sue Warrick Doederlein, Ph.D., assistant dean

Anthropology
Biological Sciences
Chemistry
Communication Studies
Computer Science
Economics
English
Foreign Languages and Literatures
Geography

Geology
History
Journalism
Mathematical Sciences
Philosophy
Physics
Political Science
Psychology
Sociology
INTERDISCIPLINARY GRADUATE CONCENTRATION

Concentration in Women's Studies

Director: Lois S. Self

Women's studies is an interdisciplinary program which fosters research and teaching related to gender. The graduate concentration in women's studies permits study of gender and its significance through a systematic engagement with feminist theory and criticism, research methods, and scholarship and results in recognition of that study on the student's transcript. Since the Women's Studies Program is not a degree-offering unit, all graduate degrees are obtained through the student's major department, whose special requirements must be met. The concentration is available to students in good standing in any graduate program in the university. Faculty who regularly teach courses which contribute to the concentration or participate in the core courses come from a variety of departments.

A student who wishes to pursue the concentration must receive approval from both her or his major department faculty adviser and the women's studies director. Students may earn transcript credit for the concentration by completing 12 hours in approved courses, including the two required interdisciplinary core courses. For the other 6 required hours, in addition to the approved electives listed below, any graduate-level special topics course or directed study focused on gender may be counted toward the graduate concentration in women's studies with the prior approval of the director of women's studies and the student's departmental adviser.

Students interested in pursuing this concentration are advised to meet with the director of women's studies as early as possible in their graduate program.

Requirements (12)

Core courses (6)
- ILAS 432, Feminist Theory (3)
- ILAS 530, Research in Women's Studies (3)

Electives chosen from the following (6)
- COMS 410, Communication and the Sexes (3)
- ENGL 507, *Topics in Literature (3)
- EPCO 592, *Special Topics in Counselor Education (3)
- HFR 500B, *Seminar: Family and Child Studies (3)
- HIST 413, Family, Sexuality, and Society since 1400 (3)
- HIST 473, Topics in Women's History (3)
- ILAS 430, Special Topics in Women's Studies (3)
- LEFE 590, *Workshop in Education (3)
- MGMT 498, Equal Opportunity and Employment (3)
- PHED 406, *Human Sexuality (3)
- PSYC 495, *Seminar in Special Topics (3)
- SOCI 454, Racial and Ethnic Minority Family Systems (3)
- SOCI 457, Comparative Family Systems (3)

*Courses may meet the concentration requirements when they include substantial treatment of women's studies.

Faculty Associates
- Rose Marie Burwell, associate professor, Department of English
- Kay Forest, assistant professor, Department of Sociology
- Sylvia Huot, associate professor, Department of Foreign Languages and Literatures
- Marybeth Koos, slide curator, School of Art
- Susan Leger, associate professor, Department of Foreign Languages and Literatures
- Maryline Lukacher, associate professor, Department of Foreign Languages and Literatures
- Carole Minor, professor, Department of Educational Psychology, Counseling, and Special Education
- Clark Neher, professor, Department of Political Science
- Ellen Parham, professor, Department of Human and Family Resources
- Barbara Posadas, associate professor, Department of History
- Lorraine Schmall, assistant professor, College of Law
- Mary Sue Schriber, professor, Department of English
- Judith Testa, associate professor, School of Art
- Lynne Waldeland, associate professor, Department of English

SECONDARY TEACHER CERTIFICATION

Departments in the College of Liberal Arts and Sciences administer programs leading to initial teacher certification in the following subject areas:
- Biology/general science
- Chemistry
- English
- Foreign Languages
- History/social science
- Mathematics
- Physics/general science
- Speech Communication

Students interested in teaching any of the above subject areas should see individual department listings in the catalog and seek departmental advisement concerning standards for admission and retention unique to each departmental certification program.

Requirements Common to All Accredited Teacher Certification Programs in the College of Liberal Arts and Sciences

All of the above teacher certification programs meet or exceed minimum requirements of the Illinois State Board of Education (ISBE); consequently, students completing the requirements for any of the programs will be recommended for certification under ISBE entitlement. Students with a baccalaureate degree from an accredited institution interested in secondary teacher certification in any of the above subject areas must:

1. be admitted to the university as a postgraduate¹, student-at-large, or a graduate student. Admission to a degree program does not guarantee admission to the certification program in any department. (Students should seek transcript evaluation and advisement from the appropriate department certification adviser concerning departmental
requirements for admission to the teacher certification program.)
2. meet departmental requirements for the teaching subject-area.
3. complete general education course work as mandated by ISBE.
4. pass the U.S. and Illinois constitution test (HB 195).
5. complete a minimum of 100 clock hours of clinical experiences approved by the department prior to student teaching.
6. complete professional education courses mandated by the ISBE. Consult the adviser in the appropriate certification program (see above list) for information about courses which meet these requirements.
7. complete the subject-area department teaching methods course.
8. pass both the State of Illinois Basic Skills Examination and the appropriate subject matter examination administered by the Illinois Certification Testing System.
9. complete the student teaching course offered by the subject-area department. Student teaching assignments and sites must be authorized by the subject-area department. See the appropriate department adviser for information about timely application and regulations governing the student teaching assignment.

Students should also note the following:
1. Illinois law prohibits the employment by school districts of any person convicted of committing or attempting to commit (whether inside or outside the State of Illinois) any one of a number of specific offenses. At present those offenses include soliciting for a juvenile prostitute, juvenile pimping, exploitation of a child, obscenity, child pornography, harmful material, criminal sexual assault, aggravated criminal sexual abuse, offenses set forth in the Cannabis Control Act, and crimes defined in the Illinois Controlled Substances Act.
2. A satisfactory academic record is not the only criterion for admission to and retention in a certification program. Written evaluations of any candidate’s performance which demonstrate deficiencies in organizational and communication skills or attitudes and behaviors unsuitable for working with students will result in that candidate not being recommended for certification.

ISBE General Education Requirements

The following meet the Illinois State Board of Education general education requirements for initial teacher certification. Graduates are advised that their undergraduate general education program may not have met all of these requirements. See the department certification adviser for transcript evaluation of both general education and subject-area course credits.

1. Communication Skills (9 semester hours)
   a. Oral Communication (3 semester hours): must focus on development and evaluation of effective speaking
   b. Written Communication (6 semester hours): must focus on development and evaluation of effective writing

2. Mathematics and Sciences (12 semester hours)
   a. Mathematics (3 semester hours): must focus on development and evaluation of understanding of the logical principles of mathematics
   b. Biological and Physical Sciences (9 semester hours): At least one of the courses in the 9 hour total must be a laboratory course, and course work in both biology and physical science must be included

3. Humanities and Arts (15 semester hours)
   a. American History (3 semester hours): must be a survey course
   b. English (3 semester hours)
   c. Humanities Electives (9 semester hours)

4. Social Science (9 semester hours)
   a. American Government (3 semester hours)
   b. Social Science Electives (6 semester hours)

5. Health and Physical Development (2 semester hours)
   Any health course focusing on personal, family, or community health (physical or mental) or safety, or any physical development course focusing on the maintenance of physical health and physical fitness, motor skill acquisition, and injury prevention and control. (Note that physical education activity courses do not meet this requirement.)
6. Third-world cultures/history (may not focus on U.S./Canadian, European, or Russian peoples [e.g., Afro-American history would not count]). Course may be included as credit in either item 3 or 4 above.
7. Academic experiences which include a focus upon cultural diversity within society

See the department certification adviser about any additional requirements.

INTRA LIBERAL ARTS AND SCIENCES

Course Offerings

ILAS 430. SPECIAL TOPICS IN WOMEN’S STUDIES (3). May be repeated for credit to a maximum of 6 semester hours as topic changes.

ILAS 432. FEMINIST THEORY (3). Concepts, methods, and concerns of feminist theory; systematic overview of contemporary feminist thought, theoretical approaches to key feminist issues. PRQ: ILAS 230 or consent of department.

ILAS 444. COMPARATIVE URBANIZATION (3). Cross-cultural and interdisciplinary analysis of urbanization focusing on selected developing areas and the United States. Topics include cross-cultural definitions of urbanism, functions and services of secondary cities, and cross-cultural comparison of problems associated with urban growth and rural developments. PRQ: Junior, senior, or graduate standing.

ILAS 502. INTERNSHIP (3-12). The student will work as an intern in activities related to one of the majors in the college. The student will do reading and prepare a paper under the supervision of a faculty member in the College of Liberal Arts and Sciences. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department and college; graduate standing.

ILAS 530. RESEARCH IN WOMEN’S STUDIES (3). Interdisciplinary analysis of principles, methods, and bibliographic resources for the study of gender and for evaluating the relevance of scholarship in women’s studies to traditional disciplines. Focuses on theoretical perspectives and methodological issues central in feminist inquiry and development of skills in integrating gender-related research and criticism in students’ area of academic specialization.

ILAS 555. SEMINAR ON COMPARATIVE URBANIZATION (3). A multidisciplinary seminar focusing on interdependent problems of urban and rural development with comparison between the United States and selected Third World areas. PRQ: ILAS 444 or equivalent.
Department of Anthropology (ANTH)

GRADUATE FACULTY

Fred H. Smith, chair, professor, Presidential Research Professor, Ph.D., University of Michigan
Cecil H. Brown, professor, Presidential Research Professor, Ph.D., Tulane University
Winifred Creamer, assistant professor, Ph.D., Tulane University
Daniel L. Gebo, associate professor, Ph.D., Duke University
Denise Hodges, assistant professor, Ph.D., University of New York, Albany
Mark W. Mehrer, assistant professor, Ph.D., University of Illinois
Susan D. Russell, associate professor, Ph.D., University of Illinois
Michael Salovesh, associate professor, Ph.D., University of Chicago
Michael Rhum, assistant professor, Ph.D., Harvard University
Ronald Prencher, professor, Ph.D., University of California
Michael Salovesh, associate professor, Ph.D., University of Illinois
Maria O. Smith, assistant professor, Ph.D., University of Tennessee
Stanley R. Witkowski, professor, Ph.D., University of Iowa

The Department of Anthropology offers graduate courses and research opportunities leading to the Master of Arts degree.

Graduate work in this field is designed to prepare students for teaching or research in anthropology, and for advanced study.

Applicants to the Graduate School desiring to pursue the graduate curriculum in anthropology are urged to consult with the departmental graduate adviser prior to admission. Students admitted to the graduate curriculum in anthropology should consult with their appointed departmental graduate advisers in order to insure that the requirements of the department will be met by the program of courses elected.

Master of Arts

Applicants for admission to this degree program are expected to have completed at least 15 undergraduate semester hours in anthropology and a course in statistics. A student lacking this background will be required to take compensatory work during his or her graduate program.

Course requirements for the degree:

A minimum of one course from each of the four subfields of anthropology taken for graduate credit:

Archaeology
Cultural-social anthropology: ANTH 420, ANTH 421, ANTH 426, ANTH 427, ANTH 451, ANTH 454, ANTH 460, ANTH 463, ANTH 464, ANTH 465, ANTH 467, ANTH 525, ANTH 566.
Linguistic anthropology
Physical anthropology

Independent study courses may not be substituted for required courses without the consent of the student's adviser and the department chair.

At least 18 additional semester hours in elective courses taken for graduate credit, of which at least 12 must be in anthropology courses.

Minimum total course requirements: 30 semester hours

Each student in the master's degree program must demonstrate to the satisfaction of his or her faculty committee proficiency in either statistics or a foreign language useful for the student's research.

Each student in the master's degree program will elect one of the following options:

Thesis/Examination Option
A student selecting this option is required to satisfactorily complete the departmental qualifying examination in his or her major subfield of anthropology.

Students choosing this option also are required to register for at least 3 semester hours of credit in ANTH 599 (Thesis). Approval of a written preliminary thesis proposal is required before registration in ANTH 599. Although the student may seek approval of the preliminary thesis proposal at any time, successful completion of the qualifying examination in the student's major subfield of anthropology is a prerequisite to formal registration in ANTH 599.

Non-Thesis/Examination Option
Students choosing this option are required to successfully complete the comprehensive examination in anthropology, covering all four subfields of anthropology.

Students selecting this option also are required to take an additional 6 hours for graduate credit in anthropology.

Course Offerings

NOTE. Prerequisites for courses may be waived with the consent of the department.

401. PEOPLE AND CULTURES OF SOUTHEAST ASIA (3). An introduction to Southeast Asian societies and culture dealing with the prehistory of the region, racial differences, and contributions of India, China, and Europe. Also covered are language, ecology, social organization, religion, urbanization, and culture change. PRQ: ANTH 220 or consent of department.

402. PEOPLE AND CULTURES OF THE PACIFIC ISLANDS (3). Ethnographic and ethnological survey and analysis of the societies and cultures of the Pacific Islands. The primary focus of attention will be on the lifeways of the indigenous peoples of the area. A secondary focus will be on the role which information about the lifeways of peoples of the Pacific Islands has played in the development of anthropological theory. PRQ: ANTH 220 or consent of department.

403. PEOPLE AND CULTURES OF AFRICA SOUTH OF THE SAHARA (3). A descriptive and analytic examination of representative African societies dealing with their culture, histories, and economic, political, and social organization, as well as religion and arts. Contemporary problems of culture change and social transformation within the context of decolonization. PRQ: ANTH 220 or consent of department.
405. PEOPLELS OF Mesoamerica (3). Cultural background of Mesoamerican ethnic groups; historical and contemporary sociocultural systems of Indian, black, and mestizo groups in rural and urban areas. Attention to the processes of acculturation, urbanization, and current cultural modifications influenced by contemporary society. PRQ: ANTH 220 or consent of department.

406. INDIANS OF NORTH AMERICA (3). A description and analysis of the cultures of native peoples of North America. Social, economic, and religious life; languages and arts of representative North American Indian groups. PRQ: ANTH 220 or consent of department.

407. ARCHAEOLOGY OF AFRICA (3). A detailed, analytical survey of African prehistory from the earliest evidence of human occupation to the time of extra-African contact. PRQ: ANTH 210 or consent of department.

408. ARCHAEOLOGY OF EUROPE (3). The origins and development of prehistoric cultures in Europe from the Paleolithic to the Neolithic. PRQ: ANTH 210 or consent of department.

409. ILLINOIS ARCHAEOLOGY (3). Examines the current state of knowledge of Illinois archaeology. Recent archaeological discoveries in our state provide a much improved picture of prehistoric life here. The time covered is from the first arrival of people in what is now Illinois until the establishment of cities during the last century. Emphasis will be on the technology, natural setting, chronology, subsistence, population, settlement, and social structure for each archaeological tradition and time period. PRQ: ANTH 210 or consent of department.

410. ARCHAEOLOGY OF AFRICA (3). A detailed survey of the processes of acculturation, urbanization, and current cultural modifications influenced by contemporary society. PRQ: ANTH 220 or consent of department.

411. ARCHAEOLOGY OF NORTH AMERICA (3). A detailed analysis of culture sequences in various archaeological areas of North America. Interrelationships between areas will be stressed. PRQ: ANTH 210 or consent of department.

412. ARCHAEOLOGY OF NORTH AMERICA (3). A detailed analysis of culture sequences in various archaeological areas of North America. Interrelationships between areas will be stressed. PRQ: ANTH 210 or consent of department.

413. HUMAN ADAPTATION AND VARIATION (3). History of the concept of race; current approaches to human variability. Selective aspects of continuous and discontinuous traits: blood groups, hemoglobins, etc.; race and IQ; sex differences. Ecological influences on human variation. PRQ: ANTH 240 or consent of department.

414. POLITICAL ANTHROPOLOGY (3). Political activities and how they articulate with other institutions. Presentation of various interpretations and theories that have been applied to the data. PRQ: ANTH 220 or consent of department.

415. ECONOMIC ANTHROPOLOGY (3). Analysis of economic behavior and institutions and how they articulate with other aspects of culture. PRQ: ANTH 220 or consent of department.

416. FIELD LINGUISTICS (3). Approaches to field work in anthropological linguistics; methods and techniques for collecting and analyzing data. PRQ: ANTH 431 or consent of department.
466. ANTHROPOLOGY AND EDUCATION (3). Study of education in cross-cultural perspective. Application of anthropological concepts and knowledge to an understanding of educative processes.

467. APPLIED ANTHROPOLOGY (3). The uses of anthropological concepts, knowledge, and insights to maintain or change cultures and societies combined with a consideration of the ethical problems in programs of directed culture change. PRQ: ANTH 220 or consent of department.

468. ANTHROPOLOGY OF GENDER (3). Survey of current theory and research on gender, sexuality, and representations of the body. Examination of debates about the significance of gender and sex in primate and human evolution, physical anthropology, and sociobiology. In seminar format, students also explore cross-cultural notions of gender and analyze the intersection of race/class/gender and the historical construction of sexuality and conceptions about "the body" in the sciences, the arts, ethnography, and popular culture. PRQ: ANTH 220 or consent of department.

490. ANTHROPOLOGICAL RESEARCH TRAINING (3-6).
A. Cultural Anthropology
B. Ethnology
C. Archaeology
D. Physical Anthropology
E. Ethnohistory
J. Linguistic Anthropology

Training and experience in field and/or laboratory research. Students will participate, under supervision, in basic research projects. Any lettered section may be repeated to a maximum of 6 semester hours. Total credit may not exceed 6 semester hours. PRQ: Consent of department.

491. CURRENT TOPICS IN ANTHROPOLOGY (3). Selected topics of current interest in anthropology. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

492. PROSEMINAR IN ANTHROPOLOGY (3). Intensive seminar on selected topics in anthropology. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

493. ANTHROPOLOGY FIELD STUDY (1-6). Directed field study in archaeology, social and cultural anthropology, linguistic anthropology, physical anthropology, or museology. The length of the field trip and the semester hours earned will depend on the area visited and the specific topic for field research. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

496X. MATERIALS AND PROBLEMS OF HIGH SCHOOL INSTRUCTION IN THE SOCIAL SCIENCES (3). HIST 496. Must be taken before student teaching. Includes 15 clock hours of clinical experience, attention to the teaching of exceptional students, planning for multicultural learning situations, and techniques of reading in the social sciences. PRQ: Consent of department.

510. ARCHAEOLOGY AND PREHISTORY (3). A critical analysis of original works of major importance in the development and current state of archaeological methods and prehistory. PRQ: Consent of department.

511. ARCHAEOLOGICAL INTERPRETATIONS (3). Detailed examination of theories and methods basic to cultural, temporal, and environmental interpretation of archaeological data. Relationships with other anthropological subdisciplines and with other sciences will be stressed. PRQ: One archaeology area course (ANTH 411, ANTH 412, or ANTH 414) and ANTH 420, or consent of department.

520. CULTURAL AND SOCIAL ANTHROPOLOGY (3). A critical analysis of original works of major importance in the development and current state of cultural and social anthropology. PRQ: Consent of department.

525. SYMBOLIC ANTHROPOLOGY (3). Anthropological approaches to the role of symbols in culture.

526. LATIN AMERICAN PEASANTS AND SOCIAL CHANGE (3). Anthropological perspectives on rural economic structure and social change in Latin America, with emphasis on geographical regions from central Mexico to the Andes that have high proportions of indigenous peoples. Methodological emphasis on comparative historical analyses of agricultural systems, ethnic identity, peasant social movements, and the relationship between economy and culture. PRQ: Consent of department.

527. SOUTHEAST ASIAN PEASANT ECONOMY (3). Anthropological perspectives on the nature of Southeast Asian peasant socio-economic institutions. Comparative analysis of how political and economic policies have affected processes of change in both lowland and highland peasant cultures over time. PRQ: Consent of department.

528. RELIGION AND COSMOLOGY IN SOUTHEAST ASIA (3). Perspectives of cultural anthropology on the folk religions and world views of peoples of Southeast Asia. Comparative analysis of the impact of different religious and secular ideologies on everyday political and economic thought and behavior of common people in various urban and rural settings of the past and present. PRQ: Consent of department.

530. LINGUISTIC ANTHROPOLOGY (3). A critical analysis of original works of major importance in the development and current state of linguistic anthropology. PRQ: Consent of department.

533. COGNITIVE ANTHROPOLOGY (3). The study of cognition through the formal semantic analysis of kinship systems, folk taxonomies, and other terminological networks with emphasis upon how such analyses relate to nonlinguistic aspects of the cultures in which they are embedded. PRQ: ANTH 331 or consent of department.

540. PHYSICAL ANTHROPOLOGY (3). A critical analysis of original works of major importance in the development and current state of physical anthropology. PRQ: Consent of department.

542. BIOCULTURAL ASPECTS OF HUMAN EVOLUTION (3). A survey of important aspects of human evolution in light of the relationship between culture and biology. Highlights include: hominid origins, origins of bipedalism and culture, hunting, intelligence, origins of domestication of plants and animals, civilization, and ongoing human evolution. PRQ: ANTH 240 or consent of department.

553. CULTURE THEORY (3). Detailed examination of theories basic to studies of individual cultures and to cross-cultural comparison: structuralism, functionalism, cultural ecology, cultural evolution, network analysis, and other viewpoints. PRQ: ANTH 420 or ANTH 451, or consent of department.

566. CULTURAL ECOLOGY (3). Exploration of the methods and findings of the ecological perspective in the study of human behavior; emphasis upon cultural mechanisms of adaptation to environmental imperatives. PRQ: Consent of department.

590. INDEPENDENT STUDY IN ANTHROPOLOGY (1-3).
A. Cultural Anthropology
B. Ethnology
C. Archaeology
D. Physical Anthropology
E. Ethnohistory
J. Linguistics

Supervised readings or research in specialized areas, topics, or problems in anthropology. Any one course may be repeated to a maximum of 6 semester hours. PRQ: Written permission of the department.

599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours.

690. SEMINAR IN ANTHROPOLOGY (3).
A. Cultural Anthropology
B. Ethnology
C. Archaeology
D. Physical Anthropology
E. Ethnohistory
J. Linguistics

Intensive study of a specific area, topic, or problem of the indicated subdiscipline. Any one course may be repeated to a maximum of 9 semester hours. PRQ: Consent of department.
Department of Biological Sciences (BIOS)

GRADUATE FACULTY

Marvin J. Starzyk, chair, professor, Ph.D., University of Wisconsin
Richard J. Becker, faculty assistant to the chair, Ph.D., Northern Illinois University
Mitchell Altschuler, assistant professor, Ph.D., State University of New York, Albany
Neil W. Blackstone, associate professor, Ph.D., Yale University
Jozef J. Bujarski, associate professor, Ph.D., Adam Mickiewicz University (Poznan, Poland)
Sonya B. Conway, associate professor, Ph.D., University of California, Berkeley
Thomas P. Conway, associate professor, Ph.D., University of Illinois
Kenneth W. Gasser, assistant professor, Ph.D., Washington State University
T. Daniel Griffiths, professor, Ph.D., University of Illinois
Richard Hahn, associate professor, Ph.D., University of Maryland
Arnold E. Hampel, professor, Distinguished Research Professor, Ph.D., University of Wisconsin
Laszlo Hanzely, professor, Presidential Teaching Professor, Ph.D., Southern Illinois University
Gabriel P. Holbrook, associate professor, Ph.D., University of York (U.K.)
Christopher J. Hubbard, associate professor, Ph.D., Wake Forest University
Michael E.S. Hudspeth, associate professor, Ph.D., Wayne State University
Mitrick A. Johns, associate professor, Ph.D., University of Oregon
Barbara P. Johnson-Wint, associate professor, Ph.D., Michigan State University
Belhia H. King, associate professor, Ph.D., Purdue University
Steven A. Kuhl, assistant professor, Ph.D., University of South Carolina
David P. Lotshaw, assistant professor, Ph.D., State University of New York, Albany
Rangaswamy Meganathan, professor, Ph.D., Oklahoma State University
Peter Meserve, professor, Ph.D., University of California
John L. A. Mitchell, professor, Distinguished Research Professor, Ph.D., Princeton University
Steven A. Nadler, assistant professor, Ph.D., Louisiana State University
Virginia L. Naples, associate professor, Ph.D., University of Massachusetts
Lowell K. Nicolaus, associate professor, Ph.D., North Dakota State University
J. Michael Parrish, associate professor, Ph.D., University of Chicago
Neil O. Polans, associate professor, Ph.D., University of California, Davis
Samuel M. Scheiner, coordinator of graduate studies, associate professor, Ph.D., University of Chicago
Thomas L. Sims, assistant professor, Ph.D., University of Oregon
Paul D. Sorensen, professor, Ph.D., University of Iowa
Joel P. Stafstrom, assistant professor, Ph.D., University of Colorado
Drake C. Stenger, assistant professor, Ph.D., University of California, Berkeley
Ronald Toth, professor, Ph.D., University of Massachusetts
Patricia S. Vary, professor, Presidential Research Professor, Ph.D., Stanford University

Carl N. von Ende, associate professor, Ph.D., University of Notre Dame
Linda S. Yasui, assistant professor, Ph.D., Florida State University
Jerrold H. Zar, professor, Ph.D., University of Illinois

ADJUNCT FACULTY

W. Elwood Bries, adjunct professor, Ph.D., University of Wisconsin
Elon W. Frampton, adjunct associate professor, Ph.D., University of Illinois
Richard B. King, adjunct assistant professor, Ph.D., Purdue University
Paul J. Meechan, adjunct assistant professor, Ph.D., University of Rochester
Meyrick J. Peak, adjunct professor, Ph.D., University of California
Christopher Reilly, adjunct associate professor, Ph.D., University of Arizona
Bernard Salafsky, adjunct professor, Ph.D., University of Washington
Ole A. Schjeide, adjunct professor, Ph.D., University of California
Jeffrey L. Schwartz, adjunct assistant professor, Ph.D., University of Texas Health Science Center, Dallas

The Department of Biological Sciences offers graduate programs leading to the degrees Master of Science and Doctor of Philosophy. Prior to being considered for admission an applicant must submit Graduate Record Examinations scores from the General Test and the Subject Test in biology to the Graduate School.

Master of Science

The minimum requirement for admission to the master of science degree program is a baccalaureate degree with a major in an area of biological sciences or in a closely related field such as biochemistry or biophysics. The baccalaureate degree should have included courses equivalent to those required for the Bachelor of Science degree at Northern Illinois University, i.e., organismal diversity, cell biology, genetics, microbiology, ecology and/or evolution, and physiology; chemistry through one year of organic; one year of physics; and mathematics through introductory calculus. Such courses not completed before admission to the Graduate School, as well as other undergraduate courses deemed appropriate to the pursuit of the master's degree in a particular specialty in biological sciences, will be recorded as deficiencies and must be taken early in the student's program.

Although one academic year is the minimum time for work leading to the Master of Science degree, most students find that an additional semester or summer session is necessary. If the student has deficiencies, the total number of semester hours required may exceed 30.

Each student pursuing a Master of Science degree with a major in biological sciences is required to complete successfully the following courses or their equivalents:

BIOS 470X, General Biological Chemistry, OR BIOS 472X and 473X, Biological Chemistry I and II
BIOS 570, Biostatistical Analysis
BIOS 661, Seminar (must be taken for a minimum of 2 semester hours of credit)

A minimum of 30 semester hours is required for the M.S. degree. Additional hours may be required based on the student's total score and subscores on the Subject Test in biology of the Graduate Record Examinations. The student is required to pass a final oral comprehensive examination.

Each student will declare, with the consent of the departmental graduate committee, one of the following two options:

Option A
This program is intended primarily for students wishing to focus on certain areas of biology and for those considering further graduate education. Each student must enroll in BIOS 599, Master's Thesis, and submit a written thesis. A maximum of 12 semester hours of combined credit in BIOS 599 and BIOS 670 may be applied toward the degree. The student's research adviser will serve as chair of the graduate committee that will administer a final oral comprehensive examination including a defense of thesis.

Option B
This program is intended primarily for students wishing to become generalists by taking course work in several areas within the biological sciences. This option may be appropriate for students who desire to qualify for careers that require such breadth in biology, for example, teaching in a secondary school or community college, administration, or interpretive work in parks and nature centers. The student's program will be designed with the advice and approval of the departmental graduate coordinator, with a minimum of 3 semester hours to be earned in each of six of the following seven areas of study. A course may satisfy a requirement in only one area of study.

Animal biology
Cellular and molecular biology
Ecology and systematics
Genetics and developmental biology
Microbiology
Physiology
Plant biology

In addition, the student must take a total of 4 semester hours of BIOS 670 under the guidance of a faculty member, and submit an acceptable research paper on a topic approved by the student's final examination committee. This committee shall include the faculty member directing the student's work in BIOS 670. The enrollment in BIOS 670 must begin within the first 15 semester hours that are to be part of the student's program of courses for the degree, and must span at least two terms.

Courses taken for an undergraduate degree may be used to satisfy Option B distribution requirements, with the consent of the department, providing that a grade of B or better was earned. Such courses, however, cannot be credited toward the master's degree.

During the admissions process, the student will indicate an area of study within the department and obtain a faculty adviser in that area who will agree to plan the student's first year of study.

Doctor of Philosophy
A student seeking admission to the Ph.D. program in biological sciences must meet all requirements for admission to the Graduate School; must have a baccalaureate or master's degree in the biological sciences or a related field; and should have completed at the college level one year of organic chemistry, one year of physics, and mathematics through introductory calculus. Such courses not completed before admission to the program, as well as other undergraduate courses deemed appropriate for the pursuit of the Ph.D. degree in a particular area of biological sciences, will be recorded as deficiencies and must be taken early in the student's program.

Each student's program must consist of at least 90 semester hours of graduate credit, including successful completion of the following courses or their equivalents.

Course Requirements
1. BIOS 470X, General Biological Chemistry; OR BIOS 472X and BIOS 473X, Biological Chemistry I and II
2. BIOS 570, Biostatistical Analysis
3. BIOS 661, Seminar (to be taken for a minimum of 4 hours of credit, at least 2 of which shall be taken after the first 30 graduate-level semester hours in the student's program)
4. BIOS 699, Doctoral Dissertation (enrollment each semester after being admitted to candidacy, until all requirements for the degree are complete)

Other Requirements
1. By the end of the student's second semester, the chair of his or her doctoral committee will be selected with the approval of the department chair. The department chair, in consultation with the chair of the doctoral committee and the student, will nominate a doctoral committee to be appointed by the dean of the Graduate School. This committee will consist of no fewer than five members, including at least one person from outside the student's research field. Adjunct graduate faculty may serve on the doctoral committee; a majority of the committee, however, must be regular members of the graduate faculty in the Department of Biological Sciences. Replacements which may be required on the committee will be nominated by the remaining committee members and the department chair from among qualified faculty in consultation with the student.

2. The doctoral committee will consult with the student in the formulation of a program of courses and research study for the duration of the Ph.D. program. The committee will meet with the student at least once a year to evaluate progress toward completion of the degree requirements. This evaluation may include written and oral presentations required of the student by the committee. This committee assessment of the student's progress will appraise the student's background knowledge and his or her competence in carrying out original independent research and will determine whether the student will be retained in the Ph.D. program.

3. The student must demonstrate average reading proficiency in one foreign language, either by (1) completing the second semester of the intermediate level university course in a foreign language with a grade of A or B, or (2) demonstrating average reading proficiency in a foreign language by achieving a score of at least 540 in French, 570 in German, 460 in Russian, or 500 in Spanish on the Graduate School Foreign Language Test, or (3) successfully completing a translation examination offered by the Department of Foreign Languages and Literatures, or in unusual cases, by other examining agencies approved by the university. The student's doctoral committee will have the responsibility of determining the appropriate foreign language for each student's program and may waive the foreign language requirement entirely for a student in whose major field the relevant literature is overwhelmingly in English.

4. The student must pass a candidacy examination consisting of written and oral portions and administered by the doctoral committee. This examination will include a comprehensive coverage of the student's academic background to enable the committee to evaluate the student's potential for successful completion of the Ph.D. degree program. This examination will be taken at a time designated by the doctoral committee, but no sooner than the completion of the first 27 graduate-level semester hours and no later than the completion of the first 60 graduate credit hours, to be applied to the Ph.D. program. A student who fails this examination may, with the permission of the committee, repeat it once;
the repeated examination will be at a time designated by the
committee, but no sooner than the lapse of one semester
and no later than eight months before granting of the degree.
5. After the student has completed all other requirements for
the degree, including the writing of a dissertation on a
research topic approved by the student's doctoral
committee, an oral defense of the dissertation will be
conducted by the doctoral committee.
6. The doctoral candidate will present a public lecture, based
on his or her dissertation.
7. Following approval of the dissertation by the doctoral
candidate, acceptable copies must be submitted to the
Graduate School.

Course Offerings

405. AMERICAN ECOSYSTEMS (1-8). A laboratory and field analysis
of environments. Lectures and laboratories on campus plus extensive
field experience. May be repeated to a maximum of 8 semester hours.
PRQ: BIOS 316 or equivalent, and consent of department.

406. BIOLOGICAL CONSERVATION (3). Ecological bases for
conservation of biological resources and relationship of conservation
practices to human welfare. Field trips required. PRQ: BIOS 205 or consent
department.

409. CYTOGENETICS (3). Lecture and laboratory exercises using plant
and animal material. Topics covered include chromosome structure and function,
movement of chromosomes during mitosis and meiosis, chromosome mapping, and topics in somatic cell genetics, including
chromosome isolation, cell fusion, DNA and chromosome transfection, and restriction fragment length polymorphism. Two hours of lecture and
three hours of laboratory per week. PRQ: BIOS 300 or BIOS 308, or consent
department.

410. PLANT ANATOMY (3). Structure of vascular plants, primarily
flowering plants. PRQ: BIOS 205 and BIOS 209, or consent of department.

411. PLANT PHYSIOLOGY (4). Physical and chemical aspects of the functions of higher plants. Two hours of lecture and four hours of
laboratory. PRQ: BIOS 205 and BIOS 209, or consent of department.

412. MYCOLOGY (4). Culture, morphology, and economic significance of the fungi. PRQ: BIOS 205 and BIOS 209, or consent of department.

413. MICROBIAL PHYSIOLOGY (3). Physical and chemical aspects of the functions of bacteria and other microorganisms. PRQ: BIOS 300 and BIOS 313, or consent of department.

414. FRESH-WATER ALGAE (3). Identification, economic importance, and limnological relations of the algae. PRQ: BIOS 205 and BIOS 209, or consent of department.

415. WATER MICROBIOLOGY (3). Designed to acquaint the student
with normal and pollutional microorganisms found in water, their sources and
control. Standard methods of detection and enumeration as well as new experimental approaches will be stressed in the laboratory. PRQ:
BIOS 313 and CHEM 330 or CHEM 336, or consent of department.

416. METHODS OF ECOLOGICAL STUDY (3). Methods for the study of ecosystems, communities, and populations. CRQ: BIOS 316 or consent of department.

417. PATHOGENIC MICROBIOLOGY (4). A consideration of human
viruses, bacteria, and fungi and their host-parasite relations. PRQ: BIOS
313 or consent of department.

418. HUMAN HEREDITY (3). Inheritance in humans. This course does
not count for credit toward the major in biological sciences. PRQ: BIOS
103, BIOS 104, BIOS 109, or equivalent, or consent of department.

420. PLANT PATHOLOGY (3). Specific causal agents of plant diseases,
their identification and control measures. Parasitism and the economy of
crop disease. Two hours of lecture and two hours of laboratory. PRQ:
BIOS 305 or consent of department.

422X. EDAPHOLOGY (4). GEOG 422. Chemical and physical properties of soils affecting agricultural and forest productivity, segregation of natural
plant communities, and ornamental plants. Field trips are required. PRQ:
GEOG 302 and CHEM 110 or CHEM 210, or consent of department.

423. GENERAL VIROLOGY (3). Interactions between bacterial, animal,
and plant viruses and their hosts, with emphasis on the biochemical
development and genetics of viruses. PRQ: BIOS 300 and BIOS 313, or consent of department.

430. PLANT TAXONOMY (4). Identification and classification of higher
plants with emphasis on the local flora. PRQ: BIOS 205 or consent
department.

432. MACROEVOLUTION (3). Mechanisms, rates, and patterns in the origin of species and higher taxa. PRQ: BIOS 317 or consent of department.

433. BEHAVIORAL ECOLOGY (3). Examples and theories of how
behavior influences survival and reproduction in different environments. PRQ: BIOS 209 or consent of department.

434. POPULATION BIOLOGY (3). Principles of population structure,
dynamics, ecology, and evolution. PRQ: BIOS 316 or BIOS 317, or consent of department.

435X. PRIMATE ANATOMY AND EVOLUTION (3). ANTH 445. Living
and fossil primate osteology. A detailed study of the primate skeleton is coupled with information on the primate fossil record. Skeletal anatomy of living and fossil primates is analyzed in terms of function and adaptation and is used to discern evolutionary relationships. Lectures and laboratory. PRQ: ANTH 240 or consent of department.

440. IMMUNOBIOLOGY (3). The biochemistry and interactions of antigens, antibodies, and lymphocytes; development of the immune
system; and medical applications and current immunological techniques. PRQ: BIOS 300 or BIOS 313, or consent of department.

441. EXPERIMENTAL IMMUNOLOGY (3). A laboratory course in
theoretical and experimental knowledge of basic immunological techniques. CRQ: BIOS 440 or consent of department.

443X. PRINCIPLES OF PHYSICAL CHEMISTRY (4). CHEM 442. A one-
semester course intended for chemistry majors pursuing Emphases 2,
3, or 4. Also suitable for non-majors desiring a course in physical chemistry. Topics covered are thermodynamics, chemical kinetics, and atomic and molecular structure. Not offered for graduate credit for chemistry majors. Four lectures a week. PRQ: CHEM 211, PHYS 251, and MATH 230, or consent of department.

444. CELL AND TISSUE CULTURE (3). Basic laboratory techniques in plant and animal tissue culture. Topics include growth analysis,
mutation induction, hybridoma production, cell cycle analysis, and cell fusion. Topics and experiments from recent literature will be emphasized. One hour of lecture and two three-hour laboratories per week. PRQ:
BIOS 300 or consent of department.

445. HISTOLOGY (3). Animal cells and tissues including their
ultrastructure. Cellular structure in relationship to tissue and organ
systems. PRQ: BIOS 300 or consent of department.

446. GROSS HUMAN ANATOMY (6). Gross anatomy of the human
body, including dissection, with functional, histological, developmental,
and clinical correlates. PRQ: BIOS 355 or BIOS 357, or consent of department.

447. COMPARATIVE VERTEBRATE ANATOMY (4). Relationships of vertebrate classes as demonstrated by embryological, morphological,
and paleontological evidence. Three hours of lecture and four hours of
laboratory. PRQ: BIOS 205 and BIOS 209, or consent of department.

448. AQUATIC ECOLOGY (3). Structure and function of freshwater communities as influenced by biotic and abiotic interactions. PRQ: BIOS
205 and BIOS 209, or consent of department.

450. ANIMAL PARASITOLOGY (4). Systematics of parasitic protozoa,
helminths, and arthropods with an emphasis on the morphology, life
cycles, and diagnostic features of human parasites. Two hours of lecture and four hours of laboratory. PRQ: BIOS 205 and BIOS 209, or consent of department.

453. ENTOMOLOGY (3). Insect anatomy and taxonomy, including
general ecology and economic importance. Other arthropod groups are
broadly considered in relation to insects. PRQ: BIOS 205 and BIOS
209, or consent of department.

454. DEVELOPMENTAL BIOLOGY (4). Mechanisms of eukaryotic
development. Emphasis on model animal systems. Two hours of lecture
and four hours of laboratory per week. PRQ: BIOS 300 or consent of department.
455. COMPARATIVE PHYSIOLOGY (3). General physiological principles and functions in vertebrates and invertebrates. Three hours of lecture and three hours of laboratory per week. PRQ: BIOS 205 and BIOS 209, or consent of department.

456. BIOLOGY OF FISHES, AMPHIBIANS, AND REPTILES (4). Evolution, taxonomy, physiology, behavior, ecology, and distribution of fishes, amphibians, and reptiles. Laboratory work and field trips emphasize identification of Illinois forms. PRQ: BIOS 205 and BIOS 209, or consent of department.

457. BIOLOGY OF BIRDS AND MAMMALS (4). Evolution, taxonomy, physiology, behavior, ecology, and distribution of birds and mammals. Laboratory work and field trips emphasize identification of Illinois forms. PRQ: BIOS 205 and BIOS 209, or consent of department.

459. ANIMAL BEHAVIOR (4). Determination of the function, biological significance, causation, and evolution of species typical behavior. Six hours of lecture and scheduled laboratory periods. PRQ: BIOS 205 and BIOS 209, or consent of department.

461. ENDOCRINOLOGY (3). Classic mammalian endocrine systems are examined with an emphasis on cellular and molecular mechanisms of action. Topics will include endocrine cell signaling, molecular mechanisms of hormone action, and some discussion of endocrine pathology. The course includes lecture material and readings from the current professional literature. PRQ: BIOS 355 or consent of department.

462. BIOGEOGRAPHY (3). Role of ecological, evolutionary, and historical factors in explaining the past and current distributions of plants and animals. Current theory and applications to species preservation and nature reserve design. Three hours of lecture. PRQ: BIOS 316 or consent of department.

463. INVERTEBRATE PALEONTOLOGY (3). GEOL 470. The principal invertebrate fossil forms of the geologic record, treated from the standpoint of their evolution, and the identification of fossil specimens. Several field trips required. PRQ: Major in biological sciences or geology.


470X. GENERAL BIOLOGICAL CHEMISTRY (3). CHEM 470. Overall view of biochemistry including structure, properties, function, and metabolism of biologically important compounds. PRQ: CHEM 331 or CHEM 337, or consent of department.

471X. BIOLOGICAL CHEMISTRY LABORATORY (3). CHEM 471. Experiments in the isolation, purification, and characterization of biomolecules by chromatographic, electrophoretic, and centrifugation techniques; enzyme kinetics; electron transport in mitochondria and microsomes. PRQ: CHEM 321 or CHEM 325, or consent of department. CRQ: CHEM 470 or CHEM 472, or consent of department.


474X. ADVANCED BIOCHEMICAL TECHNIQUES (3). CHEM 474. Theory and practice in the use of techniques for the isolation and characterization of many molecules such as ultrafiltration, amino acid analysis, ultracentrifugation, optical rotatory dispersion, circular dichroism, absorption spectroscopy, calorimetry, and rapid reaction kinetics. Two 4-hour laboratory periods including one hour of lecture a week. PRQ: Consent of department.

477. HUMAN GENETICS (3). Genetic diseases of man with emphasis on the probability of birth defects. PRQ: BIOS 308 or consent of department.

480X. COMPARATIVE PSYCHOLOGY (3). PSYC 480. An examination of experimental studies comparing the behavior of various species of animals. PRQ: PSYC 102 or consent of department.

511. PLANT METABOLISM (3). Biochemical and physiological aspects of metabolism in plants, including interpretation of current scientific literature. PRQ: Two years of chemistry or consent of department.

518. SOIL MICROBIOLOGY (3). The major groups of soil microorganisms; their significance and reactions. PRQ: BIOS 313 and one semester of chemistry, or consent of department.

525. ELECTRON MICROSCOPY (4). Preparative techniques for electron microscopy of biological specimens. Basic theory and operation of electron microscopes, including electron-micrography. Interpretation of the ultrastructure of cells and cell constituents. PRQ: Consent of department.

527X. NEUROANATOMICAL BASES OF BEHAVIOR (3). PSYC 527. Gross, microscopic, and ultramicroscopic anatomy of the nervous system; basic subdivisions of the central, peripheral, and autonomic components of the nervous system; histology and ultrastructure of nervous tissue; and neuroanatomical mechanisms in the regulation of behavior. PRQ: Graduate standing, PSYC 503, or consent of department.

528X. NEUROANATOMICAL BASES OF BEHAVIOR: LABORATORY (3). PSYC 528. Gross, microscopic, and ultramicroscopic examination of tissues from the nervous systems of selected species. PRQ: or CRQ: BIOS 527X.

530. RADIATION BIOLOGY (3). The effects of radiation upon cells and organisms.

530X. NEUROCHEMICAL BASES OF BEHAVIOR (3). PSYC 530. Biochemistry of the nervous system; chemical composition, metabolism, and chemistry of neurons and glia; chemical bases of learning, motivation, and other categories of behavior. PRQ: Graduate standing, PSYC 529, or consent of department.

535. MOLECULAR GENETICS OF PROKARYOTES (4). Mechanisms of molecular, bacterial, and viral genetics including genetic recombination, mutagenesis, gene regulation and expression in the bacteria and their viruses. Topics from recent literature will be emphasized as well as laboratory techniques in genetic exchange, mutagenesis, and genetic engineering. Familiarity with molecular biology concepts is assumed. PRQ: BIOS 300, BIOS 308, and BIOS 313, or consent of department.

536. EXPERIMENTS IN MOLECULAR GENETICS OF PROKARYOTES (3). Experiments with current techniques of molecular genetics of prokaryotes. CRQ: BIOS 535 or consent of department.
591. RECOMBINANT DNA TECHNIQUES LABORATORY (3). Advanced experiments using recombinant DNA techniques. PRQ: Consent of department.

599. MASTER'S THESIS (1-9). Research leading to writing of a master's thesis. Students are eligible to register only after their research problems have been approved. May be repeated. A maximum of 12 semester hours of combined credit in BIOS 599 and BIOS 670 may be applied toward the master's degree. PRQ: Consent of department.

600. SPECIAL TOPICS IN BIOLOGY (1-9).
A. Physiology
B. Development and Morphogenesis
C. Genetics
D. Microbiology
E. Ecology/Environmental Biology
G. Evolution
J. Systematics
K. Molecular Biology
M. Research Methods
Lectures, discussions, and reports on topics of special interest in a particular field of biology. One to 9 semester hours as scheduled; each field may be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

661. SEMINAR (1).
A. Microbiology
B. Ecology and Evolution
D. Cell Biology
E. Plant Sciences
May be repeated to a maximum of 4 semester hours.

670. INDEPENDENT STUDY (1-9). Independent study of problems under the supervision of an adviser. May be repeated, but no more than 6 semester hours may be counted toward the M.S. degree. A maximum of 12 semester hours of combined credit in BIOS 599 and BIOS 670 may be applied toward the M.S. degree. PRQ: Consent of department.

690. COOPERATIVE EDUCATION (1-3). Work experience related to biological sciences. Credit to be determined by the graduate coordinator. Enrollment restricted to students formally participating in NIU's cooperative education program. May be repeated; however, no more than 3 semester hours may be applied toward any one degree. PRQ: Consent of the department and the university's director of cooperative education.

699. DOCTORAL DISSERTATION (credit arranged). May be repeated with permission of the department. PRQ: Admission to Ph.D. candidacy and consent of department.
Department of Chemistry (CHEM)

GRADUATE FACULTY

Joe W. Vaughn, chair, professor, Ph.D., University of Kentucky
Steven M. Bachrach, associate professor, Ph.D., University of California, Berkeley
Gary M. Baker, associate professor, Ph.D., Purdue University
David S. Ballantine, Jr., associate professor, Ph.D., University of Maryland
Jon W. Carnahan, associate professor, Ph.D., University of Cincinnati
Robert F. Cunico, professor, Ph.D., Purdue University
James E. Erman, professor, Distinguished Research Professor, Ph.D., Massachusetts Institute of Technology
Thomas M. Gilbert, assistant professor, Ph.D., University of California, Berkeley
Stephen K. Gray, adjunct associate professor, Ph.D., University of California, Berkeley
Arnold E. Hampel, professor, Distinguished Research Professor, Ph.D., University of Wisconsin
Dennis N. Kevill, professor, Distinguished Research Professor, Ph.D., University of London
Gordon C. Kresheck, professor, Ph.D., Ohio State University
Chihui-Tsu Lin, professor, Ph.D., University of California, Los Angeles
W. Roy Mason III, professor, Ph.D., Emory University
John L. A. Erman, professor, Distinguished Research Professor, Ph.D., Princeton University
David M. Piatak, professor, Ph.D., University of Maine
Michael G. Prais, adjunct associate professor, Ph.D., University of California, San Diego
Robert D. Rogers, professor, Ph.D., University of Alabama
Morley E. Russell, professor, Ph.D., University of Michigan
Charles W. Spangler, professor, Presidential Research Professor, Ph.D., University of Maryland
Lee Sunderlin, assistant professor, Ph.D., University of California, Berkeley
Petr Vanysek, associate professor, Ph.D., Czechoslovak Academy of Sciences
Chong Zheng, assistant professor, Ph.D., Cornell University

The Department of Chemistry offers programs leading to the degrees Master of Science and Doctor of Philosophy. Bulletins describing graduate programs in chemistry are available from the department chair.

Admission to graduate programs in chemistry requires a baccalaureate degree including mathematics through differential equations. Consideration may also be given to applicants with degrees in related areas.

Master of Science

A student seeking to qualify for the degree Master of Science with a major in chemistry shall satisfy the following departmental requirements in addition to satisfying Graduate School requirements:
1. Students who wish to enter the M.S. program in chemistry should have a baccalaureate degree in a life, physical, or mathematical science, including the following: one year of physics; one year of general chemistry; one year of physical chemistry; mathematics through differential equations; and four courses in other areas of chemistry at the 300-400 level. Students deficient in these requirements may satisfy them after admission, but the courses may not be taken for graduate credit and must be approved by the Graduate Program Committee after consultation with the chemistry faculty in the student's primary area of interest. These deficiencies must be satisfied with a grade of C or better during the first two semesters of enrollment in the program.
2. Prior to registration the student is required to take background examinations in the fields of analytical, inorganic, organic, and physical chemistry. These examinations are usually given a week before registration to aid the adviser in the preparation of a course of study for the student. A passing level has been established so that these examinations can also serve as proficiency examinations for required undergraduate courses. (Students will be informed in advance that undergraduate deficiencies may be satisfied in this manner.)
3. A minimum of 30 semester hours of graduate work is required.
4. The student must successfully complete a minimum of five courses (15 semester hours), of which at least 9 semester hours are to be in chemistry, for graduate credit. At least one of these courses must be in physical chemistry, and a minimum of two courses must be outside the primary area of study. As a general rule, a student may meet course requirements by proficiency examination. This may be done by taking an examination prepared and administered by the appropriate division. Only one such attempt will be allowed; if a proficiency examination involving a course is failed, the student must enroll in the course for credit when next offered. Only graduate courses from accredited institutions in which the student has earned a grade of B or better may be accepted towards an advanced degree, subject to approval of the department and the Graduate School.
5. Chemistry seminar (CHEM 515) must be taken each semester.
6. A thesis incorporating the results of an approved research problem and successfully defended as part of a comprehensive oral examination is required. Thesis credit (CHEM 599) should be taken as soon as possible, with enrollment to continue each semester until graduate work terminates.
7. The student must fulfill all requirements for the M.S. degree within a period of four consecutive years from entry into the program.

Doctor of Philosophy

An applicant seeking admission to an advanced degree in chemistry must meet Graduate School requirements.

The prospective candidate for the degree Doctor of Philosophy in chemistry may do advanced study and research in any of the following five areas: analytical, biological, inorganic, organic, or physical chemistry.
Students who wish to enter the Ph.D. program should have a baccalaureate degree in a life, physical, or mathematical science, including the following: one year of physics; one year of general chemistry; one year of physical chemistry; mathematics through differential equations; and four courses in other areas of chemistry at the 300-400 level. Students deficient in these requirements may satisfy them after admission, but the courses may not be taken for graduate credit and must be approved by the Graduate Program Committee after consultation with the chemistry faculty in the student's primary area of interest. These deficiencies must be satisfied with a grade of C or better during the first two semesters of enrollment in the program.

Each student pursuing the degree Doctor of Philosophy in chemistry is required to complete successfully the following:

Course Requirements

1. A minimum of eight courses (24 semester hours), of which at least 15 semester hours are to be in chemistry, must be taken for graduate credit. At least one of these courses must be in physical chemistry, and a minimum of three courses must be outside the major area.

2. Only graduate courses from accredited institutions in which the student has earned a grade of B or better may be accepted towards an advanced degree, subject to approval of the department and the Graduate School.

3. Chemistry Seminar (CHEM 515) must be taken each semester. This requirement is in addition to the 24 semester hours of required course work.

4. The student must complete the degree requirements with a cumulative GPA of 3.20 or above in all NIU graduate course work included on the doctoral program of courses.

5. CHEM 699, Doctoral Research and Dissertation, should be taken as soon as possible after passing the qualifying examination, with enrollment to continue each semester until graduate work terminates. The research adviser will be chosen in the second term after admission to the graduate program.

Examinations

1. Background examinations are required at the time of entering the program (described above in the requirements for the master's degree).

2. A qualifying examination must be satisfactorily completed in the primary area. This examination will test comprehensive knowledge of the area at the graduate level. Each division will establish the graduate course(s) in the division which will contribute towards the material upon which the examination is based. The qualifying examination must be taken no later than the fourth semester of enrollment as a graduate student. Students must have a GPA of at least 3.20 in previous graduate work to attempt the examination. A prospective doctoral candidate who has received an M.S. degree in chemistry from NIU must take the examination at the first offering following the awarding of the M.S. degree.

Qualifying examinations will be given three times a year, in September, January, and May.

A student who fails to pass this examination must retake it at the next offering. Failure on the second attempt will terminate further work toward the doctorate but not the master's degree.

3. Within one year of passing the qualifying examination in the primary field the student will complete a research oral examination on his or her field of research encompassing (a) the background literature in the area, (b) the current state of the student's research, and (c) the proposed direction of the research. The examination committee will be formed from faculty representing the primary area and a secondary area and will constitute the student's examining committee for all future examinations, with the addition of an extradepartmental representative for the final dissertation oral defense. The student's research adviser will chair the research oral committee. This examination will serve as the admission to candidacy examination.

A student who fails to pass this examination must retake it no earlier than four nor later than six months after the first attempt. Failure on the second attempt will terminate further work toward the doctorate.

4. Each doctoral candidate will give an oral presentation of her or his research once a year. The student's examining committee will evaluate the presentation and inform the student of its opinion in writing.

5. Appeals against dismissal for failure to satisfy above examination requirements shall be directed to the Graduate Program Committee, whose recommendation shall be passed on to the faculty. The decision of the latter shall be final.

Language/Skill Requirement

After admission to the graduate program in chemistry, the student must demonstrate proficiency in computer programming or in German, French, or Russian. The student's adviser and Doctoral Guidance Committee must approve how the student will satisfy this requirement. The computer programming requirement may be satisfied by receiving a grade of A or B in CSCI 220 (Pascal), CSCI 230 (FORTRAN), CSCI 240 (C), or CSCI 360 (Assembler), or by a proficiency examination in one of these courses. Reading proficiency in a foreign language may be satisfied in French, German, or Russian by demonstrating average proficiency on the Graduate School Foreign Language Test, or on a translation examination, administered by the Office of Testing Services, or by receiving a grade of A or B in FLFR 201, TLGE 201, or FLRU 201.

Dissertation

The student must complete an approved research problem and incorporate the results in a dissertation. The dissertation will be a substantial contribution to knowledge in which original scholarship is demonstrated. A successful defense of the dissertation before the student's doctoral committee is required for its final approval.

Limitation of Time

All requirements for the Ph.D. degree in chemistry must be completed within a period of seven consecutive years from entry into an NIU graduate program in chemistry.

Course Offerings

COURSE NUMBERING SYSTEM: The courses offered by the Department of Chemistry may be divided into several different areas. As a general guide to students, the following numbering system is used:

-00, special topics
-01 to —19, general chemistry
-20 to —29, analytical chemistry
-30 to —39, organic chemistry
-40 to —50, physical chemistry
-51 to —59, special laboratory and research areas
-60 to —69, inorganic chemistry
-70 to —79, biochemistry
-80 to —99, research, dissertation, and miscellaneous

405. CHEMICAL INSTRUMENTATION (3). Measurements of signals generated by chemical instrumentation. Applications of active and passive components in amplifiers, comparison circuits, filter circuits, and mathematical function circuits in relation to chromatographic, electroanalytical, and spectrochemical systems. Electrical noise as a function of frequency is discussed in the context of signal sampling and achieving maximum signal-to-noise ratios. Analog and digital data acquisition and computer controlled measurements. Two lectures and 3 hours of laboratory per week. PRQ: CHEM 440 or consent of department. CRQ: MATH 334 or consent of department.

425. INSTRUMENTAL METHODS OF ANALYSIS (4). Fundamentals of physicochemical techniques of chemical analysis. Interpretations and application of electrical, optical, thermal, and magnetic measurements in chemical analysis. Three lectures and one 4-hour laboratory period a week. Not offered for graduate credit for chemistry majors. PRQ: CHEM 325 and either CHEM 441 or CHEM 442, or consent of department.
435. PHYSICAL METHODS IN ORGANIC CHEMISTRY (3). Application of spectroscopic techniques to the determination of organic structures. PRQ: CHEM 441 or CHEM 442, or consent of department.

440. PHYSICAL CHEMISTRY I (3). Study of the gaseous, liquid, and solid states; thermodynamics; chemical equilibrium; and kinetic theory. Three lectures a week plus a recitation section. Not offered for graduate credit for chemistry majors. PRQ: CHEM 211, PHYS 251A, and MATH 232, or consent of department.

441. PHYSICAL CHEMISTRY II (3). Atomic and molecular structure, spectroscopy, kinetics, and chemical statistics. Three lectures a week plus a recitation section. Not offered for graduate credit for chemistry majors. PRQ: CHEM 440 and either MATH 334 (preferred) or MATH 336 or consent of department.

442. PRINCIPLES OF PHYSICAL CHEMISTRY (4). Crosslisted as BIOS 443X and GEOE 443X. A one-semester course intended for chemistry majors pursuing Emphases 2, 3, or 4. Also suitable for non-majors desiring a course in physical chemistry. Topics covered are thermodynamics, chemical kinetics, and atomic and molecular structure. Not offered for graduate credit for chemistry majors. Four lectures a week. PRQ: CHEM 211, PHYS 251, and MATH 230, or consent of department.

446. THEORETICAL CHEMISTRY (3). Continuation of CHEM 440 and CHEM 441. Atomic structure, chemical bonding, and introduction to elementary quantum mechanics. Three lectures a week. PRQ: CHEM 441 or consent of department.

447. PHYSICAL CHEMISTRY LABORATORY (2). Modern experimental techniques and underlying theoretical principles for thermodynamics, chemical kinetics, spectroscopy, and molecular structure. Introduction to computer methods in physical chemistry. One lecture and one 4-hour laboratory period a week. Not offered for graduate credit for chemistry majors. PRQ: CHEM 442; or CRQ: CHEM 441; or consent of department.

460. INORGANIC CHEMISTRY II (4). Introduction to bonding and structure of transition metal complexes. Descriptive chemistry of the first row transition elements including reactions, structures, electronic spectra, and magnetic properties. Selected topics from the heavy transition elements, the lanthanides and the actinides. The laboratory work will involve the synthesis and characterization of compounds of both transition elements and main group elements. Not offered for graduate credit for chemistry majors. Three lectures and one 4-hour laboratory period a week. PRQ: CHEM 325, CHEM 339, CHEM 360, and either CHEM 441 or CHEM 442, or consent of department.

463. INORGANIC CHEMISTRY III (3). Chemical applications of group theory including vibrational spectra, molecular orbitals, and ligand field theory. Theoretical basis for physical methods in inorganic chemistry. Selected topics in modern structural inorganic chemistry; organometallic compounds, compounds including rings and polymers, and bioinorganic chemistry. Three lectures a week. PRQ: CHEM 460 or consent of department.

470. GENERAL BIOLOGICAL CHEMISTRY (3). Crosslisted as BIOS 470X. Overall view of biochemistry including structure, properties, function, and metabolism of biologically important compounds. PRQ: CHEM 331 or CHEM 337, or consent of department.

471. BIOLOGICAL CHEMISTRY LABORATORY (3). Crosslisted as BIOS 471X. Experiments in the isolation, purification, and characterization of biomolecules by chromatographic, electrophoretic, and centrifugation techniques; enzyme kinetics; electron transport in mitochondria and microsomes. PRQ: CHEM 321 or CHEM 325, or consent of department. CRQ: CHEM 470 or CHEM 472, or consent of department.


473. BIOLOGICAL CHEMISTRY II (3). Crosslisted as BIOS 473X. Detailed study of the metabolism of carbohydrates, lipids, and nitrogenous compounds, including proteins and nucleic acids. Metabolic regulation. Genetic information. PRQ: CHEM 472 or BIOS 472X, or consent of department.

474. ADVANCED BIOCHEMICAL TECHNIQUES (3). Crosslisted as BIOS 474X. Theory and practice in the use of techniques for the isolation and characterization of macromolecules, such as ultrafiltration, amino acid quantitation, optical rotatory dispersion, circular dichroism, absorption spectroscopy, calorimetry, and rapid reaction kinetics. Two 4-hour laboratory periods including one hour of lecture a week. PRQ: CHEM 471 or consent of department.

495X. TEACHING OF PHYSICAL SCIENCES (3). PHYS 495. Preparation for certification in grades 6-12 in one or more of the fields of physical science; physics, chemistry, earth science, general science (physical science emphasis). Examination and analysis of modern curricula; classroom and laboratory organization; microteaching and observation of teaching; lesson planning; multicultural education; teaching science to the exceptional child; reading and the teaching of science; methods of evaluation. Includes 15 clock hours of clinical experience. Not offered for graduate credit for chemistry majors. PRQ: Consent of department.

500. SELECTED TOPICS IN CHEMISTRY (1-3).
   A. Inorganic
   B. Analytical
   C. Organic
   D. Physical
   E. Biological
   Lecture and discussions of special topics for beginning graduate students. One to 3 semester hours as scheduled; course may be repeated up to a maximum of 9 semester hours. PRQ: Consent of department.

501. CHEMISTRY SEMINAR (1/2). Required of graduate students each semester in residence except summer session. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

522. ADVANCED ANALYTICAL CHEMISTRY (3). Fundamental principles of chemical separations and measurements with emphasis on noninstrumental methods. New reagents and techniques are surveyed. PRQ: CHEM 441 or consent of department.

524. OPTICAL METHODS IN ANALYTICAL CHEMISTRY (3). Theoretical and practical applications of spectral measurements to research and chemical analysis, with emphasis on emission and absorption spectrophotometry in the principal regions of the electromagnetic spectrum. PRQ: CHEM 425 or consent of department.

531. ORGANIC SYNTHESIS (3). Systematic presentation of methods of assembling carbon skeletons, functional group interconversions, and analysis of synthetic pathways. PRQ: CHEM 331 or CHEM 337.

532. PHYSICAL ORGANIC CHEMISTRY I (3). Structure and mechanism in organic chemistry including structural theory, stereochemistry, and the study of the reactive intermediates of organic chemistry. PRQ: CHEM 331 or CHEM 337, and CHEM 441, or consent of department.

533. PHYSICAL ORGANIC CHEMISTRY II (3). Physical factors affecting the course of organic reactions; quantitative structure-reactivity relationships; applications of modern theory. PRQ: CHEM 532 or consent of department.

541. CHEMICAL THERMODYNAMICS (3). Fundamental laws of thermodynamics and applications to chemical problems. Calculation of thermodynamic quantities. PRQ: CHEM 441 or consent of department.

542. KINETICS (3). Theories and applications of rates of chemical reactions including reactions in the gas phase and in solution. Applications of kinetics in the determination of reaction mechanisms. PRQ: CHEM 441 or consent of department.

543. QUANTUM CHEMISTRY (1). Postulational basis of quantum theory. The time-independent Schrodinger equation and its applications. Operator techniques are emphasized. PRQ: CHEM 446 and either MATH 334 or MATH 336, or consent of department.

550. STATISTICAL THERMODYNAMICS (3). Principles of statistical mechanics and application to the calculation of thermodynamic properties. PRQ: CHEM 541 or consent of department.

555. ELECTROANALYTICAL CHEMISTRY (3). Theory, practice, and applicability of electrical measurements in analysis and research; techniques as well as contemporary techniques of electroanalytical chemistry and electrochemical kinetics are emphasized. PRQ: CHEM 425 or consent of department.

570. ENZYMES (3). Basic principles of the concepts of enzyme kinetics, theory and design of experimental methods, and interpretation of enzyme mechanisms. Three lectures a week. PRQ: CHEM 470 or consent of department Recommended. CHEM 545.
575. PHYSICAL CHEMISTRY OF MACROMOLECULES (3). Comprehensive introduction to the use of physical chemistry in the study of macromolecules. Three lectures a week. PRQ: CHEM 441 or consent of department.

595. IN-SERVICE EXPERIENCE IN CHEMISTRY (1-4). Work individually or in small groups in an academic, industrial, or government setting under the guidance of a professional staff member(s) in an approved lecture and/or laboratory program. May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

599. RESEARCH: MASTER'S THESIS (1-15). The individual investigation of a special problem under the supervision of an adviser. This work normally culminates in the writing of the thesis. May be repeated, but only a maximum of 15 semester hours may be applied towards the M.S. degree. PRQ: Consent of department.

600. SPECIAL TOPICS IN CHEMISTRY (1-3).
A. Inorganic
B. Analytical
C. Organic
D. Physical
E. Biological
Lectures, discussions, and reports on topics of special interest in a particular field of chemistry. One to 3 semester hours as scheduled; course may be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

630. HETEROCYCLIC CHEMISTRY (3). A systematic survey of the chemical behavior of heterocyclic compounds as a function of ring size and heteroatom. Mechanistic aspects will be emphasized. Heteroatoms to be considered include nitrogen, oxygen, and sulfur. PRQ: CHEM 531 and CHEM 532, or consent of department.

631. ADVANCED ORGANIC SYNTHESIS (3). Condensation reactions and the design of total synthesis with respect to the introduction of chirality. PRQ: CHEM 531 and CHEM 532, or consent of department.

699. DOCTORAL RESEARCH AND DISSERTATION (credit arranged). May be repeated with permission of the department.
Department of Communication Studies (COMS)

GRADUATE FACULTY

Richard L. Johannesen, chair, professor, Ph.D., University of Kansas
Philip A. Gray, assistant chair, professor, Ph.D., Ohio State University
Gretchen Bislinghoff, assistant professor, Ph.D., Northwestern University
Ferald J. Bryan, assistant professor, Ph.D., University of Missouri
Gary Burns, associate professor, Ph.D., Northwestern University
Patrice Buzzanell, assistant professor, Ph.D., Purdue University
Sylvia Chan-Olmsted, assistant professor, Ph.D., Michigan State University
Jeffrey Chown, associate professor, Ph.D., University of Michigan
Martha Cooper, associate professor, Ph.D., Pennsylvania State University
Arthur P. Doederlein, assistant professor, Ph.D., Northwestern University
Keith M. Hearlt, assistant professor, Ph.D., Purdue University
Gary L. Kreps, professor, Ph.D., University of Southern California
Charles U. Larson, professor, Ph.D., University of Minnesota
Mary S. Larson, associate professor, Ed.D., Northern Illinois University
Robert Miller, associate professor, Ph.D., Northwestern University
M. Jack Parker, associate professor, Ph.D., Southern Illinois University
Lois S. Self, associate professor, Ph.D., University of Wisconsin
Charles O. Tucker, associate professor, Ph.D., Ohio State University
Steve Wilson, associate professor, Ph.D., Purdue University

The Department of Communication Studies offers a graduate program leading to the degree Master of Arts. The graduate program in communication studies is adapted to the student's individual needs and academic background. Each student plans a program in consultation with an adviser from the graduate faculty of the department. With the approval of the adviser, the student may elect a maximum of 12 semester hours in allied studies in other departments.

A student, with the adviser's advice and consent, may pursue the degree with or without a thesis. The number of credits transferred from another school or taken as a student-at-large to be approved as part of the student's program of courses will be determined by the student's departmental advisory committee, up to the maximum permitted by the Graduate School.

All applicants from countries where English is not the native language must submit their scores from the Test of Spoken English (TSE) as part of their application for admission to graduate study in communication studies.

Master of Arts

Requirements

1. For the Master of Arts in communication studies, a student may pursue the primary portion of graduate study in one of the areas of the Department of Communication Studies: communication theory, rhetorical studies, and media studies.
2. Every student must take at least one graduate-level course in communication theory, rhetorical studies, and media studies. A student who plans a teaching career must take at least one graduate course in communication education.
3. COMS 591 is required of all students and must be taken during the first 12 semester hours of graduate work.
4. Although a student may concentrate graduate study in one area of communication studies, the adviser reserves the right to require courses in several areas if the student's academic background is deficient in certain basic courses; the student may choose to emphasize several areas.
5. A student, with the adviser's advice and consent, may elect to earn a Master of Arts degree with or without a thesis according to the following requirements.

Degree with Thesis

1. The student must earn a minimum of 30 semester hours of graduate credit.
2. A thesis must be submitted and approved. From 3 to 6 semester hours may be allotted to thesis research and writing.
3. A maximum of 6 semester hours may be taken in a combination of COMS 597 and COMS 599.
4. During the semester in which degree requirements are completed, the student must pass a written examination (6-7 hours) which will assess knowledge and ability in the area of special interest.
5. The student must pass an oral examination on the thesis or on the thesis and course work.

Degree without Thesis

1. The student must earn a minimum of 30 semester hours of graduate credit.
2. A maximum of 3 semester hours may be earned in COMS 597.
3. During the semester in which degree requirements are completed, the student must pass a written examination (8-9 hours) and an oral examination, both of which will assess knowledge and ability in the area of special interest.
4. The comprehensive examination includes the submission by the student, for evaluation by the committee, of an expanded scholarly paper growing out of previous course work or directed individual study.
Course Offerings

Communication Theory

402. GROUP COMMUNICATION (3). The nature of group processes. Leadership, communication, and decision-making problems in small groups.

404. COMMUNICATION THEORIES (3). The role of spoken communication in social adaptation. Relationships among thought, language, and expression; verbal perception and cognition; communication models. PRQ: COMS 252 or consent of department.

405. ADVANCED INTERPERSONAL COMMUNICATION (3). Examination and application of interpersonal communication theory. PRQ: Consent of department.

410. COMMUNICATION AND THE SEXES (3). Theories, research, and observation of the verbal and nonverbal components of communication, both within and across the sexes. Gender as a central symbol in human communication activity.

419. POLITICAL COMMUNICATION IN AMERICA (3). Communication theory and practices within the context of American politics. Modern campaigns, political communication consultants, issue definition and dissemination, communication strategies of administrative control, and communication within the presidency and within congress. Special focus on the mass media.

461. ORGANIZATIONAL COMMUNICATION (3). Communication systems within and among organizations; types and components of communication systems; the effects of communication systems upon values, productivity, morale, and dispersion of responsibility. Normally not available for credit to graduate students in communication studies.

502. CONTEMPORARY RHETORICAL THEORY (3). Issues in rhetorical theory construction, trends in 20th-century rhetorical theorizing, and the approaches to rhetorical theory of such figures as Kenneth Burke, I.A. Richards, Richard M. Weaver, Chaim Perelman, Stephen Toulmin, Ernesto Grassi, Michel Foucault, and Jurgen Habermas.

503. THE RHETORIC OF CONTROVERSY (3). While subject matter will change from semester to semester, focus will be on significant public speeches throughout American history on major intellectual, social, and political issues. May be repeated to a maximum of 9 semester hours provided there is no duplication of subject matter. PRQ: Consent of department.

504. METHODS OF RHETORICAL CRITICISM (3). Examination of the nature and function of rhetorical criticism in regard to diverse texts and contexts.

507. SEMINAR IN SMALL-GROUP COMMUNICATION (3). Theories of communication in small-group interaction, especially in decision-making and conflict resolution; examination of the experimental literature.

510. COMMUNICATION AND CONFLICT MANAGEMENT (3). Communication principles and techniques in relation to conflict management and negotiation; emphasis on interpersonal and organizational contexts. PRQ: Consent of department.

540. RHETORICAL THEORY AND CRITICISM [3]. Classical and modern rhetorical theories; methods for analysis and appraisal of rhetoric. PRQ: COMS 252 or consent of department.

550. THE RHETORICAL PROCESS (3). Communication in the development and practice of leadership in modern organizations. Theory and research concerning leadership and communication.

557. SEMINAR IN RHETORICAL CRITICISM (3). Alternative critical perspectives, political rhetoric, the rhetoric of social protests, and communication in community-action groups. May be repeated to a maximum of 9 semester hours provided there is no duplication of subject matter. PRQ: Consent of department.

561. SEMINAR IN ORGANIZATIONAL COMMUNICATION (3). Analysis of communication systems in complex organizations with a focus on communication and organizational goals. Research methodologies emphasizing field study methods.

571. SEMINAR IN ORGANIZATIONAL LEADERSHIP AND COMMUNICATION (3). Communication in the development and practice of leadership in modern organizations. Theory and research concerning leadership and communication.

572. SEMINAR IN ORGANIZATIONAL DEVELOPMENT AND COMMUNICATION (3). Use of communication to identify performance gaps and direct informed organizational change. Theory and research concerning the central role of communication in organizational development.

573. SEMINAR IN EXTERNAL ORGANIZATIONAL COMMUNICATION (3). Focus on such functions as public relations, marketing, advertising, lobbying, fund raising, long-range planning, government relations, crisis management, sales, and media relations. Theory and research concerning the use of external communication in accomplishing organizational goals.

607. SEMINAR IN PERSUASION (3). Selected areas of research on persuasion and application of various theories to persuasive situations such as political campaigns, advertising, and social issues. May be repeated to a maximum of 9 semester hours provided there is no duplication of subject matter. PRQ: Consent of department.

Rhetorical Studies

400. COMMUNICATION AND THE SEXES (3). Theories, research, and observation of the verbal and nonverbal components of communication, both within and across the sexes. Gender as a central symbol in human communication activity.

500. THE CLASSICAL TRADITION IN RHETORICAL THEORY (3). Foundations of rhetoric, emphasizing the contributions of Plato, Aristotle, Cicero, and Quintilian, and selected medieval, Renaissance, and post-Renaissance rhetorical theorists.

502. CONTEMPORARY RHETORICAL THEORY (3). Issues in rhetorical theory construction, trends in 20th-century rhetorical theorizing, and the approaches to rhetorical theory of such figures as Kenneth Burke, I.A. Richards, Richard M. Weaver, Chaim Perelman, Stephen Toulmin, Ernesto Grassi, Michel Foucault, and Jurgen Habermas.

503. THE RHETORIC OF CONTROVERSY (3). While subject matter will change from semester to semester, focus will be on significant public speeches throughout American history on major intellectual, social, and political issues. May be repeated to a maximum of 9 semester hours provided there is no duplication of subject matter. PRQ: Consent of department.

504. METHODS OF RHETORICAL CRITICISM (3). Examination of the nature and function of rhetorical criticism in regard to diverse texts and contexts.

505. THE RHETORIC OF CONTROVERSY (3). A study of modern theories of argument and a critical examination of the function of debate in the determination of public policy.

560. SEMINAR IN COMMUNICATION THEORY AND RESEARCH (3). A. Theoretical Perspectives B. Intercultural Communication C. Interpersonal Communication D. Conflict Management

573. SEMINAR IN EXTERNAL ORGANIZATIONAL COMMUNICATION (3). Focus on such functions as public relations, marketing, advertising, lobbying, fund raising, long-range planning, government relations, crisis management, sales, and media relations. Theory and research concerning the use of external communication in accomplishing organizational goals.

Media Studies

426. FIELD PRODUCTION AND POST PRODUCTION (3). Production of video or film projects utilizing single-camera, on-location shooting and shot-by-shot editing, combined with sound track mixing and visual special effects. PRQ: COMS 358 and consent of department. CRQ: COMS 463 and consent of department.

449. AUDIO PRODUCTION (3). Production of radio programs or other audio projects of a complex nature, emphasizing recording, editing, and mixing techniques. PRQ: COMS 358 and consent of department.

450X. INSTRUCTIONAL TELEVISION I (3). LEIT 450X. Practical methods for the use of television in educational settings. Studio experience in the preparation and presentation of televised instructional units. Not open to students with credit in COMS 357 or COMS 358 or equivalent.

454. TRANSNATIONAL COMMUNICATION AND MEDIA (3). Crosslisted as JOUR 454X. A study of the development, structure, functions, and control of international communications media systems and activities as they affect world relations. PRQ: COMS 251 or consent of department.

455. MEDIA LAW AND ETHICS (3). The development, structure, theory, and functions of legal controls and ethical constraints on media production and programming. PRQ: COMS 251 or consent of department.
456. HISTORY OF FILM (3). 
C. Before 1950 
D. After 1950
May be repeated to a maximum of 6 semester hours provided no repetition of subject matter occurs. PRQ: COMS 356 or consent of department.

457. THE DOCUMENTARY TRADITION (3). Theories, techniques, history, and criticism of the documentary. PRQ: COMS 356 or consent of department.

458. SPECIAL TOPICS IN MEDIA STUDIES (3). Investigation of specific areas in media studies. Graduate students will be expected to do additional readings and research commensurate with their fields of study and the requirements of the course. May be repeated to a maximum of 6 semester hours provided no repetition of subject matter occurs. PRQ: Consent of department.

459. HISTORY OF BROADCASTING (3). Crosslisted as JOUR 459X. The history of radio and television broadcasting in the United States from its inception to the present. PRQ: COMS 251 or consent of department.

460. BROADCASTING THEORY AND CRITICISM (3). Major theoretical and critical perspectives for analysis of broadcasting. PRQ: COMS 251 or consent of department.

462. FILM THEORY AND CRITICISM (3). Major theoretical and critical perspectives for analysis of film. PRQ: COMS 356 or consent of department.

463. STUDIO PRODUCTION (3). Production of studio-based programs utilizing multiple cameras in a live or live-on-tape format. PRQ: COMS 358 and consent of department. CRQ: COMS 426 and consent of department.

466. NARRATIVE SCRIPTWRITING (3). Focus on structure, development, and execution of a 100-page narrative fiction script for media. Creativity, critical ability, and discipline in writing are stressed. PRQ: COMS 355 and consent of department.

467. CORPORATE SCRIPTWRITING (3). Focus on scripting for non-broadcast settings such as corporate training packages for management development or employee orientation; public service packages for social service agencies; and educational packages for such enterprises as medical agencies. Client assessment, pre-production planning, writing for specific objectives, and script evaluation are stressed. PRQ: COMS 355, COMS 357, and consent of department.

470. THE TEACHING OF SPEECH COMMUNICATION (3). Program and course development, instructional roles and strategies, and classroom communication and management. Includes special attention to multicultural variables and teaching the exceptional student. PRQ: Consent of department.

471. METHODS OF RESEARCH IN COMMUNICATION (3). Research in communication with an emphasis on qualitative and quantitative methodologies. Course requires a research paper and oral report. Computational, writing, and speaking skills will be assessed. PRQ: COMS 252 or consent of department.

472. FILM THEORY AND CRITICISM (3). Major theoretical and critical perspectives for analysis of film. PRQ: COMS 356 or consent of department.

473. THE TEACHING OF SPEECH COMMUNICATION (3). Program and course development, instructional roles and strategies, and classroom communication and management. Includes special attention to multicultural variables and teaching the exceptional student. PRQ: Consent of department.

475. INTERNSHIP IN COMMUNICATION STUDIES (1-12). For graduate students preparing to enter fields where internship experience is available and desirable. Study of problems related to teaching, media application, and communication systems. Experience will be supervised and evaluated. Total cumulative credit allowed for the course is 12 semester hours. No more than 3 semester hours may be included in the degree program. Grades awarded in internships are "satisfactory," "unsatisfactory," "incomplete." PRQ: Consent of department.

479. RESEARCH IN COMMUNICATION STUDIES (3). Focuses on the nature and development of research questions and methods typical of scholarship in such areas as communication theory, rhetorical studies, and media studies. PRQ: Consent of department.

480. SPECIAL TOPICS IN COMMUNICATION STUDIES (1-3). Course content and credit varies from semester to semester. May be repeated to a maximum of 9 semester hours provided topic varies. Not more than 3 semester hours may be applied toward the M.A. PRQ: Consent of department.

489. METHODS OF RESEARCH IN COMMUNICATION (3). Research in communication with an emphasis on qualitative and quantitative methodologies. Course requires a research paper and oral report. Computational, writing, and speaking skills will be assessed. PRQ: COMS 252 or consent of department.

490. SEMINAR IN MEDIA CRITICISM (3). Course examines mass communication theories, history of media criticism, current trends in media criticism, and major critical methods.

492. DOCUMENTARY THEORY AND PRACTICE (3). Survey of major documentary theories. Students put theory into practice while producing their own documentary videotapes.

493. SEMINAR IN MEDIA CRITICISM (3). Course examines mass communication theories, history of media criticism, current trends in media criticism, and major critical methods.

495. INSTRUCTIONAL TELEVISION II (3). LEIT 559. Application of television production techniques to instructional activities. PRQ: COMS 450X or consent of department.

Research, Communication Education, and Internship

434. THE TEACHING OF SPEECH COMMUNICATION (3). Program and course development, instructional roles and strategies, and classroom communication and management. Includes special attention to multicultural variables and teaching the exceptional student. PRQ: Consent of department.

491. METHODS OF RESEARCH IN COMMUNICATION (3). Research in communication with an emphasis on qualitative and quantitative methodologies. Course requires a research paper and oral report. Computational, writing, and speaking skills will be assessed. PRQ: COMS 252 or consent of department.

508. SPECIAL TOPICS IN COMMUNICATION STUDIES (1-3). Course content and credit varies from semester to semester. May be repeated to a maximum of 9 semester hours provided topic varies. Not more than 3 semester hours may be applied toward the M.A. PRQ: Consent of department.

539. INTERNSHIP IN COMMUNICATION STUDIES (1-12). For graduate students preparing to enter fields where internship experience is available and desirable. Study of problems related to teaching, media application, and communication systems. Experience will be supervised and evaluated. Total cumulative credit allowed for the course is 12 semester hours. No more than 3 semester hours may be included in the degree program. Grades awarded in internships are "satisfactory," "unsatisfactory," and "incomplete." PRQ: Consent of department.

591. RESEARCH IN COMMUNICATION STUDIES (3). Focuses on the nature and development of research questions and methods typical of scholarship in such areas as communication theory, rhetorical studies, and media studies. PRQ: Consent of department.

592. DIRECTED INDIVIDUAL STUDY (1-6). Supervised readings and research. A maximum of 3 credits may be applied toward the M.A. PRQ: Consent of department.

593. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

630. SEMINAR IN COMMUNICATION EDUCATION (3). May be repeated to a maximum of 9 semester hours provided that no repetition of subject matter occurs.

554. MEDIA AND SOCIETY (3). Primary focus on how media shape an individual's creation of social reality with regard to such areas as interpersonal communication, politics and government, religion, and community involvement.

555. THEORIES OF TELEVISION (3). Course focuses on the fundamental nature of television, how it differs from film and other media, its aesthetic characteristics, and how it is constituted technologically, industrially, and socially. Major theoretical and critical approaches to television will be examined.

556. FEMINIST FILM THEORY (3). Historical and methodological development of the feminist perspective in film analysis. The use and influence of sociological, psychoanalytical, Marxist, and semiological tools in a feminist approach to understanding film and how it works in a patriarchal society.
GRADUATE FACULTY

Rodney Angotti, chair, associate professor, Ph.D., University of Pittsburgh
Kathi Davis, associate professor, Ph.D., Illinois Institute of Technology
Barnett W. Glickfeld, associate professor, Ph.D., Columbia University
George Henry, associate professor, Ed.D., Northern Illinois University
H. Joel Jeffrey, professor, Ph.D., University of Colorado
C. Peter Lawes, associate professor, Ph.D., Dartmouth
Ibrahim Onyuksel, associate professor, Ph.D., University of Michigan
Robert Rannie, professor, Ph.D., Pennsylvania State University
Neil Rickert, professor, Ph.D., Yale University
Robert Zerwekh, associate professor, Ph.D., University of Illinois

For admission to the graduate program in computer science, students must have a thorough knowledge of the programming language C, advanced aspects of COBOL, and assembler language for third generation computers. Students who are admitted with stipulated deficiencies must earn a grade of B or higher in each of their stated deficiency courses.

Graduate students and students-at-large may not elect to complete courses offered by the Department of Computer Science on a pass/fail basis.

If a graduate student in the M.S. program has already completed a required 400-level course with a grade of C or better as an undergraduate at NIU, that course requirement will be waived in the student's M.S. program. Other graduate course work will be substituted to complete the required program.

Master of Science with a Major in Computer Science

In addition to fulfilling the requirements established by the Graduate School, all students seeking to qualify for the degree Master of Science with a major in computer science must satisfy the following requirements:
1. Complete at least 30 semester hours of graduate work including at least seven 3-semester-hour 500-level graduate courses. At least 24 of the 30 required semester hours must be earned in courses offered by the Department of Computer Science. Prior departmental approval must be obtained to count courses not offered by the Department of Computer Science toward the 30 required semester hours.
2. Follow a program of study approved by the Department of Computer Science. The student and adviser will design the program.
3. Pass a comprehensive examination in computer science. Students pursuing full-time graduate study will be required to take the comprehensive examination within two academic years of admission to the Graduate School.

Course Offerings

434X. NUMERICAL LINEAR ALGEBRA (3). MATH 434. Roundoff errors and computer arithmetic. Direct and iterative methods for solving linear systems; norms and condition numbers, iterative refinement. Linear least squares problems: the normal equations and QR approach for overdetermined systems. Numerical methods for eigenvalues: an introduction to the QR iteration. The course makes extensive use of computers. PRQ: MATH 232, MATH 240, and either CSCI 230 or approved equivalent, or consent of department.


440. DATA STRUCTURES AND ALGORITHM ANALYSIS (4). The application of analysis and design techniques to numeric and nonnumeric algorithms acting on data structures. The utilization of algorithmic analysis and design criteria in the selection of methods for data manipulation. Computing projects will be done in a high-level computing language. Laboratory projects. PRQ: CSCI 240 and CSCI 360, or consent of department.

461. TECHNIQUES OF COMPUTER PROGRAMMING AND ALGORITHMIC PROCESSES (3). An advanced course in algorithmic processes and computer programming. A major higher-level language will be used in developing applications and the solutions of current problems. Knowledge of programming is required. PRQ: Consent of department.

462. INTRODUCTION TO THE FOUNDATIONS OF COMPUTER SCIENCE (3). An introduction to mathematical languages, automata theory, and the theory of recursive functions and computability. PRQ: MATH 232 or MATH 240, and CSCI 230, CSCI 250, or consent of department.

466. COMPUTER SYSTEMS ORGANIZATION (3). Organization and use of distributed computer systems. Basic concepts and examples from microcomputers and networks, peripheral components, data communications, and the organization of operating systems such as UNIX and DOS. Extensive laboratory work. PRQ: CSCI 360 or consent of department.
464. DATA STRUCTURES (4). An in-depth study of the theory and the programming techniques related to the storage and management of various forms of data. The programming assignments require an advanced understanding of assembler language. Extensive laboratory work. PRQ: CSCI 360 or consent of department.

465. EXTERNAL DATA STRUCTURES (4). Formal organization of files, organization techniques using direct access, and indexed sequential and sequential files. Advanced COBOL topics, Job Control Language, access methods and utilities with applications to data processing. Extensive laboratory work. PRQ: CSCI 250 and CSCI 360, or consent of department.

466. DATABASE/DATA COMMUNICATIONS SOFTWARE (4). Software development in a representative current database and an on-line interprocess communication system. Extensive laboratory work. PRQ: CSCI 465 or consent of department.

467. INTRODUCTION TO SYSTEMS DESIGN AND ANALYSIS (4). Phases of the systems development life cycle and the tools used by the analyst in planning, specifying, and implementing a computer-based system. Related topics include documentation standards, interaction with users, and design of interfaces including Windows. Assignments include at least one major group project. PRQ: CSCI 465 or consent of department.

480. THEORETICAL OPERATING SYSTEMS (4). The principles and practices of modern operating system design. Includes file system organization; multi-tasking; windowing interfaces such as Windows or OS/2; interprocess communication, including communications across a network; server-client models of processing. PRQ: CSCI 330 or CSCI 463, and either CSCI 440 or CSCI 464, or consent of department.

521. PARALLEL PROCESSING (3). Principles of parallel computation and advanced computer architectures. Topics include vector processors, multiprocessors, concurrency control, parallel programming environments, and software support. PRQ: CSCI 468 or CSCI 480, or consent of department.

525. PARALLEL LOGIC PROGRAMMING (3). A parallel logic programming language will be studied. Basic concepts to be examined include data structuring and destructuring, processes and their execution, and data-flow synchronization. The fundamental techniques of producer-consumer protocols, incomplete messages, bounded buffers, difference lists, short-circuits, and blackboards will be developed and applied. PRQ: Consent of department.


532. ADVANCED PROLOG PROGRAMMING AND ARTIFICIAL INTELLIGENCE (3). A continuation of CSCI 531. Topics will include second order programming, meta-logical and extra-logical predicates, and definite clause grammars. Meta-interpreters and their application to coding expert system shells will be studied. Prolog versions of one or more small expert systems will be examined. PRQ: CSCI 531 or consent of department.

545. NEURAL NETWORKS (3). Topics will include Hopfield networks, back propagation, competitive learning, the Kohonen feature map and counterpropagation. Applications and examples will be provided, and future directions for these networks will be discussed. PRQ: Consent of department.

562. ANALYSIS OF DATA PROCESSING SYSTEMS (3). A detailed and in-depth analysis of large and complex computerized data processing systems. Several such systems including both batch and on-line systems will be considered. Programming assignments involving COBOL and BAL will be included. PRQ: CSCI 467 or consent of department.
The following constitute the core requirements for a Master of Arts in economics:

- ECON 490, Economic Statistics and Econometrics (3)
- ECON 491, Mathematical Methods for Microeconomics (3)
- ECON 492, Mathematical Methods for Macroeconomics (3)
- ECON 560, Microeconomic Analysis I (3)
- ECON 561, Macroeconomic Analysis I (3)
- ECON 590, Econometrics I (3)

One of the following:

1. ECON 599A, Master's Thesis (6)
2. ECON 599B, Master's Research Paper (3)
3. A substantial research paper written in a 500- or 600-level economics course and approved by the professor teaching the course.

Students must supplement the core requirements (21-24 semester hours) with elective hours (6-9 semester hours) approved by the department's Director of Graduate Studies.

Comprehensive Examinations

Comprehensive examinations in microeconomic and macroeconomic analysis will normally be taken by each student in the master's degree program the first time that these examinations are offered following the completion of ECON 560 and ECON 561. The Department of Economics offers these examinations during the week preceding the beginning of each semester.

A student who fails either of these examinations twice will generally not be permitted to continue in the M.A. program. However, in extenuating circumstances a student may submit a written appeal to the department to take an examination a third and final time.

A student will be exempted from taking one or both of the comprehensive examinations under the following circumstances:

1. Both examinations will be waived if the student obtains at least a B in each of the six core courses (ECON 490, ECON 491, ECON 492, ECON 560, ECON 561, ECON 590) with a GPA of at least 3.20 in these courses. (2) The microeconomic examination will be waived if a student earns an A in ECON 560 and at least a B in each of the remaining core courses. (3) The macroeconomic examination will be waived if a student earns an A in ECON 561 and at least a B in each of the remaining core courses.

Interdisciplinary Concentration and Fields of Study

The Department of Economics, in cooperation with other departments, offers a concentration in Southeast Asian studies in which students pursuing the Master of Arts degree are eligible to participate. In addition, comparative economics, economics of development, government and industry, international economics, metropolitan problems, and industrial relations and human resource studies can be pursued by the selection of an interdisciplinary group of courses from certain departments including economics, history, management, and sociology. Students desiring additional information on these fields of study should contact one of the departments listed above.
Students whose primary interest is teaching in the primary or secondary schools can consider the Master of Science in Economics. The program offers a strong core of courses in theory and econometrics, and a focus on three applied fields: labor economics, public finance, and urban and regional economics. The paper will generally serve as a basis for the student's dissertation. If the student fails either of these examinations a second time or consent of department.

Course Offerings

402. COMPAREATIVE LABOR RELATIONS (3). Patterns of industrial relations systems in European and selected emerging economies. Scope of collective bargaining and social welfare legislation. Cooperation between the various national labor movements. PRQ: ECON 300; ECON 360 or ECON 361; or consent of department.

403. ECONOMICS OF HUMAN RESOURCES (3). Analysis of factors affecting demand for and supply of labor. Human capital analysis, discrimination, labor market operations, and public policy. PRQ: ECON 360 or consent of department.

420. ANTITRUST ECONOMICS (3). Detailed analysis of monopoly, near monopoly, and various business practices. Examines legal and economic foundations of current and past public policies toward monopoly. PRQ: ECON 360 or consent of department.

443. ECONOMIC DEVELOPMENT (3). Analysis of major problems and issues of a theoretical and a policy nature concerning developing economies. PRQ: ECON 360 or ECON 361, or consent of department.

450. PUBLIC FINANCE (3). Analysis of the structure and effects of the national, state, and local revenue and outlay systems. PRQ: ECON 360 or consent of department.

452. FISCAL POLICY (3). An examination of the role of the federal budget in fiscal policy. Public expenditures, taxes, and debt management are evaluated as tools of economic stabilization since World War II. PRQ: ECON 361 or consent of department.

454. STATE AND LOCAL FINANCE (3). Analysis of the expenditure-revenue process in state and local governments. The effect of intergovernmental grants and the future of fiscal federalism. PRQ: ECON 360 or consent of department.

466. BUSINESS CYCLES (3). History of business fluctuations; theories and techniques of analysis; countercyclical monetary and fiscal policies; and survey of selected forecasting techniques. PRQ: ECON 361 or consent of department.

470. HISTORY OF ECONOMIC THOUGHT (3). The development of economic thought to the mid-19th century. Emphasis on Adam Smith, Ricardo, Malthus, Mill, and Marx. PRQ: ECON 260 and ECON 261, or consent of department.


474. ECONOMIC HISTORY OF THE UNITED STATES (3). The evolution and development of American economic institutions and processes from colonial times to the 20th century. The modern economic approach will be developed and applied to various topics. PRQ: ECON 260 and ECON 261, or consent of department.

485. URBAN ECONOMIC PROBLEMS AND POLICIES (3). Economic analysis of urban growth and land use and selected urban problems such as urban transportation, public finance, housing, poverty, and environmental quality. PRQ: ECON 360 and ECON 385; or consent of department.

490. ECONOMIC STATISTICS AND ECONOMETRICS (3). Topics include descriptive statistics, probability, estimation, hypothesis testing, correlation, and regression analysis, as applied to economic models. PRQ: ECON 390 and MATH 230, or consent of department.

491. MATHEMATICAL METHODS FOR MICROECONOMICS (3). Mathematical methods used in microeconomics with applications. PRQ: ECON 360, ECON 361, and ECON 393, or consent of department.
492. MATHEMATICAL METHODS FOR MACROECONOMICS (3). Mathematical methods used in macroeconomics with applications. PRQ: ECON 361 and ECON 393, or consent of department.

493. SEMINAR IN POLITICAL ECONOMY (3). Crosslisted as POLS 493X. A. Decision Making in the Public Sector
B. International Relations
C. Metropolitan Studies
D. Human Resources and Training Policy
Selected topics in political economy, offered jointly by the Departments of Political Science and Economics. Topics will be listed by semester. Each lettered topic may be taken once. PRQ: Consent of department.

496X. MATERIALS AND PROBLEMS OF HIGH SCHOOL INSTRUCTION IN THE SOCIAL SCIENCES (3). HIST 496. Must be taken by students seeking certification in a social science before student teaching. Includes 15 clock hours of clinical experience, attention to the teaching of exceptional students, planning for multicultural learning situations, and techniques of reading in the social sciences. PRQ: Consent of department.

497. INDEPENDENT STUDY IN ECONOMICS (3). Individually arranged study within the various fields of economics. Not open to economics graduate students. PRQ: ECON 360 and ECON 361, or consent of department.

500. LABOR MARKET ANALYSIS (3). Employment and human resources theory. A study of occupational choice, employment, unemployment, labor market operation, and related public and private programs. PRQ: Consent of department.


502. MONETARY THEORY (3). Theoretical and empirical analysis of supply of and demand for money; the interrelationships between money and interest, prices, and output, with particular attention to monetary aspects of macroeconomic theory. PRQ: Consent of department.

503. MONETARY POLICY (3). Objectives and instruments of monetary policy and the supply of money, alternative monetary models, and the effectiveness and incidence of monetary policy. PRQ: Consent of department.

504. STRUCTURE OF INDUSTRY (3). Analysis of the determinants of the number of sellers in an industry, and whether industries with few sellers are less competitive, more profitable, or more innovative than those with a large number of sellers. PRQ: ECON 490 and ECON 491, or consent of department.

505. INDUSTRIAL ORGANIZATION (3). Analysis of contracts between traders, including vertical integration, price discrimination, tying contracts, requirements contracts, resale price maintenance, market division, and exclusive dealing. Additional topics include antitrust policy, patents, and other issues in law and economics. PRQ: ECON 490 and ECON 560, or consent of department.

506. INTERNATIONAL TRADE THEORY (3). PRQ: ECON 560 or consent of department.

507. INTERNATIONAL MONETARY ECONOMICS (3). PRQ: ECON 561 or consent of department.

512. MONETARY POLICY (3). Objectives and instruments of monetary policy and the supply of money, alternative monetary models, and the effectiveness and incidence of monetary policy. PRQ: Consent of department.

514. THEORIES OF ECONOMIC DEVELOPMENT (3). Analytical approach to problems and obstacles to economic development in emerging societies: population problems, capital formation, investment criteria, structural and technical change, sectoral analysis, foreign trade, and others. PRQ: ECON 560 or consent of department.

515. ECONOMICS OF THE PUBLIC SECTOR (3). The economic nature of government services, public sector decision making, welfare and efficiency criteria in financing these services, and interrelationships of the public and private sectors. PRQ: ECON 360 or consent of department.

516. MACROECONOMIC ANALYSIS I (3). Factors determining levels of aggregate income, employment, and prices. PRQ: ECON 360, ECON 361, and ECON 492, or consent of department.

517. HISTORY OF ECONOMIC ANALYSIS I (3). A detailed treatment of the development of tools and concepts of theoretical economics up to the decline of the classical school. PRQ: Consent of department.

518. HISTORY OF ECONOMIC ANALYSIS II (3). A continuation of ECON 570 beyond the classical school to the analytics of the late 19th and early 20th centuries. PRQ: ECON 570 or consent of department.

519. SPECIAL TOPICS IN ECONOMICS (3). Topics not dealt with in other courses. May be repeated as the topic changes to a maximum of 6 semester hours. PRQ: ECON 560 and ECON 561, or consent of department.

522. INDEPENDENT STUDY IN ECONOMICS (3). Individually arranged readings within the various fields of economics. May be repeated at the post-master's level of study to a maximum of 6 semester hours. PRQ: ECON 560 and ECON 561, or consent of department.

530. INTERNATIONAL TRADING (3). PRQ: ECON 560 or consent of department.

531. INTERNATIONAL MONETARY ECONOMICS (3). PRQ: ECON 561 or consent of department.

540. THEORIES OF ECONOMIC DEVELOPMENT (3). Analytical approach to problems and obstacles to economic development in emerging societies: population problems, capital formation, investment criteria, structural and technical change, sectoral analysis, foreign trade, and others. PRQ: ECON 560 or consent of department.

541. ECONOMICS OF THE PUBLIC SECTOR (3). The economic nature of government services, public sector decision making, welfare and efficiency criteria in financing these services, and interrelationships of the public and private sectors. PRQ: ECON 360 or consent of department.

542. FINANCING GOVERNMENT ACTIVITIES (3). Budgetary policy, evaluation of different forms of taxation, pricing of government services, public borrowing and debt management, and programs of tax reform. PRQ: ECON 360 or consent of department.

543. MICROECONOMIC ANALYSIS I (3). Domestic and international price systems with regard to resource allocation, welfare, and income distribution. A brief introduction to the concepts involved in input-output analysis and linear programming. PRQ: ECON 360 and ECON 491, or consent of department.
693. SEMINAR IN QUANTITATIVE ECONOMICS (3). Application of mathematical and statistical techniques to the analysis of economic problems. May be repeated once for additional credit. PRQ: Consent of department.

695. INTERNSHIP IN ECONOMICS (2-15). May be repeated to a maximum of 15 semester hours. PRQ: Written consent of departmental Graduate Committee.

698. CURRENT RESEARCH COLLOQUIUM (1). Discussion by faculty and graduate students of their current research. Required each semester (except for summer sessions) for doctoral students in residence. A maximum of 6 semester hours can be applied towards the doctoral degree. S/U grading basis is used. PRQ: Consent of department.

699. DOCTORAL RESEARCH AND DISSERTATION (1-15). May be repeated to a maximum of 32 semester hours.
The Department of English offers graduate programs leading to degrees at both the master’s and doctoral levels. The scores on the General Test of the Graduate Record Examinations are required as admission credentials. Well prepared students with baccalaureate degrees may begin work immediately to fulfill the requirements for the doctoral. ENGL 501, Bibliography and Methods of Research, is required of all graduate students in English, and should be taken early in a student's program of studies.

Advising

Students will be assigned a departmental advisor upon admission to a degree program. Students must consult their advisor before or during the first semester of course work to select courses and to design a program of study to be filed with the Graduate School. After doctoral students decide upon fields of study, they must select an advisor from one of these fields for approval of the department.

Master of Arts

The Department of English offers two options leading to the Master of Arts degree.

Option A

Option A is designed to prepare students for graduate work at the doctoral level and concentrates upon research in the criticism of English and American language and literature. A student pursuing an M.A. under this option must earn a minimum of 30 semester hours of graduate credit in the Department of English with a grade point average (GPA) of at least 3.00, pass a proficiency examination in one foreign language, and pass a comprehensive examination. Foreign language proficiency may be demonstrated in French, German, Greek (classical or koine), Italian, Latin (classical or medieval), Russian, or Spanish, or in another language approved by the director of graduate studies on the basis of demonstrated need. The student’s graduate advisor may permit limited study in fields closely related to English and approve substitution of a thesis for up to 3 semester hours of the required course work. Full-time students concentrating in the usual literary or linguistic areas will normally enroll in Option A.

Option B

Option B is designed for students who are currently teaching in secondary schools or community colleges or who plan to teach at one of these levels, and for students interested in other professional pursuits, such as business or public relations, to which a strong background in English may contribute. A graduate advisor and the student will design a program of study (subject to the approval of the director of graduate studies) which must include 9 semester hours of study in subjects other than English and American literature, such as courses in the teaching of English, rhetoric, creative writing and composition, linguistics, reading, mass media, public relations, or others that contribute to the student’s professional development. A student pursuing an M.A. under this option must earn a minimum of 36 semester hours of graduate credit in the Department of English with a grade point average (GPA) of at least 3.00, pass a proficiency examination in one foreign language, and pass a comprehensive examination.
hours of credit, including 27 in the Department of English. The student may not take the final comprehensive examination before completing a minimum of 24 semester hours in the Department of English.

Students who desire a linguistic focus under either Option A or Option B will be permitted to take 15 semester hours in language courses supplemented by 15 semester hours of literature courses.

The department allows a focus in literature and film for an M.A. in English under Option B.

Students who desire a rhetoric focus under either M.A. Option A or Option B will be permitted to take 15 semester hours in rhetoric courses supplemented by 15 semester hours in literature courses.

A specialized and flexible program of courses leading to an M.A. in English has been designed for students and educators wishing to pursue careers in Teaching English to Speakers of Other Languages (TESOL).

In special areas of focus for M.A. Options A or B (linguistics, literature and film, rhetoric) candidates will take comprehensive examinations, one half in English and American literature and one half in the area of study. In the TESOL focus, the M.A. examination will be solely in linguistics with a particular emphasis on TESOL.

Doctor of Philosophy

The Doctor of Philosophy degree represents the highest level of academic achievement formally recognized in the humanities. The degree is a symbol of distinguished standards of academic excellence, as well as mastery of advanced techniques in a discipline.

The program of study leading to the Ph.D. degree in English at Northern Illinois University is flexible in that it offers two options, one emphasizing traditional research concerns in such areas as British and American literature, language and linguistics, and literary criticism, and the other emphasizing pedagogical and related concerns in these same areas.

A graduate faculty member, after careful analysis of the applicant's background and training, will counsel the student in planning an appropriate program. Small graduate seminars conducted by active scholars enable the student to develop the critical and investigative skills and insights necessary to successful scholarship and teaching. Fellowships and teaching assistantships are available for qualified students.

Selected students who hold only a baccalaureate degree may enroll immediately in the doctoral program. Qualified full-time students should be able to complete all the requirements for the doctoral degree in four years beyond the baccalaureate degree or three years beyond the master's degree.

The doctoral degree in English is granted not only on the basis of successful completion of a definite number of prescribed courses but also in recognition of the candidate's high attainments and ability as shown, first, by passing the required examinations in his or her general and special fields (as detailed below), and second, by the preparation of a dissertation. Departmental requirements for the doctorate are as follows.

Admission to the Program

For admission to the program leading to the Doctor of Philosophy degree in English, the student must:
1. Show evidence of ability to pursue doctoral work.
2. Secure departmental approval of a program of study.

Program Requirements

In consultation between the adviser and the student, each program for the doctorate shall be designed to include:

1. Individual author courses in Chaucer, Shakespeare, and Milton in either the student's undergraduate or graduate program.
2. ENGL 511 (or another graduate-level course in Old English language or Middle English language).
3. At least four seminars at the 600 level.

Students who select the traditional research option must include in their programs of study three graduate courses (500 or 600 level) in each of the following areas:
- British literature before 1660
- British literature after 1660
- American literature

Students who select the pedagogical option must include in their programs of study courses in the following areas:
- American literature (9 hours)
- British literature (9 hours)
- Literary criticism (3 hours)
- Rhetoric (3 hours)
- World literature (6 hours)
- Language/linguistics (6 hours beyond ENGL 511 or its substitute)

Students may select a secondary field consisting of a program of not more than 12 semester hours of closely related courses in any one of the following fields or in some other field approved by the department.
- American studies
- Anthropology
- Comparative literature
- Drama
- Foreign languages and literatures
- History
- Linguistics
- Philosophy
- Political science
- Psychology
- Sociology
- Women's studies

Admission to Candidacy

For admission to candidacy for the doctorate in English, a student must:

1. Qualify for the doctoral program, after successfully completing 30 semester hours of graduate work, by passing the master's comprehensive examination or equivalent.
2. Demonstrate a knowledge of:
   a. Two foreign languages, average proficiency, or
   b. One foreign language, high proficiency.

The choice of languages shall be subject to departmental approval. The proficiency examinations must be passed before a student takes the candidacy examination. (For means of demonstrating language proficiency, refer to the "Language and Research-Tool Requirement" section in the front of the catalog.)

4. Pass a candidacy examination:
   a. On three fields of study selected from the following (at least one of which shall be in English literature):
      - Linguistics or philology
      - Medieval literature (Old English literature and Middle English literature)
      - 16th century to 1600 (to 1616 for Shakespeare)
      - 17th century to 1660 (but including Aubrey, Bunyan, Milton, Traherne, and Vaughan)
      - Restoration and 18th century
      - 19th century
      - 20th century
A student may request permission of the director of graduate studies in English to write the examination when he or she has successfully completed 20 semester hours of course work after qualifying for the doctoral program.

**Dissertation Requirements**

The candidate must write a dissertation which will contribute to literary or linguistic scholarship. If a student selects the pedagogical option, the dissertation project should have direct relevance to classroom instruction. The candidate will present an oral defense of the dissertation before his or her dissertation committee for its final approval. This committee shall consist of three or more members of the graduate faculty of the department especially qualified in the area of the dissertation, one of whom shall be the dissertation director; it may include members from related fields. The dean of the Graduate School or a dean’s designee may also serve as an ex officio, nonvoting member of the dissertation defense committee.

**Teacher Certification in English**

The initial teacher certification program in English qualifies students for the Standard High School Certificate [6-12] issued by the state of Illinois. The state issues certificates upon the recommendation of the Department of English and Northern Illinois University. Admission to the program requires formal application by candidates and formal approval by the department. Students seeking an initial teaching certificate in English who have been admitted to any of the programs leading to a graduate degree in English should apply directly to the coordinator of teacher certification in English at the earliest possible date. Students-at-large and students seeking graduate degrees in other departments should request preliminary review forms from the coordinator for teacher certification, College of Liberal Arts and Sciences, at least one term before the term in which they wish to begin their program. Upon successful completion of the preliminary review, students in these categories may also apply for admission to the coordinator of teacher certification in English.

**Admission Requirements**

1. Admission to a graduate degree program in English or satisfactory completion of the preliminary review process.
2. Completion of 9 hours of graduate credit in English at NIU with a GPA of 3.00 or better, such credit to be approved by the coordinator. These hours will not, ordinarily, include courses used to meet certification requirements.
3. Satisfaction of the foreign language requirement for the B.A. in English at NIU, or the equivalent.
4. Application in writing to the coordinator.
5. Satisfactory interview with the coordinator

**Retention**

1. Good academic standing.
2. GPA of 3.00 or better in all work required for certification taken at NIU.
3. A grade of B or better in all English courses required for certification.
4. A satisfactory review of progress toward the certificate with the coordinator each semester.

**Courses in English Required for Certification: 42 hours**

1. At least 6 hours of American literature
2. At least 12 hours of English literature
3. At least 3 hours of linguistics
4. At least 3 hours of advanced composition or rhetoric
5. Three hours in the teaching of composition
6. Three hours in methods of teaching English
7. Twelve hours in student teaching (ENGL 485)

Students who have not satisfied all requirements in English as part of their undergraduate programs may satisfy the remaining requirements, except for student teaching, with graduate-level courses. Upon the approval of the director of graduate studies in English, such courses may also be included in the program of studies for the graduate degree. Students seeking both a degree and certification should be careful to consult regularly with the director of graduate studies in English and with the coordinator of teacher certification about using courses to satisfy requirements in both programs.

Students are admitted to ENGL 485, Student Teaching (Secondary) in English, only after completing all other work required for the certificate and upon application to the coordinator. The methods course must be taken in the semester immediately preceding student teaching.

**Supporting Courses Required Outside the Department of English**

1. General Education: 47 hours
   The state of Illinois requires extensive work in general education for certification. This work is taken, typically, at the undergraduate level and forms no part of a graduate degree program. Candidates for admission to certification should consult the coordinator for a list of courses approved by the department to make certain that they have satisfied these requirements and to remedy any deficiencies.
2. Clinical Experiences: 100 clock hours
   The state of Illinois requires 100 clock hours of clinical experiences. This requirement may be satisfied in a variety of ways; it will be met, in most instances, with three consecutive enrollments in ILAS 300. Each enrollment in ILAS 300 involves 30 clock hours of clinical experience and awards one hour of undergraduate credit. ENGL 480 or ENGL 504, the methods course taken just prior to student teaching, includes 15 clock hours of clinical experience and completes the 100 hour requirement. Credit for clinical experiences may not be included in the program of studies for a graduate degree in English. Candidates should consult the coordinator of teacher certification in English about satisfying this requirement as soon as they have been admitted to the certification program.
3. Other state certification requirements: 7 hours
   a. Educational Psychology (2 hours)
   b. History and/or Philosophy of Education (2 hours)
   c. Psychology of Exceptional Children (3 hours)

   These requirements may be met in a variety of ways, most readily by obtaining approval from the coordinator of teacher certification in English for appropriate courses taken in the College of Education. Because such courses are usually offered for 3 hours of credit, students may need to take at least 9 hours of credit.

---

*Ordinary to include work in American literature before 1865.
Ordinary to include Shakespeare.
** at the graduate level, usually ENGL 514 or ENGL 516
** at the graduate level, usually ENGL 500 or ENGL 600.
** at the graduate level, usually ENGL 504.
Courses which meet these requirements and which carry graduate credit may be included in graduate programs of study in English, with the approval of the director of graduate studies in English.

d. Passing the state of Illinois certification examination in English.

Course Offerings

General

498. LITERARY TOPICS (2-3). The subject chosen for each section will be announced in advance. May be repeated to a maximum of 8 semester hours when topic varies. Half-semester course, 2 hours; semester course, 3 hours. Credit may not be applied toward a graduate degree in English.

501. BIBLIOGRAPHY AND METHODS OF RESEARCH (3). Introduction to the philosophy and methods of literary research. Required of all graduate students.

504. TOPICS IN MATERIALS FOR THE ENGLISH CLASSROOM (3). An analysis of new curriculum materials in English, with focus on language, literature, or composition. May be repeated to a maximum of 6 semester hours when topic varies.

507. TOPICS IN LITERATURE (3). Course devoted to the study of special topics and periods of literature. May be repeated to a maximum of 9 semester hours when topic varies.

509. CREATIVE WRITING (3). A workshop/pedagogy course in poetry or fiction for students who wish to further their knowledge of literature through practice of the art, and for those who intend to become practicing writers and critics. May be repeated to a maximum of 9 semester hours as the topic changes. PRQ: Consent of department.

510. LITERATURE AND FILM (3). The relationship between literature and film as narrative forms. The significance of literary modes such as romanticism and realism for film content and structure. Analysis of the adaptation of literary works to the medium of film.

516. PRACTICUM IN THE TEACHING OF COLLEGE ENGLISH (3). Supervised and evaluated experience in designing and conducting a course in English. May be repeated to a maximum of 15 semester hours; however, only 3 hours may be applied toward a graduate degree in English. PRQ: Consent of department.

519. ENGLISH INSTITUTE (1-6). Studies in selected topics of special interest to teachers of English. May be repeated to a maximum of 12 semester hours as the topic changes. May not be included in a program of courses for a graduate degree in English except upon approval of the Graduate Studies Committee. May be graded on a satisfactory, unsatisfactory basis. PRQ: Permission of director of graduate studies in English.

596. INDEPENDENT READING (1-3). Normally open only to students who have completed 30 semester hours in an M.A. program. May not be repeated. PRQ: Permission of director of graduate studies in English.

599. MASTER'S THESIS (3). May be taken upon the appointment of a thesis director and the approval of a prospectus.

602. SEMINAR: TEXTUAL STUDIES (3). Advanced study of analytical bibliography, either descriptive or textual. May be repeated to a maximum of 9 semester hours when topic varies. PRQ: ENGL 501 or consent of department.

607. SEMINAR TOPICS IN LITERATURE (3). Seminar devoted to advanced study of special topics and periods of literature. May be repeated to a maximum of 9 semester hours when topic varies.

699. DOCTORAL DISSERTATION (credit arranged). May be repeated to 30 semester hours.

Rhetoric and Literary Criticism

500. INTERNSHIP IN THE COLLEGE TEACHING OF ENGLISH (3). For teaching interns only. May be repeated for a maximum of 6 semester hours, all of which may be counted toward Option B program requirements for both master's and doctoral degrees, and for the certificate of advanced study. Only 3 semester hours of ENGL 500 may be applied toward other master's or doctoral program options in English.


503. TRADITIONS IN WRITTEN RHETORIC (3). Survey of major rhetoricians, theories, and movements that have contributed to rhetorical traditions determining or influencing the production and analysis of written text.

505. LITERARY CRITICISM TO 1800 (3). An examination of major trends in criticism from Plato to the eve of Romanticism, with special emphasis on authors whose contributions continue to affect critical thought.

506. LITERARY CRITICISM SINCE 1800 (3). A survey of Anglo-American and Continental literary theory and criticism of the 19th and 20th centuries, examining major texts as they relate to past work and especially as they contribute to contemporary developments.

508. EXPOSITORY WRITING (3). An intensive course in expository writing. PRQ: Consent of department.

510. RHETORIC OF PROSE COMPOSITION (3). An introduction to contemporary rhetorical theories and methods of written discourse and their pedagogical and practical applications. Required of students with an emphasis in rhetoric.

526. TECHNICAL WRITING (3). Principles and strategies of planning, writing, and revising technical documents common in business and industry. Application in case studies and practical projects.

527. TECHNICAL EDITING (3). Principles and strategies of preparing technical documents for publication, including editing for content, organization, style, and layout. Application in case studies and practical projects. PRQ: ENGL 526 or consent of department.

528. INTERNSHIP IN TECHNICAL WRITING OR EDITING (3-12). Job-related experience involving primarily writing or editing and supervised cooperatively by the department's internship coordinator and by the sponsoring company or organization. May be repeated to a maximum of 12 semester hours; however, only 3 semester hours of credit may be applied toward a graduate degree in English. Open only to graduate students in English. PRQ: ENGL 526 and ENGL 527 and consent of department internship coordinator.

529. TOPICS IN RHETORIC (3). Topics in rhetorical theory and analysis. May be repeated to a maximum of 6 semester hours when the topic changes. PRQ: Consent of department.

600. TOPICS IN THE TEACHING OF COLLEGE ENGLISH (3). May be repeated to a maximum of 6 semester hours when topic varies. PRQ: Consent of department.

603. SEMINAR: RHETORICAL STUDIES (3). Seminar devoted to advanced study of special topics in the history of written rhetoric, theories of oral communication, writing practicum, rhetoric and stylistics, and applied discourse analysis. May be repeated to a maximum of 9 semester hours when topic varies.

Language

511. HISTORY OF THE ENGLISH LANGUAGE (3). Linguistic analysis and description of the development of English from its earliest Anglo-Saxon stages to present-day British and American English.

512. OLD ENGLISH (3). Introduction to English at the earliest period of its history (i.e., before the Norman Conquest in 1066) with focus upon grammatical analysis of short prose works and upon careful reading of several important poems.

513. MIDDLE ENGLISH (3). Analysis and description of the process by which Old English lost most of its Germanic inflections and gained an enormous Romance vocabulary in the wake of the Norman Conquest, with special attention to the persistence of dialectal variety as well as to the rise of a London standard.

514. INTRODUCTION TO LINGUISTICS (3). Survey of language and language study: elements of language, language change, language universals, first and second language acquisition, dialects, language and society, language and writing, non-human communication, language change. Recommended as a preliminary course for students with little linguistic background.
English Literature Before 1660
535. MIDDLE ENGLISH LITERATURE (3).
536. BEOWULF (3).
537. CHAUCER (3).
538. 16TH CENTURY PROSE AND POETRY (3). English prose and poetry, 1485-1603.
539. ENGLISH DRAMA TO 1600 (3).
540. ENGLISH DRAMA: 1600-1660 (3).
541. SHAKESPEARE (3).
542. 17TH CENTURY PROSE AND POETRY (3).
543. SPENSER (3).
544. MILTON (3).
636. SEMINAR: MEDIEVAL LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
637. SEMINAR: CHAUCER (3). May be repeated to a maximum of 9 semester hours when topic varies.
638. SEMINAR: 16TH CENTURY ENGLISH LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
641. SEMINAR: SHAKESPEARE (3). May be repeated to a maximum of 9 semester hours when topic varies.
642. SEMINAR: 17TH CENTURY ENGLISH LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
644. SEMINAR: MILTON (3). May be repeated to a maximum of 9 semester hours when topic varies.

English Literature After 1660
556. RESTORATION AND EARLY 18TH CENTURY LITERATURE (3).
557. LATER 18TH CENTURY ENGLISH LITERATURE (3).
558. ENGLISH DRAMA: 1660-1800 (3).
559. 18TH CENTURY ENGLISH NOVEL (3).
560. ENGLISH ROMANTIC PERIOD (3).
561. VICTORIAN POETRY: 1830-1880 (3).
562. 19TH CENTURY ENGLISH PROSE (3).
563. 19TH CENTURY ENGLISH NOVEL (3).
564. ENGLISH LITERATURE: 1880-1920 (3).
565. ENGLISH LITERATURE SINCE 1900 (3).
566. 20TH CENTURY ENGLISH POETRY (3).
567. 20TH CENTURY DRAMA (3). This course in the drama as an international genre is also listed under American Literature.
568. 20TH CENTURY ENGLISH FICTION (3).
656. SEMINAR: RESTORATION AND 18TH CENTURY ENGLISH LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
662. SEMINAR: 19TH CENTURY ENGLISH LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
664. SEMINAR: ENGLISH LITERATURE, 1880-1920 (3). May be repeated to a maximum of 9 semester hours when topic varies.
665. SEMINAR: 20TH CENTURY ENGLISH LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.

American Literature
567. 20TH CENTURY DRAMA (3). This course in the drama as an international genre is also listed under English Literature after 1660.
576. AMERICAN LITERATURE TO 1830 (3).
577. AMERICAN LITERATURE: 1830-1865 (3).
578. AMERICAN LITERATURE: 1865-1900 (3).
579. 19TH CENTURY AMERICAN NOVEL (3).
583. AMERICAN LITERATURE SINCE 1900 (3).
584. 20TH CENTURY AMERICAN POETRY (3).
585. 20TH CENTURY AMERICAN FICTION (3).
595. BLACK AMERICAN WRITERS (3).
676. SEMINAR: AMERICAN LITERATURE TO 1830 (3). May be repeated to a maximum of 9 semester hours when topic varies.
677. SEMINAR: 19TH CENTURY AMERICAN LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
683. SEMINAR: 20TH CENTURY AMERICAN LITERATURE (3). May be repeated to a maximum of 9 semester hours when topic varies.
The Department of Foreign Languages and Literatures (FL- -)

GRADUATE FACULTY

Frederic W. Murray, chair, professor, Ph.D., University of New Mexico
Katharina Barbe, assistant professor, Ph.D., Rice University
Anne L. Birberick, assistant professor, Ph.D., University of Virginia
Dennis E. Brain, assistant professor, Ph.D., University of Texas, Austin
Francis Butler, assistant professor, Ph.D., University of California, Berkeley
Mary L. Cozad, assistant professor, Ph.D., University of California, Berkeley
Mary E. Floyd, associate professor, Ph.D., University of Colorado
William F. Harrison, associate professor, Ph.D., University of New Mexico
John F. Hartmann, professor, Ph.D., University of Michigan
Francis C. Valette, associate professor, Ph.D., University of Illinois
Heinz D. Osterle, professor, Ph.D., Brown University
Elena Ray, associate professor, Ph.D., University of Illinois
Francis C. Valette, associate professor, Ph.D., University of Illinois
Johanna Van Lente, assistant professor, Ph.D., Northwestern University
Pablo Virumbrales, assistant professor, Ph.D., Ohio State University
Jack Weiner, professor, Ph.D., Indiana University
Theodore F. Welch, professor, Ph.D., University of Tokyo

John A. Kerr, Jr., professor, Ph.D., University of Wisconsin
Joanne Kot, assistant professor, Ph.D., University of Chicago
Susan E. Leger, associate professor, Ph.D., State University of New York, Buffalo
Monique J. LeMaitre, professor, Ph.D., University of Pittsburgh
Maryline Lukacher, associate professor, Ph.D., University of California, San Diego
Michael L. Mazzola, associate professor, Ph.D., Cornell University
Catherine Jagoe, assistant professor, Ph.D., Cambridge University
Colette V. Michael, professor, Ph.D., University of Wisconsin
Christopher Nissen, assistant professor, Ph.D., University of California, Berkeley
Amanda T. Osterle, professor, Ph.D., New York University
Elena Ray, associate professor, Ph.D., University of Illinois
James R. Shwal, assistant professor, Ph.D., University of Washington
Francis C. Valette, associate professor, Ph.D., University of Illinois
Johanna Van Lente, assistant professor, Ph.D., Northwestern University
Pablo Virumbrales, assistant professor, Ph.D., Ohio State University
Jack Weiner, professor, Ph.D., Indiana University
Theodore F. Welch, professor, Ph.D., University of Tokyo

The Department of Foreign Languages and Literatures offers a graduate program leading to the degree of Master of Arts. Students may pursue a specialization in one of two languages, French or Spanish. The program permits selective enhancement of particular skills, such as translation, linguistics, or cultural and literary analysis. The curriculum provides a core experience consisting of courses in linguistics, culture, and literature culminating in a practicum (applied project or internship) or thesis. It also allows for the exploration of related interdisciplinary fields.

On admission to the program, each student will be assigned a graduate advisory committee appointed by the chair of the department. The committee will consist of three members and will be chaired by one person designated as the student's adviser. Responsibility for approving the student's program of courses rests with this committee, which will also assess any work done at other institutions and grant up to 6 semester hours of transfer credit for graduate work deemed acceptable, subject to subsequent approval by the Graduate School. The committee will also be responsible for the administration of the thesis or practicum and for the supervision of an exit examination to test oral proficiency.

In addition to satisfying the requirements for admission to the Graduate School, students seeking admission to the Master of Arts program in foreign languages should have completed an undergraduate major in French or Spanish, or have a demonstrated proficiency at an equivalent level. Students also must possess a practical command of the target language (determined by interview) and be able to follow lectures in it. Admission to the program is on a competitive basis.

Master of Arts in Foreign Languages

Requirements

Students are required to complete a minimum of 30 semester hours of graduate credit, at least 15 hours of which must be taken in 500-level courses. A student's program of courses should be formally approved by the advisory committee early in the program of study.

Students are required to complete a specialization in French or Spanish with the following distribution of credit hours: linguistics (3), translation (6-9), culture and literature (12-15), elective (3), and practicum or thesis (3).

Students who wish to complete a program that includes a focus on a second language are required to take 12 additional semester hours in the second language (3-6 hours in translation and 6-9 hours in culture and literature) for a total of 42 semester hours of graduate credit, at least 21 hours of which must be taken in 500-level courses.

During their last semester of study, candidates are required to pass an oral comprehensive examination demonstrating a satisfactory level of communicative competence and the ability to integrate effectively a knowledge of language, literature, and culture. If a focus is taken in a second language, a second, similar examination must be passed for that language.

Specialization in French

Linguistics (3)
FLAL 483, Applied Linguistics and the Romance Languages (3)
FLFR 481, French Phonetics and Phonemics (3)
FLST 583A, Research Seminar in Language and Linguistics: French (3)
Translation (6-9)
FLFR 483, Theme et Version (3)
FLFR 484, Advanced Translation (3)
FLFR 485, Initiation to Consecutive Translation (3)
FLST 584A, Research Seminar in Translation: French (3)

Culture and Literature (12-15)
FLFR 431, 17th Century French Literature (3)
FLFR 433, 18th Century French Literature (3)
FLFR 435, 19th Century French Literature: Romanticism (3)
FLFR 436, 19th Century French Literature: Realism and Naturalism (3)
FLFR 437, 19th Century French Literature: Symbolism and the Modern Movement (3)
FLFR 438, 20th Century French Literature (3)
FLFR 441, Medieval French Literature (3)
FLFR 443, French Literature of the Renaissance (3)
FLFR 463, La France Contemporaine (3)
FLST 540A, Research Seminar in Literature: French (3)
FLST 561A, Research Seminar in Civilization and Culture: French (3)

Elective (3)
With the consent of their graduate advisory committee, students may select from the following language-related courses, or they may select other graduate-level courses which have direct bearing on their program of study.
ANTH 432, Historical and Comparative Linguistics (3)
COMS 454, Transnational Communication and Media (3)
ENGL 501, Bibliography and Methods of Research (3)
ENGL 502, Interpretation of Literary Texts (3)
ENGL 514, Introduction to Linguistics (3)
HIST 418, European Thought and Culture since 1850 (3)
FLST 599, Practicum (3), OR
FLST 599, Practicum (3), OR
FLST 599, Master's Thesis (1-3)

Specialization in Spanish

Linguistics (3)
FLAL 483, Applied Linguistics and the Romance Languages (3)
FLSP 481, Phonetics and Phonemics (3)
FLSP 485, The Structure of Modern Spanish (3)
FLSP 486, Contrastive Grammatical Structures in Spanish and English (3)
FLSP 487, Spanish Dialects of the United States (3)
FLST 583D, Research Seminar in Language and Linguistics: Spanish (3)

Translation (6-9)
FLSP 483, Techniques of Spanish Translation (3)
FLSP 484, Advanced Spanish Translation (3)
FLST 584D, Research Seminar in Translation: Spanish (3)

Culture and Literature (12-15)
FLSP 431, Golden Age Poetry (3)
FLSP 432, Medieval Spanish Literature (3)
FLSP 433, Classical Spanish Drama (3)
FLSP 434, Cervantes: The Quixote (3)
FLSP 435, Golden Age Prose (3)
FLSP 436, Spanish Romanticism and Realism (3)
FLSP 437, The Generation of 1898 (3)
FLSP 438, Contemporary Spanish Literature (3)
FLSP 451, Literature of the Andean Republics (3)
FLSP 452, Literature of the Caribbean (3)
FLSP 453, Literature of Uruguay, Argentina, and Chile (3)
FLSP 454, Mexican Literature (3)
FLSP 455, Spanish-American Short Story (3)
FLSP 461, Hispanic Civilizations (3)
FLSP 462, Spanish-American Civilization (3)
FLST 540D, Research Seminar in Literature: Spanish (3)
FLST 561D, Research Seminar in Civilization and Culture: Spanish (3)

Elective (3)
With the consent of their graduate advisory committee, students may select from the following language-related courses, or they may select other graduate-level courses which have a direct bearing on their program of study.
ANTH 432, Historical and Comparative Linguistics (3)
COMS 454, Transnational Communication and Media (3)
ENGL 501, Bibliography and Methods of Research (3)
ENGL 502, Interpretation of Literary Texts (3)
ENGL 514, Introduction to Linguistics (3)
HIST 418, European Thought and Culture since 1850 (3)
FLST 599, Practicum (3), OR
FLST 599, Master's Thesis (1-3)

Course Offerings

French (FLFR)

412. COMMERCIAL FRENCH (3). Practice in business and administrative correspondence in French. PRQ: FLFR 302 or consent of department. CRQ: MGBE 246 or consent of department.

431. 17TH CENTURY FRENCH LITERATURE (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

433. 18TH CENTURY FRENCH LITERATURE (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

435. 19TH CENTURY FRENCH LITERATURE: ROMANTICISM (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

436. 19TH CENTURY FRENCH LITERATURE: REALISM AND NATURALISM (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

437. 20TH CENTURY FRENCH LITERATURE: SYMBOLISM AND THE MODERN MOVEMENT (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

438. 20TH CENTURY FRENCH LITERATURE (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

441. MEDIEVAL FRENCH LITERATURE (3). A general treatment of literary expression in France, from the beginnings to the end of the 15th century, with emphasis on the 12th and 13th centuries. PRQ: FLFR 321 and FLFR 322, or consent of department.

443. FRENCH LITERATURE OF THE RENAISSANCE (3). PRQ: FLFR 321 and FLFR 322, or consent of department.

463. LA FRANCE CONTEMPORAINE (3). Political, social, and cultural development of France since 1945. PRQ: FLFR 301 and FLFR 311, or consent of department.

481. FRENCH PHONETICS AND PHONEMICS (3). PRQ: FLFR 301 and FLFR 311, or consent of department.

483. THEME ET VERSION (3). Translation of selected literary passages, alternating between French and English. May be repeated to a maximum of 9 semester hours. PRQ: FLFR 302 or consent of department.

484. ADVANCED TRANSLATION (3). Intensive training in accurate translation of business, administrative, and technical texts. May be repeated to a maximum of 9 semester hours. PRQ: FLFR 302 or consent of department.

485. INITIATION TO CONSECUTIVE TRANSLATION (3). Initiation to the tools, methodology, and terminology of consecutive translation. PRQ: FLFR 415 and FLFR 484, or consent of department.

Italian (FLIT)

481. SPECIAL TOPICS IN ITALIAN LITERATURE (3). The study of a major author, genre, theme, period, or literary movement. Topics for each offering will be announced in the schedule of classes. PRQ: FLIT 321 or equivalent, or consent of department.

482. SPECIAL TOPICS IN ITALIAN LINGUISTICS (3). Focus on linguistic topics such as the history of the Italian language, Italian dialectology, or Italian structure. PRQ: FLIT 301 and FLIT 311 or equivalent, or consent of department.

Spanish (FLSP)

414. SPANISH CORRESPONDENCE (3). Practice in contemporary business, administrative, and personal correspondence in Spanish. PRQ: FLSP 491 or consent of department. CRQ: MGBE 246 or consent of department.
431. SPANISH GOLDEN AGE POETRY (3). Study and analysis of the major poetic works of the Spanish 16th and 17th centuries. Poets treated will be Spanish Petrarchists of the Renaissance, "Mannerist," and Baroque periods, including some of the greatest poets of all Spanish literature.

432. MEDIEVAL SPANISH LITERATURE (3). Through the 15th century. PRQ: FLSP 321 or consent of department.

433. CLASSICAL SPANISH DRAMA (3). PRQ: FLSP 321 or consent of department.

434. CERVANTES: THE QUIXOTE (3). PRQ: FLSP 321 or consent of department.

435. SPANISH GOLDEN AGE PROSE (3). Study and analysis of the prose of the Spanish Golden Age, including the chivalric, picaresque, and mystic genres. Includes the works of Miguel de Cervantes (with the exception of Don Quixote).

436. SPANISH ROMANTICISM AND REALISM (3). PRQ: FLSP 321 or consent of department.

437. THE GENERATION OF 1898 (3). PRQ: FLSP 321 or consent of department.

438. CONTEMPORARY SPANISH LITERATURE (3). PRQ: FLSP 321 or consent of department.

451. LITERATURE OF THE ANDEAN REPUBLICS (3). A general treatment of the literature of Peru, Ecuador, and Bolivia with emphasis upon the 20th century. PRQ: FLSP 322 or consent of department.

452. LITERATURE OF THE CARIBBEAN (3). A general treatment of the literature of Colombia, Venezuela, Central America, and the Spanish-speaking West Indies, with emphasis upon the 19th and 20th centuries. PRQ: FLSP 322 or consent of department.

453. LITERATURE OF URUGUAY, ARGENTINA, AND CHILE (3). A general treatment of the regional literature of the River Plate republics and Chile, with emphasis on the period since 1914. PRQ: FLSP 322 or consent of department.

454. MEXICAN LITERATURE (3). A general treatment of Mexican literature, with emphasis on the 20th century. PRQ: FLSP 322 or consent of department.

455. SPANISH-AMERICAN SHORT STORY (3). A general treatment of this genre in the various Spanish-American countries including different authors, with special emphasis upon the 20th century. PRQ: FLSP 322 or consent of department.

461. HISPANIC CIVILIZATIONS (3). The development of the Spanish pattern of civilization from pre-Roman times to the present. PRQ: FLSP 311 or consent of department.

462. SPANISH-AMERICAN CIVILIZATION (3). The evolution of the Spanish-American pattern of civilization from the pre-Hispanic period to the present. PRQ: FLSP 311 or consent of department.

463. SPANISH PHONETICS AND PHONEMICS (3). PRQ: FLSP 411 or consent of department.

464. TECHNIQUES OF SPANISH TRANSLATION (3). Development of skill and techniques of translation from Spanish to English and English to Spanish. May be repeated to a maximum of 9 semester hours. PRQ: FLSP 411 or consent of department.

465. ADVANCED SPANISH TRANSLATION (3). Intensive training in accurate and idiomatic translation of business, administrative, and technical texts from Spanish to English and English to Spanish. May be repeated to a maximum of 9 semester hours. PRQ: FLSP 483 or consent of department.

466. THE STRUCTURE OF MODERN SPANISH (3). Descriptive analysis of grammatical principles and characteristics fundamental to the language. PRQ: FLSP 411 or consent of department.

467. CONTRASTIVE GRAMMATICAL STRUCTURES IN SPANISH AND ENGLISH (3). To provide the student with a knowledge of the basic structural differences between Spanish and English. The course will be taught in both languages to demonstrate fundamental interrelationships between the two languages. Emphasis also placed on sensitivity to language interference and other problems of language acquisition. PRQ: FLSP 411 or consent of department.

481. THE STRUCTURE OF MODERN GERMAN (3). An introduction to the synchronic analysis of German, with emphasis on phonology, morphology, and syntax. Other topics, e.g., German dialectology and German-English contrastive grammar, will also be addressed. PRQ: FLGE 311 or consent of department.

482. TECHNIQUES OF TRANSLATION (3). Techniques of translation from German to English and English to German. Focus on subtleties of expression in the two languages. May be repeated to a maximum of 9 semester hours. PRQ: FLGE 311 or consent of department.

487. SPANISH DIALECTS OF THE U.S. (3). To provide the student with a knowledge of the variations that exist within the Spanish language as spoken in the United States. Oral participation is stressed. PRQ: FLSP 411 or consent of department.

501. INTENSIVE SPANISH FOR SCHOOL PERSONNEL (3). Practical course in Spanish for non-bilingual teachers, aides, counselors, administrators, or others who work directly or indirectly with students whose dominant language is Spanish. PRQ: Consent of department.

Portuguese (FLPO)

461. BRAZILIAN CIVILIZATION (3). A course which stresses the contributions of the African and Indian to the history and literature of Brazil. Classes will be conducted in English with English and Portuguese bibliography.

German (FLGE)

411. MODERN GERMAN (3). Current usages in spoken and written German with emphasis on contemporary vocabulary, idiomatic expressions, and syntax. In German. PRQ: FLGE 311 or consent of department.

412. BUSINESS GERMAN (3). Techniques of spoken and written communication necessary in the business world with emphasis on commercial correspondence. PRQ: FLGE 411 or consent of department.

423. ENLIGHTENMENT, THROUGH WEIMAR CLASSICISM (3). Literary, philosophical, and political experience of Germany in the 18th century as reflected in the works of Lessing, Herder, Wieland, Goethe, Schiller, and others. PRQ: FLSP 321, FLGE 322, or consent of department.

433. GERMAN ROMANTICISM (3). Background to the literature and theory of 18th- and 19th-century German romanticism. PRQ: FLSP 311 and FLGE 322, or consent of department.

434. GERMAN REALISM AND NATURALISM (3). Realism and naturalism in 19th century Germany as reflected in the prose, poetry, and drama of Stifter, Keller, Hebbel, Storm, Fontane, Hauptmann, and others. PRQ: FLGE 321 and FLGE 322, or consent of department.

435. MODERN GERMAN LITERATURE: 1900-1945 (3). Literary trends, including impressionism, neo-romanticism, expressionism, the new realism of the Weimar Republic, the Third Reich, "inner emigration," and the Other Germany in exile. Such authors as Wedekind, Schnitzler, Hofmannsthal, Rilke, Thomas and Heinrich Mann, Hesse, Brecht, and Kafka, are included. PRQ: FLGE 321 and FLGE 322, or consent of department.

437. MODERN GERMAN LITERATURE: POSTWAR LITERATURE, EAST AND WEST (3). The period of reawakening after 1945 and the literature of a country divided between two ideologies. The political-moral dilemma and the search for identity and meaning within the European community as reflected in the prose, drama, and poetry of Boll, Grass, Frisch, Durrenmatt, Weiss, Johnson, and others. PRQ: FLGE 321 and FLGE 322, or consent of department.

441. EARLY GERMAN LITERATURE (3). A study of German literature from its beginnings through the Middle Ages and the age of Baroque. PRQ: FLGE 321 and FLGE 322, or consent of department.

461. DEUTSCHLAND HEUTE (3). A study of the current trends in contemporary German culture, society, and everyday life. In German. PRQ: FLGE 311 or consent of department.

481. THE STRUCTURE OF MODERN GERMAN (3). An introduction to the synchronic analysis of German, with emphasis on phonology, morphology, and syntax. Other topics, e.g., German dialectology and German-English contrastive grammar, will also be addressed. PRQ: FLGE 311 or consent of department.
Classical Languages (FLCL)

FLCL 483 DIRECTED READINGS IN CLASSICAL LANGUAGES (1-3). Independent study of a classical author under the direction of a faculty member. May be repeated to a maximum of 3 semester hours. PRQ: Two years of college Latin or Greek or equivalent, or consent of department.

Asian Languages

FLIN 421. INTRODUCTION TO INDONESIAN LITERATURE (3). A survey of the development of Indonesian literature. Selected readings in regional languages in translation using traditional and contemporary Indonesian literature. PRQ: FLIN 204 or consent of department.

General

FLAL 483 APPLIED LINGUISTICS AND THE ROMANCE LANGUAGES (3). A survey of the principles of linguistic theory as they apply to the teaching of the major romance languages. Emphasis on taxonomic and transformational linguistics. PRQ: Completion of the second year of a Romance language or consent of department.

FLIN 481. INDEPENDENT STUDY IN A FOREIGN LANGUAGE (1-6). Independent research on a cultural, linguistic, or literary topic. Student must present a detailed outline of proposed research before permit is granted. May be repeated to a maximum of 6 semester hours. PRQ: Three 400-level courses in the language or consent of department.

FLST 481 SPECIAL TOPICS IN LITERATURE I (3). The study of a major author, genre, theme, period, or literary movement. The topics for each section will be announced in the Schedule of Classes. May be repeated for credit to a maximum of 6 semester hours as topic changes. PRQ: Consent of department.

FLST 482. SPECIAL TOPICS IN LITERATURE II (3). The study of a major author, genre, theme, period, or literary movement. The topics for each section will be announced in the Schedule of Classes. PRQ: Consent of department.

FLST 540. RESEARCH SEMINAR IN LITERATURE (3).
A. French
B. German
C. Russian
D. Spanish
The study of special subjects and periods of literature. May be repeated to a maximum of 12 semester hours as the subject and/or period varies. PRQ: Consent of department.

FLST 561. RESEARCH SEMINAR IN CIVILIZATION AND CULTURE (3).
A. French
B. German
C. Russian
D. Spanish
Selected subjects in civilization and culture of the language area indicated. Specific subjects will be announced in the schedule. Any one language area may be repeated to a maximum of 12 semester hours when the subject varies. PRQ: Consent of department.

FLST 583. RESEARCH SEMINAR IN LANGUAGES AND LINGUISTICS (3).
A. French
B. German
C. Russian
D. Spanish
Focus on specific subjects in linguistics as related to an individual language area. May be repeated to a maximum of 9 semester hours as the subject changes. PRQ: Consent of department.

FLST 584. RESEARCH SEMINAR IN TRANSLATION (3).
A. French
B. German
C. Russian
D. Spanish
Graduate training in translation with a focus on specific subjects related to the various foreign languages. May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

FLST 590. PRACTICUM (3). Professional experience related to the work environment, utilizing foreign language translation and/or communication skills. Normally only available to students who have no prior foreign-language-related work experience. PRQ: Consent of department.

FLST 599. MASTER'S THESIS (1-3). May be taken upon the appointment of a thesis director and the approval of a prospectus. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.
Department of Geography (GEOG)

GRADUATE FACULTY

John M. Harlin, chair, professor, Ph.D., University of Iowa
Kenneth L. Bowden, assistant professor, M.S.Ed., Northern Illinois University
Richard E. Dahlberg, professor, Ph.D., University of Wisconsin
C. Daniel Dillman, professor, Ph.D., University of Michigan
Richard Greene, assistant professor, Ph.D., University of Minnesota
Andrew J. Krmenec, associate professor, Ph.D., Indiana University
Donald W. Maxfield, associate professor, Ph.D., University of Iowa
A. Steven Messenger, associate professor, Ph.D., Michigan State University
Allen E. Staver, associate professor, Ph.D., University of Wisconsin
Charles E. Trott, professor, Ph.D., Ohio State University

The Department of Geography offers a graduate program leading to the Master of Science degree.

Master of Science

All new students who are admitted to a major in geography leading to the Master of Science degree are required to consult with the coordinator of the Graduate Studies Committee (GSC) before registering for courses. The coordinator will assist students in identifying an appropriate regular adviser who will form a committee to arrange a program of study. A student must choose either a thesis or a non-thesis option subject to the consent of the adviser. Students must have the written approval of their adviser to register for geography courses each semester and must meet with their committee and with the GSC each academic year to discuss progress made toward the degree. Students who have not already met the requirements for an undergraduate degree in either geography or meteorology at Northern Illinois University must satisfy course deficiencies during their first year in the department. Such course hours do not carry graduate credit toward the degree unless approved by the GSC or adviser.

Requirements Within Either Option

1. Completion of one of the following:
   a. Satisfactory performance on a reading-knowledge examination in an appropriate modern foreign language.
   b. Satisfactory completion of the course in advanced quantitative methods for geographic research, GEOG 561.
   c. Satisfactory completion of a course in advanced field methods, GEOG 565. (This alternative is intended only for individuals teaching or planning to teach at the elementary or secondary levels.)
2. Satisfactory completion of the course in geographic research procedures, GEOG 563.
4. GEOG 500, Geography Seminar, must be taken each semester. Hours do not count toward required hours for graduation.

Thesis Option

A program consisting of a minimum of 30 semester hours, including at least 24 semester hours of course work and a thesis. Students are required to present findings of the thesis at the Geography Seminar (GEOG 500) and to present one paper or poster at a state, regional, or national professional meeting. Complete instructions for writing and submitting the thesis are in the department's "Graduate Student Handbook" (consult adviser).

Non-Thesis Option

A program consisting of a minimum of 36 semester hours. Students must submit two major research papers. The first paper must be submitted and accepted prior to completion of 24 semester hours. One paper must be completed under GEOG 572. Findings of one non-thesis paper will be presented at the Geography Seminar (GEOG 500). Complete instructions for writing and submitting the research papers are available in the department's "Graduate Student Handbook."

Course Offerings

Geography (GEOG)

402. PEDOLOGY (4). Soil genesis, distribution, and classification. Emphasis on soils of the U.S. Field trips are required. PRQ: GEOG 302 or consent of department.

403. SOIL GEOGRAPHY AND LAND USE PLANNING (3). Regional and local problems of soil utilization and management. PRQ: GEOG 201 or consent of department.

413. FOREST ECOLOGY AND MANAGEMENT (3). Forest tree identification and environmental requirements. Problems of forest management and assessment of conflicting social and economic demands. Field trips involving extra fees are required. PRQ: GEOG 253 and BIOS 103 or BIOS 104, or consent of department.

422. EDAPHOLOGY (4). Crosslisted as BIOS 422X. Chemical and physical properties of soils affecting agricultural and forest productivity, segregation of natural plant communities, and ornamental plants. Field trips are required. PRQ: GEOG 302, and CHEM 110 or CHEM 210, or consent of department.

430. POPULATION GEOGRAPHY (3). Basic demographic measures and data sources for the study of population size, distribution, composition, and dynamics. Relationships between population and geographic, economic, resource, social, and policy issues. Both conceptual and empirical approaches will be discussed. PRQ: 3 semester hours in geography or sociology or consent of department.

439. GEOGRAPHY OF DEVELOPING AREAS (3). A geographic appraisal of resources, problems, and development potentials of the developing nations. A multidisciplinary approach.
442X. GEOMORPHOLOGY (3). GEOL 442. Systematic study of the geologic processes affecting the evolution of the earth's surface. Special emphasis on glacial, fluvial, and coastal processes and their relationship to the development of landforms under diverse climates of the past and present. Lecture, laboratory, and field trips. PRQ: GEOG 120 or GEOG 201, or consent of department.

451. POLITICAL GEOGRAPHY (3). The study of political phenomena in areal context. Emphasizes temporal and spatial attributes of the State. Core areas, national boundaries, administration of territory. Geopolitics, power, multinational organizations, and modern theories about States. Geographic concepts applied to in-depth analysis of selected conflict regions. PRQ: Consent of department.

453. ENVIRONMENTAL RESOURCE PLANNING (3). Problems and alternative strategies in environmental management. Project evaluation of alternatives; feasibility studies; benefit/cost analysis, environmental impact statements. PRQ: GEOG 253 or consent of department.

455. LAND USE PLANNING (3). Types and patterns of land use: problems, goals, alternatives, and policy. PRQ: GEOG 304 or GEOG 362, or consent of department.

456. CARTOGRAPHIC COMMUNICATION (3). Study of the map product creation process, assessment of user needs, and prototype development and evaluations. One hour of lecture and four hours of laboratory. PRQ: GEOG 356 or consent of department.

457. COMPUTER-ASSISTED CARTOGRAPHY (3). Creation and development of interactive, microcomputer-based programs specifically designed for the display and analysis of spatially encoded data bases. The use of FORTRAN with a graphic kernel system is emphasized. Two hours of lecture and two hours of laboratory. PRQ: CSCI 230 or consent of department.

458. MAPPING PROGRAMS AND REQUIREMENTS (3). Study of public-sector mapping programs with emphasis on responses to legislated-driven requirements. Impacts of ongoing shifts in cartographic data bases from analog to digital formats. PRQ: GEOG 356 or consent of department.

459. GEOGRAPHIC INFORMATION SYSTEMS (3). Study of the conceptual framework and development of geographic information systems. Emphasis is placed upon the actual application of a GIS to spatial analysis. Two hours of lecture and two hours of laboratory. PRQ: GEOG 356 or consent of department.

461. APPLIED STATISTICS IN GEOGRAPHIC RESEARCH (4). Application of descriptive and inferential statistics in geographic research: the general linear model, spatial statistics, computer analysis, and research design and presentation. PRQ: STAT 301 or STAT 350, or consent of department.

462. MARKETING GEOGRAPHY (3). Locational analysis of marketing activities and consumer behavior. Review of census data bases and models used in the analysis of consumer travel and shopping patterns, trade regions, market hierarchies, facility siting, and market demand forecasting. PRQ: GEOG 204 or ECON 261 or MKTG 310, or consent of department.

463. URBAN GEOGRAPHY (3). Examination of the internal patterns and dynamics of urban areas. Spatial, economic, political, social, and behavioral approaches to the study of cities. Major focus is on U.S. cities. PRQ: GEOG 362 or consent of department.

464. INDUSTRIAL LOCATION THEORY (3). A comprehensive study of traditional and contemporary theories of industrial locations, and the changing structure of industrial systems in regional, national, and global economies. PRQ: MATH 210 and either GEOG 204 or ECON 261, or consent of department.

466. THE QUANTITATIVE BASIS OF REMOTE SENSING (3). Energy-matter interactions important to biophysical remote sensing. Study of how relational data bases, including satellite and aircraft sensor data, are applied in quantitative analyses of spectral/spatial data. Principles of digital image processing emphasized. Two hours of lecture and two hours of laboratory. PRQ: GEOG 365 or consent of department.

467. WORKSHOP IN APPLIED CARTOGRAPHY (1-3). Problems and techniques of map prototype development. Projects vary but include creation of customized maps and design of image maps. Directed individual study. May be repeated to a maximum of 6 semester hours. PRQ: GEOG 356 or consent of department.

468. APPLIED REMOTE SENSING (3). An advanced course in developing a project to implement digital image processing for environmental problem solving. Directed individual study. PRQ: GEOG 466 or consent of department.

469. EDUCATION METHODS AND MATERIALS IN GEOGRAPHY (3). Strategies of presenting geographic concepts. Evaluation of techniques and materials. PRQ: EPSY 313 or consent of department.

492. HYDROLOGY (3). Crosslisted as GEOL 492X. Quantitative examination of the interaction of precipitation, stream discharge, and groundwater flow. Utilization of water resources. PRQ: GEOG 201 or GEOG 120, and MATH 210 or MATH 229, or consent of department.

493. COMPUTER METHODS AND MODELING (3). Algorithms for programming of geographic research problems; computer graphics; simulation techniques; regional modeling. PRQ: CSCI 210 or CSCI 230, and GEOG 461 or MET 421, or consent of department.

494. WATER RESOURCES MANAGEMENT AND POLICY (3). Problems of water use and allocation; evaluation of policy alternatives. PRQ: GEOG 201 and GEOG 303, or consent of department.

495X. TEACHING OF PHYSICAL SCIENCES (3). PHYS 495X. Preparation for certification in grades 6-12 in one or more of the fields of physical science: physics, chemistry, earth science, and general science (physical science emphasis). Examination and analysis of modern curricula; classroom and laboratory organization; microteaching and observation of teaching; lesson planning; multicultural education; teaching science to the exceptional child; reading and the teaching of science; methods of evaluation. Includes 15 clock hours of clinical experience. PRQ: Consent of department.

496X. MATERIALS AND PROBLEMS OF HIGH SCHOOL INSTRUCTION IN THE SOCIAL SCIENCES (3). HIST 496X. Must be taken by students seeking certification in a social science before student teaching. Includes 15 clock hours of clinical experience, attention to the teaching of exceptional students, planning for multicultural learning situations, and techniques of reading in the social sciences. PRQ: Consent of department.

498. SEMINAR IN CURRENT PROBLEMS (1-3). A. Natural Environmental Systems B. Meteorology/Climatology C. Environmental Management D. Urban/Economic Geography E. Area Studies F. Hydrology G. Soil Science H. Methodology and Techniques Selected topics in the various subfields of geography. May be repeated to a maximum of 6 semester hours as the topic changes. PRQ: Consent of department.

500. GEOGRAPHY SEMINAR (1/2). Required of graduate students each semester in residence except summer session. May be repeated to a maximum of 3 semester hours. Hours do not count toward required hours for graduation.

502. INTERNSHIP (1-6). A. Natural Environmental Systems B. Meteorology/Climatology C. Urban/Economic Geography D. Area Studies E. Cartography F. J. Remote Sensing Work as an intern in an off-campus agency or firm. The students will complete intern tasks as assigned, do readings, and prepare a paper under the supervision of a faculty member. May be repeated to a maximum of 12 semester hours; only 3 semester hours may be applied for graduation.

506. GEOGRAPHY INSTITUTE FOR TEACHERS (1-8). Development of substantive knowledge of systematic or regional geography, understanding of geographical methodology, and exploration of means of articulating advanced work into field and classroom instruction. May be repeated to a maximum of 8 semester hours. PRQ: Consent of institute director.

558. READINGS IN GEOGRAPHY (1-3). Directed readings in those phases of geographic literature needed by the student to strengthen background knowledge. May be repeated to a maximum of 6 semester hours.
559. GEOGRAPHIC ASPECTS OF REGIONAL PLANNING AND DEVELOPMENT (3). A geographical analysis of functional and comprehensive planning at various levels. Case studies, with emphasis upon the U.S. and the relationships between planning and economic development.

561. ADVANCED QUANTITATIVE METHODS FOR GEOGRAPHIC RESEARCH (3). Introduction to multivariate data analysis: matrix algebra, MANOVA, discriminant functions, principal components, and other procedures in geographic research. PRQ: GEOG 461 or consent of department.

563. GEOGRAPHIC RESEARCH PROCEDURES (3). Geography in the sciences: logical inquiry; paradigms and models; geographic research strategies.

566. ADVANCED FIELD METHODS (3-6). Field investigation of spatial processes and patterns. Research design, sampling methods, and mapping techniques. Choice of area and topics dependent upon needs and interests of the student. May be repeated to a total of 6 semester hours. PRQ: Consent of department.

568. HISTORY OF GEOGRAPHIC THOUGHT (3). The evolution of concepts pertaining to the nature, scope, and methodology of geography since classical times; major emphasis on the modern period. PRQ: Consent of department.

571. INDEPENDENT RESEARCH (1-3). A. Natural Environment Systems B. Meteorology/Climatology C. Urban Economic Geography D. Area Studies J. Cartography/Remote Sensing Independent research under the supervision of adviser. May be repeated to a maximum of 6 semester hours.

572. MASTER'S RESEARCH PAPER (1-3). Individual investigation of special problems in the field of geography under supervision of one or more staff members. May be repeated to a maximum of 6 semester hours.

579. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours.

600. SEMINAR IN SYSTEMATIC GEOGRAPHY (1-3). A. Landforms/Soils B. Meteorology/Climatology C. Natural Resources D. Economic Geography E. Cultural Geography J. Urban Geography K. Political Geography Lectures, discussions, and reports on topics of special interest in a particular field of systematic geography. One to 3 semester hours as scheduled. May be repeated in one or more fields of geography to a maximum of 6 semester hours in any field of systematic geography. PRQ: Consent of department.

601. SEMINAR IN REGIONAL GEOGRAPHY (1-9). Lectures, discussions, and reports on topics of special interest in a particular field of regional geography. One to 9 semester hours as scheduled; course may be repeated to a maximum of 9 semester hours in any field of regional geography as the topic changes. PRQ: Consent of department.

602. SEMINAR IN GEOGRAPHIC METHODOLOGY AND TECHNIQUES (1-9). Lectures, discussions, and reports on topics of special interest in geographic methods and techniques. May be repeated to a total of 9 semester hours, if the topic changes.

Meteorology (MET)

410. WEATHER DYNAMICS I (4). Statics, conservation of mass, linear momentum and energy, shallow water equations, scale analysis, geostrophic, gradient and thermal winds, circulation and vorticity theorems, and introduction to the planetary boundary layer. Three hours of lecture and two hours of laboratory. PRQ: MET 300, MATH 232, and CSCI 230, or consent of department.

411. WEATHER DYNAMICS II (4). Waves in the atmosphere, quasi-geostrophic flow theory, introduction to numerical weather prediction and dynamic instability theory. Three hours of lecture and two hours of laboratory. PRQ: MET 410 or consent of department.

430. MICROMETEOROLOGY (3). Study of physical processes in the boundary layer; laminar flow, turbulence, momentum and heat flux, diffusion, katabatic and anabatic flow. PRQ: CSCI 230 and MET 300, or consent of department. CRQ: MET 410.

431. APPLIED METEOROLOGY (3). Application of meteorology theory and microcomputers in air pollution, acid rain, weather modification, aviation weather, agricultural forecasting, and industrial meteorology. Review of meteorological research techniques and experiment design. PRQ: MET 430 and CHEM 160A or CHEM 210, or consent of department.

472. BROADCAST METEOROLOGY (1-3). Laboratory experience in the preparation and presentation of weather information to the public. May be repeated up to 4 semester hours but only 3 semester hours may count toward requirements of major in meteorology. Laboratories to be arranged. CRQ: MET 320, COMS 309, and consent of department.

485. ATMOSPHERIC PHYSICS (3). Fundamentals of radiation transfer theory, cloud and precipitation physics, satellite remote sensing techniques, and physics of the middle and upper atmosphere. PRQ: MET 300 or consent of department. CRQ: MATH 232 or consent of department.

540. CLIMATE DYNAMICS I (3). Global scale tropospheric convection and wave processes on time scales from the Brunt-Vaisala frequency to multiples of the Milankovitch cycle. Deterministic chaos and climate variability. Sensitivity of the troposphere to solar forcing, volcanism, orbital and microcomputers in air pollution, acid rain, weather modification, aviation weather, agricultural forecasting, and industrial meteorology. Review of meteorological research techniques and experiment design. PRQ: MET 430 and CHEM 160A or CHEM 210, or consent of department. CRQ: MET 410 or consent of department.

541. CLIMATE DYNAMICS II (3). A detailed systematic investigation into the macroscale dynamics of the climate system as a continuation of MET 540. Additional topics include the Lorenz equations, energy balance models, Milankovitch theory of climate, Goityn similarity theory of planetary atmospheric circulation, and the development of a three-dimensional tropospheric general circulation model. PRQ: MET 540 or consent of department.

550. NUMERICAL ANALYSIS AND FORECASTING (3). Finite difference schemes, numerical stability, forward, backward, and centered differencing, numerical relaxation techniques, finite element methods, and spectral techniques. PRQ: MET 411 and MATH 334 or MATH 336, or consent of department.
GRADUATE FACULTY
Jonathan H. Berg, chair, professor, Presidential Research
Professor, Ph.D., University of Massachusetts
Colin J. Booth, associate professor, Ph.D., Pennsylvania State University
Elizabeth A. Burton, associate professor, Ph.D., Washington University
Phillip J. Carpenter, associate professor, Ph.D., New Mexico Institute of Mining and Technology
Clarence J. Casella, associate professor, Ph.D., Columbia University
C. Patrick Ervin, associate professor, Ph.D., University of Wisconsin
Ruth I. Kalamarides, associate professor, Ph.D., University of Massachusetts
Hsin Yi Ling, professor, Distinguished Research Professor, Ph.D., Washington University
Paul Loubere, professor, Ph.D., Oregon State University
Carla W. Montgomery, associate professor, Ph.D., Massachusetts Institute of Technology
Eugene C. Perry, Jr., professor, Ph.D., Massachusetts Institute of Technology
Ross D. Powell, professor, Presidential Research Professor, Ph.D., Ohio State University
Paul R. Stoddard, associate professor, Ph.D., Northwestern University
Jay A. Stravers, associate professor, Ph.D., University of Colorado
James A. Walker, associate professor, Ph.D., Rutgers University

The Department of Geology offers graduate programs leading to the degrees Master of Science and Doctor of Philosophy.

Because the number of places in the graduate program in geology is limited, the graduate committee may wait to make admission decisions until the majority of applications for a given semester are complete. In the case of an applicant presenting superior credentials for admission, however, a decision may be made immediately upon receipt of the completed application.

Master of Science
The Master of Science degree prepares one for professional work in geology, or for further work leading to a doctorate. It may also be valuable to teachers of earth science in secondary schools and community colleges. Teachers and prospective teachers, if not already certified, will be expected to obtain the necessary prerequisites for certification in Illinois.

Students whose undergraduate major was in a science other than geology are encouraged to apply. Such students will also be expected to complete a core sequence of undergraduate geology courses in mineralogy, petrology, stratigraphy, structural geology, and the summer field camp.

A student who elects a program leading to the degree Master of Science with a major in geology must satisfy the following departmental requirements in addition to satisfying Graduate School requirements.

1. The student is normally expected to meet the geology, chemistry, physics, and mathematics requirements for the Bachelor of Science in geology at Northern Illinois University.
2. A minimum of 30 semester hours of graduate credit is required; this will normally include at least 24 semester hours in geology.

Thesis option: At least 24 semester hours plus a thesis. Ordinarily, no more than 3 semester hours of independent study courses (GEOL 570 and/or GEOL 670) may be included in the minimum 24 non-thesis semester hours. Additional independent-study hours may be counted toward this total only with the approval of the departmental graduate committee. Each student is required to make a public presentation of the results of the thesis research through a departmental colloquium as well as a defense of the thesis.

Non-thesis option: At least 30 semester hours. During the first semester in the program, a student must petition the department's graduate committee to obtain permission to pursue this option.
3. The student must pass a comprehensive examination, which is to be taken in the semester following in which the student has completed at least 13 hours of graduate course credit. In consultation with their adviser, practicing or prospective teachers should construct a broad subject-matter course plan involving astronomy, biology, chemistry, mathematics, meteorology, or physics.

Doctor of Philosophy
Any student who has earned a baccalaureate or master's degree in geology, biology, chemistry, engineering, mathematics, or physics from an accredited college or university is eligible to apply for admission. Every candidate for the Ph.D. must complete the requirements specified below.

Course Work
Ph.D. students in geology must normally complete a minimum of 90 semester hours as part of the degree program. In computing this total, a maximum of 30 semester hours may be included from the M.S. or equivalent program, provided they are consistent with the student's Ph.D. program objectives. At least 24 semester hours must be taken in approved courses in the student's field of study. A maximum of 39 semester hours may be counted for Ph.D. dissertation research and writing (GEOL 699). The remaining hours must be selected from electives and an internship program, with the consent of the adviser.

The complete doctoral program is arranged as follows:
1. Field of study 24-30 semester hours
2. Electives 21-30 semester hours
3. Internship 0-9 semester hours
4. Dissertation (GEOL 699) 30-39 semester hours

The student should expect to take a significant portion of the elective course work in allied science departments, particularly chemistry, mathematics, and physics, as is appropriate to round out the doctoral program. Entering students with particularly
sound preparation in geology may, with approval, substitute graduate courses in other departments for required geology courses. Conversely, non-geology majors entering the doctoral program will need to strengthen their background in fundamental geologic principles.

The student entering the Ph.D. program with a B.S. or B.A. degree who does not elect to undertake a master's thesis must take the non-thesis option M.S. examination in the semester in which he or she will have completed 30 semester hours of graduate study. The student must complete this examination satisfactorily in order to continue in the Ph.D. program.

Candidacy Examination

No later than the semester in which 30 semester hours of graduate study beyond the M.S. (or beyond satisfactory performance on the non-thesis M.S. examination—see above) are completed, but at least 8 months before the dissertation defense, the student must successfully complete a candidacy examination consisting of both written and oral portions. Details concerning this examination may be obtained from the Department of Geology.

Language/Skill Requirement

The language/skill requirement may be satisfied in one of the following ways:

1. Two foreign languages with average reading proficiency.
2. One foreign language with high level of proficiency.
3. One foreign language with average reading proficiency and one research tool with average proficiency.

The foreign languages may be German, French, or Russian. Research tools and alternate foreign languages must be approved by the department graduate committee.

Internship

Before or during tenure in the Ph.D. program, the student must intern for a minimum period of one semester with industry, a public or private research organization, or a government agency. The internship position and arrangements must be approved by the department. The internship must be in a geoscience setting or organization and appropriate to the candidate's program. This requirement may be waived in special cases where a degree candidate has previous practical experience in the subject matter.

Dissertation

The student must complete an approved research project and prepare a dissertation. It must be a substantial contribution to knowledge, in which original scholarship is demonstrated. An oral defense of the student's work and dissertation is required; this will be held before the university community and under the supervision of the student's doctoral committee, in accordance with Graduate School regulations.

Course Offerings

**NOTE:** Students-at-large may enroll in graduate courses in geology only by consent of the department.

410. **STRUCTURAL AND DETERMINATIVE MINERALOGY** (3). Crystal structures and the chemical and physical factors that govern them. Mineral identification techniques, including X-ray, thermal, infra-red, and microprobe analyses are emphasized in the laboratory. **PRO: GEOL 300 and CHEM 211, or consent of department.**

411. **OPTICAL MINERALOGY** (3). Principles of optics, optical properties of minerals, and the relationship between optical properties and crystallography; measurement of optical properties and mineral identification by the immersion method and in thin section. **PRO: GEOL 300 or consent of department.**

419. **ELEMENTS OF GEOCHEMISTRY AND COSMOCHEMISTRY** (3). Chemical principles applied to the study of mineral equilibria and to solving geologic problems, with emphasis on high-temperature (igneous and metamorphic) processes. Origin and abundances of the elements, aspects of the composition of the solar system and of the earth's interior. **PRO: GEOL 312 and CHEM 211, or consent of department.**

420. **GEOCHEMISTRY OF THE EARTH'S SURFACE** (3). Natural chemical processes occurring at and near the earth's surface: carbonate equilibria, chemical weathering, oxidation-reduction reactions, and mineral stability relations. Introduction to geochemical cycles and the evolution of sedimentary rocks. **PRO: CHEM 211 and GEOL 300, or consent of department.**

421. **ENVIRONMENTAL GEOCHEMISTRY** (3). Explores topics in pollution geochemistry including hydrologic and geochemical framework; human-influenced distribution and circulation of metals, radioactive materials, and complex organic compounds; and governmental response to current pollution problems. **PRO: Any 100- or 200-level geology course and CHEM 211, or consent of department.**

425. **ENGINEERING GEOLOGY** (3). Utilization and characterization of earth materials for geotechnical and environmental engineering. Assessment of soils and rock quality, Atterberg limits, soil and rock mechanics, geotechnical testing, consolidation theory, dewatering, slope stability, and seismic hazards. Case histories and problem solving. **PRO: GEOL 300, GEOL 310, MATH 230, and PHYS 250 or PHYS 250A, or consent of department.**

429. **FIELD GEOLOGY FOR EARTH SCIENCE TEACHERS** (3). Field and lab survey of the salient geological features and landforms of northern Illinois and southern Wisconsin. Open only to certified teachers and students pursuing teacher certification. **PRO: Introductory course in physical and historical geology, and consent of department.**

440. **THEORETICAL PETROLOGY** (3). Origin of igneous and metamorphic rocks with emphasis on theoretical principles such as phase equilibria, thermodynamics, elemental and isotopic concentrations and partitioning, and kinetics. **PRO: GEOL 312 and GEOL 411, or consent of department.**

443X. **PRINCIPLES OF PHYSICAL CHEMISTRY** (4). **CHEM 442.** A one-semester course intended for chemistry majors pursuing Emphasis 2, 3, or 4. Also suitable for non-majors desiring a course in physical chemistry. Topics covered are thermodynamics, chemical kinetics, and atomic and molecular structure. Not offered for graduate credit for chemistry majors. Four lectures a week. **PRO: CHEM 211, PHYS 251, and MATH 230, or consent of department.**

444. **ECONOMIC GEOLOGY** (3). Introduction to metallic and nonmetallic resources, including coal, petroleum, and groundwater. Investigation of ore-forming processes, including studies of ore minerals and suites. Economic, geopolitical, and geological factors related to resource development will be considered. Lectures, laboratory, and field trips. **PRO: GEOL 310 or consent of department.**

447. **QUANTITATIVE TECHNIQUES IN GEOLOGY** (3). Survey of the methods and practices of quantifying, collecting, analyzing, and summarizing geologic data. **PRO: MATH 155 or consent of department.**

470. **INVERTEBRATE PALEONTOLOGY** (3). Crosslisted as BIOS 469X. The principal invertebrate fossil forms of the geologic record, treated from the standpoint of their evolution, and the identification of fossil specimens. Several field trips required. **PRO: Major in biological sciences or geology.**

471. **INTRODUCTION TO MICROPALAEONTOLOGY** (3). **PRO: BIOS 205 and GEOL 220, or consent of department.**

477. **PALEOECOLOGY** (3). Analysis and interpretation of ancient ecological systems, including ecostratigraphic parameters of depositional environments, and paleoecology and paleosynecology of marine and terrestrial organisms. **PRO: GEOL 470 or GEOL 471, or consent of department.**

480. **THEORETICAL PETROLOGY** (3). Origin of igneous and metamorphic rocks with emphasis on theoretical principles such as phase equilibria, thermodynamics, elemental and isotopic concentrations and partitioning, and kinetics. **PRO: GEOL 312 and GEOL 411, or consent of department.**

481. **SEDIMENTARY PETROLOGY** (3). Emphasis on laboratory analysis of siliciclastic and carbonate rocks to determine depositional and diagenetic histories. Lectures and two-hour laboratory per week. **PRO: GEOL 305 and GEOL 312 or consent of department.**
485. VOLCANOLOGY (3). An examination of volcanoes, types of volcanic eruptions, magma sources and storage, lava flows, and pyroclastic deposits. PRQ: GEOL 305 and GEOL 312, or consent of department.

486. ENVIRONMENTAL CHANGE (3). An examination of the physical, chemical, and biological processes that cause environments to change naturally or under the influence of human activities. Environments at several different size scales will be considered, from small water-sheds/forests, to larger lake systems, to the global atmospheric-ocean system. The course will emphasize the roles of positive and negative feedback in controlling the state of environments and their susceptibility to change. PRQ: Any 100- or 200-level BIOS, GEOG, GEOL, course, and CHEM 210, and MATH 229 or MATH 210, or consent of department.

490. HYDROGEOLOGY (3). Comprehensive introduction to hydrogeology; groundwater occurrence, physics of flow, aquifer characteristics, basic groundwater chemistry, aspects of groundwater contamination, resources, and environmental hydrogeology. PRQ: Any 100- or 200-level geology course and MATH 229, or consent of department.

491. GEOPHYSICAL WELL LOGGING (3). The qualitative and quantitative interpretation of electric, sonic, radioactive, and other well logs. Physical and electrical properties of saturated rock and soil applied to petroleum, mining, and groundwater exploration. PRQ: GEOL 496 or consent of department.

492X. HYDROLOGY (3). GEOG 492. Quantitative examination of the interaction of precipitation, stream discharge, and groundwater flow. Utilization of water resources. PRQ: GEOL 201 or GEOL 120, and MATH 210 or MATH 229, or consent of department.

493. GROUNDWATER GEOPHYSICS (3). A survey of geophysical methods commonly employed in groundwater investigations. Applications of geophysics to groundwater exploration, contaminant migration, and aquifer evaluation as well as the theoretical basis for surface and borehole geophysical measurements. Case histories will illustrate field procedures and interpretation methods. PRQ: GEOL 490, MATH 230, and PHYS 251A, or consent of department.

496. GEOPHYSICS (3). Intended for majors in all areas of geology. An introduction to the basic principles of geophysical techniques applicable to the solution of geological and environmental problems that range in scale from local to global. PRQ: MATH 229 and PHYS 250 or PHYS 250A, or consent of department.

497. REGIONAL FIELD GEOLOGY (1-3). Extended field trips to regions of broad geologic interest. Emphasis will be placed on understanding the region as a whole, as well as its relationships to adjacent areas. May be repeated to a maximum of 3 semester hours. PRQ: Consent of department.

500. CLAY MINERALOGY (3). Study of structure, properties, and origin of clay minerals and the mineralogy, sedimentation, diagenesis, and physicochemical properties of argillaceous sediments. PRQ: GEOL 410 or consent of department.

501. PHYSICAL SEDIMENTOLOGY (3). Overview of major physical processes producing mechanically formed features of detrital sediments. Emphasis on texture and structures of sediments and how they originate. PRQ: GEOL 481 or consent of department.

502. GEOLOGICAL REMOTE SENSING (3). Theoretical principles, instrumentation, software, and systems applications used in geological remote sensing analysis. Elements of photogeology, processing of multi- and single-band digital imagery, and merged raster-vector data analysis will be treated. Data types include aerial photographs, multispectral imagery, and high-resolution digital imagery. Applications will focus on resource exploration, logistics, and environmental analysis as well as geological interpretations. Lectures and laboratory. PRQ: GEOG 466, GEOL 310, and PHYS 251 or PHYS 251A; or ELE 554; or consent of department.

504. INSTITUTE FOR SCIENCE TEACHERS (1-8). Lectures, demonstrations, laboratory experiences, and field trips designed for the classroom teacher. Topics drawn from the spectrum of geological activities that affect society. May be repeated to a maximum of 16 semester hours. On application of institute director and by invitation only. Grading is on the S/U basis.

505. ORE DEPOSITS (3). Study of the physiochemical controls and tectonic settings of metallic and selected industrial mineral deposits. Evaluation of ore deposit models. Techniques of deposit analysis, including examination of ores using reflected light, fluid inclusion, and geochemical and isotopic analyses. Lectures and laboratory. PRQ: GEOL 410, GEOL 443X, and GEOL 444, or consent of department.

506. PETROLEUM GEOLOGY (3). A study of the origin and occurrence of oil and natural gas as well as surface and subsurface applications to exploration and development. Two lectures, one two-hour laboratory.

510. TECTONICS (3). The evolution of continents and oceans treated from a perspective of sea-floor spreading and continental drift, with emphasis on major episodes of crustal orogeny, the genesis of economic minerals, and the origins of sedimentary, igneous, and metamorphic rocks. PRQ: GEOL 450 or consent of department.


524. STABLE ISOTOPE GEOLOGY (3). Isotope fractionation in natural systems containing D/H, carbon, oxygen, and sulfur. Application of stable isotope studies to paleoclimatology and geothermometry. Stable isotopes as tracers in crust-mantle differentiation processes and in hydrologic processes. Two hours of lecture and one laboratory session per week. PRQ: GEOL 312 or consent of department.

525. RADIOACTIVE ISOTOPE GEOLOGY (3). Radioactive decay schemes useful for determining ages of rocks and minerals and investigating the histories of the earth, moon, and meteorites. Use of isotopes as tracers in the study of geologic processes, such as magmatic and metamorphic Processes and the evolution of earth's crust and mantle. PRQ: GEOL 312 or consent of department.

530. GROUNDWATER MODELING (3). Mathematical and numerical modeling of groundwater flow, with particular emphasis on finite-difference modeling. PRQ: GEOL 490, FORTRAN, and calculus; or consent of department.

535. GROUNDWATER GEOLOGY (3). Examination of the hydraulic controls of groundwater occurrence and movement, hydrogeology of different geologic terrains, and hydrogeology of Illinois. PRQ: GEOL 490 or consent of department.

537. CONTAMINANT HYDROGEOLOGY (3). Sources and types of groundwater contamination; contaminant transport processes and modeling; monitoring, sampling, and assessment; chemical reactions and attenuation processes of organic and inorganic contaminants; remediation. PRQ: GEOL 420 or GEOL 421, and GEOL 490, or consent of department.

540. ADVANCED MINERALOGY (3). Application of crystal chemistry to the structure and composition of minerals; theory and application of powder and single crystal techniques of structural analysis. PRQ: GEOL 410 and MATH 229, or consent of department.

544. GLACIAL GEOLOGY (3). Physical properties of ice and the fundamentals of glacier and ice sheet dynamics as they relate to processes of glacier erosion, sediment transport, and deposition. Glacial isostasy of continental interiors and margins, global sea level changes, and late Cenozoic climate cycles. PRQ: GEOL 442 or consent of department.

547. QUATERNARY STRATIGRAPHY (3). Systematic study of glacial processes responsible for the formation of complex glacial drift sequences in the mid-continent. Stratigraphic and geochronological methods will be discussed. Pedological, geotechnical, and hydrogeological properties of unconsolidated deposits will be examined in regard to environmental properties. PRQ: GEOL 442 or GEOG 544, or consent of department.

548. STRATIGRAPHY (3). A systematic study of selected aspects of the North American stratigraphic record with emphasis on broad sedimentary patterns and tectonic development.

549. ADVANCED STRUCTURAL GEOLOGY (3). The origin and the mechanisms involved in the formation of various structural features occurring in nature. PRQ: GEOL 310 or consent of department.

550. APPLIED GEOPHYSICS: GRAVITY AND MAGNETIC FIELDS (3). Theory and application of gravity and magnetic techniques to investigations of the earth's structure and its physical properties. PRQ: PHYS 251A and MATH 232, or consent of department.

551. APPLIED GEOPHYSICS: SEISMIC AND ELECTRICAL (3). Theory and application of seismological and electrical techniques to investigations of the earth's structure and its physical properties. PRQ: PHYS 251A and MATH 232, or consent of department.
552. PETROLOGY OF CLASTIC SEDIMENTS AND ROCKS (3). The origin of terrigenous clastic sediments and their occurrence in modern environments. Texture, composition, and sedimentary structures of sediments and rocks by megascopic and microscopic methods, including thin sections, emphasized in the laboratory. PRQ: GEOL 411 or consent of department.

553. PETROLOGY OF PRECIPITATED SEDIMENTS AND ROCKS (3). Biogenic and inorganically precipitated modern sediments and their ancient rock analogs: origins, environments, mineralogy, textures, and methods of study, including thin sections. Lectures and laboratory. PRQ: GEOL 411 or consent of department.

554. GEOPHYSICAL FIELD METHODS (3). The application of geophysical laboratory and field instrumentation and techniques to the investigation of geological problems. CRQ: GEOL 496 or consent of department.

555. ADVANCED GEOPHYSICS (3). Regional geophysical measurements and properties of earth's interior and their implications for geodynamics. PRQ: GEOL 550 or GEOL 551, or consent of department.

558. POTENTIAL THEORY (3). Development of potential theory with application to geophysics. Problem of the nonuniqueness and limits of theoretical approximations. PRQ: GEOL 496 and MATH 232, or consent of department.

560. GEOPHYSICAL TIME SERIES ANALYSIS (3). Analysis of time series with special emphasis on applications of spectral techniques and linear filtering in the earth sciences. Properties of continuous and discrete Fourier transforms; sampling, design, and use of linear filters; stochastic processes; spatial and cross-spectral density, and fast Fourier transforms. Applications to geophysics, hydrology, and meteorology. PRQ: MATH 232 and CSCI 230, or consent of department.

565. EARTHQUAKE SEISMOLOGY (3). Development of 1-, 2-, and 3-dimensional wave theory. Effects of rheology on seismic wave propagation. Constitutive relations. Body waves and surface waves. Focal mechanisms, body wave modeling, and source parameters. Inverse problems including earthquake location and seismic tomography. PRQ: MATH 240 or consent of department.

570. SPECIAL PROBLEMS IN EARTH SCIENCES (1-3). Independent study under supervision of an adviser. May be repeated to a maximum of 9 semester hours.

575. IGNEOUS PETROLOGY (3). The study of igneous rocks in the earth's crust and mantle, emphasizing phase equilibria, kinetics, and geochemistry. PRQ: GEOL 480 or consent of department.

580. METAMORPHIC PETROLOGY (3). The study of chemical and petrological principles and processes relevant to metamorphic rocks. Evaluation of metamorphic environment and the controlling factors of metamorphism. PRQ: GEOL 480 or consent of department.

589. CALCAREOUS MICROPALeONTOLOGY (3). Application of calcareous and phosphatic microfossils to problems in biostatigraphy, paleobiogeography, paleo-environmental and paleo-climatic analysis. Emphasis on current research and case studies to illustrate methods and principles. PRQ: GEOL 470 and GEOL 471, or consent of department.

590. SILICEOUS MICROPALeONTOLOGY (3). An in-depth discussion of siliceous microfossils, their geologic occurrence, and their application to the problems of earth sciences, emphasizing current research advancement. PRQ: GEOL 470 and GEOL 471, or consent of department.

591. ADVANCED PALEONTOLOGY (3). Biostatigraphy and paleoecology of various fossil groups, and use of fossils to solve stratigraphic, structural, mapping, and paleo-oceanic problems. PRQ: GEOL 471 or consent of department.

599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours.

610. GEODYNAMICS (3). A rigorous examination of the processes associated with plate tectonics. Development of the concepts of stress, strain, elasticity, and flexure, and their application to the earth's lithosphere. Analysis of heat flow within the earth, including conduction and convection. Introduction to fluid mechanics as it pertains to the driving forces of plate motions. Effects of crustal and mantle rheology on plate motions and convection. Gravity and seismology as tools for understanding plate tectonics. PRQ: MATH 334 or consent of department.

620. DEPARTMENTAL SEMINAR (0). Weekly reports by graduate students, staff, and guests. Required of all graduate students.

625. WATER RESOURCE GEOCHEMISTRY (3). Chemical composition of water in surface and subsurface aquifers. Equilibrium and disequilibrium chemical reactions occurring in aquifers. The relation between health, disease, and the geochemistry of drinking water. PRQ: GEOL 520 or consent of department.

630. ADVANCED GEOCHEMISTRY (3). Current and classic readings on topics such as nucleosynthesis, evolution of the earth, composition of the earth's interior, petrogenesis, and development of the atmosphere and ocean. PRQ: GEOL 419, and GEOL 524 or GEOL 525, or consent of department.

645. GROUND VIBRATIONS AND INSTRUMENTATION (3). Application of the theory of periodic motion to the design of geophysical instruments, particularly the seismograph and gravimeter, and to the understanding of seismic wave propagation within the earth. PRQ: GEOL 551 or consent of department.

646. GEOLOGY SEMINAR (1-9). A. General Geology
   B. Isotope Geochemistry
   C. Environmental Geology
   D. Remote Sensing
   E. Engineering Geology
   F. Marine Geology
   G. Recent Developments
   H. Geomorphology
   I. Structural Geology
   J. Paleontology
   K. Stratigraphy
   L. Biogeography
   M. Petroleum Geology
   N. Geophysics
   O. Geophysics

May be repeated. One to 9 semester hours may be earned in each subdivision.

647. GEOCHEMISTRY SEMINAR (1-9). A. General Geochemistry
   B. Isotope Geochemistry
   C. Environmental Geochemistry
   D. Remote Sensing
   E. Engineering Geology
   F. Marine Geology
   G. Recent Developments
   H. Geomorphology
   I. Structural Geology
   J. Paleontology
   K. Stratigraphy
   L. Biogeography
   M. Petroleum Geology
   N. Geophysics
   O. Geophysics

May be repeated. One to 9 semester hours may be earned in each subdivision.

648. GEOPHYSICS SEMINAR (1-9). A. General Geophysics
   B. Gravity and Magnetics
   C. Electrical Geophysics
   D. Environmental Geophysics
   E. Remote Sensing
   F. Marine Geology
   G. Recent Developments
   H. Geomorphology
   I. Structural Geology
   J. Paleontology
   K. Stratigraphy
   L. Biogeography
   M. Petroleum Geology
   N. Geophysics
   O. Geophysics

May be repeated. One to 9 semester hours may be earned in each subdivision.

650. INTERPRETATION METHODS IN POTENTIAL FIELDS (3). Application of various interpretation methods to the solution of geophysical problems using gravity and magnetic data. PRQ: GEOL 550 and working knowledge of FORTRAN, or consent of department.

651T. REFLECTION SEISMOLOGY (3). Principles and applications of seismic reflection interpretation techniques used in oil, gas, groundwater exploration, and deep crustal imaging. PRQ: GEOL 493 or GEOL 496 and a working knowledge of FORTRAN, or consent of department.

670. INDEPENDENT RESEARCH IN GEOLOGY (1-3). Individual investigation of special problems in the field of geology under supervision of one or more staff members. May be repeated to a maximum of 6 semester hours. PRQ: 22 semester hours of graduate work in the earth sciences, or consent of department.

680. BASIN ANALYSIS (3). Investigation of sedimentary and biological processes and engineering on continental margins and intracratonic basins. Ancient basin analysis from modern analogues. PRQ: Consent of department.

690. GEOLOGIC PROBLEMS OF THE MIDWEST (3). The nature of geologic problems in midwestern urban and rural environments, including water supply, stream and groundwater pollution, chemical and human waste disposal, and the utilization of and construction in earth materials.

695. APPLIED GEOSCIENCE INTERNSHIP (1-9). At least one semester in duration, during which the student performs the functions of a geoscientist under the direct supervision of qualified personnel approved by the department. May be repeated to a maximum of 9 semester hours.

699. DOCTORAL RESEARCH AND DISSERTATION (credit arranged). May be repeated to a maximum of 39 semester hours.
Graduate Faculty

George W. Spencer, chair, professor, Ph.D., University of California, Berkeley
William H. Logue, assistant chair, professor, Ph.D., University of Chicago
Samuel Amaral, associate professor, Ph.D., University of La Plata
Michael Aung-Thwin, associate professor, Ph.D., University of Michigan
Thomas W. Blomquist, professor, Ph.D., University of Minnesota
Joe D. Burchfield, associate professor, Ph.D., Johns Hopkins University
J. Eric Duskin, assistant professor, Ph.D., University of Michigan
Bruce Field, assistant professor, Ph.D., College of William and Mary
Stephen Foster, professor, Presidential Research Professor, Ph.D., Yale University
Margaret George, professor, Ph.D., University of Pittsburgh
Glen A. Gildemeister, adjunct assistant professor, Ph.D., Northern Illinois University
Michael J. Gonzales, professor, Ph.D., University of California, Berkeley
Stephen Halicz, professor, Ph.D., St. Andrews University (Scotland)
Stephen R. Kern, professor, Distinguished Research Professor, Ph.D., Columbia University
Samuel C. Kinser, professor, Presidential Research Professor, Ph.D., Cornell University
Paul J. Kleppner, professor, Distinguished Research Professor, Ph.D., University of Pittsburgh
Allan Kulikoff, professor, Ph.D., Brandeis University
W. Bruce Lincoln, professor, Distinguished Research Professor, Ph.D., University of Chicago
J. Carroll Moody, professor, Ph.D., University of Oklahoma
Simon P. Newman, assistant professor, Ph.D., Princeton University
James D. Norris, professor, Ph.D., University of Missouri
Joseph P. Parot, professor, Ph.D., Northern Illinois University
Carl P. Parr, professor, Ph.D., University of Wisconsin
Barbara M. Posadas, associate professor, Ph.D., Northwestern University
Marvin J. Powell, Jr., professor, Presidential Research Professor, Ph.D., University of Minnesota
Marvin S. Rosen, associate professor, Ph.D., University of California, Berkeley
James D. Schmidt, assistant professor, Ph.D., Rice University
Robert W. Schneider, professor, Ph.D., University of Minnesota
Jordan A. Schwarz, professor, Distinguished Research Professor, Ph.D., Columbia University
J. Harvey Smith, associate professor, Ph.D., University of Chicago
Constance Wilson, professor, Ph.D., Cornell University

Department of History (HIST)

Graduate Faculty

George W. Spencer, chair, professor, Ph.D., University of California, Berkeley
William H. Logue, assistant chair, professor, Ph.D., University of Chicago
Samuel Amaral, associate professor, Ph.D., University of La Plata
Michael Aung-Thwin, associate professor, Ph.D., University of Michigan
Thomas W. Blomquist, professor, Ph.D., University of Minnesota
Joe D. Burchfield, associate professor, Ph.D., Johns Hopkins University
J. Eric Duskin, assistant professor, Ph.D., University of Michigan
Bruce Field, assistant professor, Ph.D., College of William and Mary
Stephen Foster, professor, Presidential Research Professor, Ph.D., Yale University
Margaret George, professor, Ph.D., University of Pittsburgh
Glen A. Gildemeister, adjunct assistant professor, Ph.D., Northern Illinois University
Michael J. Gonzales, professor, Ph.D., University of California, Berkeley
Stephen Halicz, professor, Ph.D., St. Andrews University (Scotland)
Stephen R. Kern, professor, Distinguished Research Professor, Ph.D., Columbia University
Samuel C. Kinser, professor, Presidential Research Professor, Ph.D., Cornell University
Paul J. Kleppner, professor, Distinguished Research Professor, Ph.D., University of Pittsburgh
Allan Kulikoff, professor, Ph.D., Brandeis University
W. Bruce Lincoln, professor, Distinguished Research Professor, Ph.D., University of Chicago
J. Carroll Moody, professor, Ph.D., University of Oklahoma
Simon P. Newman, assistant professor, Ph.D., Princeton University
James D. Norris, professor, Ph.D., University of Missouri
Joseph P. Parot, professor, Ph.D., Northern Illinois University
Carl P. Parr, professor, Ph.D., University of Wisconsin
Barbara M. Posadas, associate professor, Ph.D., Northwestern University
Marvin J. Powell, Jr., professor, Presidential Research Professor, Ph.D., University of Minnesota
Marvin S. Rosen, associate professor, Ph.D., University of California, Berkeley
James D. Schmidt, assistant professor, Ph.D., Rice University
Robert W. Schneider, professor, Ph.D., University of Minnesota
Jordan A. Schwarz, professor, Distinguished Research Professor, Ph.D., Columbia University
J. Harvey Smith, associate professor, Ph.D., University of Chicago
Constance Wilson, professor, Ph.D., Cornell University

The Department of History offers programs leading to two graduate degrees, the Master of Arts and the Doctor of Philosophy. The department views historical study not only as a scholarly analysis of the past but also as a means of providing sophisticated learning that will be of practical significance to society and the individual. Traditionally graduate work in history, especially at the doctoral level, has led into the world of scholarship and teaching, but it has also led to many other successful careers in the private and public sectors. Historical training provides recognized skills in administration, management, research, writing, policy analysis, consulting, and editing; and trained historians have been successful in fields ranging from business, education, journalism, and law to government, publishing, and archival or museum work. Graduate study in history also is appropriate for individuals seeking self-fulfillment or a better understanding of the human experience and predicament.

Admission to the Master of Arts program in history is based upon consideration of the following factors: general undergraduate grade point average (GPA); preparation and GPA in undergraduate history courses; scores on the Graduate Record Examinations (GRE), especially on the verbal and analytical sections of the General Test; letters of recommendation; special requirements in the applicant's proposed field of study; a brief essay submitted by the applicant; and, where appropriate, proficiency in foreign language(s) or quantitative methods.

The department endeavors to review application data in a comprehensive manner and to avoid mechanical judgments. It prefers, however, that applicants have a general GPA of 3.00 or better in the last two years of undergraduate work, a GPA of 3.25 or better in all undergraduate history courses, and GRE verbal and analytical scores in the 60th percentile or higher. The GRE Subject Test in history is not required. Applicants need not have an undergraduate major in history, but those with fewer than 18 semester hours of undergraduate history courses may be required to enroll in one or more undergraduate courses on a deficiency basis.

Applicants for admission to the doctoral program are expected to have established an outstanding record at the master's level and to have demonstrated a capacity for effective research and writing.

Applicants to the M.A. program in history are normally notified of an admission decision within three weeks of receipt of all required application materials. Applicants to the Ph.D. program are notified within a month, except during the summer when processing may take longer.

Graduate courses in history are principally of three types: advanced lecture-discussion courses, reading seminars designed to acquaint the student with the literature and problems of a selected field, and research seminars in which intensive research on a particular historical topic provides experience in historical methodology and in the use of primary and secondary source materials.

At the time of admission to a degree program, a student will be assigned a departmental adviser who will be responsible for implementing department and Graduate School regulations. As early as practical the student should initiate the selection of a field adviser from among the faculty. M.A. students should have at least one such adviser and Ph.D. students should normally have two. The field advisers are primarily responsible for assisting students in planning a program of study, selecting appropriate courses, outlining problems unique to a particular field, and determining appropriate areas of research. Students

167
are responsible for fulfilling both departmental and Graduate School requirements for graduate degrees. Graduate School requirements are outlined in the section of this catalog entitled "Requirements for Graduate Degrees." Departmental requirements are further elaborated in the departmental booklet, *Handbook for History Graduate Students*.

### Master of Arts

The primary and secondary fields offered in the M.A. program are ancient, medieval, modern European, Russian, Asian, British, United States, and Latin American history. The secondary field may instead be an approved cognate field outside of history.

Students pursuing the M.A. degree in history shall satisfactorily complete 30 semester hours of approved credits. A minimum of 24 semester hours of the 30 semester hours total must normally be in history courses. The balance may be in history courses or in courses in an approved cognate field or fields.

The 30 semester hours required for the M.A. must include a minimum of 18 semester hours in a primary field (of which a minimum of 9 semester hours must be in research credits) and a minimum of 6 semester hours in a secondary field. Within the total of 30 semester hours the student must present a minimum of 6 semester hours in reading seminars.

Various means are available for M.A. students to fulfill the 9 semester hours research requirement of the M.A. degree, but all students must satisfactorily complete at least one formal research seminar. The balance of the credits required may be fulfilled through additional reading seminars, completion of a thesis, or independent research. The method selected by the student to fulfill the research requirement must be approved by the department. M.A. students who intend to apply for admission to the Ph.D. program will be expected to submit their M.A. research paper(s) or thesis for review by faculty responsible for approving admission into the Ph.D. program.

All M.A. students, except those majoring in United States or British history who are not planning to continue in the Ph.D. program, must demonstrate at least average proficiency in an approved foreign language or, if appropriate, in quantitative methods. Admission to the Ph.D. program in all fields requires at least average proficiency in one approved foreign language or in quantitative methods.

Students in the M.A. program must satisfactorily complete a written comprehensive examination in their primary field. At the discretion of either the examining committee or the student, the written M.A. comprehensive may be followed by an oral examination about one week after the evaluation of the written examination. There is no examination in the student's secondary field, but students must achieve a grade of B or better in at least 6 semester hours of course work in that field.

If the student receives a recommendation from the comprehensive examining committee for admission to the Ph.D. program and otherwise makes application and qualifies for such admission, the student may satisfactorily complete a written comprehensive examination in a traditional primary field area and an internship-related report, project, or research paper.

### Doctor of Philosophy

The Department of History regards the Ph.D. degree as both a research and teaching degree and recommends the award of the degree only to those who have met rigorous standards, including the demonstration of excellence in scholarship.

Admission to the Ph.D. program implies admission to the primary field specified by the student in his or her application. Subsequent requests to change the primary field of study must be specifically approved by the Department of History.

The primary fields offered in the Ph.D. program are ancient, medieval, early modern European, modern European, Russian, Asian, British, United States, and Latin American history. Secondary fields are of several types: (a) national or area fields: ancient, medieval, early modern European, modern European, Russian, Asian (with focus on Chinese, Indian, or Southeast Asian), British, United States to 1876, United States since 1865, Latin American; (b) thematic fields, as defined on a list available from the department; (c) an approved field in a discipline outside history; and (d) a dissertation-related secondary field. Distribution rules for secondary fields are explained below.

Students admitted to the Ph.D. program who have completed the M.A. degree or equivalent elsewhere will be expected to pass an oral qualifying examination on completion of 9-12 semester hours of course work at NIU. This examination will usually come early in the second semester of full-time study.

History Ph.D. students must normally complete a minimum of 90 semester hours as part of the degree program. Approved course work from the M.A. program or equivalent may be counted, provided the hours are consistent with the student's primary and secondary Ph.D. fields. A maximum of 30 semester hours may be counted for Ph.D. dissertation research and writing (HIST 699).

Counting applicable hours from the M.A. program or equivalent, the department expects Ph.D. students to complete about 30 semester hours in a primary field and about 15 semester hours must be completed to meet the normal requirements for the traditional M.A. degree described above. A secondary field is not required.

The remaining 12 semester hours required for the degree option normally shall be distributed as follows:

#### Required Courses (6-9)
- HIST 492, Principles of Historical Administration (3)
- HIST 500, Internship in Historical Administration (3-6)

#### Elective Courses (3-6)

- **Recommended Electives:**
  - HIST 495, Introduction to Historical Editing (3)
  - HIST 497, Principles and Uses of Oral History (3)
  - ANTH 462, Museum Methods (3)
  - ART 465, Introduction to Museum Studies (3)

- **Other Available Electives:**
  - ART 493, History of Architecture III: From 1900 (3)
  - ART 498, History of Architecture II: From 1400-1900 (3)
  - ART 496A, History of Decorative Arts: Furniture (3)
  - ART 496B, History of Decorative Arts: Minor Arts and Crafts (3)
  - ART 596, Studies in American Art (3)
  - COMS 450X, Instructional Television I (3)
  - COMS 559X, Instructional Television II (3)
  - COMS 457, The Documentary Tradition (3)

Students in the M.A. degree program taking the option in historical administration must satisfactorily complete a written comprehensive examination in a traditional primary field area and an internship-related report, project, or research paper.

### Option in Historical Administration

The Master of Arts with an option in historical administration has been designed to meet the needs of those students seeking special educational preparation for careers in public and private historical agencies, archives, museums and historical societies, and research and consulting firms.

Students pursuing the M.A. option in historical administration shall satisfactorily complete 36 semester hours of approved credits. A minimum of 24 semester hours in history courses usually come early in the second semester of full-time study.

History Ph.D. students must normally complete a minimum of 90 semester hours as part of the degree program. Approved course work from the M.A. program or equivalent may be counted, provided the hours are consistent with the student's primary and secondary Ph.D. fields. A maximum of 30 semester hours may be counted for Ph.D. dissertation research and writing (HIST 699).

Counting applicable hours from the M.A. program or equivalent, the department expects Ph.D. students to complete about 30 semester hours in a primary field and about 15 semester hours...
in each of two secondary fields. No course may be counted toward more than one primary or secondary field.

The first secondary field must be (a) a national or area field outside the primary field of study or (b) an approved field in a discipline outside of history, usually one of the social sciences or humanities. The other secondary field may be one of the following: (a) another national or area field outside the primary field, although students may only elect one secondary field in U.S. history; (b) an approved field in a discipline outside of history; (c) a thematic field chosen from the list provided by the department; (d) a dissertation-related field designed in consultation with the student's dissertation director and the Director of Graduate Studies. Thematic and dissertation-related secondary fields have different requirements from national or area fields. See the department's Handbook for History Graduate Students for details.

Ph.D. students must satisfy one of the following research skill requirements, but it should be emphasized that these are minimal department requirements. Students may be required to establish additional proficiencies in certain fields of study and, in any case, the selection must be specifically approved by the student's major field advisers and, if appropriate, by the Graduate Committee of the department.

The minimal requirements are: (1) average proficiency in two approved foreign languages; or (2) high proficiency in one approved foreign language; or (3) average proficiency in one approved foreign language and average proficiency in quantitative methods; or (4) high proficiency in quantitative methods.

If otherwise approved, a proficiency or proficiencies established previously in an M.A. program, or equivalent, shall be applicable in fulfilling Ph.D. program requirements.

All Ph.D. students must satisfactorily complete the Ph.D. candidacy examination. This is scheduled when the student has or is about to complete the Ph.D. program of courses, has fulfilled proficiency requirements of the Ph.D. degree, and has otherwise prepared for a comprehensive examination over the primary and secondary fields being offered. The examination should normally be scheduled toward the end of the fourth semester of full-time Ph.D. study or equivalent for part-time students.

The candidacy examination consists of a written examination taken over a five-day period, and an oral examination taken about a week later. Both examinations consist of five sections, three devoted to the primary field and one each for the two secondary fields. Three faculty members normally represent the primary field of study. One faculty member represents each national or area secondary field. In the case of thematic or dissertation-related secondary fields, two faculty members will collaborate on their portion of the written examination, with one or both sitting on the oral examination committee. The oral examination lasts about two hours. It will include but is not limited to discussion of the written examination, and it may include, if appropriate, discussion of the relationship between the candidate's primary field and his or her proposed dissertation topic. Each committee member is responsible for evaluating the student's performance on the questions which she or he has prepared, but the committee arrives at one assessment of the overall quality of the student's performance following the oral examination.

Upon satisfactory completion of the candidacy examination, the student will be certified to the Graduate School as a candidate for the Ph.D. degree. Students who fail the Ph.D. candidacy examination will normally be permitted to sit for the examination a second time after the lapse of an appropriate time interval. A second failure shall be final and shall result in the termination of the student from the Ph.D. program in history.

After the student has satisfactorily completed the candidacy examination, the department's adviser to Ph.D. students, in consultation with the candidate and his or her field advisers, will arrange a committee of three suitable graduate faculty members to pass on the dissertation proposal of the candidate. The prospective dissertation director will serve as chair of the three-person committee.

When a Ph.D. candidate's dissertation topic and dissertation director have been approved, the candidate and the dissertation director, in consultation with the department's adviser to Ph.D. students, will identify the appropriate faculty to serve on the candidate's dissertation reading and defense committee. This committee will consist of four or five faculty members and will be chaired by the dissertation director. One member must be from an academic department outside the Department of History. The composition of this committee must be confirmed by the dean of the Graduate School. The dean or a dean's designee may also serve as an ex officio, nonvoting member of the dissertation defense committee.

When the dissertation has been substantially approved by the director and at least two other members of the reading committee, the candidate should request the department's adviser to Ph.D. students to schedule the oral defense of the dissertation. Prior to the defense, the dissertation should have been read in a defensible version by all members of the reading committee and one copy of this version of the dissertation must have been submitted to the Graduate School for review. For further details see the Handbook for History Graduate Students.

In the oral defense the candidate should be prepared to discuss questions relevant to the dissertation, including its thesis, organization, sources, scholarly contribution, and relationship to other literature in the field of inquiry. The defense committee may suggest or require changes and/or corrections in the content and style of the manuscript.

When the dissertation has been approved by the committee, the Department of History will certify to the Graduate School that the candidate has fulfilled the dissertation requirements of the Ph.D. degree and will endorse the candidate's application for the award of the Ph.D. degree in history.

Foreign Study in History

Since 1956 the Department of History has offered study-abroad programs at regular intervals, usually in cooperation with a British university. The purpose is to afford students of history and allied disciplines an opportunity to study at first hand the historical developments and traditions of other peoples and their cultures and also to provide personal contact with the locales of important historical events and with the artifacts of the past. Course content, duration of the program, and foreign countries included will vary. Courses carry either undergraduate or graduate credit. Interested students should consult with the department chair or the Office of International Programs for relevant details of forthcoming programs.

Course Offerings

General

492. PRINCIPLES OF HISTORICAL ADMINISTRATION (3). An introduction to the practical application of historical knowledge in such areas as historic preservation, manuscript and archival management, editing, genealogy and family history, oral history, and museum work. PRQ: Consent of department.

495. INTRODUCTION TO HISTORICAL EDITING (3). An introduction to the nature, basic principles, and professional significance of the editing process in all types of historical literature, including the editing of primary sources, historical journals, and book-length scholarly studies. PRQ: Consent of department.
Open to qualified students in accordance with department guidelines. Consent of the faculty member with whom the student wishes to study is necessary. May be repeated to a maximum of 15 semester hours. PRQ: Consent of graduate adviser in history.

699. DOCTORAL RESEARCH AND DISSERTATION (1-15). Open only to Ph.D. candidates. May be repeated to a maximum of 30 semester hours. PRQ: Consent of graduate adviser in history.

Ancient and Medieval History

408. ECONOMIC AND SOCIAL HISTORY OF MEDIEVAL EUROPE (3). Examines the economic and social changes underlying the formation of medieval civilization. Special attention will be given to demographic change, urbanization, and social movements. PRQ: HIST 305 or HIST 306, or consent of department.

530. READING SEMINAR IN ANCIENT AND MEDIEVAL HISTORY (3). A. Ancient
B. Medieval
Intensive reading and discussion in one or more areas of ancient and medieval history, designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. Any one area may be repeated to a maximum of 12 semester hours when the subject varies. PRQ: Consent of department.

630. RESEARCH SEMINAR IN ANCIENT AND MEDIEVAL HISTORY (3). A. Ancient
B. Medieval
Selected problems in the ancient and medieval periods. Specific areas to be announced in the schedule. Any one area may be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

European History

410. RISE OF CAPITALISM IN PRE-INDUSTRIAL EUROPE (3). A social and economic history of Europe from the 14th-century crisis to the eve of the Industrial Revolution. Discusses noble and peasant life, urban development, labor organization, and popular rebellion. Features the social impact of industrialization and urbanization and changing patterns of social stratification, mobility, and class conflict in the 19th and 20th centuries.

413. FAMILY, SEXUALITY, AND SOCIETY SINCE 1400 (3). The history of the family in Western society as seen in household structures, marriage customs, childbirth and child rearing, sex roles, the life-cycle, and attitudes towards sexual deviance.

415. EUROPEAN THOUGHT IN THE 17TH CENTURY (3). European and British thought of the 17th century; the rise of modern science; and baroque and classical art and literature.

416. THE AGE OF ENLIGHTENMENT (3). The intellectual revolution that preceded the American and French revolutions is considered in its various main aspects, including the growth of secularism and rationalism; the rise of scientific thought; the formulation of political liberalism and radicalism; and the enrichment of the humanist tradition.

417. ROMANTICISM AND REVOLUTION (3). The impact of the Romantic movement and the French Revolution of 1789 on European thought and culture; romanticism in literature and politics; rise of socialist theory; spread of liberalism; emergence of counter-revolutionary thought; growth of historical consciousness.

418. EUROPEAN THOUGHT AND CULTURE SINCE 1850 (3). Views of the individual and society as revealed in art and literature from Romanticism to Cubism and from Flaubert to Proust; in formal thinkers such as Darwin, Marx, Nietzsche, Einstein, Freud, and Sartre; and in selected topics such as racism, sexual morality, and bourgeois society.

419. HISTORY OF MARXIST THOUGHT AND WRITING (3). An analytically oriented course elucidating the historical corpus of Marx and the historiography which has developed from it.

420. THE RENAISSANCE (3). The social, political, and ideological breakdown of medieval Europe with consideration of the reaction of the new class of artists and intellectuals to the special problems of their age.
421. THE CATHOLIC AND PROTESTANT REFORMATIONS (3). Examination of the religious reforms and institutional breaks. Catholic and Protestant, official and heretical, which ended the medieval unity of Christendom.

422. AGE OF ABSOLUTISM: EUROPE 1550-1730 (3). An analytical survey emphasizing the changing role of European nobilities, the rise of capitalism, baroque civilization, and the interaction of learned and popular culture.

423. THE FRENCH REVOLUTION AND NAPOLEON (3). Origins of the Revolution of 1789; moderate and radical phases; the Terror and the Thermidorian reaction; the rise of Napoleon; the Napoleonic wars and the remaking of Europe; the revolutionary legacy.

424. 19TH CENTURY EUROPE (3). An analytical survey of important developments in the political, social, economic, and intellectual history of Europe from the fall of Napoleon to World War I.

425. WORLD WAR II (3). A military history of World War II, with an emphasis on the struggle against Nazi Germany.

426. 20TH CENTURY EUROPE (3). European and world affairs in this century. Origins of the two world wars, the great depression, rise of totalitarian governments, retreat of Europe from Asia and Africa, and attempts at international organization.


428. EUROPEAN DIPLOMATIC HISTORY SINCE 1914 (3). Great power rivalries and competition for empire; two world wars and their consequences; decolonization; cold war and the division of Europe.

429. HITLER'S GERMANY (3). The history of National Socialism from the origins of the party to the end of World War II. Emphasis on the means used for seizing and consolidating power; social, cultural, and foreign policies of the Third Reich; anti-Semitism and the Holocaust.

540. READING SEMINAR IN EUROPEAN HISTORY (3). A. Early Modern European
B. Modern European
Intensive reading and discussion over a selected field of European history from the medieval period to modern times, designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. Any one area may be repeated to a maximum of 12 semester hours when the subject varies. PRQ: Consent of department.

640. RESEARCH SEMINAR IN EUROPEAN HISTORY (3). A. Early Modern European
B. Modern European
Selected problems in European history from the medieval period to the modern era. Specific topics to be announced in the schedule. Any one area may be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

Russian History

430. RUSSIAN THOUGHT AND CULTURE TO 1917 (3). Pre-Soviet social, cultural, and intellectual life. Emphasis on the period since Peter the Great.

431. SOVIET THOUGHT AND CULTURE SINCE 1917 (3). Soviet social, cultural, and intellectual life, 1917 to the present. The ongoing revolution in Soviet culture—the formation of the "new Soviet man" and a "socialist culture."

432. THE SOCIETY AND INSTITUTIONS OF IMPERIAL RUSSIA (3). The development of the society and institutions in Russia from 1689 to 1917. Emphasis on the changing character of Russian society and the attempts to create an effective state organization in Russia.

433. SOVIET FOREIGN POLICY SINCE 1917 (3). Soviet foreign policy from the birth of the Soviet state to its emergence as a world power. Goals and methods of Soviet conduct in world affairs are analyzed with special attention to the conventional and ideological elements, the constant and variable factors, and the domestic and communist-bloc politics that shape Soviet foreign policy.


435. STALIN AND STALINISM (3). Stalin's role as a revolutionary before 1917, his career to his death in 1953, and his legacy in Russia today. Particular attention is focused on the political, economic, cultural, and moral issues associated with Stalin's rule over the Soviet Union.

670. RESEARCH SEMINAR IN RUSSIAN HISTORY (3). Selected problems in Russian history. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

Asian History

445. THE CHINESE REVOLUTION (3). Intellectual and social backgrounds of the nationalist revolutionary movement; political history of the revolutionary period to the present.

446. HISTORY OF THAILAND (3). The history and culture of Thailand from the prehistoric period to the present, with appropriate references to Thai relations with Laos and Cambodia. Not available for credit for those with prior credit in HIST 448.

447. HISTORY OF BURMA (3). The history and culture of Burma from prehistoric times to the present. Not available for credit for those with prior credit in HIST 448.

448. HISTORY OF INDONESIA (3). Indonesian political, social, and cultural life from prehistory to the present. Special attention will be given to the cultures of the various peoples of Indonesia and the efforts of the modern state to create a national sense of identity.

449. HISTORY OF MALAYSIA AND SINGAPORE (3). The Malay world from prehistory to the present. Topics include early Malay trade, classical Malay culture, British imperialism, Chinese immigration, and the modern states of Malaysia, Singapore, and Brunei.

560. READING SEMINAR IN ASIAN HISTORY (3). Intensive reading and discussion on one or more countries of Asia, designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. May be repeated to a maximum of 12 semester hours when subject varies. PRQ: Consent of department.

660. RESEARCH SEMINAR IN ASIAN HISTORY (3). Selected problems in the history of one or more countries of south, southeast, or east Asia. The S.E. Asian seminar will usually emphasize Thailand, Burma, Malaysia, Indonesia, and the Philippines. Specific topics will be announced in the schedule. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

British History

450. TUDOR AND STUART ENGLAND (3). The constitutional and legal foundations of bourgeois England, Elizabethan and Jacobean culture; and the origins of capitalism.

451. THE ENGLISH REVOLUTION: 1640-1660 (3). The focus will be more on the battleground of ideas and ideologies than on Cromwell's military exploits. Attention will be given to "the peculiarities of the English" as well as to the classic interpretations of traditional economic historians and Marxists.

452. BRITISH CONSTITUTIONAL HISTORY (3). British political and legal institutions from Anglo-Saxon times to the mid-20th century.

453. THE FOUNDATIONS OF MODERN ENGLAND: 1714-1815 (3). The agricultural and industrial revolutions and their impact upon the social, political, economic, and intellectual life of Great Britain during the 18th century.

454. BRITAIN, 1815-1914: THE AGE OF INDUSTRY (3). Culture and society in Victorian and Edwardian Britain. Economic, social, and political developments and the changing patterns of leisure, architecture, and popular and high culture as ways of understanding the significance and meaning of the period.

455. BRITAIN, 1914 TO THE PRESENT: THE AGE OF ADVERSITY (3). British society since the First World War. The effect of the loss
of empire upon Britain's politics, society, and culture. Historical roots of the problems facing Britain today.

550. READING SEMINAR IN BRITISH HISTORY (3). Intensive reading and discussion in British history designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. May be repeated to a maximum of 12 semester hours when subject varies. PRQ: Consent of department.

650. RESEARCH SEMINAR IN BRITISH HISTORY (3). Selected problems in the history of Britain. Specified areas to be announced in the schedule. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

United States History

460. COLONIAL AMERICA TO 1763 (3). A survey of the first two centuries of English settlement in America. Emphasis on the emergence of a colonial culture formed by the interaction of Old World civilizations with the conditions and opportunities posed by the New World.

461. THE AMERICAN REVOLUTION AND NEW NATION: 1763-1815 (3). An examination of the period 1763-1815 dealing with the causes, the character, and the results of the American Revolution, the confederation period, and the Constitution, the presidencies of Washington, Adams, Jefferson, and Madison, the First Party System, and the War of 1812.

463. JACKSONIAN AMERICA: 1815-1850 (3). The United States from the Era of Good Feeling through the Jacksonian democratic movement and the age of Manifest Destiny.

464. CIVIL WAR AND RECONSTRUCTION: 1850-1877 (3). Slavery and the sectional crisis, the war and emancipation, national reconstruction, and economics and race in the postwar South.

465. INDUSTRIAL AMERICA: 1877-1901 (3). The impact of industry and the city upon vital aspects of American life and society, with particular emphasis upon the response of farmers, workers, politicians, and intellectuals to the problems of an emerging urban-industrial society.

466. CORPORATE AMERICA: 1900-1929 (3). The U.S. in the era of Theodore Roosevelt, Woodrow Wilson, and Herbert Hoover. Topics include the rising corporate order, labor militance, the origins of the modern state, America's response to war and revolution, 1920s style prosperity, and the Great Crash.

467. LIBERAL AMERICA: 1925-1961 (3). The U.S. in the Great Depression, World War II, and the Cold War. Topics include Franklin D. Roosevelt and the New Deal, the road to Pearl Harbor, total war, social and political change in mid-century America, the Truman Doctrine and Stalinism, the Korean War, the Fifites, civil rights, the Eisenhower presidency, and the American response to revolutions in East Asia.

468. AMERICA SINCE 1960 (3). An analysis of social, economic, political, cultural, and intellectual trends from the Kennedy years through the post-Cold War era. Topics include the civil rights movement, the Kennedy-Johnson foreign policies toward Cuba and East Asia, the Great Society programs, the Vietnamese civil war, the "counterculture," Nixon and Watergate, the Reagan years, and the Persian Gulf conflict and the 1990s.

469. THE VIETNAM WAR (3). A history of the American involvement in Vietnam between 1940 and 1975 that examines the evolving circumstances and policies leading to the American defeat.

470. AMERICA AND ASIA (3). A history of trans-Pacific contacts from the search for a passage to India to the Indochina War. Special attention given to symbol and myth in history, special interest groups, and the development of America's relations with industrially modernizing and traditional agrarian societies.

471. AMERICAN LABOR SINCE 1787 (3). Role of the working class in American history from the early national period to the present, with emphasis upon the growth of organized labor, labor problems, and labor's relation to other segments of American society during the 20th century.

472. TOPICS IN AFRO-AMERICAN HISTORY (3). Selected problems in interpretation relating to the history of people of African descent in the Americas. Particular emphasis is placed upon the black population of the United States and some attention is given to the question of race relations. Course may be repeated to a maximum of 6 semester hours when subject varies. PRQ: Consent of department.

473. TOPICS IN WOMEN'S HISTORY (3). Selected issues in interpretation relating to the history of women and gender relations. May be repeated to a maximum of 6 semester hours when subject varies.

474. HISTORY OF IMMIGRATION AND ETHNICITY (3). A survey of the nature and impact of immigration in American history from the colonial era to the present which focuses on ethnic group origins, persistence, modification, and interaction. Includes comparative analysis of European, Latino, and Asian immigration. Examines assimilation, acculturation, and accommodation theories, nationalism, immigration legislation, multiculturalism, and minority relations.

476. AMERICAN DIPLOMATIC HISTORY TO 1898 (3). American diplomacy, the theory and conduct of foreign affairs, and America's world role from colonial backgrounds to the Spanish-American War.

477. AMERICAN DIPLOMATIC HISTORY SINCE 1898 (3). The theory and practice of American foreign relations, the United States' emergence as a world power, and the conduct of diplomatic affairs from the Spanish-American War to the cold war.

478. AMERICAN CONSTITUTIONAL HISTORY TO 1865 (3). American constitutional development, including English backgrounds, the colonial and revolutionary eras, and the evolution of the federal Constitution to 1865, with consideration of the economic, political, and intellectual factors which have contributed to its growth.

479. AMERICAN CONSTITUTIONAL HISTORY SINCE 1865 (3). American constitutional development since 1865, including Reconstruction, the impact of the industrial revolution, and such significant 20th-century constitutional issues as civil liberties, segregation, and the government's role in the economy.

510. READING SEMINAR IN U.S. HISTORY (3).
A. Early American History
B. 19th Century American History
C. 20th Century American History

Intensive reading and discussion over a selected field in U.S. history, designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. Any one area may be repeated to a maximum of 12 semester hours when subject varies. PRQ: Consent of department.

610. RESEARCH SEMINAR IN U.S. HISTORY (3-6).
A. Early American History
B. 19th Century American History
C. 20th Century American History

Selected problems in U.S. history. Specific topics will be announced in the schedule. Any one area may be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

Latin American History

482. MEXICO SINCE 1810 (3). The quest for independence—political, economic, and cultural—with particular attention to the revolution of 1910-1920.

483. HISTORY OF PERU (3). Survey of Peruvian history from the conquest of the Inca to the present. Themes include formation of a colonial state, Indians under Spanish rule, African slavery, administrative reform, revolution, imperialism, expansion of export economies, formation of a class society, and militarism.

484. BRAZIL FROM EMPIRE TO REPUBLIC (3). The early emergence of Brazil as a major force in the western hemisphere and its potential as a world power; the evolution of Brazil's political institutions, economy, social structure, and culture.

485. MODERN LATIN AMERICAN REVOLUTIONS (3). Major social revolutions of the 19th and 20th centuries, with emphasis on Mexico, Cuba, and Central America. Social, economic, and political causes, ideology, international influences, and current areas of conflict.

520. READING SEMINAR IN LATIN AMERICAN HISTORY (3). Intensive reading and discussion over a selected field in Latin American history, designed to acquaint the student with the literature and problems of the field. Specified areas to be announced in the schedule. May be repeated to a maximum of 12 semester hours when subject varies. PRQ: Consent of department.

620. RESEARCH SEMINAR IN LATIN AMERICAN HISTORY (3).

Selected problems in Latin American history. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.
Department of Journalism (JOUR)

GRADUATE FACULTY

Daniel Riffe, chair, professor, Ph.D., University of Tennessee
Abraham Z. Bass, associate professor, Ph.D., University of Minnesota
John S. Clogston, assistant professor, Ph.D., Michigan State University
Richard Digby-Junger, assistant professor, Ph.D., University of Wisconsin
Russell A. Elder, assistant professor, M.A., Ball State University
Angela M. Powers, assistant professor, Ph.D., Michigan State University
Anthony J. Scantlen, associate professor, Ph.D., United States International University
Shirley A. Serini, assistant professor, Ph.D., University of Iowa

Daniel Riffe, chair, professor, Ph.D., University of Tennessee
Abraham Z. Bass, associate professor, Ph.D., University of Minnesota
John S. Clogston, assistant professor, Ph.D., Michigan State University
Richard Digby-Junger, assistant professor, Ph.D., University of Wisconsin
Russell A. Elder, assistant professor, M.A., Ball State University
Angela M. Powers, assistant professor, Ph.D., Michigan State University
Anthony J. Scantlen, associate professor, Ph.D., United States International University
Shirley A. Serini, assistant professor, Ph.D., University of Iowa

Course Offerings

40. NEWS EDITING (3). Advanced practice in editing and headline construction for print media, and in newspaper and newsletter page design. PRQ: JOUR 200 and a passing score on the Journalism Qualifying Examination, or consent of the department.

45. ADVANCED PHOTOJOURNALISM (3). Advanced techniques of photography with emphasis on written-visual communication as employed in contemporary mass media. Students write and photograph stories. Preparation of color photographs, work experience with area publications, and picture editing. PRQ: JOUR 315 or equivalent, and consent of department.

46. PHOTOGRAPH EDITING (3). Editing and layout of photographs in the mass media. Includes selection and preparation of photographs for use as singles, spreads, stories, and essays. PRQ: JOUR 315 or equivalent, and consent of department.

47. ADVANCED PUBLIC RELATIONS (3). Analysis of public relations problems and procedures. Practice in solving public relations problems and preparation of public relations materials. PRQ: JOUR 335 or consent of department.

48. PUBLIC RELATIONS PROBLEMS (3). Investigation in depth of problems in public relations in a number of specialized areas, based on new developments, primary sources, and cases. Emphasis is on individual investigation and oral and written reports with discussion. May be repeated to a maximum of 6 semester hours when topics vary. PRQ: JOUR 435 or consent of department.

49. MEDIA MANAGEMENT (3). The management of mass communications organizations, with emphasis on general administration, advertising, promotion, production, research and planning.

50. TRANSNATIONAL COMMUNICATION AND MEDIA (3). COMS 459. A study of the development, structure, functions, and control of international communications media systems and activities as they affect world relations. PRQ: COMS 251 or consent of department.

51. THE TELEVISION NEWS DOCUMENTARY (3). In-depth reporting on location of some aspect of the contemporary scene. Students investigate, prepare scripts, and shoot and edit documentaries to be used on television. Some traveling may be required. PRQ: JOUR 357 or consent of department.

52. HISTORY OF BROADCASTING (3). COMS 459. The history of radio and television broadcasting in the United States from its inception to the present. PRQ: COMS 251 or consent of department.

460. SPECIALIZED PRESS WRITING (3). Writing for specialized publications: research for articles, writing in the style of specialized publications, and the marketing of articles. Included will be a study of the specialized press. PRQ: JOUR 200 and a passing score on the Journalism Qualifying Examination, or consent of department.

461. SPECIALIZED PRESS EDITING (3). Practical work in managing, planning, editing, and producing specialized publications. Includes reporting, copywriting, and picture editing. PRQ: JOUR 200 and JOUR 312 and a passing score on the Journalism Qualifying Examination, or consent of department.

471. TEACHING JOURNALISM: SUPERVISION OF SCHOOL PUBLICATIONS (3). Methods and materials for teaching journalism and supervising publications in secondary schools and junior colleges; courses of study; organization; attention to exceptional students; planning for multicultural classes and staffs; and production of publications. Includes 15 clock hours of clinical experience. PRQ: Consent of department.

480. JOURNALISM LAW AND REGULATION (3). Law and regulation affecting the concept of freedom of the press, access to information, free press—fair trial, libel, privacy, copyright, access to the media, and legal concepts and restrictions related to the press, publishing, electronic media, photojournalism, and public relations.

481. HISTORY OF JOURNALISM (3). The development of a free press from its origins in Europe through the emergence of modern journalism. Includes the study of early newspapers, periodicals, and broadcast news programs.

482. INTERNATIONAL NEWS COMMUNICATIONS (3). A survey of the news media and international affairs; foreign correspondence and coverage; international news agencies; and country-by-country historical-societal study of foreign journalism.

483. MASS MEDIA IN MODERN SOCIETY (3). The concept and role of mass communications; rights, restrictions, and responsibilities of the mass media; and interactions of mass communications and society.

485. TOPICS IN JOURNALISM (1-3). In-depth study and discussion of current topics of special importance and interest in the field of journalism, including the background of the topics and their relationship to other fields. May be repeated to a maximum of 6 semester hours when topics vary. PRQ: Consent of department.

490. ETHNIC MINORITIES AND THE NEWS MEDIA (3). The press of ethnic minorities and its relationship to other mass media. Study of the problems and responsibilities faced by mass communicators in relating to ethnic minorities. Includes individual investigation and reporting.

492. INTERNSHIP IN JOURNALISM (3). A work experience program for students planning to enter the field of mass communication. Students work for a semester or a summer for a minimum of 320 hours as interns with appropriate organizations under the supervision and advisement of a department faculty coordinator. S/U grading basis is used. PRQ: Consent of department.

502. REPORTING OF PUBLIC AFFAIRS (3). An advanced study and application of investigative, interpretive, and in-depth reporting of public affairs. Emphasis is placed on social, political, and economic news as it is developed and reported at the local, state, and federal levels. Course combines practical reporting experiences with seminar discussions and research investigations.

521. SEMINAR IN SPECIAL TOPICS IN JOURNALISM (3). May be repeated to a maximum of 6 semester hours when topics vary. PRQ: Consent of department.
535. PUBLIC RELATIONS CASES, CONCEPTS, AND CAMPAIGNS (3). Practice in planning and conducting campaigns to achieve specific goals and to anticipate and solve specific public relations problems, including pre- and post-testing to measure results. Case method approach.

540. THE PRESS IN SUBURBIA (3). Evolution of media in metropolitan suburbs; special aims that determine news, editorial, and business policy; content problems; group publication and its effect on staffing, editing, and mechanical and business operation; and research and future development. PRQ: Consent of department.

552. SEMINAR IN BROADCAST NEWS (3). Development, structure, and future of radio-television journalism and its role in society, consideration of contemporary problems, practices, and research.

580. READINGS IN JOURNALISM (3). A selected review of journalism literature, including books, research studies, and periodicals.

581. MASS COMMUNICATIONS RESEARCH METHODS (3). Procedures; sources of information; introduction to and use of mass communications research tools; and application of research techniques to restricted problems.

582. THE PRESS AND WORLD AFFAIRS (3). Communication problems of the press in international affairs; a detailed study of international news agencies and services; investigation of the foreign press by countries with emphasis on the press under fascism, communism, and democracy; and world censorship.

583. SEMINAR IN PRESS PROBLEMS (3). Selected problems in press freedom, federal-local censorship, press privileges, display and suppression of news, and the public's right to know. Also selected problems in influences of the press on social, economic, and political affairs; public opinion; and the formation of thought processes. May be repeated to a maximum of 6 semester hours when topics vary.

590. INDEPENDENT STUDY (1-3). Open to qualified students who wish to do individual advanced work in journalism or mass communications. PRQ: Consent of department.

599. THESIS (1-3). The student is eligible to register for this course after completion of JOUR 581, or by consent of department.
Department of Mathematical Sciences (MATH, STAT)

GRADUATE FACULTY

William D. Blair, chair, professor, Ph.D., University of Maryland
Stanley M. Trail, assistant chair, associate professor, Ph.D.,
Oklahoma State University, & Ph.D., University of Connecticut
Ibrahim A. Ahmad, professor, Ph.D., Florida State University
Gregory Ammar, associate professor, Ph.D., Case Western
Reserve University
Paul Bailey, adjunct professor, Ph.D., University of Washington
John A. Beachy, professor, Ph.D., Indiana University
Hamid Bellout, associate professor, Ph.D., Purdue University
Mohamed Benbourenane, assistant professor, Ph.D., University of
California, San Diego
Christian Bischof, adjunct assistant professor, Ph.D., Cornell
University
Harvey I. Blau, professor, Ph.D., Yale University
Richard Blecksmith, associate professor, Ph.D., University of
Arizona
Frederick Bloom, professor, Ph.D., Cornell University
Biswa N. Datta, professor, Ph.D., University of Ottawa
Karabi Datta, associate professor, Ph.D., University of Campinas,
Brazil
Sien Deng, assistant professor, Ph.D., University of Washington
Nader Ebrahimi, professor, Ph.D., Iowa State University
Harald Ellers, assistant professor, Ph.D., University of Illinois
W. Norrie Everitt, adjunct professor, Ph.D., Oxford University
John A. Ewell, professor, Ph.D., University of California, Los
Angeles
Carol J. Feltz, associate professor, Ph.D., University of Missouri
Daniel Grubb, associate professor, Ph.D., Kansas State
University
Sudhir Gupta, professor, Ph.D., University of Kent
Bernard Harris, professor, Ph.D., University College Cardifff
Yoo Pyo Hong, associate professor, Ph.D., Johns Hopkins
University
Michael E. Hosea, assistant professor, Ph.D., Southern Methodist
University
Balakrishna Hosmane, associate professor, Ph.D., University of
Kentucky
Hui Hu, assistant professor, Ph.D., Stanford University
Joseph G. Ibrahim, associate professor, Ph.D., University of
Minnesota
Hans G. Kaper, adjunct professor, Ph.D., Rijksuniversiteit
Groningen (Netherlands)
Helen A. Khoury, associate professor, Ph.D., Florida State
University
Qingkai Kong, assistant professor, Ph.D., University of Alberta
Robert G. Kuller, associate professor, Ph.D., University of
Michigan
Man K. Kwong, adjunct professor, Ph.D., University of Chicago
Ying C. Kwong, associate professor, Ph.D., University of
Wisconsin
Purushottam W. Laud, associate professor, Ph.D., University of
Missouri
Henry S. Leonard, professor, Ph.D., Harvard University
Anders Linner, associate professor, Ph.D., Case Western
Reserve University
Jindrich Necas, professor, Ph.D., Czechoslovak Academy of
Sciences
Thomas W. O’Gorman, assistant professor, Ph.D., University of
Iowa
Ching-Tsuan Pan, associate professor, Ph.D., North Carolina
State University
Mohsen Pourahmadi, director, Division of Statistics, professor,
Ph.D., Michigan State University
T. N. Srividya, associate professor, Ph.D., Purdue University
Robert H. Rodine, associate professor, Ph.D., Purdue University
David Rusin, associate professor, Ph.D., University of Chicago
George F. Seelinger, assistant professor, Ph.D., University of
Texas, Austin
Linda R. Sons, professor, Presidential Teaching Professor, Ph.D.,
Cornell University
Joseph B. Stephen, associate professor, Ph.D., University of
Nebraska
Peter Waterman, associate professor, Ph.D., University of
Aberdeen
Robert F. Wheeler, professor, Distinguished Teaching Professor,
Ph.D., University of Missouri
Eddie R. Williams, associate professor, Ph.D., Columbia
University
John Wolfskill, associate professor, Ph.D., California Institute of
Technology
Hongyou Wu, assistant professor, Ph.D., University of Kansas
Yining Xia, assistant professor, Ph.D., Ohio State University
Zhuan Ye, assistant professor, Ph.D., Purdue University
Anton Zettl, professor, Ph.D., University of Tennessee
Alan Zollman, assistant professor, Ph.D., Indiana University

The Department of Mathematical Sciences offers graduate
programs leading to the Master of Science in applied probability
and statistics, the Master of Science in mathematics, and the
Doctor of Philosophy in mathematical sciences.

Applicants to the graduate programs in mathematical sciences
are normally notified of an admission decision within three weeks
of receipt of the complete application.

If a student in an M.S. program has already completed a required
400-level course with a grade of C or better as an undergraduate
at NIU, that course requirement will be waived in the student’s
M.S. program. Other graduate course work will be substituted
to complete the required program, with the approval of the
student’s adviser.

Master of Science with a Major in
Applied Probability and Statistics

At the time of admission each student is expected to have
completed a standard three-course sequence in calculus and
a course in elementary linear algebra. Courses equivalent to
CSCI 230 and one from STAT 470 and STAT 473, must also
have been completed. Any deficiencies should be removed at
the beginning of the student’s program. In addition to the
requirements of the Graduate School, each student seeking to
qualify for the degree of Master of Science with a major in applied
probability and statistics must satisfy the following requirements:

1. Complete at least 30 semester hours of graduate work, not
more than 50 percent of which may be in courses numbered
400-499. At least 15 semester hours must be courses offered
by the Department of Mathematical Sciences and numbered
500 or above.

2. Follow a program of study approved by the Department
of Mathematical Sciences.
3. Pass a comprehensive examination based upon his or her plan of study. Usually, a student pursuing full-time graduate study will be required to take the comprehensive examination within two academic years of admission to the Graduate School. A student who fails the examination may, with the permission of the department, repeat it once.

With the consent of the department, a student may include STAT 599, Master's Thesis, for 3 semester hours of credit in the 30 semester hours required for a master's degree.

Required Courses
STAT 472, Introduction to Mathematical Statistics (3)
STAT 474, Statistical Methods and Models II (3)
STAT 572, Theory of Statistics (3)
STAT 573, Linear Models (3)
Two courses each from any two of the groups A, B, and C.

Group A:
- STAT 556, Regression Analysis (3)
- STAT 566, Discrete Multivariate Data Analysis (3)
- STAT 575, Multivariate Methods of Statistics (3)
- STAT 591, Statistical Consulting (3)

Group B:
- STAT 567, Reliability and Survival Analysis (3)
- STAT 568, Methods in Biostatistics (3)
- STAT 569, Methods for Quality Control and Improvements (3)
- STAT 574, Design and Analysis of Experiments (3)

Group C:
- STAT 471, Probability Models and Applications (3)
- STAT 478, Statistical Methods of Forecasting (3)
- STAT 570T, Probability Theory (3)
- STAT 571, Stochastic Processes (3)

At least one additional course from the following:
- STAT 576, Distribution-Free Statistics (3)
- STAT 577, Sampling Techniques (3)
- STAT 578, Time Series Analysis (3)
- STAT 579, Advanced Statistical Methods (3)
- STAT 593, Graduate Reading in Probability and Statistics (1-9)

Master of Science with a Major in Mathematics

The Department of Mathematical Sciences offers specializations within the degree Master of Science in mathematics; specifically, specializations in pure mathematics, applied mathematics, computational mathematics, and mathematics education are available. Applicants are expected to have completed the equivalent of the requirements for the appropriate emphasis for the degree of Bachelor of Science in mathematical sciences at Northern Illinois University. This requirement may be modified for applicants with promising undergraduate records. In addition to the requirements established by the Graduate School, all students seeking to qualify for the degree Master of Science in Mathematics will satisfy the following requirements:

1. Complete at least 30 semester hours of graduate work, not more than 50 percent of which may be in courses numbered 400-499. At least 24 of these hours must be in mathematical sciences. All courses outside the Department of Mathematical Sciences must have departmental approval in advance.
2. Follow a program of study approved by the department. The program will be designed by the student and his or her adviser and will be built on the requirements listed under one of the specializations. Students with inadequate backgrounds may be required to remove specific deficiencies.
3. Pass a comprehensive examination in mathematics. Normally, students pursuing full-time graduate study will be required to take the comprehensive examination within two academic years of admission to the graduate school. A student who fails the examination may, with the permission of the department, repeat it once.

With the consent of the department, a student specializing in pure mathematics, applied mathematics, or mathematics education may include MATH 599, Master's Thesis, for 3 semester hours of credit in the 30 semester hours required for a master's degree. Students specializing in computational mathematics are usually required to complete a thesis.

Specialization in Pure Mathematics

Required Courses
MATH 520, Algebraic Structures I (3)
MATH 530, Real Analysis I (3)
MATH 532, Complex Analysis (3)
MATH 550, Topology (3)

Specialization in Applied Mathematics

Required Courses
MATH 423, Linear and Multilinear Algebra (3)
MATH 530, Real Analysis I (3)
MATH 532, Complex Analysis (3), OR MATH 440, Elements of Complex Analysis (3)
MATH 536, Ordinary Differential Equations I (3), OR MATH 438, Theory of Differential Equations (3)
MATH 542, Partial Differential Equations I (3), OR MATH 442, Elements of Partial Differential Equations (3)
MATH 562, Numerical Analysis (3)
At least one of the following:
- MATH 523, Modern Applied Algebra (3)
- MATH 540, Applied Mathematics (3)
- MATH 564, Numerical Linear Algebra (3)
- MATH 566, Numerical Differential Equations (3)
- MATH 584, Combinatorial Mathematics I (3)

Specialization in Computational Mathematics

At the time of admission, each student must have completed courses equivalent to CSCI 230 and MATH 444. Students are strongly advised to take MATH 423, MATH 430, and MATH 431 during their first year, if they have not previously taken these or equivalent courses.

Required Courses
MATH 434, Numerical Linear Algebra (3)
MATH 435, Numerical Analysis (3)
MATH 564, Numerical Linear Algebra (3)
MATH 566, Numerical Differential Equations (3)
MATH 568, Nonlinear Programming (3)
One additional MATH or STAT course numbered above 500 (except MATH 560-MATH 569 and MATH 599)

Thesis Option
This program will usually be recommended by the department. Each student pursuing this option must enroll in MATH 599, Master's Thesis, and submit a written thesis. Three semester hours credit in MATH 599 may be applied toward the degree. The student's thesis adviser will serve as chair of the graduate committee that will administer a defense of the thesis.

Non-Thesis Option
This program is primarily for students who intend to pursue doctoral work in the mathematical sciences at this university, or who wish to acquire breadth in the mathematical sciences by taking additional courses. With departmental consent, the student must complete a 30-semester hour program of courses approved by the department and pass a written comprehensive examination.
Specialization in Mathematics Education

Required Courses
MATH 421, Algebra II (3),
OR MATH 423, Linear and Multilinear Algebra (3)
MATH 430, Advanced Calculus I (3)
MATH 510, Theoretical Foundations of Mathematics Education (3)

Four courses in the Department of Mathematical Sciences numbered 421 through 587 (except MATH 502-MATH 515),
including at least one MATH course numbered above 500 (12)

Two of the following:
MATH 511, Introduction to Mathematics Education Research (3)
MATH 512, The Teaching of Mathematics, Grades 6-9 (3)
MATH 513, The Teaching of Algebra (3)
MATH 514, The Teaching of Geometry (3)
MATH 515, Using Microcomputers in Teaching Mathematics and Science in Secondary Schools (3)

One additional course in mathematics, mathematics education, statistics, or supporting work from other departments, the choice to be approved by the department (3)

Doctor of Philosophy

Admission
A student seeking admission to the Ph.D. program in mathematical sciences must meet all requirements for admission to the Graduate School and shall have satisfied the requirements (or equivalent) for the Bachelor of Science degree in mathematical sciences at Northern Illinois University. In addition, each student is required to have completed an approved year-long sequence of courses in probability and statistics prior to admission to the program, or to take an approved sequence of graduate courses in probability and statistics as part of the doctoral program. Students seeking admission who possess a master's degree in mathematical sciences will also be expected to have met the above requirements.

Course Requirements

The Graduate Studies Committee of the department will be responsible for approving each student's program to meet the course requirements specified below. Each student will complete at least 90 hours of course work. The committee will assess all work done at other institutions and will grant transfer credit for any graduate work deemed acceptable and subsequently approved by the dean of the Graduate School. The Graduate Studies Committee of the department will also be responsible for the administration of the qualifying and candidacy examinations.

All students will be required to complete the following:

1. Core courses (24)
   MATH 520, Algebraic Structures I (3)
   MATH 530, Real Analysis I (3)
   MATH 532, Complex Analysis (3)
   MATH 562, Numerical Analysis (3)

   One of the following groups of courses:
   Group A
   MATH 521, Algebraic Structures II (3)
   MATH 531, Real Analysis II (3)
   MATH 536, Ordinary Differential Equations I (3)
   MATH 550, Topology (3)

   Group B
   MATH 510, Theoretical Foundations of Mathematics Education (3)
   MATH 511, Introduction to Mathematics Education Research (3)
   MATH 513, The Teaching of Algebra (3)
   MATH 514, The Teaching of Geometry (3)

   Group C
   STAT 570, Probability Theory (3)
   STAT 572, Theory of Statistics (3)
   STAT 573, Linear Models
   STAT 579, Advanced Statistical Methods (3)

2. At least 21 semester hours of elective topics courses and seminars. One seminar must be elected outside the student's area of study. The topics courses should ordinarily be chosen from the list below:
   MATH 610, Topics in Mathematics Education (3)
     A. Learning and Teaching
     B. Curriculum and Evaluation
   MATH 620, Topics in Algebra (3)
   MATH 630, Topics in Analysis (3)
   MATH 640, Topics in Applied Mathematics (3)
   MATH 650, Topics in Geometry and Topology (3)
   MATH 660, Topics in Computational Mathematics (3)
   MATH 670, Topics in Probability Theory (3)
   MATH 680, Topics in Number Theory (3)
   STAT 675, Topics in Statistics (3)
   (Repetitions of topics courses and seminars are allowed as subjects vary.)

3. The applications-involvement component including 3-9 semester hours in MATH 692, Applications Experience (1-9), or equivalent experience.

4. At least 24 hours of dissertation work.

5. An additional 12-18 semester hours of electives at the graduate level.

Qualifying Examination

Whether admission to the program follows completion of a baccalaureate or a master's degree, each student is required to pass a written qualifying examination administered by the Graduate Studies Committee of the department.

Candidacy Examination

The candidacy examination is an oral examination in the student's primary area of study and is taken later than the qualifying examination. The committee to hear the candidacy examination will be nominated by the chair of the department and appointed by the dean of the Graduate School.

Doctoral Language Requirement

The student must demonstrate average reading proficiency in two of the following foreign languages: French, German, and Russian; or average reading proficiency in one of these languages, combined with a translation of a mathematical research article in this language to the satisfaction of the Graduate Studies Committee of the department.

Computer Project Requirement

The student must complete a project in which a computer is used in a nonroutine way. The project will normally be related to the candidate's primary area of study and must be approved by the candidate's dissertation adviser and the Graduate Studies Committee.

Courses in categories 2 and 5 should be chosen so that the program contains a coherent selection of 6 semester hours at the 500-level or above in the mathematical sciences, outside the student's broad area of study, or in a related discipline.
Dissertation Committee
The dissertation committee for each student will be nominated by the chair of the department and appointed by the dean of the Graduate School. This committee will consist of three to five graduate faculty members and be chaired by the dissertation adviser who has been appointed by the chair of the department.

External Examiner
An external examiner for the doctoral dissertation will be nominated by the chair of the department and appointed by the dean of the Graduate School. The examiner shall submit a written report on the dissertation to the chair of the department, the dean of the Graduate School, and the student's dissertation committee prior to the oral dissertation defense.

Oral Dissertation Defense
An oral examination on the dissertation will be conducted by the dissertation committee according to the rules of the Graduate School. This defense will be open to the university community.

Course Offerings

Mathematics (MATH)

402. MATHEMATICS CURRICULUM AND INSTRUCTION: GRADES K-9 (3). Crosslisted as CEE 402X. Methods of teaching mathematics with emphasis on developing the skills and understanding required for using different teaching aids. Attention given to the teaching of exceptional students and to planning for multicultural learning situations. Primarily for elementary education and special education majors. Not open for credit toward the major or minor in mathematical sciences. PRQ: MATH 201 or consent of department.

412. MATHEMATICS CURRICULUM AND INSTRUCTION: GRADES 6-12 (3). The aims and organization of materials for the mathematics programs of the secondary school, including attention to the needs of exceptional students, reading techniques in mathematics, and planning for multicultural learning situations. Accepted as mathematical sciences credit only for those preparing to teach. PRQ: Consent of department.

420. ALGEBRA I (3). Basic theory of commutative rings, the ring of integers, and polynomial rings. Introduction to group theory. PRQ: MATH 240 or consent of department.

421. ALGEBRA II (3). A continuation of MATH 420. Theory of groups, fields, polynomials, algebraic extension fields. Applications to classical problems. PRQ: MATH 420 or consent of department.

423. LINEAR AND MULTILINEAR ALGEBRA (3). The general theory of vector spaces, linear transformations, and matrices. Topics selected from determinants, tensor products, canonical forms, and bilinear and quadratic forms. PRQ: MATH 240 and MATH 420, or consent of department.

430. ADVANCED CALCULUS II (3). A reexamination of the calculus of functions of one variable: convergence, continuity, differentiation, the mean-value theorem, and the Riemann integral. PRQ: MATH 232 and MATH 240, or MATH 334, or consent of department.

431. ADVANCED CALCULUS II (3). Further study of sequences and series of functions; function of several variables. PRQ: MATH 430 or consent of department.

432. ADVANCED CALCULUS III (3). Line and surface integrals, the Riemann-Stieljes integral, gamma and beta functions, and Fourier series and integrals. Applications to probability theory and mathematical physics. PRQ: MATH 431 or both MATH 334 and PHYS 385, or consent of department.

434. NUMERICAL LINEAR ALGEBRA (3). Crosslisted as CSCI 434X. Roundoff errors and computer arithmetic. Direct and iterative methods for solving linear systems; norms and condition numbers, iterative refinement. Linear least squares problems; the normal equations and QR approach for overdetermined systems. Numerical methods for eigenvalues: an introduction to the QR iteration. The course makes extensive use of computers. PRQ: MATH 232, MATH 240, and either CSCI 230 or approved equivalent, or consent of department.


438. THEORY OF DIFFERENTIAL EQUATIONS (3). Topics include linear systems, existence and uniqueness of solutions, nonlinear equations, and stability. PRQ: MATH 232, MATH 240, and either MATH 334 or MATH 336, or consent of department.


440. ELEMENTS OF COMPLEX ANALYSIS (3). A beginning course in complex analysis emphasizing the applications of complex function theory. PRQ: MATH 232 and MATH 240, or MATH 334, or consent of department.


450. INTRODUCTION TO TOPOLOGY (3). The basic notions of metric and topological spaces; additional topics from combinatorial and algebraic topology may be included. PRQ: MATH 430 or consent of department.

456. LINEAR GEOMETRY (3). A treatment of affine and related geometries using the techniques of linear algebra. PRQ: MATH 420 or consent of department.

460. MODELING DYNAMICAL SYSTEMS (3). This course involves students in the process of translating some questions about the observed world into mathematical form, combining formal reasoning with intuitive insight. Phenomena susceptible to formulation in terms of differential equations and various kinds of differential equations are investigated. The concepts of equilibrium, stability, bifurcation, limit cycles, and chaos are illustrated. PRQ: MATH 232 and MATH 240 and MATH 336, PHYS 250A and PHYS 251A, or consent of department.

480. NUMBER THEORY (3). Divisibility, primes, congruences, quadratic reciprocity, Diophantine equations, continued fractions, and selected topics. PRQ: MATH 420 or consent of department.

492. ELEMENTARY AND/OR JUNIOR HIGH CURRICULUM (1-6).
A. Elementary School
B. Junior High—Middle School
C. Elementary and Junior High School
Intensive study of selected mathematical topics in curriculum and instruction as they relate to the teaching of mathematics. Not open for credit toward the major or minor in mathematical sciences. Course may be repeated to a maximum of 6 semester hours as topic changes. PRQ: Consent of department.

502. TOPICS FOR TEACHERS OF ELEMENTARY SCHOOL MATHEMATICS (3). Contemporary curricula, learning theories and strategies, materials of learning and supporting empirical evidence. PRQ: MATH 402 or consent of department.

510. THEORETICAL FOUNDATIONS OF MATHEMATICS EDUCATION (3). A survey of current developments in areas of human learning that relate directly to mathematics curriculum and instruction. A consideration of curriculum concerns, and an introduction to methods of critical reading of research reports. PRQ: Consent of department.
511. INTRODUCTION TO MATHEMATICS EDUCATION RESEARCH (3). Introduction to the structure and scope of mathematics education research. PRQ: MATH 510 or consent of department.

512. THE TEACHING OF MATHEMATICS, GRADES 6-9 (3). Curriculum goals and issues; recent developments in curriculum; learning research; alternate modes of presentation. Previous teaching experience is recommended. PRQ: MATH 510 or consent of department.

513. THE TEACHING OF ALGEBRA (3). Contemporary approaches to secondary school algebra; treatment of selected topics; instructional aids; individualized instruction; relevant research. Previous teaching experience is recommended. PRQ: MATH 510 or consent of department.

514. THE TEACHING OF GEOMETRY (3). Current programs, aims, issues, and trends in high school geometry; treatment of selected topics; instructional aids; relevant research. Previous teaching experience is recommended. PRQ: MATH 510 or consent of department.

515. USING MICROCOMPUTERS IN TEACHING MATHEMATICS AND SCIENCE IN SECONDARY SCHOOLS (3). Application of microcomputers to the teaching of mathematics and science in secondary schools; theoretical foundations for these applications; evaluation and analysis of software designed to facilitate teaching with the microcomputer. PRQ: MATH 510, knowledge of programming, and consent of department.

520. ALGEBRAIC STRUCTURES I (3). Group theory including the Sylow theorems, the basics theorem for finite Abelian groups. Polynomial rings, field theory, Galois theory, solvable groups, and solvability of equations by radicals. PRQ: MATH 421 or consent of department.

521. ALGEBRAIC STRUCTURES II (3). Ring theory including the Artin-Wedderburn theorem, the Jacobson radical. Commutative algebra, Noetherian rings, and Dedekind domains. PRQ: MATH 520 or consent of department.

522. HOMOLOGICAL ALGEBRA (3). Categories and functors, projective and injective modules, complexes and homology. Ext and Tor, and dimensions. Applications to cohomology of groups and ring theory. PRQ: MATH 521 or consent of department.

523. MODERN APPLIED ALGEBRA (3). Concepts and techniques of modern algebra which are useful in applied mathematics. Topics covered include applications of group theory to coding, applications of lattice theory to switching theory, and applications of ring theory to linear automata. PRQ: MATH 420 or consent of department.

530. REAL ANALYSIS I (3). The theory of functions of a real variable, emphasizing Lebesgue measure and the Lebesgue integral. The basic properties of the classical Lebesgue function spaces are developed. PRQ: MATH 431 or consent of department.

531. REAL ANALYSIS II (3). Functional analysis; topics include normed linear spaces, general measure theory, Banach and Hilbert spaces, and operator theory. PRQ: MATH 450 and MATH 530, or consent of department.

532. COMPLEX ANALYSIS (3). The theory of functions of a complex variable including analytic functions and their properties, sequences and power series, Cauchy’s theorem on integration and its consequences, and evaluation of real integrals using residue theory. PRQ: MATH 431 or consent of department.

536. ORDINARY DIFFERENTIAL EQUATIONS I (3). The theory of ordinary differential equations including existence of solutions, uniqueness, stability, oscillation. An introduction to boundary value problems including eigenfunction expansions. PRQ: MATH 430 and either MATH 336 or MATH 438, or consent of department.

537. ORDINARY DIFFERENTIAL EQUATIONS II (3). Continuation of MATH 536. PRQ: MATH 536 or consent of department.

540. APPLIED MATHEMATICS (3). Selected topics in applied mathematics. PRQ: MATH 430 and MATH 438, or consent of department.

541. APPLIED FUNCTIONAL ANALYSIS (3). Concepts and techniques of functional analysis needed in applied mathematics. Topics covered include basic principles of Banach and Hilbert space theory with applications to convex optimization, integral and differential equations, and variational inequalities. PRQ: MATH 530 or consent of department.

542. PARTIAL DIFFERENTIAL EQUATIONS I (3). Introduction to the theory and applications of partial differential equations. Linear and quasi-linear equations, characteristic curves, and classification and canonical forms are studied with emphasis on first order equations. The equations of mathematical physics are introduced. PRQ: MATH 431 and MATH 438, or consent of department. MATH 432 is strongly recommended.

543. PARTIAL DIFFERENTIAL EQUATIONS II (3). Introduction to Sobolev spaces, elliptic and parabolic equations. Weak solutions, regularity. Approximation of solutions. PRQ: MATH 531 and MATH 542, or consent of department.

544. APPLIED MATHEMATICS MODELLING (3). Survey of problems arising in one or more areas of application of mathematics which are of current research interest, e.g., mechanics, nonlinear continuum theories, wave propagation, nonlinear optics and electromagnetic theory, nonlinear elasticity and viscoelasticity. Concurrent development of the relevant mathematical techniques. PRQ: MATH 530 and one or more of MATH 536, MATH 540, or MATH 542 as appropriate, and consent of department.

550. TOPOLOGY (3). A survey of some major areas of modern topology. Includes a detailed study of compactness and connectedness, an introduction to combinatorial methods for classifying manifolds, and an examination of homotopy theory for maps between topological spaces. PRQ: MATH 450 or consent of department.

560. AUTOMATA THEORY (3). An introduction to the algebraic theory of automata. PRQ: MATH 420 or CSCI 462, or consent of department.

562. NUMERICAL ANALYSIS (3). Fundamental ideas and tools of numerical analysis and computational mathematics. Analysis of floating-point computations, rootfinding algorithms, interpolation and least-squares approximation by polynomials, numerical integration, direct and iterative methods for linear systems of equations, and numerical solution of initial-value problems for ordinary differential equations. Additional topics as time permits. Mathematical analysis of algorithms and the applicability and use of software modules will be emphasized. Not available for credit to students with credit in MATH 434 and MATH 435. PRQ: MATH 431, knowledge of FORTRAN programming, and consent of department.

563. VECTOR AND PARALLEL COMPUTATIONS IN NUMERICAL LINEAR ALGEBRA (3). Basic concepts of parallel and vector computations. Development of machine-independent algorithms for vector and parallel computations of basic linear algebra problems. Vector and parallel algorithms for linear systems, least squares and eigenvalue problems, and aspects of their implementations on both distributed and shared-memory computers will be discussed. In implementing the algorithms, the use of portable powerful software packages such as LAPACK will be emphasized. Applications to engineering as time permits. PRQ: MATH 434 and good knowledge of the UNIX operating system, or consent of department.

564. NUMERICAL LINEAR ALGEBRA (3). Floating point numbers and rounding errors. Direct and iterative methods for numerical solution of symmetric and nonsymmetric eigenvalue problems. Matrix equations, singular value decomposition, and total least squares. PRQ: MATH 423 or equivalent, MATH 434 or equivalent, and consent of department.

566. NUMERICAL DIFFERENTIAL EQUATIONS (3). A survey of the theory and application of numerical solutions for ordinary and partial differential equations. Includes methods for solving initial value problems, boundary value problems, and eigenvalue problems. Error and stability analyses are discussed. PRQ: MATH 431, MATH 434, and MATH 435, or consent of department.

568. NONLINEAR PROGRAMMING (3). Basic computational methods for minimizing a nonlinear function of one or more variables subject to constraints. Both numerical and theoretical problems will be treated. PRQ: MATH 430 and MATH 444, or consent of department.

569. SIMULATION AND MODEL BUILDING (3). An introduction to the theory and practice of the simulation of discrete event systems using the simulation language GPSS. PRQ: STAT 350 and MATH 360, or consent of department.

580. NUMBER THEORY I (3). The prime number theorem, primes in arithmetic progression, sieve methods, additive number theory. PRQ: MATH 421 and MATH 480, or consent of department.

581. NUMBER THEORY II (3). Continuation of MATH 580. PRQ: MATH 580 or consent of department.

585. COMBINATORIAL MATHEMATICS II (3). Continuation of MATH 584. PRQ: MATH 584 or consent of department.
586. RECURSIVE FUNCTION THEORY AND COMPUTABILITY (3). A study of recursive functions and Turing machines including a proof of the equivalence of the recursive functions and the Turing computable functions. PRQ: CSCI 482 or consent of department.
591. CURRICULUM AND INSTRUCTION IN MATHEMATICAL SCIENCES AT THE COLLEGE LEVEL (3). Study of various components of pedagogy and curriculum in the mathematical sciences at the college level.
592. INTERNSHIP IN MATHEMATICAL SCIENCES (2-6). The internship may be either industrial, consisting of an approved project in industry, or academic, consisting typically of association with a master teacher in the design and implementation of a course. May be repeated to a maximum of 12 semester hours, with no more than 6 semester hours counting toward the M.S. degree. PRQ: Consent of department.
596. TOPICS IN CONTEMPORARY MATHEMATICS EDUCATION (1-9). Intensive study of special topics in mathematics and mathematics education selected to meet the needs of teachers of mathematics at the precollege level. May be repeated to a maximum of 16 semester hours. PRQ: Consent of department.
597. GRADUATE READING IN MATHEMATICAL SCIENCES (1-9). A. Pure Mathematics
B. Applied Mathematics
E. Mathematics Education
May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.
598. TOPICS IN CONTEMPORARY MATHEMATICS (1-6). Faculty and student discussion of selected topics in contemporary mathematics. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.
599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
610. TOPICS IN MATHEMATICS EDUCATION (3). A. Learning and Teaching
B. Curriculum and Instruction
Content will vary from semester to semester. Offerings may include courses on theoretical issues concerned with learning, instruction, and curriculum in mathematics. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.
620. TOPICS IN ALGEBRA (3). Content will vary from semester to semester. Offerings may include courses in semigroup theory, finite group theory, ring theory, and homological algebra. May be repeated to a maximum total of 15 semester hours. PRQ: Consent of department.
630. TOPICS IN ANALYSIS (3). Content will vary from semester to semester. Offerings may include courses in real analysis, complex analysis, functional analysis, and differential equations. May be repeated to a maximum total of 15 semester hours. PRQ: Consent of department.
640. TOPICS IN APPLIED MATHEMATICS (3). Content will vary from semester to semester. Offerings may include courses in differential equations and mathematical physics. May be repeated to a maximum total of 15 semester hours. PRQ: Consent of department.
650. TOPICS IN GEOMETRY AND TOPOLOGY (3). Content will vary from semester to semester. Offerings may include courses in algebraic topology, point set topology, and algebraic geometry. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.
660. TOPICS IN COMPUTATIONAL MATHEMATICS (3). Content will vary from semester to semester. Offerings may include courses in numerical analysis, mathematical programming, mathematical modeling, and computational complexity. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.
670. TOPICS IN PROBABILITY THEORY (3). Content will vary from semester to semester. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.
680. TOPICS IN NUMBER THEORY (3). Content will vary from semester to semester. Offerings may include courses in algebraic, analytic, computational, and combinatorial number theory. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.
690. SEMINAR IN THE MATHEMATICAL SCIENCES (1-9).
A. Algebra
B. Analysis
C. Applied Mathematics
D. Geometry and Topology
E. Computational Mathematics
J. Probability Theory
K. Number Theory
M. Mathematics Education
Lectures and discussions on topics in advanced mathematics. One to 9 semester hours as scheduled. May be repeated to a maximum of 24 semester hours, not more than 15 of which may be selected in a single area. PRQ: Consent of department.
692. APPLICATIONS EXPERIENCE (1-9). Field experience for the doctoral student in applications of the mathematical sciences. May be repeated to a maximum of 18 semester hours with no more than 9 semester hours counting toward the Ph.D. degree. PRQ: Consent of department.
699. DOCTORAL RESEARCH AND DISSERTATION (1-15). May be repeated to a maximum of 36 semester hours.

Statistics (STAT)
470. INTRODUCTION TO PROBABILITY THEORY (3). The mathematical study of probability including probability spaces, random variables, discrete, continuous, mixed probability distributions, moment generating functions, multivariate distributions, conditional probability, conditional expectation, special distributions, laws of large numbers, and central limit theorem. PRQ: MATH 202 and MATH 240, or consent of division.
471. PROBABILITY MODELS AND APPLICATIONS (3). An introduction to elementary stochastic processes and their applications to various phenomena in engineering, management science, the physical and social sciences, and operations research. PRQ: STAT 470 or consent of department.
472. INTRODUCTION TO MATHEMATICAL STATISTICS (3). An introductory study of mathematical statistics including distributions of functions of random variables, interval estimation, sufficiency, completeness, point estimation, statistical hypotheses, analysis of variance, and the multivariate normal distribution. PRQ: STAT 470 or consent of department.
473. STATISTICAL METHODS AND MODELS I (3). A first course in statistical methods and models including exploratory data analysis and graphical techniques, regression analysis, experimental design, and basic sampling techniques. Extensive use of statistical computer packages. PRQ: MATH 211 and STAT 301, or STAT 350, or consent of division. CRQ: STAT 473A.
473A. STATISTICAL COMPUTING PACKAGES (1). Introduction to statistical computing with the aid of software packages. Data entry, transformations, simple plots, summary statistics, and statistical procedures. No previous computer experience is required. PRQ: MATH 211 and STAT 301, or STAT 350, or consent of division. CRQ: STAT 473 or consent of division.
474. STATISTICAL METHODS AND MODELS II (3). Continuation of STAT 473. Topics include cluster sampling, two-level factorial experiments, confounding and fractional replications, analysis of discrete data, an introduction to time series analysis, control charts for quality, and productivity analysis. PRQ: STAT 473 and STAT 473A, or consent of division.
478. STATISTICAL METHODS OF FORECASTING (3). Introduction to forecasting including use of regression in forecasting; removal and estimation of trend and seasonality; exponential smoothing; stochastic time series models; stochastic difference equations; autoregressive, moving average, and mixed models; model identification and estimation; diagnostic checking; and the use of time series models in forecasting. PRQ: STAT 473 or consent of division.
565. REGRESSION ANALYSIS (3). Simple and multiple linear regression, estimation, confidence intervals and tests, and prediction. Diagnostic methods using residuals, transformations, outliers, and influence analysis. Polynomial regression, stepwise variable selection, and collinearity. PRQ: STAT 474 or consent of department.
566. DISCRETE MULTIVARIATE DATA ANALYSIS (3). A first course in the analysis of discrete data including two-dimensional tables, the log linear model, goodness-of-fit of the model, measures of dependence, three and higher dimensional tables, hierarchical models, model selection, ordered categories, logit model, zero frequency problem, and
introduction to Bayesian analysis of categorical data. PRQ: STAT 472 and STAT 474, or consent of department.

567. RELIABILITY AND SURVIVAL ANALYSIS (3). Survival function, failure rate, types of censored data, estimation for parametric models, non-parametric estimation of survival function, accelerated life tests, competing risks, and Bayesian analysis of survival data. PRQ: STAT 472 and STAT 474, or consent of department.

568. METHODS IN BIOSTATISTICS (3). Survival function, failure rate, types of censored data, life tables, regression models for life-time data, bioassay, direct assay, indirect assays with quantitative response, and clinical trials. PRQ: STAT 472 and STAT 474, or consent of department.

569. METHODS FOR QUALITY CONTROL AND IMPROVEMENT (3). Control charts for attributes and variables, special control charts, process control techniques, acceptance sampling, process capability, Taguchi's approach to improving quality of a product, and the philosophy of Deming. PRQ: STAT 472 and STAT 474, or consent of department.


572. THEORY OF STATISTICS (3). Exponential class, elements of decision theory, unbiased estimation, shrinkage estimators, methods for estimating standard errors, multiparameter estimation, generalized likelihood ratio tests, sequential probability ratio test, and linear models. PRQ: STAT 472 or consent of department.

573. LINEAR MODELS (3). The theory of linear models with applications to the analysis of variance and regression and to the design of experiments. PRQ: STAT 472 and STAT 474, or consent of department.

574. DESIGN AND ANALYSIS OF EXPERIMENTS (3). An intermediate course in the design and analysis of experiments including linear models of less than full rank, distributions of quadratic forms, estimable functions, confounding, fractional replication, incomplete block, hierarchical, Latin square, cross-over, split plot, repeated measures and related designs, response surface methods, covariance analysis. PRQ: STAT 472 and STAT 474, or consent of department.

575. MULTIVARIATE METHODS OF STATISTICS (3). An introduction to the techniques of multivariate analysis including description of multivariate data, reducing the dimension, principal components, factor analysis, estimation and testing for the parameters in multinormal populations, and multivariate analysis of variance. Problems which involve the use of computers will be treated. PRQ: STAT 472 or STAT 474, or consent of department.

576. DISTRIBUTION-FREE STATISTICS (3). A survey of nonparametric statistical techniques and their logical foundations including the distributions of order statistics and ranks, tests of hypotheses, confidence intervals and Hodges-Lehmann estimators for one-sample, two-sample, and paired sample location problems, the two-sample dispersion problem, analysis of one-way and two-way layouts, tests of independence, goodness-of-fit tests, linear rank statistics, and U-statistics. PRQ: STAT 472 or STAT 474, or consent of department.

577. SAMPLING TECHNIQUES (3). An introduction to sample survey techniques and sampling theory including estimation of population parameters based on simple random sampling, cluster sampling, stratified sampling, and ratio sampling. Included will be a summary of recent advances in sampling theory and discussions of practical problems and sources of error in surveys. PRQ: STAT 472 or STAT 474, or consent of department.

578. TIME SERIES ANALYSIS (3). A course in models for analysis of time series data including mean and covariance functions of stationary time series, moving average, autoregressive and mixed models, identification and estimation in ARMA (p,q) models, asymptotic properties of estimators, periodogram and spectral analysis, and regression with time series error. PRQ: STAT 472 and STAT 474, or consent of department.

579. ADVANCED STATISTICAL METHODS (3). Various topics will be discussed from the perspective of modeling and analyzing data. Emphasis will be on application of statistical methodology. Data analytic techniques will be illustrated with several types of data including categorical data, survival data, linear and nonlinear regression data, time series data, and data from designed experiments. Modern statistical software will be used extensively. PRQ: STAT 472 and STAT 474, or consent of department. Recommended: MATH 562.


593. GRADUATE READING IN PROBABILITY AND STATISTICS (1-9). May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

675. TOPICS IN STATISTICS (3). Content will vary from semester to semester. Offerings may include courses in linear models, estimation, hypothesis testing, decision theory, and Bayesian inference. May be repeated to a maximum of 15 semester hours. PRQ: Consent of department.

690. SEMINAR IN STATISTICS (1-9). Discussions or topics in advanced probability and statistics as scheduled. Topics include but are not limited to probability theory, stochastic processes, statistical inference, nonparametric statistics, multivariate analysis, linear and nonlinear models, discrete data analysis, time series. One to 9 semester hours as scheduled. May be repeated to a maximum of 24 semester hours, not more than 15 of which may be on a single topic. PRQ: Consent of department.
GRADUATE FACULTY

Sherman M. Stange, chair, professor, Presidential Teaching Professor, Ph.D., University of Colorado
Harold I. Brown, professor, Ph.D., Northwestern University
David J. Buller, assistant professor, Ph.D., Northwestern University
Donald A. Cress, associate professor, Ph.D., Marquette University
James T. King, Jr., professor, Ph.D., University of Notre Dame
Charles M. Gelven, professor, Presidential Research Professor, Ph.D., Washington University
James L. Hudson, associate professor, Ph.D., Johns Hopkins University
Tomis Kapitan, associate professor, Ph.D., Indiana University
Theodore J. Kisiel, professor, Ph.D., Duquesne University
Delbert W. Stoltz, chair professor, University of Wisconsin
Charles M. Gelven, professor, Presidential Research Professor, Ph.D., Washington University
William E. Tolhurst, associate professor, Ph.D., University of Connecticut

The Department of Philosophy offers a graduate program leading to the degree Master of Arts. The program is designed to prepare students for teaching and research in philosophy and for doctoral-level graduate work in philosophy and in other disciplines, as well as for positions in government and industry where a broad liberal arts background with strong critical training is desired. Students planning to enroll for graduate courses in philosophy should consult their advisers before registering.

Admission requirements are those established for admission to the Graduate School, plus the baccalaureate degree with a major or strong minor in philosophy. In addition, the Department of Philosophy may require a student to remedy specific deficiencies in preparation by enrolling without graduate credit in certain courses.

Master of Arts

All students studying for the degree Master of Arts in philosophy are required to complete a minimum of 30 semester hours of graduate study and pass a comprehensive examination. In completing these 30 semester hours a student may: (1) complete the minimum of 30 semester hours in philosophy, or (2) complete a minimum of 24 semester hours in philosophy and receive an additional 6 semester hours of credit for writing a thesis (PHIL 599), or (3) complete a minimum of 24 semester hours in philosophy and receive up to 6 semester hours of credit for courses taken outside the field of philosophy, or (4) complete a minimum of 18 semester hours in philosophy, receive an additional 6 semester hours for writing a thesis (PHIL 599), and receive up to 6 semester hours credit for courses taken outside the field of philosophy.

All courses are to be chosen with the approval of the student’s adviser, thereby insuring adequate coverage of the various fields of philosophy represented on the comprehensive examination.

Course Offerings

401. ADVANCED SYMBOLIC LOGIC (3). Topics vary, but will be selected from characteristic issues: for example, foundations of quantification theory, including Herbrand’s theorem, Lowenheim-Skolem theorem, Godel’s completeness theorem; basic proof theory, including Godel’s incompleteness theorem; elements of recursive function theory and undecidability theorems; and axiomatic set theory. The relevance of symbolic logic to the analysis of philosophical problems will be considered. PRQ: PHIL 302 or consent of department.

402. PHILOSOPHY OF LOGIC (3). A consideration of the various definitions of logic and theories of its role in mathematics, natural science, and philosophy. Texts will be selected from such philosophers as Aristotle, Hegel, Mill, Peirce, Bradley, Dewey, and Strawson. PRQ: PHIL 302 or consent of department.

403. PHILOSOPHY OF MATHEMATICS (3). Problems in the interpretation of mathematics, e.g., the philosophical importance of non-Euclidean geometries, the arithmetization of analysis, Godel’s incompleteness theorem, and such general philosophies of mathematics as formalism, intuitionism, and logicism. Readings will be drawn from such philosophers as Aristotle, Hegel, Mill, Peirce, Bradley, Dewey, and Strawson. PRQ: PHIL 302 or consent of department.

411. THEORIES AND PROBLEMS OF KNOWLEDGE (3). A study of various contemporary views of knowledge. Consideration of such problems as the conditions of meaning; the nature of truth; the relationship between sensation, perception, and intuition; the difference between knowing and believing; methods of verification; and types of judgment. Analysis of the works of such philosophers as Meinong, Husserl, Brentano, Russell, Lewis, Wittgenstein, and Austin. Emphasis is placed on either analyzing several theories of knowledge or tracing a problem through the thought of several philosophers. PRQ: 6 semester hours of philosophy at the 300 level or consent of department.

412. METAPHYSICS (3). A study of contemporary speculative and descriptive metaphysical theories dealing with such areas as cosmology and ontology. Critical exegesis of the writing of philosophers such as Whitehead, Bergson, Goodman, Sarte, and Strawson. PRQ: 6 semester hours of philosophy at the 300 level or consent of department.

420. MAJOR PHILOSOPHERS (3). An intensive study of the work of one major figure from the history of philosophy. Selection will be made from such figures as Aquinas, Descartes, Hume, Hegel, Heidegger, and Wittgenstein. May be repeated to a maximum of 9 semester hours as the subject matter varies. PRQ: Consent of department.

421. PLATO (3). PRQ: 6 semester hours of philosophy at the 300 level including PHIL 321 or consent of department.

422. ARISTOTLE (3). PRQ: 6 semester hours of philosophy at the 300 level including PHIL 321 or consent of department.

423. MEDIEVAL PHILOSOPHY (3). PRQ: 6 semester hours of philosophy at the 300 level including PHIL 321 or consent of department.

424. 17TH AND 18TH CENTURY EMPIRICIST PHILOSOPHIES (3). A critical exegesis of selected writings by such philosophers as Hobbes, Locke, Berkeley, Hume, and Reid. PRQ: 6 semester hours of philosophy at the 300 level including PHIL 322 or consent of department.

425. 17TH AND 18TH CENTURY RATIONALIST PHILOSOPHIES (3). A critical exegesis of selected writings by such philosophers as Descartes, Malebranche, Spinoza, Leibniz, and Wolff. PRQ: 6 semester hours of philosophy at the 300 level including PHIL 322 or consent of department.

426. KANT (3). PRQ: 6 semester hours of philosophy at the 300 level including PHIL 322, or consent of department.
427. 19TH CENTURY PHILOSOPHY (3). A critical exegesis of selected writings representative of significant philosophical developments in 19th century thought with emphasis on post-Kantian idealism. Texts will be chosen from the writings of such philosophers as Hegel, Schopenhauer, Kierkegaard, Comte, J. S. Mill, Nietzsche, and Mach. PRQ: 6 semester hours of philosophy at the 300 level including PHIL 322, or consent of department.

429. 20TH CENTURY ANALYTIC PHILOSOPHIES (3). A critical exegesis of selected writings by such philosophers as Moore, Russell, Wittgenstein, Carnap, C. I. Lewis, Ryle, and Austin. PRQ: 6 semester hours of philosophy at the 300 level including PHIL 322, or consent of department.

430. 20TH CENTURY SYSTEMATIC AND PHENOMENOLOGICAL PHILOSOPHIES (3). A critical exegesis of selected writings by such philosophers as Dewey, Husserl, Bergson, Whitehead, Heidegger, and Merleau-Ponty. PRQ: 6 semester hours of philosophy at the 300 level including PHIL 322, or consent of department.

431. CONTEMPORARY ETHICAL THEORY (3). A study of the major ethical concepts. Readings will be selected from such philosophers as Toulmin, Nowell-Smith, Baier, Hare, and Rawls. PRQ: 6 semester hours of philosophy at the 300 level or consent of department.

432. THEORIES OF VALUE (3). A study of the major theories of value, the relationship between knowing and believing. The works of major theorists such as Moore, Croce, C. I. Lewis, Perry, and Stevenson, as well as recent texts and articles in the field, will be analyzed. PRQ: 6 semester hours of philosophy at the 300 level or consent of department.

433. CONTEMPORARY PHILOSOPHY OF SCIENCE (3). An analysis of some of the views which have achieved major importance in this field. Texts will be selected from such key works as Hume's Dialogues Concerning Natural Religion, Kant's Religion within the Limits of Reason Alone, Schleiermacher's On Religion, and Feuerbach's Essence of Christianity. PRQ: 6 semester hours of philosophy at the 300 level or consent of department.

435. PHILOSOPHY OF MIND (3). Some recent developments in philosophy having a bearing on such concepts as perception, thought, intentionality, belief, and the role of these concepts in such philosophical problems as the relation of mind and body, the veridicality of perception, and the nature of personal identity.

436. PHILOSOPHY OF SCIENCE (3). Topics in the philosophy of science. A consideration of such problems as confirmation, the ontological status of theoretical entities, the role of conventions in science, the logic of discovery, and the nature of scientific progress.

437. PHILOSOPHY OF RELIGION (3). Detailed analysis of one or more key issues in contemporary analytic philosophy of religion, or in important recent theories of the nature and function of religion.

438. SPECIAL TOPICS IN RECENT PHILOSOPHY (3). May be repeated to a maximum of 6 semester hours as topic changes. PRQ: Consent of department.

439. SPECIAL STUDIES AND RESEARCH (1-4). Guided research for students wishing to do special studies of an advanced nature. Students will be expected to write a number of short papers and will select their research topics in consultation with the instructor. May be repeated to a maximum of 12 semester hours, providing no repetition of subject matter occurs. PRQ: Consent of department.

440. THESES (1-6). Guidance in the writing of the master's thesis. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
The Department of Physics offers a graduate program leading to the degree Master of Science.

**Specialization I: Basic Physics**

**Departmental Requirements**

1. Completion of 24 semester hours in physics, including PHYS 400 or PHYS 500, PHYS 560, PHYS 570, PHYS 571; with at least 12 semester hours at 500-level or above.
2. Passage of a proficiency examination in mechanics, electricity, and magnetism, thermodynamics, optics and modern physics.

**Specialization II: Applied Physics**

**Departmental Requirements**

1. 6 semester hours from PHYS 420, PHYS 467, PHYS 474, PHYS 475, PHYS 480, PHYS 430; 6 semester hours from PHYS 560, PHYS 563, PHYS 566, PHYS 582.
2. Passage of a proficiency examination which may include a special area examination (e.g., acoustics, biophysics, geophysics) in place of one section of the proficiency examination.

**Specialization III: Physics Teaching**

**Departmental Requirements**

1. Completion of 6 semester hours from PHYS 560, PHYS 566, PHYS 570 or PHYS 571, PHYS 582; and 5 semester hours from PHYS 467, PHYS 472, PHYS 474, PHYS 475, PHYS 477.
2. Passage of proficiency examination with an option of course work in a related science substituted for one area of proficiency examination.
   Plan B: Submission of two papers, one of which may pertain to teaching of physics or history and philosophy of physics.
4. PHYS 592 (seminar) or one year of successful teaching experience.

The proficiency examination in any of the above specializations should be taken during the first or second semester of residence. It normally should be passed in the second semester in order for the student to be considered for continuing financial assistance.

All graduate students are required to register for PHYS 698, Physics Seminar, each semester. No more than 6 semester hours of credit in PHYS 599, Master's Thesis, may be applied toward the required 30 semester hours for the M.S. degree.

**Course Offerings**

- **400. ANALYTICAL MECHANICS II (3)**: Tensors, variational principles, introduction to Lagrangian and Hamiltonian formulation, dynamics of rigid bodies, introduction to relativistic dynamics, oscillating systems. PRQ: PHYS 385 or consent of department.
- **410. COMPUTERS IN PHYSICS (3)**: Review of methods of problem solving in a large sample of the areas of basic physics. Techniques of numerical analysis and FORTRAN programming are applied to the solution of physics problems by computer. PRQ: PHYS 385 and CSCI 230, or consent of department.
- **420. ACOUSTICS I (3)**: Vibrating strings, bars and plates, acoustic wave equation, transmission and absorption of sound, radiation, and filters. PRQ: PHYS 367 or MEE 320; and MATH 334 or MATH 336; or consent of department.
- **421. ACOUSTICS II (3)**: Radiation and scattering of sound, resonators, ducts, filters, nonlinear vibrations, architectural acoustics, and transducers. PRQ: PHYS 420 or consent of department.
- **430. OPTICS (4)**: Geometrical, physical, quantum, and experimental optics with emphasis on topics of current interest. Three lectures plus a 3-hour laboratory weekly. PRQ: PHYS 367 and PHYS 370, or consent of department.
- **432. SOLAR ENERGY COLLECTION AND CONVERSION (3)**: Solar radiation characteristics, radiation thermodynamics, thermodynamics and optics of concentrating collectors, selective absorption, interference stacks, direct electric solar conversion (photovoltaic and thermal e.m.f.), thermal storage and retrieval. PRQ: PHYS 320 and PHYS 367, or consent of department.
434. NUCLEAR ENERGY (3). Nuclear fission, radioactivity, dose determinations, shielding, comparison of various types of fission reactors (burners and breeder), nuclear fusion, prospective techniques for controlled fusion reactions. Waste management. PRQ: PHYS 360 or consent of department.

436. ENERGY CONVERSION (3). Generation of electrical power from fossil fuel plants, nuclear reactors, wind machines, solar power towers, solar farms, and ocean thermal gradients. Electric transmission. Heat engines. PRQ: PHYS 320 or consent of department.

460. QUANTUM PHYSICS (3). Schrodinger wave equation, eigen-values and eigen-functions, methods of approximation, and applications to the square well, the harmonic oscillator, and hydrogen-like atoms. PRQ: PHYS 385 or consent of department.

461. MODERN PHYSICS (3). Applications of quantum physics to atoms, molecules, solids, nuclei, and elementary particles. PRQ: PHYS 460 or consent of department.

463. THERMODYNAMICS, KINETIC THEORY, AND STATISTICAL MECHANICS (3). The thermodynamics section will review such topics as the laws of thermodynamics, the entropy concept, and thermodynamic potentials. Probability, distribution functions, and transport phenomena are treated in the kinetic theory portion. An introductory treatment of classical and quantum-mechanical statistical mechanics will be given. The course will stress applications to areas of modern physics. PRQ: PHYS 320 or consent of department.

467. NOISE AND VIBRATION CONTROL (3). Includes mechanical vibrations, damping, resonance, vehicle noise, acoustic enclosures, and techniques of noise abatement and measurement. PRQ: PHYS 300, PHYS 367, or TECH 367, or consent of department.

470. ELECTRICITY AND MAGNETISM II (3). Mathematical treatment of electric and magnetic fields, Maxwell's equations and applications. PRQ: PHYS 370 or consent of department.

472. PHYSICAL MEASUREMENTS (2). Special laboratory problems. PRQ: Consent of department.

474. METHODS OF EXPERIMENTAL PHYSICS (3). Basic techniques of experimental physics, including high-vacuum techniques, digital electronics, design and construction of research apparatus, radiation safety. etc. Open to graduate students and advanced undergraduate students in all sciences. Strongly recommended for all graduate students in physics. PRQ: PHYS 395X or consent of department.

475. ADVANCED ELECTRONICS (3). Digital electronics, digital-to-analog and analog-to-digital conversion, mini and microcomputers, high-frequency techniques, signal measurement and processing. This course is intended primarily for students in the experimental sciences. Two lectures and one 3-hour laboratory period a week. PRQ: PHYS 395X or consent of department.

477. ASTROPHYSICS (3). Kepler's laws and solar system, analysis of solar radiations, nuclear reactions in the sun, and other selected topics. PRQ: PHYS 300 or consent of department.

480. INTRODUCTION TO MATERIALS SCIENCE (3). Mechanical, thermal, electrical, optical, and structural properties of modern engineering materials. PRQ: PHYS 300, PHYS 360, and PHYS 370, or consent of department.

485. METHODS OF MATHEMATICAL PHYSICS II (3). Tensor analysis. Functions of complex variable, residue calculus, partial differential equations of mathematical physics and Green's function. PRQ: PHYS 385 or consent of department.

492. SCIENCE TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL: GRADES K-9 (3). Selected instructional methods and materials for teaching science in elementary, middle, and junior high schools with emphasis on the physical sciences. Analysis of modern curricula and practice in the use of associated laboratory materials developed for use at all levels from grades K-9. Course designed for the classroom teacher and pre-teacher, but open to science supervisors or concerned with teaching procedure. May be repeated to a maximum of 16 semester hours. On application to institute director and by invitation only.

495. TEACHING OF PHYSICAL SCIENCES (3). Crosslisted as CHEM 495X and GEOG 495X. Preparation for certification in grades 6-12 in one or more of the fields of physical science: physics, chemistry, earth science, and general science (physical science emphasis). Examination and analysis of modern curricula, classroom and laboratory organization, microteaching and observation of teaching, lesson planning, multicultural education; teaching science to the exceptional child; reading and the teaching of science; and methods of evaluation. Includes 15 clock hours of clinical experience. PRQ: Consent of department.

500. CLASSICAL MECHANICS (3). Hamiltonian formulation, canonical transformations, Hamilton-Jacobi theory, special relativity, continuous media and fields. PRQ: PHYS 400 or consent of department.

501. MECHANICS OF CONTINUOUS MEDIA (3). Statics of fluids, hydrodynamics, theory of elasticity, vortex theory. PRQ: PHYS 400 or consent of department.

505. INSTITUTE FOR SCIENCE TEACHERS (1-8). Lectures, demonstrations, laboratory work, and field trips, designed for the science teacher. Subject matter from the fields of chemistry, physics, biology, and earth sciences. May be repeated to a maximum of 16 semester hours. On application to institute director and by invitation only.

559. SPECIAL PROBLEMS IN PHYSICS (1-10). Special problems in physics under supervision of staff. Problems may be technical in nature or concerned with teaching procedure. May be repeated to a maximum of 10 semester hours. PRQ: Consent of department.

560. QUANTUM MECHANICS I (3). Linear vector spaces, principles of wave mechanics, one-dimensional problems, central forces, angular momentum, spin, methods of approximation. PRQ: Consent of department.

561. QUANTUM MECHANICS II (3). Symmetry principles, theory of scattering, identical particles, many-electron atoms, relativistic electron. PRQ: PHYS 560 or consent of department.

563. STATISTICAL PHYSICS I (3). Review of thermodynamics, kinetic theory and the Boltzmann transport equation, classic ensemble theory, the H theorem, elementary quantum statistics. CRQ: PHYS 460 or consent of department.

566. SOLID STATE PHYSICS I (3). Crystal structure, lattice vibrations, thermal and transport properties, free electron and band theories, Brillouin zones, surfaces, semiconductors. PRQ: PHYS 460 or consent of department.

567. SOLID STATE PHYSICS II (3). Symmetry and crystal field theory, magnetic properties, lattice vacancies, diffusion, optical properties, superconductivity. PRQ: PHYS 566 or consent of department.

570. ELECTROMAGNETIC THEORY I (3). Maxwell's equation, plane waves in isotropic and anisotropic dielectrics, conducting media, wave guides and plasmas, dipole radiation and diffraction. PRQ: PHYS 470 or consent of department.

571. ELECTROMAGNETIC THEORY II (3). Radiation from moving charges, relativistic formulation of electrodynamics, collisions and scattering, multipole radiation, radiation damping and self forces. PRQ: PHYS 470 or consent of department.

574. METHODS OF EXPERIMENTAL PHYSICS: SPECTROSCOPY (3). Various experimental methods and applications of spectroscopy including: optical, nuclear, Mossbauer, X-ray diffraction, electron spin resonance, nuclear magnetic resonance, etc. PRQ: PHYS 474 or consent of department.

580. ATOMIC AND MOLECULAR PHYSICS (3). Atomic spectra, Zeeman effect, Stark effect, hyperfine structure. PRQ: Consent of department.

582. NUCLEAR PHYSICS I (3). Nuclear properties, the deuteron problem, nucleon-nucleon scattering, nuclear decay, radiation detection, structure and models of the nucleus. CRQ: PHYS 460.

583. NUCLEAR PHYSICS LABORATORY (2). The properties of particles from natural and artificial disintegration of nuclei; the corresponding measuring instruments. PRQ: PHYS 582 or consent of department.

584. NUCLEAR PHYSICS II (3). Particle accelerators, nuclear reactions, nuclear models, nuclear energy, elementary particles. PRQ: PHYS 582 or consent of department.

585. METHODS OF THEORETICAL PHYSICS I (3). Calculus of variation, integral equations, integral transforms, approximation methods. PRQ: PHYS 465 or consent of department.

592. SEMINAR ON COLLEGE TEACHING OF PHYSICS (2). Traditional and nontraditional methods for teaching physics at the college and community college level. Laboratory and demonstration apparatus will be discussed. Seminar participants may participate in teaching classes under the guidance of an experienced teacher. These semester hours
may not be applied toward the hours required for a master's degree. PRQ: Consent of department.

599. MASTER'S THESIS (1-6). The individual investigation of a problem under the supervision of an adviser in the department. May be repeated to a maximum of 6 semester hours. PRQ: Consent of research supervisor and the department.

651. RELATIVITY (3). Lorentz transformations and kinematics of special relativity; relativistic dynamics and manifestly covariant electrodynamics; general relativity as a theory of gravitation. PRQ: PHYS 500 and PHYS 570 or consent of department.

660. QUANTUM MECHANICS III (3). Symmetry and invariance in quantum mechanics, field quantization, introductory quantum field theory. PRQ: PHYS 560 or consent of department.

668. QUANTUM THEORY OF SOLIDS (3). Space groups, lattice vibrational and electronic spectra of solids; elementary theory of the electron gas; effective mass theory, impurity states in metals and semiconductors. PRQ: PHYS 567 or consent of department.

676. HIGH ENERGY PHYSICS (3). Classification of particles into baryons, mesons, and leptons and their fundamental properties; symmetries and conservation laws. PRQ: PHYS 660 or consent of department.

686. FUNDAMENTAL PARTICLE THEORY (3). S-matrix theory; analyticity properties of propagators, vertex functions, and scattering amplitudes; single-variable dispersion theory. PRQ: PHYS 660 or consent of department.

690. SPECIAL TOPICS IN PHYSICS (1-6). A. Solid State Physics B. Nuclear Physics C. Elementary Particle Physics D. Other Topics of Current Interest Lectures and discussions on topics in various fields of physics at the graduate level. One to 6 semester hours as scheduled; course may be repeated in one or more fields of physics. Six semester hours is the maximum in any one area; not more than 15 semester hours will count toward a master's degree. PRQ: Consent of department.

698. PHYSICS SEMINAR (1). Discussion of current problems in physics under guidance of staff.
Department of Political Science (POLS, PSPA)

GRADUATE FACULTY

Clark D. Neher, chair, professor, Ph.D., University of California, Los Angeles
Andrea Bonnicksen, assistant chair, professor, Ph.D., Washington State University
Robert B. Albritton, associate professor, Ph.D., Northwestern University
Larry Arnhart, associate professor, Ph.D., University of Chicago
James M. Banovetz, director, Division of Public Administration, professor, Ph.D., University of Minnesota
Paul J. Culhane, associate professor, Ph.D., Northwestern University
Martin D. Dubin, associate professor, Ph.D., Indiana University
Craig R. Ducat, professor, Ph.D., University of Minnesota
J. Dixon Esseks, professor, Ph.D., Harvard University
Lawrence S. Finkelstein, professor, Ph.D., Columbia University
Morton J. Frisch, adjunct professor, Ph.D., Pennsylvania State University
Gerald T. Gabris, associate professor, Ph.D., University of Missouri
Gary D. Glenn, associate professor, Ph.D., University of Chicago
Gordon T. Hilton, associate professor, Ph.D., Lancaster University (England)
Daniel R. Kempton, director of graduate studies, associate professor, Ph.D., University of Illinois
Dwight Y. King, associate professor, Ph.D., University of Chicago
Paul J. Kleppner, professor, Distinguished Research Professor, Ph.D., University of Pittsburgh
Kevin L. McKeough, associate professor, Ph.D., University of Kansas
Jon D. Miller, professor, Ph.D., Northwestern University
William R. Monat, adjunct professor, Ph.D., University of Minnesota
Michael T. Peddle, assistant professor, Ph.D., Northwestern University
Bruce Rocheleau, associate professor, Ph.D., University of Florida
Irene Rubin, professor, Ph.D., University of Chicago
Peter S. Ruckman, Jr., assistant professor, Ph.D., Florida State University
Gregory Schmidt, associate professor, Ph.D., Cornell University
James N. Schubert, professor, Ph.D., University of Hawaii, Manoa
M. Ladd Thomas, professor, Ph.D., Fletcher School of Law and Diplomacy, Tufts University
Manfred W. Wenner, professor, Ph.D., Johns Hopkins University
Mikel Wyckoff, associate professor, Ph.D., University of Maryland

The Department of Political Science offers graduate programs leading to the degrees Master of Arts, Master of Public Administration, and Doctor of Philosophy.

Eight fields are available in political science: American government and politics, public law, public administration, public policy, political theory, comparative politics, international relations, and politics and the life sciences. Graduate study may lead to careers in government service (federal, state, and local), international business, teaching, and professional writing and research. The public administration program offers professional preparation, including internship opportunities in government agencies as part of course work, toward a graduate degree; active efforts are made to place students in career government positions upon completion of their studies. Foreign study and overseas internship opportunities also exist. All programs are related to the students' career objectives by their departmental advisers.

Master of Arts

Students interested in pursuing a Master of Arts degree with a major in political science normally should have at least 9 undergraduate semester hours in political science or the equivalent. When this is lacking, a student may be required to make up deficiencies by enrolling in and successfully completing designated courses, by auditing designated courses, or by engaging in supervised reading without graduate credit.

Of the minimum 30 semester hours of graduate credit required for the degree, at least 24 semester hours are to be taken in political science at the graduate level including:

1. POLS 502, Scope and Methods of Political Science I (3), or equivalent as approved by the department
2. POLS 503, Scope and Methods of Political Science II (3), or equivalent as approved by the department
3. 12 semester hours in one and 9 semester hours in another of the eight fields listed above.

Students may apply the additional 3 semester hours to the writing of a thesis, or may take 3 semester hours of elective courses within or outside the department. If a thesis is to be written the student must register for POLS 599, Thesis (1-6). Students not writing a thesis must submit a copy of one accepted research paper (starred paper) prepared for each of two graduate courses in different fields of political science.

No more than 9 semester hours in 400-level graduate courses may be included in the student's program of 30 semester hours for the Master of Arts degree. Normally a student will be required to take the core courses in the chosen fields of study.

An oral comprehensive examination is required upon completion of all course work, or during the last semester of study.
Master of Public Administration

The Master of Public Administration degree program has been designed to meet the needs of those students seeking special educational preparation for careers in public service. It focuses principally upon the dynamics of public policy formulation and public management as the appropriate basis for persons who wish to address political, social, economic, environmental, and administrative problems through career positions in governmental and quasi-public agencies.

Prerequisites for admission to the program are 9 semester hours in the social sciences, including at least one course in U.S. government, and appropriate undergraduate work in mathematics or statistics.

The M.P.A. degree will normally require the completion of a minimum of 39 to 50 semester hours of approved graduate study. This study is to be undertaken in two fields, the public policy/management core and a selected specialization.

The public policy/management core consists of the following courses (24 semester hours):

- PSPA 500, Scope and Dynamics of Public Administration (3)
- PSPA 501, Data Analysis in Public Administration (3)
- PSPA 504, Program Evaluation Methods (3)
- PSPA 505, Organization Theory and Behavior (3)
- PSPA 509, Public Personnel Management (3)
- PSPA 510, Public Budgeting and Financial Management (3)
- PSPA 511T, Information Management and Decision Support in Public Organizations (3)
- PSPA 599, Sectoral Study (3)

Students with appropriate previous course work or professional experience may petition program faculty for permission to substitute elective courses for PSPA 501, 509, or 510. Permission for such a substitution involving PSPA 501 will not be granted until after the student has demonstrated his or her competence by passing an examination administered by the faculty for that purpose. In no case will any semester hours be waived. Students are also held responsible on the comprehensive examination for knowledge/skill areas from all public policy/management core courses, irrespective of any approved substitutions.

Students must also complete the requirements of one of the following specializations, thus permitting the development of expertise in a particular field of academic and professional interest. Students will normally be expected to select elective courses from curricula other than public administration (PSPA) courses.

1. Public Administration. A general study of public administration, focusing principally on organization theory, administrative analysis, and the problems endemic to large federal and state government agencies. Course requirements: 15 semester hours of approved graduate study and PSPA 595, Internship in Public Administration (1-3).1

2. Urban Management. An analysis of urban problems, especially the political and administrative problems of city management and community organization activities. Course requirements: PSPA 530, Local and Metropolitan Government (3); PSPA 531, Urban Planning and Zoning (3), or PSPA 532, Problems of Municipal Administration (3); PSPA 595, Internship in Public Administration (1-3); 9 additional semester hours of approved graduate study.

3. Comparative and Developmental Administration. A thorough study of the economic and social problems of development administration, and an examination of bureaucratic functioning in other cultures. Course requirements: PSPA 571, Readings in Comparative Public Administration (3), or PSPA 572, Administrative Problems of Less Developed Countries (3); two of the following: POLS 432, POLS 521, POLS 533T, POLS 568, POLS 584, PSPA 571 or PSPA 572 (if not counted above); and 6 additional semester hours of approved graduate study.

4. Fiscal Administration. The critical examination of techniques and problems in the areas of fiscal management, accountancy, budgetary policy, and political economy. Course requirements: PSPA 552, Public Sector Revenue Management (3); ACCY 557, Accounting for Public Administration (3); 9 semester hours of approved graduate study, and PSPA 595, Internship in Public Administration (1-3).1

5. Human Services Administration. An intensive review of fundamental problems involved in the development and administration of programs in social services, mental health, developmental disabilities, health planning, workforce planning, aging, youth services, and related topics. Course requirements: PSPA 526, Social Policy (3), 12 semester hours of approved graduate study, and PSPA 595, Internship in Public Administration (1-3).1

In addition to credit-hour requirements, students must also develop a basic familiarity with the utilization of computers; submit a starred paper while registered for PSPA 595, and pass a comprehensive examination. The starred paper is a culminating research analysis presentation, based upon an approved research design and original field research, which is expected to be of professional, publishable quality. Students must have completed a minimum of 27 semester hours of approved graduate study, exclusive of internship courses; have maintained a grade point average of better than 3.00; be carrying no "incompletes"; and have completed the starred paper to be eligible to sit for the comprehensive examination.

Doctor of Philosophy

While traditionally the degree Doctor of Philosophy in political science has been the badge of distinction of college and university teachers, doctoral programs in political science are also designed with other career objectives in mind: professional research, public service, and university administration. The Department of Political Science is conscious of these several career objectives.

Course Requirements

The Department of Political Science offers two alternatives: (1) three fields and (2) two fields and one area of study. (An area of study is interfied and/or interdisciplinary.) For both alternatives, the Department of Political Science requires that 90 semester hours of graduate course work be completed with a cumulative average of B or higher. These hours may include no more than 30 semester hours of credit in POLS 699, Doctoral Research and Dissertation (1-15). In completing the remaining required 60 semester hours of course work, students must include POLS 502, Scope and Methods of Political Science I (3), or equivalent as approved by the department, and POLS 503, Scope and Methods of Political Science II (3) or equivalent as approved by the department.

The fields offered by the department are: (1) American governmental and politics, (2) public law, (3) public administration, (4) public policy, (5) political theory, (6) comparative politics, (7) international relations, and (8) politics and the life sciences. Course work is also available in political economy.

Graduate students in the doctoral program shall offer themselves for comprehensive written and oral examinations (candidacy examinations) either in three fields of the discipline or in two fields and one area of study.

1 The requirement for PSPA 595 may be waived if a student has had appropriate professional experience.
Option 1: Three fields. A student shall complete 12 to 18 semester hours of course work in each field. Each student shall designate one field as a primary field; course work in that field shall normally be greater than in the other two. Each student shall take at least one 600-level seminar in the field of the dissertation. Students who take only 12 semester hours in any field may not count any independent study courses in those 12 hours. No more than one course outside of political science may be counted toward the hours required in any one field. No more than 15 semester hours may be taken outside of political science. Petitions for exceptions to any of these rules must be submitted in writing to the department graduate committee through the student's advisory committee.

Option 2: Two fields and one area of study. A student shall complete 12 to 18 semester hours of course work in each of two fields. Each student shall designate one field as a primary field; course work in that field shall normally be greater than in the other field. In addition, a student shall complete one area of study in lieu of the third field. An area of study requires a minimum of 12 to 18 semester hours, and must include at least 9 semester hours outside of the two fields the student has otherwise chosen. However, courses in the area of study may not count toward completion of course requirements in the other two fields. Each student shall take at least one 600-level seminar in the field of the dissertation. Students who take only 12 semester hours in any field or area of study may not count any independent study courses in those 12 hours. Students may take one course in each of their two fields outside of political science. Up to a total of 15 semester hours in the two fields and one area of study may be taken outside of political science. An area of study will be formed by the student and must be approved by his or her academic committee as well as the department graduate committee. Students choosing this option must take a comprehensive examination in the area of study in addition to comprehensive examinations in the other two fields.

Students in both options will be expected to consult initially with an interim adviser, and subsequently with members of the advisory committee, once these have been appointed, regarding a program of studies. Such consultation will help to ensure that the student's doctoral work is related to career and professional interests, and to Graduate School and departmental requirements. Registration for courses without the adviser's approval might lead to the accumulation of graduate credits in political science and related disciplines, but provides no assurance that the department will support an application for admission to candidacy for the Ph.D.

Dissertation Requirement
Same as Graduate School requirement.

Language and Research Skills Requirements
The student working toward a Ph.D. in political science must demonstrate an ability to make use of research tools. He or she will do this by showing proficiency in using language and/or quantitative research skills. The choice of research tools will relate to the student's chosen fields of study, and will be made in consultation with the members of the student's advisory committee. Proficiency is normally demonstrated by passing a special written examination in foreign languages, or, in the case of other research tools, by successfully completing designated courses with a grade of A or B. In certain cases, a student's committee may approve the use of a proficiency examination in lieu of course requirements for the research tool. Any one of the following will satisfy the language and research skills requirement:

1. Two foreign languages, average reading proficiency
2. One foreign language, high level of reading proficiency
3. One foreign language, average reading proficiency, and one research tool, average proficiency
4. Two research tools, average proficiency
5. One research tool, high level of proficiency

The language and research skills requirement must be completed before the student takes doctoral candidacy examinations, unless the department grants an exception.

Residence Requirement
Same as Graduate School requirement.

Qualifying Examination
Same as Graduate School requirement.

Candidacy Examinations
The student will take a candidacy examination after completing most or all of his or her course work, and not later than eight months before the granting of the Ph.D. in political science. Written candidacy examinations will be administered in each of the three fields and/or area of study in a student's program, followed by an oral examination. A student who successfully completes this requirement will be recommended to the Graduate School for admission to candidacy for the doctorate in political science. Any student who fails the candidacy examination may, with the permission of the examining committee and after the lapse of at least one semester, repeat the examination. A student who fails the candidacy examination a second time will not be permitted to continue work toward the doctorate in the Department of Political Science.

Oral Examination
Same as Graduate School requirement.

Limitation of Time
Same as Graduate School requirement.

Teaching Skill Requirement
All students in the Ph.D. program will be required to participate in a training program in classroom techniques. Ordinarily the requirement will be met through direct involvement in the instructional program for at least one semester under the close supervision of a faculty member.

Course Offerings

Political Science (POLs)

COURSE NUMBERING SYSTEM: Many of the courses offered by the department relate to more than one of the fields of political science. However, as a general guide to students, the following numbering system is used:

-00 to -09, American government
-10 to -19, public law
-20 to -29, public policy
-30 to -39, politics and the life sciences
-40 to -49, methodology
-50 to -59, political theory
-60 to -79, comparative politics
-80 to -89, international relations

Thus, for example, courses numbered 400-409 or 500-509 are in the American government field, while those numbered 450-459 or 550-559 are political theory courses.

The following numbers are for courses that are not in any of the above fields:
-40 to -49, methodology
-90 to -99, general

403. INTEREST GROUPS IN AMERICAN POLITICS (3). Examine the growing influence of interest groups in American politics including the roles of major economic interest groups, the emergence of political action committees, the involvement of interest groups in campaign financing, personnel recruitment for the executive branch, and direct lobbying. PRQ: POLS 305 or consent of department.

404. COMPARATIVE STATE POLITICS (3). An intensive examination of the formal structure, political dynamics, and policy outputs of state governmental systems. Emphasis is placed on the use of the comparative approach.
405. URBAN POLITICAL BEHAVIOR (3). The organization, conduct, and problems of politics in American urban government. PRQ: POLS 100 or consent of department. Recommended: POLS 303.

407. POLITICAL ATTITUDE AND VALUE FORMATION (3). Formation, transmission, maintenance, and change of political attitudes. Topics include strategies for the conceptualization and measurement of attitudes and major theories of attitude change. PRQ: POLS 340 or consent of department. Recommended: POLS 304.

408. POLITICAL PARTICIPATION AND BEHAVIOR (3). Focuses on the structural, psychological, and sociological factors associated with participation in the political process. Both electoral and non-electoral participation will be studied. Attention will be directed to the impact of various levels and types of participation on the American and other major political systems. PRQ: POLS 407 or consent of department.

410. CONSTITUTIONAL LAW IN THE POLITICAL PROCESS I (3). Judicial, legislative, and executive powers, war and emergency powers, federalism, the commerce clause, taxing and spending powers, the state police power, inter- and intrastate relations, and the Supreme Court and economic policy. Political science graduate students with public law as a field of study may not use this course for credit toward the major. PRQ: POLS 100 or consent of department.

411. CONSTITUTIONAL LAW IN THE POLITICAL PROCESS II (3). Economic liberties and property rights, equal protection of the law, due process, incorporation of the Bill of Rights, right to counsel, right against compelled self-incrimination, right against cruel and unusual punishment, and right against unreasonable searches and seizures. Political science graduate students with public law as a field of study may not use this course for credit toward the major. PRQ: POLS 100 or consent of department.

412. CONSTITUTIONAL LAW IN THE POLITICAL PROCESS III (3). The First Amendment: freedoms of speech, association, assembly, press, and petition; and the right to petition the government for a redress of grievances. Interests of the individual and of the state with public law as a field of study may not use this course for credit toward the major. PRQ: POLS 100 or consent of department.

414. TOPICS IN LAW AND SOCIAL PROBLEMS (3). Examination and analysis of the enduring questions of importance for the legal system. Problems illustrating the intersection of law, morality, and politics are set in the context of contemporary issues. Specific focus of the course changes each semester. May be repeated once as topic changes.

415. CRIMINAL LAW (3). Course focuses on substantive criminal law: functions of the criminal law, crimes against the person, crimes against property, attempt, conspiracy, solicitation, and crimes without victims. Course may also touch upon elements of criminal procedures.

426. AGING, POLITICS, AND PUBLIC POLICY (3). This course examines the role that aging plays in politics and policy. Attention is given to impact of the aging on the political process and the political process on the aging population. Also examined are the relationships between aging and major programs such as Social Security, Medicare, and others. PRQ: Consent of department.

432. PUBLIC ADMINISTRATION IN SOUTHEAST ASIA (3). An examination of public administration in selected Southeast Asian countries, includes an analysis of the various factors which condition the operation of these administrative systems, a study of the major ingredients in each, and an appraisal of how well they function in terms of development programs as well as traditional activities. PRQ: POLS 100 or consent of department.

439. INTERNSHIP IN ADMINISTRATION (3). Admission upon written departmental approval. Two days a week or equivalent in a government agency. The only grades awarded are "satisfactory," "unsatisfactory," or "incomplete." PRQ: POLS 330 or consent of department. Recommended: POLS 331.

440. MAJOR MODES OF EMPIRICAL THEORY (3). Selected major empirical theoretical approaches: institutional analyses, the role of elites, systems and communications networks, game theory, decision making, and phenomenology. PRQ: POLS 340 or consent of department.

450. AMERICAN POLITICAL THOUGHT I (3). An analysis of the political thought of selected American statesmen and stateswomen having political responsibility at the critical moments in American history. Particular attention is given to the relationship between the political philosophy in their thinking and the political actions which they initiated. PRQ: Consent of department. Recommended: POLS 350 or POLS 351.

451. AMERICAN POLITICAL THOUGHT II (3). Analysis of topics in American political thought which reflect major political controversies in American history: the examples, liberty and equality, liberalism and conservatism, American political rhetoric. Topics change each semester. May be repeated to a maximum of 6 hours. PRQ: Consent of department.

452. RELIGION AND THE CONSTITUTION (3). Examines the constitutional relation of religion and American politics in light of modern political philosophy, the Founders' political thought, and historical and contemporary constitutional controversies involving religion. PRQ: One course in political theory or consent of department. Recommended: One course in public law or American political history.

455. MARXISM (3). A study of the thought of Karl Marx and 20th century Marxists with emphasis upon the relation of Marxism to the tradition of political philosophy. PRQ: POLS 100 and a previous course in political theory or philosophy, or consent of department. Recommended: POLS 352.

460. COMPARATIVE COMMUNIST POLITICAL SYSTEMS (3). Analysis of the political processes and institutions of contemporary communist states and an evaluation of the theoretical methods appropriate to such a study.

469. POLITICS OF SOUTH AMERICA (3). Comparative analysis of politics and government in major South American states, with emphasis on alternative interpretations and contemporary political and policy issues. PRQ: Consent of department. Recommended: POLS 260 or POLS 381.


482. FOREIGN POLICIES OF THE WESTERN EUROPEAN POWERS (3). Contemporary external policies of France, the Federal Republic of Germany, the United Kingdom, and the European Community. PRQ: POLS 100 or consent of department. Recommended: POLS 385.

495. SEMINAR IN CURRENT PROBLEMS (3). Contemporary issues and policies in government and politics. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

496X. MATERIALS AND PROBLEMS OF HIGH SCHOOL INSTRUCTION IN THE SOCIAL SCIENCES (3). HIST 496. Must be taken by students seeking certification in a social science before student teaching. Includes 15 clock hours of clinical experience, attention to the teaching of exceptional students, planning for multicultural learning situations, and techniques of reading in the social sciences. PRQ: Consent of department.

498. SEMINAR ABROAD (3-9). A foreign study program to be arranged with the department chair.

501. TOPICS IN AMERICAN POLITICS (3). A reading seminar which in any one semester will focus on either the American Executive, comparative state politics, government and the economic system, or some other topic in American politics. May be repeated to a maximum of 6 semester hours as topic changes.


503. SCOPE AND METHODS OF POLITICAL SCIENCE II (3). Social science theories of knowledge and orientation to the discipline of political science. Required of all students in the M.A. and/or Ph.D. programs. Not required for M.P.A. students.
505. SEMINAR IN POLITICAL PARTIES (3). Survey of the literature and research pertaining to American political parties.

506. INTERGOVERNMENTAL RELATIONS (3). An analysis of national-state, national-local, state-local, interstate, and interlocal relationships within the United States. The nature of federalism, constitutional and statutory power bases, and cooperative problem-solving.

507. URBAN POLITICS (3). The theory of urban politics with special emphasis upon urban research design.

508. LEGISLATIVE BEHAVIOR (3). Functioning of legislative bodies, actions of members, coalitions, policy outputs, decision processes, and constituency relationships.

509. THE ROOTS OF POLITICAL BEHAVIOR (3). An examination of the foundations of political behavior of individuals and groups; a survey of paradigms to study such behavior. May be repeated for a total of 6 semester hours.

510. SEMINAR IN THE JUDICIAL PROCESS (3). Judicial systems and roles, judicial selection, organization and management of litigation, influences on judicial decision-making, impact and enforcement of judicial decisions, relationships among courts and other policy makers in the political system.

511. THE COURTS AND ADMINISTRATIVE POLICY (3). Basic principles of law that characterize the relationship between courts and administrative agencies. Impact of attempts to judicialize administrative policymaking. Judicial impact on policy formation by various local, state, and federal agencies.

512. CONSTITUTIONAL POLITICS (3). Relationship between doctrines of constitutional law and the political values of prevailing coalitions on the U.S. Supreme Court. Attention given to selected cases.

517. FORMS AND LIMITS OF ADJUDICATION (3). Assumptions, functions, and limitations of the judicial process. Relationship between adjudication and contract as the model for the organization of legal rights and obligations.

518. THEORIES OF LEGAL JUSTIFICATION (3). Alternative frameworks for the justification of judicial decisions.

519. TOPICS IN PUBLIC LAW (3). Selected topics in public law. May be repeated to a maximum of 6 semester hours.

520. STUDY OF PUBLIC POLICY (3). A survey of the theoretical approaches to public policymaking rooted in the fields of American politics, public administration, and urban politics. Required for advanced graduate work in public policy.

521. COMPARATIVE PUBLIC POLICY (3). Comparative analysis of the policies of both developed and developing nations in the areas of budgetary, development, foreign, military, and social welfare policies.

522. COLLECTIVE PUBLIC CHOICE: ECONOMIC AND SOCIAL POLICIES (3). Intended to provide a basic understanding of recent developments in the study of political economy. Such models will be applied to the study of selected issues in current social and economic policy making and policy evaluation in the United States.

524. NATURAL RESOURCES POLICY (3). Policymaking and political management regarding environmental issues such as pollution regulation, water resources development, and environmental impact assessment. Enrollment open to students in both natural and social sciences.

526. HEALTH POLICY (3). An examination of political issues relating to the allocation and rationing of health resources in democratic and in other societies. Health policies and case studies of governmental decision making will be examined.

529. TOPICS IN PUBLIC POLICY (3). Selected issues concerning public policymaking in the U.S. and/or other nations. May be repeated to a maximum of 8 semester hours as the topic changes.

530. BIOPOLITICAL THEORY (3). History, approaches, problems, and critiques of biopolitics.

531. BIOMEDICAL POLICY (3). Detailed examination of state and federal government policies related to biomedical issues. Special emphasis on policies relating to human genetics (counseling, screening, therapy), reproductive technologies, and organ transplantation. PRQ: Consent of department.

532. BIOTECHNOLOGY AND POLITICAL STRUCTURES (3). Intensive examination of the role of the executive, legislative, and judicial branches of government in the regulation of biotechnology research and development. Exploration of questions of industry-academic relations in biotechnology.

533. INTERNATIONAL BIOTECHNOLOGY POLICY (3). An examination of the social and political implications of developments in biotechnology for international relations. Topics to be addressed include international regulatory, economic, and legal issues in biotechnology as well as the uses of biotechnology in terrorism and warfare.

537. EVOLUTION AND POLITICAL THEORY (3). Theoretical and methodological problems in biopolitical studies with particular attention to the political implications of Darwinian evolution, ethology, and sociobiology. PRQ: Consent of department.

540. INTERMEDIATE ANALYSIS OF POLITICAL DATA (3). Regression analysis techniques in political research. Simple bivariate statistical models through structural modeling. PRQ: POLS 340 or POLS 502, or consent of department.

543. ADVANCED ANALYSIS OF POLITICAL DATA (3). Consideration of advanced analytic techniques in political research such as structural equation, time-series, LISREL, factor, discriminant, logistic, probit, and MANOVA analysis. PRQ: POLS 540 or consent of department.

544. TOPICS IN ADVANCED ANALYSIS OF POLITICAL DATA (1-3). Intensive consideration of an advanced, state-of-the-art political data analysis method. May be repeated up to 6 hours as the topic changes. PRQ: POLS 543 or consent of department.

550. BASIC PROBLEMS IN ANCIENT POLITICAL PHILOSOPHY (3). An analysis of a major work or major works of classical political philosophy. May be repeated to a maximum of 12 semester hours as topic changes.

551. TOPICS IN MODERN POLITICAL PHILOSOPHY (3). An analysis of a major work or major works illustrative of modern political philosophy. May be repeated to a maximum of 15 semester hours as topic changes.

552. THEORY OF AMERICAN DEMOCRACY I: THE FEDERAL CONVENTION (3). A theoretical consideration of the American political order as it is revealed in its founding decade. Primary attention is given to the Proceedings of the Federal Convention and related philosophical and historical materials.

553. THEORY OF AMERICAN DEMOCRACY II: THE FEDERALIST (3). A theoretical consideration of the American political order as it is revealed in the founding decade. Primary attention is given to The Federalist as a work of political philosophy, to the anti-Federalist writings, and to related philosophical and historical materials.

554. PRINCIPLES OF PLATO'S POLITICAL THEORY (3). An analysis of Plato's political dialogues. May be repeated to a maximum of 6 semester hours for different dialogues.

560. SEMINAR IN COMPARATIVE POLITICAL ANALYSIS (3). Reading seminar in the major theoretical and methodological concerns of the field of comparative government. Required for advanced graduate work in comparative government.

562. SEMINAR IN POLITICAL CULTURE (3). An analysis of politics as a cultural manifestation; comparative analysis of the cultural bases of national political systems. Research on selected topics of political culture.


566. SOVIET POLITICS AND GOVERNMENT (3). An examination of key factors influencing the origins, development, current institutions, policies, and practices of the Soviet political order, including the relevant theories, from totalitarianism onward. PRQ: Consent of department.

567. SEMINAR IN POLITICAL DEVELOPMENT (3). A reading seminar devoted to a comprehensive survey of the literature on the problems of political development and social modernization in the developing nations.

568. SEMINAR IN THE POLITICAL ECONOMY OF DEVELOPING AREAS (3). The seminar will examine the political determinants and consequences of economic development programs in underdeveloped nations. Special attention will be given to the politics of the planning
process, the internal impact of foreign assistance, the politicization of economic conflict, and the evolution of public policy in selected developing countries.

569. THE POLITICS OF ECONOMIC POLICY IN INDUSTRIALIZED COUNTRIES (3). Special attention will be given to various forms of planning, regulation, participation, and industrial relations in industrialized countries, including the U.S., USSR, Japan, and selected European countries.

570. READING SEMINAR IN SOUTHEAST ASIAN POLITICS (3). An examination of the literature concerning the diverse political cultures of Southeast Asia, the salient political forces, and the major political problems of development, integration, and stability in the area.

573. FOREIGN AREA POLITICS (3).
A. India and Pakistan
C. Africa
D. China
E. The Middle East
J. Western Europe
K. Latin America
M. Communist Political Systems
N. Thailand
R. Indonesia
Each of these seminars will focus on political institutions, processes, behaviors, and the impact of sociocultural change in the area of concern. May be repeated to a maximum of 9 semester hours; however, individual topics may not be repeated.

575. SEMINAR IN COMPARATIVE POLITICAL INSTITUTIONS AND PROCESSES (3). An examination of the literature dealing with selected institutions and processes, such as parties, interest organizations, elites, legislatures, and executives, in a comparative framework and the methodology used in examining these phenomena.


581. THEORY AND INTERNATIONAL RELATIONS: SYSTEMIC ANALYSIS (1-3). An examination of the nature of international relations as a field of study and theories concerning the nature of the international system. May be repeated to a maximum of 9 semester hours.

582. SEMINAR IN INTERNATIONAL LAW AND ORGANIZATION (3). Selected topics and cases in international law. Structural and functional problems of the United Nations and its specialized agencies.

583. THEORY AND INTERNATIONAL RELATIONS: INTERNATIONAL REGIONS (3). Regionalism and regional organizations in the international political system.

584. POLITICAL ECONOMY OF INTERNATIONAL RELATIONS (1-3).
The mutual influence of economic and political factors in international relations, including the roles of multinational corporations, international economic organizations, and national foreign economic policies. Relevant theories will be examined in depth, including theories of imperialism and dependency. May be repeated to a maximum of 3 semester hours.

585. PROBLEMS OF AMERICAN FOREIGN POLICY (3). An examination of major problems in the formulation and conduct of American foreign policy.

586. SEMINAR IN INTERNATIONAL RELATIONS (3). Research and analysis of selected topics or selected world regions in the field of international relations.

587. SOUTHEAST ASIA AND INTERNATIONAL POLITICS (3). An examination of Southeast Asia's role in contemporary international politics with emphasis on conflict and cooperation among neighboring states, commitment vs. neutrality in the cold war, and participation in international organizations.

589. THEORY AND INTERNATIONAL RELATIONS: SUBSYSTEMIC ANALYSIS (1-3). The political aspects of theories below the systemic level that describe international behavior including communications, small-group, decision-making, frustration-aggression, and biological theories as they relate to international political processes. May be repeated to a maximum of 3 semester hours.

591. SEMINAR IN COLLEGE TEACHING OF POLITICAL SCIENCE (1-3).
A. American Government
B. Public Law
C. Public Administration
E. Political Theory
J. Comparative Politics
K. International Relations
M. Politics and the Life Sciences
N. Public Policy
Open to graduate teaching interns in political science as an integral part of the college teaching intern program. This credit may not be applied toward the hours required for a master's degree, and is not normally accepted toward field requirements for the Ph.D. degree. May be repeated to a maximum of 8 semester hours. PRQ: Consent of department.

596. INDEPENDENT STUDY IN POLITICAL SCIENCE (1-6). Open to qualified master's students who wish to do individual advanced work in political science. May be repeated to a maximum of 9 semester hours.

599. THESIS (1-6). May be repeated to a maximum of 6 semester hours.

600. RESEARCH SEMINAR IN POLITICAL SCIENCE (3).
A. American Government
B. Public Law
C. Political Theory
D. Comparative Politics
E. International Relations
G. Politics and the Life Sciences
J. Public Policy
With the consent of the student's adviser and the director of graduate studies, the 600-level seminars may be repeated to a maximum of 9 semester hours each.

696. INDEPENDENT STUDY IN POLITICAL SCIENCE (1-6). Open to students admitted to the doctoral program who wish to do individual advanced work in political science. May be repeated to a maximum of 9 semester hours.

698. FOREIGN STUDY AND INTERNSHIP (3-9). Individual research, study, and work abroad.

699. DOCTORAL RESEARCH AND DISSERTATION (1-15). May be repeated to a maximum of 32 semester hours.

Public Administration (PSPA)

420. AMERICAN PUBLIC POLICY (3). Foundation, design, implementation, and evaluation of American public policy at federal, state, and local levels. PRQ: POLS 100 or consent of department.

500. SCOPE AND DYNAMICS OF PUBLIC ADMINISTRATION (3). Examines the history of public administration and the basic issues which confront it including administrative responsibility and ethics, and the formulation and implementation of public policy.

501. DATA ANALYSIS IN PUBLIC ADMINISTRATION (3). Examines techniques for the collection, manipulation, interpretation, and presentation of data and information in public policy/management processes, and demonstrates applications of the techniques using microcomputer technology.

504. PUBLIC PROGRAM EVALUATION METHODS (3). An examination of the techniques of evaluation and their application to selected policy areas, including a discussion of experimental, quasi-experimental, and other evaluative tools. Requires design of a research project. PRQ: PSPA 501 or consent of department.

505. ORGANIZATION THEORY AND BEHAVIOR (3). A survey of current research on organizations relevant to public administration, with a focus on key organizational functions and ways of defining and responding to organizational problems. PRQ: PSPA 500 or consent of department.

509. PUBLIC PERSONNEL MANAGEMENT (3). An examination of techniques, methods, and policies concerning the management of personnel in public and quasi-public organizations.

510. PUBLIC BUDGETING AND FINANCIAL MANAGEMENT (3). Examination of the public budgetary process and related financial management techniques.
527. TOPICS IN HEALTH AND MENTAL HEALTH ADMINISTRATION (3).
A. The Politics of Mental Health
B. Clinical Administration: Treatment through Institutional Change
C. Planning and Policy Making in Health and Mental Health
D. Mental Health Administration
An examination of political and administrative aspects of organizing, maintaining, and delivering health and mental health services.

530. LOCAL AND METROPOLITAN GOVERNMENT (3). Discussion of the operational and administrative aspects of local and metropolitan government in the United States, including design and structure, municipal law, finance, administrative organization, local political systems, and intergovernmental relations.

531. URBAN PLANNING AND ZONING (3). The basic theory, techniques, and practice of modern urban planning and land use regulation; current trends and problems; social, political, and economic characteristics of urban, suburban, and metropolitan political systems.

532. PROBLEMS OF MUNICIPAL ADMINISTRATION (3). The administration of local government services in urban and metropolitan areas. Analysis of particular problems faced by local governments in the performance of line and staff functions.

552. PUBLIC SECTOR REVENUE MANAGEMENT (3). Investigation of theories and politics of taxation, impacts of alternative taxes, fiscal federalism, mechanisms of raising funds, macroeconomic impacts, and principles of municipal investment. PRQ: PSPA 510 or consent of department.

554. INFORMATION SYSTEMS AND GOVERNMENT (3). An examination of management issues, innovative applications, and research involving information systems and government. Covers topics such as geographic information systems, expert systems, pert/cpm software, political, and legal issues involved in public information systems. PRQ: PSPA 512T or consent of the department.

555. ORGANIZATION DEVELOPMENT IN THE PUBLIC SECTOR (3). Examines the theoretical basis of organization development (OD) and total quality management (TQM). Demonstrates how OD and TQM technologies can be applied to public sector organizations for improving program quality and performance.

556. MANAGEMENT OF NOT-FOR-PROFIT AGENCIES (3). A comprehensive study of the not-for-profit organization as an integrated and complex model. Examines not-for-profit management principles and objectives, program services, planning, resource development and fund raising, volunteer development, and public relations.

558. LABOR-MANAGEMENT RELATIONS IN THE PUBLIC SECTOR (3). Federal, state, and local government employee-management relations with emphasis on legislative, judicial, political, and social considerations. Special attention is given to selected occupational groups such as police and fire in the public sector. Comparisons with the private sector and the special bargaining problems of various units in the public sector are considered.

559. TOPICS IN PUBLIC ADMINISTRATION (3). Selected issues concerning the policy and administrative processes of public organizations. May be repeated to a maximum of 9 semester hours as the topic changes.

561. THEORY AND ANALYSIS IN PUBLIC ADMINISTRATION (3). An examination of the major theoretical and conceptual concerns of public administration as a field of academic inquiry. Required for advanced graduate work in the field leading to the M.A. or Ph.D. degree. Not available to candidates for the M.P.A. degree.
Department of Psychology (PSYC)

GRADUATE FACULTY

Frederick M. Schwantes, chair, associate professor, Ph.D., University of Iowa
Gary D. Coover, assistant chair, professor, Ph.D., University of Oregon
James V. Corwin, associate professor, Ph.D., University of Kentucky
Raymond Ditrichs, associate professor, Ph.D., University of Iowa
Seymour Simon, professor, Ph.D., University of California, Los Angeles

Solomon E. Feldman, professor, Ph.D., Indiana University

Jane E. Fisher, assistant professor, Ph.D., University of Western Ontario

Richard D. Goffin, assistant professor, Ph.D., University of Iowa

Steven R. Gold, professor, Ph.D., Purdue University

Joseph E. Grush, professor, Ph.D., University of Illinois

Wayne A. Hershberger, professor, Ph.D., University of Colorado

Martin F. Kaplan, professor, Distinguished Research Professor, Ph.D., University of Iowa

Steven G. Little, assistant professor, Ph.D., Tulane University

Erwin J. Lotsof, adjunct professor, Ph.D., Ohio State University

Mary C. Lovejoy, assistant professor, Ph.D., University of Iowa

Randall B. Martin, professor, Ph.D., Syracuse University

Elise F. Masur, associate professor, Ph.D., University of Minnesota

Thomas R. McCanne, professor, Ph.D., Ohio State University

Charles E. Miller, professor, Ph.D., University of Michigan

Keith K. Millis, assistant professor, Ph.D., Memphis State University

Joel E. Milner, professor, Presidential Research Professor, Ph.D., Oklahoma State University

George A. Neuman, assistant professor, Ph.D., Illinois Institute of Technology

William T. O'Donohue, assistant professor, Ph.D., State University of New York, Stony Brook

Kimberly K. Powlishta, assistant professor, Ph.D., Stanford University

Seymour Simon, professor, Ph.D., University of California, Los Angeles

Gregory A. Waas, associate professor, Ph.D., University of Wisconsin, Madison

James F. Willott, professor, Presidential Research Professor, Ph.D., University of California, Davis

The Department of Psychology offers programs leading to the Master of Arts and the Doctor of Philosophy degrees. Preference will be given to applicants who show potential for doctoral work. The department offers a continuous program leading to the doctorate and the master's thesis is regarded as a part of this training. An entitlement program leading to qualification for state certification as a school psychologist may be completed in conjunction with either the M.A. or the Ph.D. degree.

The majority of applications for graduate programs in psychology are accepted or rejected within six weeks, with deferral of decision on other applications until the month of April. In order to insure full consideration for admission, applications should be fully completed by March 1.

Admission

In considering applicants for admission to its graduate programs, the department evaluates the general undergraduate grade point average (GPA), preparation in undergraduate psychology courses, background in science and mathematics, Graduate Record Examinations scores, and letters of recommendation. An attempt is made to select the best applicants on a combination of indexes, recognizing that no index is absolute. While there are no minimum requirements, applicants should have a GPA of at least 3.00 (on a 4.00 scale) during the last two years of undergraduate work and a combined verbal-quantitative-analytic score of at least 1750 on the General Test of the GRE in order to be competitive. Exceptions may be made under special conditions.

Master of Arts

The M.A. degree program in psychology requires that a student earn a minimum of 30 semester hours in psychology. This work must include successful completion of the foundation courses. 1. PSYC 504, Advanced Psychological Statistics (3), and PSYC 506, Experimental Design (3) 2. Three courses selected from PSYC 501 or PSYC 511, PSYC 520, PSYC 541, and PSYC 565

PSYC 504 and PSYC 506 must be completed during the first calendar year and the remaining course requirements must be completed by the end of the second calendar year.

PSYC 590, Psychological Research (1-3), must be taken each fall and spring semester. These hours will not count toward the 30 semester hours required for the master's degree.

Registration for a minimum of 12 semester hours is required each fall and spring semester unless granted permission for a reduced load by the department chair.

Successful completion of a master's comprehensive examination.

In addition, 15 semester hours must be completed in either of two options:

Thesis Option

PSYC 599, Master's Thesis (6), and other courses in psychology determined by the student and adviser (9).

Non-Thesis Option

Other courses in psychology determined by the student and adviser (15). Students electing the non-thesis option will not be considered for admission to the doctoral program.
Other Requirements

Students in the M.A. program must maintain at least a 3.00 GPA in graduate psychology courses exclusive of thesis and independent study courses. Failure to meet this requirement will result in academic probation for one semester following which the GPA must meet the 3.00 requirement or the student will be removed from the program.

Other special requirements may be determined by the department and the curricular area in which the student chooses to study. The student is responsible for obtaining the Psychology Department Graduate Student Manual and for complying with the regulations in that manual.

Doctor of Philosophy

The doctoral program in psychology is built around the areas of clinical psychology, cognitive-instructional-developmental-school psychology, neuroscience and behavior, and social and organizational psychology. All four areas place strong emphasis on research, teaching, and the development of appropriate applied skills.

The curriculum is designed to fulfill several purposes: (1) development of knowledge of methodologies; (2) acquaintance with basic literature; (3) integration of course work, research experience, and practical experience; (4) in-depth understanding in at least one area; and (5) study in related fields when appropriate.

As a part of the doctoral program a student must complete a master's degree in psychology with at least a 3.20 GPA in graduate psychology courses exclusive of thesis and independent study courses, including at least a 3.00 GPA in the master's foundation courses (on a 4.00 point scale) and an acceptable research thesis. Students entering Northern Illinois University with a master's degree in psychology from another institution must complete the master's foundation courses. With departmental approval, students with adequate background may be exempted from individual courses.

Additional requirements for the Ph.D. in psychology are the following:

1. Ninety semester hours beyond the baccalaureate degree, including at least 75 hours in psychology. Exceptions to the 75-hour requirement may be granted with the consent of the curricular area faculty and approval of the department chair.
2. Completion of a minimum of 30 semester hours of graduate work beyond the master's degree in psychology, exclusive of dissertation. This work must be taken in the Department of Psychology at Northern Illinois University.
3. Registration in PSYC 590, Psychological Research (1-3), each fall and spring semester prior to approval of the dissertation proposal. These hours will not count toward the 90 semester hours required for the Ph.D.
4. Registration for a minimum of 12 semester hours each fall and spring semester unless granted permission for a reduced load by the department chair.
5. For students in clinical or school psychology, completion of a year of internship.
6. Before admission to candidacy for the doctorate in psychology, demonstration of one of the following:
   a. Average proficiency in using two research tools.
   b. High proficiency in using one research tool.
   The selection of these research tools must be approved by the student's adviser. Proficiency is normally demonstrated by the successful completion of such courses as are designated by the department and approved by the Graduate School.
7. Pass an extensive written candidacy examination covering the student's curricular area.
8. Completion of a dissertation. The dissertation will be a substantial contribution to knowledge in which the student displays ability to conduct original scholarship. Prior to the time the student begins gathering the dissertation research data, a proposal of a dissertation must be approved by a dissertation advisory committee and filed with the department. Normally, an advisory committee will be made up of the dissertation director and at least two additional committee members.
9. Oral defense of the dissertation. After all other requirements for the Ph.D. in psychology have been met, including submission of a complete manuscript that has been tentatively approved by the dissertation advisory committee, a student must successfully defend the dissertation. The defense will be conducted by and in the presence of an oral examining committee made up of the advisory committee plus additional members serving as readers; however, other members of the department and the faculties of other disciplines will be invited to attend and participate. The dean of the Graduate School or a dean's designee may serve as an ex officio, nonvoting member of the dissertation defense committee.
10. Other special requirements as determined by the department and the curricular area in which the student chooses to study. The student is responsible for obtaining the Psychology Department Graduate Student Manual and for complying with the regulations in that manual.

Course Offerings

GENERAL PREREQUISITE: It is assumed that students enrolling in 500- and 600-level courses in psychology will have had an adequate background on which to build. Students who have any questions about preparation should consult with the instructor of the course.

415. BEHAVIOR DISTURBANCES IN CHILDREN (3). The course will cover disturbances in children involving intellectual, emotional, and expressive behaviors as well as selected therapeutic procedures and their relationship to psychological theories and research. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 225 or consent of department.

416. INTRODUCTION TO PSYCHOPATHOLOGY (3). An introduction to the study of "pathological" behavior. The development, maintenance, and treatment of problem behavior will be discussed from theoretical, empirical, and clinical perspectives. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 102 or consent of department.

417. PRINCIPLES OF BEHAVIOR MODIFICATION (3). An introduction to the psychological principles, methods, and issues in behavior modification. Emphasis will be placed on the theoretical and empirical foundations of the various strategies for producing behavior change and on the ethical issues involved in the use of behavioral techniques. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 102 or consent of department.

425. ADULT DEVELOPMENT AND AGING (3). Behavioral development from early adulthood through old age. Emphasis on the biological, motor, cognitive, social, and personality characteristics at various stages of development. PRQ: PSYC 225 or equivalent, or consent of department.

426. THEORIES OF PERSONALITY (3). A systematic study of the theoretical contributions of major psychologists to basic understanding of the dynamics of human personality. PRQ: PSYC 102 or consent of department.

428. HISTORY OF PSYCHOLOGY (3). A review of the historical roots of the science of psychology and the development of the field to contemporary times. PRQ: PSYC 102 or consent of department.

432. PERSONALITY (3). Consideration of basic factors in personality and the role of personality in the study of behavior. Discussion and critical examination of contemporary studies in personality, with an emphasis on experimental evidence. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 102 or consent of department.

445. COGNITIVE PSYCHOLOGY (3). A general introduction to human information processing and memory. The experimental analysis of how humans represent, store, and retrieve information about verbal and nonverbal material. Topics to be covered will include attention, sensory
information storage, pattern recognition, memory, and problem solving. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 102 or consent of department.

465 DEVELOPMENTAL PSYCHOLOGY (3). Fundamental theories, issues, and concepts in developmental psychology are examined in depth and illustrated within one or more content areas, such as physical, cognitive, perceptual, language, personality, and/or social aspects of development. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 225 or consent of department.

470 SOCIAL PSYCHOLOGY (3). Behavior in the context of social interaction, with an emphasis on experimental findings. Study of such topics as interpersonal judgment and perception, social attraction, aggression, prejudice, and social influence, including attitude formation and persuasion, conformity, and social modeling. Not available for credit toward graduate degrees in psychology. PRQ: PSYC 102 or consent of department.

471 INDUSTRIAL-ORGANIZATIONAL PSYCHOLOGY (3). The contribution of psychology in theory, research, and practice to the understanding of such topics as employee selection, placement, and training, job satisfaction, work motivation and performance, problem solving and decision making, leadership and supervision, work design, and organizational development. Not available for credit toward graduate degrees in psychology. PRQ: 6 semester hours of psychology, or consent of department.

480 COMPARATIVE PSYCHOLOGY (3). Crosslisted as BIOS 480X. An examination of experimental studies comparing the behavior of various species of animals. PRQ: PSYC 102 or consent of department.

481 INTRODUCTION TO PSYCHOPHARMACOLOGY (3). The basic techniques, current data, and interpretations from neurochemical, neuropharmacological, and behavioral approaches to the investigation of behaviorally active drugs. The course assumes some knowledge of the structure and functioning of the mammalian nervous system. PRQ: PSYC 102 and BIOS 104, or consent of department.

495 SEMINAR IN SPECIAL TOPICS (3). Selected topics which will be announced. May be repeated once as topics change. PRQ: Consent of department.

501 FUNDAMENTALS OF LEARNING (3). An analysis of methodology, empirical findings, and theoretical attempts in the area of learning with an emphasis on classical and instrumental conditioning. PRQ: Graduate standing in psychology or consent of department.

502 INTRODUCTION TO EXPERIMENTAL PERSONALITY (3). An introduction to methods and empirical findings in the area of personality, with emphasis on experimental investigation. The study of several key topics of current interest in the field will be utilized to illustrate typical methods and findings. PRQ: Graduate standing in psychology or consent of department.

503 BIOPSYCHOLOGY (3). A selected review of current research concerned with the biological and chemical bases of behavior. PRQ: Graduate standing in psychology or consent of department.

504 ADVANCED PSYCHOLOGICAL STATISTICS (3). Probability and probability models; linear functions of independent random variables; sampling; the binomial, hypergeometric, normal, t, chi-square, and F distributions; estimation of parameters; tests of statistical hypotheses; correlation; introduction to nonparametric methods. PRQ: A course in statistics or consent of department.

506 EXPERIMENTAL DESIGN (3). A basic course in experimental design and data analysis, including such designs as factorial experiments, randomized blocks, Latin squares, incomplete blocks, and nested designs; the uses of confounding and fractional replication; some nonparametric tests related to the analysis of variance designs. PRQ: PSYC 504 or consent of department.

507 PSYCHOMETRIC TECHNIQUES (3). A consideration of the assumptions involved and the techniques available in psychometrics. Concerns processes involved in the development of psychological tests. PRQ: PSYC 504 or consent of department.

509 FUNDAMENTALS OF PERCEPTION (3). The major theories of perception and their historical antecedents; classical and contemporary psychophysics, some basic auditory and visual phenomena, and selected topics from the current research literature. PRQ: Graduate standing in psychology or consent of department.

510 HUMAN INFORMATION PROCESSING (3). Topics include pattern recognition, memory systems, language and cognitive processes, decisions and choice behavior, and information integration. Attention is given current knowledge in the area and to research methods used to acquire knowledge. PRQ: Graduate standing in psychology or consent of department.

511 HUMAN LEARNING AND MEMORY (3). Theories and issues in human learning and memory. Topics to be discussed will include verbal learning, short- and long-term memory, decisional and organizational processes in memory, conceptual learning, and problem solving. PRQ: Graduate standing in psychology or consent of department.

512 COMPARATIVE PSYCHOLOGY (3). Crosslisted as EPSY 612B. Models and theories of instructional psychology as related to contemporary research in cognition. PRQ: EPSY 613, a course in cognitive psychology, or consent of department.

516 ADVANCED PSYCHOPATHOLOGY (3). Selected topics and issues in psychopathology involving etiological models, classification and assessment issues, and intervention. The emphasis will be on an in-depth understanding and integration of psychological theory and empirical evidence.

517 ORGANIZATIONAL PSYCHOLOGY (3). The contribution of psychology in theory, research, and practice to the understanding of such topics as job satisfaction, work motivation and performance, group and organizational decision, leadership and supervision, conflict resolution, and organizational design, development, and effectiveness. PRQ: Graduate standing in psychology or consent of department.

518 EVALUATION RESEARCH (3). A systematic examination of the theory and practice of research strategies for planning and evaluating various programs. Models of experimental and quasi-experimental designs, cost-benefit, decision-theoretic, and systems approaches are critically reviewed. Illustrations of the models are taken from compensatory education, public health, mental health, employment training, income maintenance, and the criminal justice system. PRQ: Consent of department.

519 PRACTICUM IN EVALUATION RESEARCH (3). Supervised experience in developing a new program or evaluating an existing program for governmental or public interest agencies. May be repeated to a maximum of 6 semester hours. PRQ: PSYC 518 or consent of department.

520 EXPERIMENTAL SOCIAL PSYCHOLOGY (3). An in-depth survey of topics of current interest in the study of social interaction. Emphasis will be on experimental approaches to the social behavior of humans, but developments in animal social experimentation will also be utilized. Topics examined will include, but not necessarily be limited to, attitudes and obedience, conformity, social judgment, aggression, and interpersonal attraction. PRQ: Graduate standing in psychology or consent of department.

521 SMALL GROUP BEHAVIOR (3). Social interaction in small groups. Emphasis is on experimental evidence regarding group processes. Topics include competition and cooperation, bargaining and coalitions, choice and decision behavior, and group influence and problem solving. PRQ: PSYC 520 or consent of department.

522 THEORIES IN SOCIAL PSYCHOLOGY (3). Survey and critical analysis of current theoretical approaches to social behavior. Relevant experimental evidence will be examined in several critical areas of research PRQ: Graduate standing in psychology or consent of department.

523 SOCIAL INFLUENCE (3). Detailed and critical survey of empirical findings on how people influence others in social situations. Includes the study of social modeling and imitation, conformity, social judgment, aggression, and interpersonal attraction. PRQ: Graduate standing in psychology or consent of department.

524 ATTITUDE CHANGE (3). A survey of current theories of attitude change. Research will be reviewed which demonstrates the success or failure of these theories to predict attitude change. Important theoretical and research issues in the area will be considered. PRQ: Graduate standing in psychology or consent of department.

525 SOCIAL JUDGMENT (3). Critical examination of theories and research in the formation of judgments and evaluations of other people. A variety of contexts will be considered, including social and causal attributions, and moral, political, clinical, judicial, and personal judgments, both in groups and singly. PRQ: Consent of department.

526 PERSONNEL PSYCHOLOGY (3). The contribution of psychology in theory, research, and practice to the understanding of such topics
as job analysis, personnel selection and placement, performance appraisal, and training. PRQ: Graduate standing in psychology or consent of department.

527. NEUROANATOMICAL BASES OF BEHAVIOR (3). Crosslisted as BIOS 527X. Gross, microscopic, and ultrastructural anatomy of the nervous system; basic subdivisions of the central, peripheral, and autonomic components of the nervous system; histology and histophysiology of nervous tissue; neuroanatomical mechanisms in the regulation of behavior. PRQ: Graduate standing in psychology or PSYC 503, or consent of department.

528. NEUROANATOMICAL BASES OF BEHAVIOR: LABORATORY (3). Crosslisted as BIOS 528X. Gross, microscopic, and ultrastructural examination of tissues from the nervous systems of selected species. PRQ or CRQ: PSYC 527.

529. NEUROPHYSIOLOGICAL BASES OF BEHAVIOR (3). Excitation, conduction, and transmission in the nervous system; neural coding and the transformation and representation of information in the nervous system; limbic and hypothalamic regulation of drives and reinforcement. PRQ: Graduate standing in psychology and PSYC 527, or consent of department.

530. NEUROCHEMICAL BASES OF BEHAVIOR(3). Crosslisted as BIOS 530X. Biochemistry of the nervous system; chemical composition, metabolism, and chemistry of neurons and glia; chemical bases of learning, motivation, and other categories of behavior. PRQ: Graduate standing in psychology, PSYC 529, or consent of department.

535. THEORIES OF LEARNING (3). A general study of theories of learning with particular emphasis on theories which have emerged from the psychological laboratory.

539. PROFESSIONAL SCHOOL PSYCHOLOGY (3). A review of the history and development of school psychology, types of problems handled, methods employed, and current perspectives on psychological work in the schools with emphasis on research functions and the utilization of principles of learning. PRQ: Consent of department.

540. CLINICAL PSYCHOLOGY I: THEORY AND ASSESSMENT OF INTELLUCTUAL FUNCTIONING (3). A historical review of theory and research concerning the definition and measurement of intelligence. Topics covered include intellectual development, factor analytic and computer models of intelligence, and the construction and use of intelligence tests. Students receive supervised practice in administering, scoring, and reporting intelligence test results and evaluating their implications for intellectual functioning and for such clinical problems as retardation, brain damage, and thought disorders. PRQ: Consent of department.

541. CLINICAL PSYCHOLOGY II: THE ANALYSIS OF BEHAVIOR PATHOLOGY (3). Evaluation of criteria, definitions, and classification schemes of psychopathology. Review of theoretical and research contributions to models of behavior and psychopathological problems. Instruction in obtaining information, conceptualizing, and formulating treatment plans with special clinical groups. PRQ: Consent of department.

542. CLINICAL PSYCHOLOGY III: PERSONALITY ASSESSMENT (3). Examination of theoretical and practical issues in the assessment of personality with emphasis on problems of reliability, validity, and test construction in this area. Review and evaluation of the use and research on specific personality measures. Supervised practice in administering, evaluating, and reporting the results of structured and projective technique. PRQ: PSYC 540 or PSYC 541, or consent of department.

543. CLINICAL PSYCHOLOGY IV: THEORIES OF PSYCHOTHERAPY (3). Examination and evaluation of the major theoretical approaches to psychotherapy including the psychoanalytic schools, client-centered, existential, and learning models. PRQ: PSYC 541 or consent of department.

544. CLINICAL PSYCHOLOGY V: BEHAVIOR MODIFICATION (3). Presentation and discussion of various intervention techniques associated with behavior and learning theories and derived from empirical research on behavior change. PRQ: PSYC 543 or consent of department.

545. CHILD PSYCHOPATHOLOGY (3). Examination of research and theoretical contributions to understanding the etiology and maintenance of psychopathology in children from infancy through adolescence. Emphasis on diagnosis and the formulation of treatment plans for children with various social, emotional, and intellectual disorders at various stages of development. PRQ: PSYC 541 or consent of department.

546. PSYCHOLOGICAL ASSESSMENT OF CHILDREN (3). Examination of the concepts and techniques relating to the clinical assessment of children from infancy through adolescence. The course covers a variety of assessment techniques including standardized tests, behavioral observations, and parent inventories. Students receive supervised practice in administering, interpreting, and reporting the results of intellectual and personality test batteries, and in evaluating the implications of their findings for the child's functioning at home and at school. PRQ: PSYC 540, PSYC 542, and PSYC 544, or consent of department.

547. PSYCHOLOGICAL INTERVENTION WITH CHILDREN AND THEIR FAMILIES (3). Examination of the concepts and techniques relating to clinical psychological intervention with children and their families. Emphasis on theoretical, ethical, and practical issues as well as on the psychological research on the efficacy of each therapeutic modality. Topics cover the major techniques of child-oriented psychotherapy, with attention given to their appropriateness for children of various ages and levels of functioning and with various forms of psychopathology. PRQ: PSYC 543 and PSYC 544, or consent of department.

548. CONSULTATIVE INTERVENTIONS IN SCHOOL AND COMMUNITY SETTINGS (3). Examination of consultation theory, research, and practice as it is applied by school psychologists. Emphasis will be placed on the major models of consultation employed within school and community settings but may include other models such as peer consultation. Consultation will be examined. The application of consultative interventions to specific psychological disorders commonly found in school and community settings will also be addressed. PRQ: Consent of department.

551. CLERKSHIP IN CLINICAL PSYCHOLOGY (1-3). Pre-internship experience in institutional settings, such as the school system, clinics, hospitals, or laboratories. The student will be assigned to one or more institutions where a supervised work program will be designed involving psychological assessment and intervention consistent with the student's experience and training. May be repeated to a maximum of 3 semester hours. PRQ: Admission to the clinical training program.

552. PRACTICUM IN ASSESSMENT-INTERVENTION (1-3). Experience with specific assessment techniques and models, and practice in planning and executing intervention programs. The emphasis of the practicum will vary among such topics as child-clinical problems, psychotherapy, behavior assessment and intervention, the use of projective techniques, and intervention via a consulting role. May be repeated, but only 9 semester hours may be applied toward a graduate degree in psychology. PRQ: Admission to the clinical training program.

553. PRACTICUM IN SCHOOL PSYCHOLOGY (1-3). Experience in psychological work in schools. Activities will vary depending on the prior experience and training of the student but may include observations, recording of behavior, assessment of learning dysfunctions, research work, design of learning programs, and consultation with school personnel. May be repeated, but only 6 semester hours may be applied toward a graduate degree in psychology. PRQ: PSYC 539 or consent of department.

554. PRACTICUM IN PSYCHOTHERAPY (1-3). Supervised experience in planning and executing a therapeutic program with clients who have sought help for adjustment and personal problems. May be repeated, but only 15 semester hours may be applied toward a graduate degree in psychology. PRQ: Approval of the clinical training area.

555. INTERNSHIP IN CLINICAL PSYCHOLOGY (6-12). A period of one year in a setting such as a hospital or clinic where the student will perform the functions of a clinical psychologist under the direct supervision of qualified personnel. The internship must have the approval of the clinical psychology faculty. The student must register for 12 semester credit hours during each of the fall and spring semesters and 6 semester hours during the summer session for a total of 30 semester hours, of which 4 may be applied to the 90 semester hours required for the doctoral program. PRQ: Departmental approval for the doctoral program in clinical psychology.

556. INTERNSHIP IN SCHOOL PSYCHOLOGY (12). A period of one year in a school setting where the student will perform the functions of a school psychologist under the direct supervision of qualified personnel. The internship must have the approval of the school psychology faculty. The student must register for 12 semester hours in each of the fall and spring semesters for a total of 24 semester hours, of which 4 may be applied to the hours required in the Ph.D. program. PRQ: Consent of department. Recommended: At least 2 semester hours of PSYC 553.

560. MATHEMATICAL PSYCHOLOGY (3). The nature of quantitative models in psychology, their mathematical basis, and techniques of construction. Elementary models from learning, psychophysics, choice
behavior, and other areas are examined. Emphasis is on preparation to read current literature and conduct research. PRQ: A year of mathematical statistics, or consent of department.

565. BEHAVIORAL DEVELOPMENT (3). An intensive review of the processes involved in behavioral development. The focus is on the factors affecting these processes, rather than on a cross-sectional description of characteristic behavioral changes related to age. PRQ: Psychology major or consent of department.

566. CURRENT ISSUES IN DEVELOPMENTAL PSYCHOLOGY (1). An examination of major historical and contemporary areas within the field of developmental psychology, with the focus on research and theoretical writings appearing within the current five-year period. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: PSYC 565.

567. RESEARCH METHODOLOGY IN DEVELOPMENTAL PSYCHOLOGY (3). An examination of the interplay of theory, research methodology and design as they exert their influences on data collecting, analysis, and interpretation in the field of developmental psychology. PRQ: Graduate standing in psychology or consent of department.

570. STUDIES IN EXPERIMENTAL PSYCHOLOGY (2-6).
A. Learning
B. Perception
C. Motivation
D. Sensory Processes
E. Physiological
J. Comparative
K. Mathematical
Specialized courses in the area of experimental psychology offered under the appropriate heading. The courses will be on specific topics within this area and may be lecture, laboratory, seminar, or a combination of these methods. The topics and the semester hours of credit will vary from semester to semester. May be repeated to a maximum of 21 semester hours.

571. STUDIES IN GENERAL PSYCHOLOGY (2-6).
A. Behavioral Development
B. Individual Differences
C. Personality
D. Quantitative Methods
E. Instrumentation
J. Social Behavior
Specialized courses in the area of general psychology offered under the appropriate heading. The courses will be on specific topics within this area and may be lecture, laboratory, seminar, or a combination of these methods. The topics and the semester hours of credit will vary from semester to semester. May be repeated to a maximum of 18 semester hours.

572. STUDIES IN CLINICAL PSYCHOLOGY (2-6).
A. Clinical Methods
B. Behavioral Pathology
C. Group Processes
D. Child-Clinical
E. Psychotherapy
Specialized courses in the area of clinical psychology offered under the appropriate heading. The courses will be on specific topics within this area and may be lecture, laboratory, seminar, or a combination of these methods. The topics and the semester hours of credit will vary from semester to semester. May be repeated to a maximum of 15 semester hours.

575. DEVELOPMENT OF LANGUAGE ACQUISITION (3). Critical evaluation of recent research and theory in developmental psychology on the processes underlying normal language acquisition and development. Background in developmental psychology is assumed, and background in language development is desirable.

576. SOCIAL-PERSONALITY DEVELOPMENT (3). The development of social behavior and personality characteristics throughout the life-span with emphasis on the changes occurring throughout childhood. Among the topics to be covered are attachment, aggression, sex-role development, moral development, socialization processes, parent-child relations, peers and the impact of television, and social-class and crosscultural comparisons.

577. DEVELOPMENT OF PERCEPTION AND LEARNING (3). The development of perception and children's learning with emphasis placed on the basic processes and changes which occur during childhood. Among the topics to be covered are visual attention in infancy, form and pattern perception, the development of visually guided behavior, perceptual integration, information processing approaches to perceptual development, infant learning, and higher-order learning and motivation.

578. DEVELOPMENT OF COGNITION AND MEMORY (3). The development of cognitive skills and memory with emphasis on the basic processes and changes which occur during childhood. The topics to be covered include overview of cognitive theorists, conceptualizations of cognitive growth patterns, concept development, problem solving, cognitive styles, developmental aspects of obtaining and storing stimulus information, selective attention, and metamemory.

580. SEMINAR IN PSYCHOLOGY (1-3).
A. Psychotherapy
B. School Psychology
C. Professional Problems
Specialized topics will be considered that are of professional concern to those entering the field of psychology. May be repeated to a maximum of 7 semester hours in each subsection. PRQ: Consent of department.

581. PRACTICUM IN COLLEGE TEACHING OF PSYCHOLOGY (1-3). Supervised experience in teaching selected undergraduate courses in psychology. Instructional techniques, materials, and methods of evaluation. May be repeated, but only 8 semester hours may be applied toward a graduate degree in psychology. S/U grading basis is used. PRQ: Consent of department.

585. INDEPENDENT STUDY (1-6). May be repeated, but only 6 semester hours may be applied toward the M.A. degree and only 15 semester hours may be applied toward the Ph.D. degree.

590. PSYCHOLOGICAL RESEARCH (1-3). Supervised research training in planning, design, execution, and analysis of psychological research. Required of all graduate students in psychology each semester prior to the approval of a dissertation proposal. May be repeated without limit, but may not be used to meet the minimum credit hour requirements for a graduate degree in psychology. S/U grading basis is used.

599. MASTER'S THESIS (1-6). May be repeated to a maximum of 6 semester hours.

699A. PH.D. DISSERTATION (3-15). May be repeated to a maximum of 24 semester hours.

699B. PH.D. DISSERTATION (1). Open only to students who have successfully completed the oral defense of the dissertation research and received departmental approval of the final version of the dissertation document.

198 PSYCHOLOGY
GRADUATE FACULTY

Gian Sarup, chair, associate professor, Ph.D., Pennsylvania State University
Kevin Anderson, assistant professor, Ph.D., City University of New York, Graduate Center
Charles L. Cappell, associate professor, Ph.D., University of Chicago
Man Tsun Cheng, assistant professor, Ph.D., University of California, Los Angeles
Man Singh Das, professor, Ph.D., Oklahoma State University
Joseph E. Harry, professor, Ph.D., University of Oregon
David H. Howard, associate professor, Ph.D., Indiana University
Clinton J. Jesser, professor, Ph.D., Michigan State University
David H. Kamens, professor, Ph.D., Columbia University
Richard Quinney, professor, Ph.D., University of Wisconsin
Herbert J. Rubin, professor, Ph.D., Massachusetts Institute of Technology
Kevin Anderson, assistant professor, Ph.D., City University of New York
Susan L. Miller, assistant professor, Ph.D., University of Maryland
William L. Massey, associate professor, Ph.D., University of Illinois, Chicago
Richard Quinney, professor, Ph.D., University of Wisconsin
John K. Rhoads, professor, Ph.D., University of Wisconsin
Robert W. Suchner, associate professor, Ph.D., University of Wisconsin
Jim Thomas, professor, Ph.D., Michigan State University
Robin M. Uili, assistant professor, Ph.D., Yale University

The Department of Sociology offers graduate courses and research opportunities leading to the Master of Arts or Master of Science degree. Graduate work in sociology is designed to prepare students for teaching and research in sociology, for positions in public and private agencies, and for further advanced study. Students planning to pursue the doctorate should enroll in the Master of Arts program. Students planning to enter or resume careers at the master's degree level should enroll in the Master of Science program. All new master's students are required to consult with the departmental graduate adviser before being admitted to courses.

Master of Arts and Master of Science

Applicants for admission to these programs should have a background (equivalent to 3 semester hours) in each of the following: sociological theory, sociological methods, and statistics. Students with deficiencies in these areas may be required to take appropriate course work to remove these deficiencies as soon as possible after enrollment. Students admitted to these programs with stipulated deficiencies will be informed by the graduate adviser of the courses that must be taken.

Graduate courses are classified into six fields: theory, research methods and statistics, social organization and institutions, social psychology, sociology of health and aging, and criminology. The specific classification of courses by field can be obtained from the sociology office.

Students must earn an overall GPA of 3.00 or better and a grade of A or B in each of the core courses: SOCI 570 and/or SOCI 571, SOCI 575, and SOCI 576.

The comprehensive examination requirement may be met by a written examination or by an oral presentation of research conducted by the student. In the latter case, the examining committee will ask questions about related theoretical and methodological issues in sociology, as well as about the research itself.

Master of Arts

The Master of Arts degree is designed primarily for pre-doctoral students or for those desiring a traditional liberal arts master's degree. Students pursuing the Master of Arts degree in sociology will be required to complete a minimum of 30 semester hours including a thesis (up to 6 semester hours) and one elective course selected from graduate offerings in consultation with the graduate adviser. Either of the following two tracks is also required:

1. General Sociology: The following core courses must be completed: SOCI 570, Classical Sociological Theory (3), SOCI 571, Contemporary Sociological Theory (3), SOCI 575, Sociological Statistics (3), and SOCI 576, Advanced Research Methodology (3). In addition, 9 semester hours beyond the core course requirements must be completed in one of the following areas: theory, research methods and statistics, social organizations and institutions, social psychology, sociology of health and aging, or criminology.

2. Specialization in Criminology: The following core courses must be completed: SOCI 570, Classical Sociological Theory (3), or SOCI 571, Contemporary Sociological Theory (3), SOCI 575, Sociological Statistics (3), and SOCI 576, Advanced Research Methodology (3). In addition, 12 semester hours consisting of the following must be completed: SOCI 581, Theories of Delinquency and Crime (3), SOCI 589, Criminal Justice in Society (3), and two electives in criminology selected from graduate offerings in consultation with the graduate adviser.

Master of Science

The Master of Science degree is designed primarily for careers which do not require the doctorate. Students pursuing the Master of Science degree in sociology will be required to complete a minimum of 36 semester hours including 6 semester hours of ILAS 502, Internship (3-12), a set of core courses (9 hours), and an applied sequence (9 hours). At the discretion of the department, the requirement for ILAS 502 may be waived if a student has had appropriate professional experience. In such
cases, ILAS 502 will be replaced by six hours of electives chosen in consultation with the graduate adviser.

The core consists of the following requirements: SOCI 570, Classical Sociological Theory (3), or SOCI 571, Contemporary Sociological Theory (3), SOCI 575, Sociological Statistics (3), and SOCI 576, Advanced Research Methodology (3).

The applied sequence is a set of courses thought to have particular relevance for types of employment appropriate for master's-level sociology graduates. The applied sequence is intended to complement a traditional sociological education, not to replace a professional degree in another field. The applied sequence consists of a set of three courses in one of the following areas: public health applications, quantitative methods, applied social research, organizational analysis, community programs and development, social policy analysis, modeling skills, budgeting and planning, or a specially designed applied sequence approved in advance by the graduate adviser. A list of courses approved for these applied sequences is available in the Department of Sociology office.

In addition, students pursuing the Master of Science degree are required to complete either the general track or the specialization in criminology.

1. General Sociology: 12 semester hours (6 semester hours each in two areas) must be completed in the areas of theory, research methods and statistics, social organizations and institutions, social psychology, sociology of health and aging, or criminology.

2. Specialization in Criminology: 12 semester hours consisting of the following: SOCI 581, Theories of Delinquency and Crime (3), SOCI 589, Criminal Justice in Society (3), and two criminology elective courses selected from graduate offerings in consultation with the graduate adviser.

Course Offerings

450. SOCIAL INEQUALITY (3). Causes and consequences of inequality: economic, political, ethnic, and cultural dimensions; sources of conflict and class behavior; analysis and measurement of social stratification and mobility. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

451. MEDICAL SOCIOLOGY (3). An introductory examination and comparison of organizational structures and social roles within medical institutions. Particular attention is given to sociological perspectives for understanding and consequences of mental and physical health problems and how medical institutions relate to other institutions in society. PRQ: SOCI 250 or SOCI 251, or consent of department.

453. SOCIOLOGY OF EDUCATION (3). The relationship of the educational system to the social structure; the changing function of education in an advanced industrial society; the impact of education on technological changes and social mobility; a comparison of systems in various cultures. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

454. RACIAL AND ETHNIC MINORITY FAMILY SYSTEMS (3). Comparison and analysis of ethnic and racial minority family systems in American society. White, black, native American, Asian, Spanish-speaking, Jewish, utopian, and alternative forms of family systems will be surveyed. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department. Recommended: SOCI 354.

455. ENVIRONMENTAL SOCIOLOGY (3). Relationship of the physical environment ("natural" and "built") to human behavior and social structure. Several specific topics include population and urbanization, technological development, energy resources, housing, architectural design, natural disasters, occupational health and safety, industrial waste and pollution, and changes in agricultural production. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

457. COMPARATIVE FAMILY SYSTEMS (3). Structural-functional and comparative analysis of family systems in relation to other societal systems and to social change. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department. Recommended: SOCI 354.

458. OCCUPATIONS IN THE SOCIAL STRUCTURE (3). Cultural definitions of work; the concepts of career and mobility; occupational choice theories; consequences of occupational specialization for social integration. Problems of disengagement from work. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

459. POLITICAL SOCIOLOGY (3). The relationship between political and social structures with emphasis on the concepts of power, ideology, elites, class, and politics. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

460. SOCIAL STRUCTURE AND THE LIFE COURSE (3). Aging as a life-long process of development through socially structured, historically conditioned stages. Topics include role transitions, intergenerational relations, and age norms. Emphasizes stages prior to old age. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

461. INTERGROUP RELATIONS (3). Analysis and exposition of cultural and social-psychological influences underlying relations among racial, ethnic, and other minority and majority groups. Emphasis upon problems of prejudice and discrimination, and the promotion of harmonious intergroup relations. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

462. AGING AND SOCIETY (3). Interpersonal, structural, and cultural aspects of age and aging. Emphasizes old age. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.

463. TOPICS IN SOCIAL PSYCHOLOGY (3). Treatment of recent developments in social psychology. Possible topics include social influence processes, attitude formation and change, leadership, group dynamics, personality in social structures, and person perception and attribution processes. PRQ: SOCI 260 or consent of department.

473. SOCIOLOGICAL THEORY (3). Sociological theory as a body of unifying principles and as a guide for research. The significant contributions of outstanding sociologists past and present. PRQ: Consent of department. Does not count for credit toward the M.A. or M.S. in sociology.

475. HEALTH ORGANIZATIONS AND DELIVERY OF SERVICES (3). Social structure of hospitals, public health, and ambulatory care settings. Comparison of health care systems in U.S. and selected other nations, differences in financing, utilization, staffing, and relations with other social institutions. PRQ: SOCI 250 or SOCI 251, or consent of department.

476. SEMINAR IN SOCIOLOGICAL RESEARCH METHODS (4). A. Survey Methods B. Experimental Methods C. Quantitative Methods D. Field Methods E. Multi-methods F. Evaluation Research Methods G. Course repeated to a maximum of 12 semester hours as the topic changes. PRQ: SOCI 376 and SOCI 473 and either STAT 208 or STAT 301; or consent of department.

482. SOCIOLOGY OF DEATH AND DYING (3). Systematic study of the last stage of the life cycle. How people cope with various forms of death, thebereavement process, and growing old alone. The social organization of dying and the treatment of death in the hospital setting. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.


486. POLICE IN A DEMOCRATIC SOCIETY (3). The police, their organization, and their functions will be examined with special attention to political and social factors that affect their activities. Police relations with the community and particularly with minority groups; the problems of brutality, corruption, and political involvement. PRQ: SOCI 289 or consent of department.

488. JUVENILE DELINQUENCY (3). Social and psychological factors in delinquent behavior; causation, prevention, and rehabilitation; the role of community agencies; the juvenile court. May include visits to juvenile correctional agencies. PRQ: SOCI 289 or consent of department.

491. SOCIOLOGY OF THE MIDWEST (3). The Midwest region will be delineated and analyzed in terms of the interplay between the environment and everyday life, and according to the formation of a regional culture and socioeconomic system. Investigation of the relation of the Midwest to other regions. PRQ: SOCI 170 or SOCI 250 or SOCI 260, or consent of department.
SOCIOLICAL RESEARCH IN MENTAL HEALTH (3). An examination of research methodologies: theories and epidemiology of mental illness, institutionalization, societal reaction to mental illness, efficacy of therapies, and ethics of mental health research. PRQ: 6 semester hours of sociology or consent of department.

SOCIAL STRUCTURE AND DEVELOPMENT (3). The comparative analysis of social structural change resulting from industrialization and modernization in developing societies. PRQ: Consent of department.

SOCIAL STRUCTURE AND PERSONALITY (3). Interrelationships between social systems and personality over the life cycle. PRQ: 9 semester hours in sociology including a course in social psychology, or consent of department.

RESEARCH FIELDS AND PROBLEMS IN SOCIAL PSYCHOLOGY (3). Historical developments related to recent research in experimental social psychology, small groups, and related fields. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department. Recommended: A course in social psychology.

CLASSICAL SOCIOLOGICAL THEORY (3). Critique of Durkheim, Weber, and other early theorists. PRQ: SOCI 370 or consent of department.

CONTEMPORARY SOCIOLOGICAL THEORY (3). Critique of Mead, Parsons, Becker, Homans, Merton, and other recent theorists. PRQ: SOCI 473 or consent of department.

PROSEMINAR IN SOCIOLOGY (3). Analysis and synthesis of current research, concepts, and issues in various areas. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

SOCIOLOGICAL STATISTICS (3). Methods of sampling and testing hypotheses; statistical inference; correlation and other measures of association; and methods of treating both quantitative and nonquantitative variables. PRQ: 3 semester hours in statistics or consent of department.

ADVANCED RESEARCH METHODOLOGY (3). The scientific approach, selection of problems, design, and methods of analysis. PRQ: SOCI 476 or consent of department.

THEORIES OF DELINQUENCY AND CRIME (3). Relation of theories of delinquency and crime to general biological, sociological, and psychological theories. PRQ: SOCI 488 or consent of department.

LAW AND SOCIAL CONTROL (3). The institutional relationships among social order, law, justice, and legal coercion. Emphasis on factors underlying the enactment, enforcement, and administration of the law, including interest-group politics, social structure, and economic institutions. Comparison of the changing role of the police in America, and minority pressures on the law and the police. PRQ: SOCI 488 or consent of department.

PENOLOGY AND PENAL INSTITUTIONS (3). Justice and punishment; penal reformers and their social context; penitentiaries and reformatory in the 19th century; the designs and originations of modern prisons; the prison system; the courts and modern prisons. PRQ: SOCI 488 or consent of department.
College of Professional Studies

James E. Lankford, Ph.D., dean
Sharon M. Miller, Ph.C., associate dean

Allied Health Professions
Communicative Disorders
Human and Family Resources
Military Science
Nursing
College of Professional Studies

INTERDISCIPLINARY GRADUATE CONCENTRATION

Concentration in Gerontology

Director: John F. Stolte

The gerontology program is an interdisciplinary program that fosters educational, research, and service activities pertinent to the study of adulthood and aging into their degree programs. A program student must complete a minimum of 15 semester hours with at least 9 semester hours from the primary content area. A student may take no more than 9 of the required 15 semester hours from a single department.

Primary Content Area (9-15)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDSP 465</td>
<td>Issues in Gerontology (3)</td>
<td>3</td>
</tr>
<tr>
<td>EPCO 667</td>
<td>Counseling Older Persons (3)</td>
<td>3</td>
</tr>
<tr>
<td>HFR 486</td>
<td>Aging and the Family (3)</td>
<td>3</td>
</tr>
<tr>
<td>LEAC 590</td>
<td>Educational Gerontology (3)</td>
<td>3</td>
</tr>
<tr>
<td>NURS 555,2</td>
<td>Advanced Older Adult Health Nursing: Aging Processes (3)</td>
<td>3</td>
</tr>
<tr>
<td>NURS 556,2</td>
<td>Advanced Older Adult Health Nursing: Alterations in Mental Health (3)</td>
<td>3</td>
</tr>
<tr>
<td>NURS 557,2</td>
<td>Advanced Older Adult Health Nursing: Societal Impact and Response (3)</td>
<td>3</td>
</tr>
<tr>
<td>PHED 454</td>
<td>Exercise Gerontology (3)</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 425</td>
<td>Adult Development and Aging (3)</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 462</td>
<td>Aging and Society (3)</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 662</td>
<td>Seminar in the Sociology of Aging (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Other Courses Related to Gerontology (0-6)²

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHPH 465</td>
<td>Principles of Nursing Home Administration (3)</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 465</td>
<td>Medical Anthropology (3)</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 556</td>
<td>Human Cell Physiology (3)</td>
<td>3</td>
</tr>
<tr>
<td>COMD 574</td>
<td>Cognitive-Linguistic Disorders of Neurologically Impaired Adults (3)</td>
<td>3</td>
</tr>
<tr>
<td>EPSY 610</td>
<td>Advanced Seminar in Human Development (3)</td>
<td>3</td>
</tr>
<tr>
<td>HFR 553C</td>
<td>Nutrition in Growth and Human Development: Geriatric Nutrition (3)</td>
<td>3</td>
</tr>
<tr>
<td>LEAC 501</td>
<td>Adult Learning: Maturity Through Old Age (3)</td>
<td>3</td>
</tr>
<tr>
<td>PHHE 410</td>
<td>Death Education (3)</td>
<td>3</td>
</tr>
<tr>
<td>PSPA 526</td>
<td>Social Policy (3)</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 465</td>
<td>Developmental Psychology (3)</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 451</td>
<td>Medical Sociology (3)</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 460</td>
<td>Social Structure and the Life Course (3)</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 482</td>
<td>Sociology of Death and Dying (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

³With the approval of the director of the gerontology program, 3 semester hours of independent study, directed individual study, or other appropriate course work may be substituted for 3 semester hours of course work in this group.

Faculty Associates

John F. Stolte, director of gerontology program, professor of sociology, Ph.D., University of Washington
Dianne Cearlock, associate professor of allied health professions, Ph.D., University of Illinois, Chicago
Jane E. Fisher, assistant professor of psychology, Ph.D., Indiana University
James H. Gillette, assistant professor of allied health professions, Ph.D., Northern Illinois University
T. Daniel Griffiths, professor of biological sciences, Ph.D., University of Illinois
Rebecca A. Johnson, assistant professor of nursing, Ph.D., University of Iowa
Robert E. Keim, associate professor of human and family resources, Ph.D., Florida State University
Sondra King, associate professor of human and family resources, Ph.D., Kansas State University
Gary L. Kreps, professor of communication studies, Ph.D., University of Southern California
Robert C. Mason, professor of leadership and educational policy studies and director, Office of Research and Evaluation in Adult Continuing Education, Ed.D., University of Nebraska
H. Lee Meadow, professor of marketing, Ph.D., Virginia Polytechnic Institute and State University
Sharon M. Miller, professor of allied health professions, Ph.C., University of California, Santa Cruz
Donna Rane-Szostak, assistant professor of nursing, Ed.D., Northern Illinois University
Robert Ridinger, associate professor in University Libraries, M.A., Case Western Reserve University
James H. Rimmer, associate professor of physical education, Ph.D., Texas Woman's University
Bruce Rocheleau, associate professor of political science, Ph.D., University of Florida
Arthur Rubens, assistant professor of allied health professions, Dr.P.H., University of Pittsburgh
Jody Newman Ryan, assistant professor of communicative disorders, Ph.D., University of Texas, Dallas
James N. Schubert, professor of political science, Ph.D., University of Hawaii, Manoa
Valerie B. Schwiebert, assistant professor of educational psychology, counseling, and special education, Ph.D., University of Florida, Gainesville
Laura S. Smart, associate professor of human and family resources, Ph.D., University of Connecticut
M. Cecil Smith, associate professor of educational psychology, counseling, and special education, Ph.D., University of Wisconsin
Sheriynn F. Spear, associate professor of allied health professions, Ph.D., University of Iowa
Robin M. Uili, assistant professor of sociology, Ph.D., Yale University
Josephine Umore, associate professor of human and family resources, Ph.D., University of Nebraska
James F. Willott, professor of psychology, Presidential Research Professor, Ph.D., University of California, Davis

¹IDSP 465, ISSUES IN GERONTOLOGY (3). An interdisciplinary examination of aging and the older adult population. Biological, psychological, social, and educational aspects of aging; theoretical and programmatic perspectives. PRQ: Consent of gerontology program director.
²Restricted to nursing majors or students who hold a baccalaureate degree in nursing.
³With the approval of the director of the gerontology program, 3 semester hours of independent study, directed individual study, or other appropriate course work may be substituted for 3 semester hours of course work in this group.
School of Allied Health Professions (AH- -)

GRADUATE FACULTY
Sherilynn F. Spear, acting chair, associate professor, Ph.D., University of Iowa
Diane M. Cearlock, assistant professor, Ph.D., University of Illinois
James H. Gillette, assistant professor, Ph.D., Northern Illinois University
Elizabeth D. Kay, assistant professor, Ph.D., University of Illinois
Sharon M. Miller, professor, Ph.C., University of California, Santa Cruz
William A. Oleckno, professor, H.S.D., Indiana University
Gina Marie Piane, assistant professor, Dr.P.H., University of Illinois, Chicago
Arthur J. Rubens, assistant professor, Dr.P.H., University of Pittsburgh

The School of Allied Health Professions offers the Master of Public Health degree. The curriculum prepares students for leadership positions in the public health field, including program management and health promotion. Students learn skills in leadership, problem solving, and planning and promoting change in health and social service systems.

The graduate public health program is an institutional member of the Association of Teachers of Preventive Medicine (ATPM). ATPM is a professional organization whose purpose is to influence the development of and set standards for the academic preparation of students in the fields of public health, disease prevention, and health promotion.

Admission
Procedures for admission to the program and other detailed information are available from the public health program office.

Master of Public Health
The graduate public health program prepares professionals for leadership positions in the public health field, including program management and health promotion. Students may focus in program management or health promotion.

Potential applicants for this program should consult with a program adviser about recommended and required prerequisites. Admission to the program requires approval of an admissions committee. Preference is given to applicants who have had work or extensive volunteer experience in a public health or human service agency.

A minimum of 42 semester hours of graduate credit is required for the degree.

Option 1 (non-thesis)
AHPH 500, Professional Seminar in Community Health (3)
AHPH 520, Primary Prevention and Health Promotion (3)
AHPH 530, Organizational Leadership in Community Health (3)
AHPH 555, Principles and Methods of Epidemiology (3)
AHPH 589, Community Health Planning (3)

Option 2 (thesis)
AHPH 590, Applied Research Methods in Community Health (3)
BIOS 570, Biostatistical Analysis (3), or another 3 semester hour course in statistics approved by the student's adviser.
21 additional semester hours subject to approval of the student's adviser.

Course Offerings
Allied Health Professions (AHP)
440. INTRODUCTION TO TEACHING IN THE ALLIED HEALTH PROFESSIONS (1-3). An introduction to principles of learning, instructional strategies, interpersonal relationships, evaluation, and instructional design as these topics relate to clinical instruction in the allied health professions. PRQ: Consent of department.

444. TOPICS IN ALLIED HEALTH PROFESSIONS (1-3). The examination of contemporary issues and problems in the allied health occupations and professions. May be repeated to a maximum of 6 semester hours.

446. SUPERVISION IN HEALTH CARE FACILITIES (1-3) A study of the administration of health care programs with an emphasis on the development of administrative and leadership skills, including analysis of problems in supervision for clinical department heads, supervisors, and other health-related mid-management personnel.

Physical Therapy (AHPT)

Public Health (AHPH)
445. COMMUNITY HEALTH PROMOTION (3). Principles and techniques for promoting and maintaining health. Overview of individual and community-level interventions designed to prevent illness/injury and promote well-being. Emphasis is on the acquisition and maintenance of health enhancing behaviors and the design of health promoting environments. PRQ: AHPH 295 or consent of department.

465. PRINCIPLES OF LONG-TERM CARE ADMINISTRATION (3). Overview of long-term care services, personnel, and the roles of the administrator. Emphasis on organizational management and operations control. Resident care issues, federal and state regulations, and licensing and certification are also addressed. PRQ: AHPH 460 or consent of department.
475. ECONOMIC ISSUES IN PUBLIC HEALTH (3). Overview of economic issues in health services delivery. The health care system is presented as a market mechanism wherein forces of supply strive to achieve an equilibrium with health needs and consumer demands. The relationships between elements of the system such as availability, accessibility, quality of care, and financial efficiency are described and analyzed. PRQ: AHP 295 or consent of department.

491. ASSESSMENT, TREATMENT, AND PREVENTION OF ALCOHOL ABUSE (3). Assessment of alcohol drinking patterns in relation to physiological, interpersonal, and cultural problems. Techniques and programs of alcoholism prevention/education and treatment. PRQ: AHP 201 or consent of department.

493. FINANCIAL MANAGEMENT OF HEALTH CARE ORGANIZATIONS (3). Study of topics in financial management of health care organizations. Included are important concepts, issues, and skills that administrators need to manage a health care organization effectively. PRQ: A course in accounting or consent of department.

495. FUNDING FOR PROGRAMS IN COMMUNITY HEALTH (3). A seminar in identifying significant health problems and preparing competitive grant proposals. Students will gain experience in writing and evaluating grant proposals and identifying potential funding agencies. PRQ: Consent of department.

500. HEALTH CARE DELIVERY IN THE U.S. (3). Evaluation of health care controversies using critical thinking and knowledge of the sources, uses, and analysis of the health literature, especially data. Topics include bioethics, health system structure, financing methods, role of government, health personnel, mental health policy, and special populations' needs.

510. CRISIS THEORY AND CASE MANAGEMENT (3). Study of the principles of mental health crises and application of these principles in practical diagnostics, case management, and outcome evaluation. PRQ: Consent of department.

520. PRIMARY PREVENTION AND HEALTH PROMOTION (3) Analysis of primary prevention in the area of community health including health promotion program planning, development, implementation, and evaluation strategies. PRQ: Consent of department.

530. HEALTH SERVICES MANAGEMENT (3). Analysis of techniques in leadership and management applicable to the public health field. Emphasis is placed on leadership challenges, research findings on experimental exercises, and case histories involving applied leadership and management skills in health service organizations. PRQ: Consent of department.

540. HUMAN RESOURCE MANAGEMENT IN THE HEALTH CARE SETTING (3). Reading, discussion, and practice of techniques in the field of human resource management. Covers organizational practices to improve employee morale, health, motivation, and productivity.

550. WORKSHOP IN HEALTH SERVICES DELIVERY (1-3). Advanced workshop designed for students, community professionals, and health-related board members to study a selected contemporary issue or problem in the field of health services delivery. Content varies to provide the opportunity to study current problems. May be repeated to a maximum of 12 semester hours. PRQ: Consent of department.

555. PRINCIPLES AND METHODS OF EPIDEMIOLOGY (3). Presentation and discussion of the principles and methods of the design, conduct, and interpretation of epidemiological studies. Focus is on the evaluation and interpretation of the validity of findings from published epidemiological research. Examples from public health and biomedical literature will be used to illustrate concepts, methods, and interpretation. PRQ: BIOS 570 or consent of department.

558. COMMUNITY HEALTH PROMOTION PROGRAMS (3). Experiential involvement with health promotion programing and wellness life styles. The case study approach will be used to reinforce the experiential component. PRQ: AHPH 520 and consent of department.

569. COMMUNITY HEALTH PLANNING (3). Study of the development of community health planning goals, objectives, and activities through understanding of data collection, analysis, and evaluation. Discussion of social values and political processes in planning and plan implementation will also be covered. PRQ: BIOS 570 or consent of department.

580. APPLIED RESEARCH METHODS IN PUBLIC HEALTH (3). Study of the research process applied to the community, workplace, and health agency setting. Emphasis on conceptual understanding and skill development. Integration of research methods and statistics applicable to the community health setting. PRQ: BIOS 570 or consent of department.

589. MASTER'S RESEARCH (1-6). A. Master's Thesis. May be repeated to a maximum of 6 semester hours. Continuous enrollment is required until completion of the thesis. S/U grading basis is used. PRQ: Consent of department.
B. Master's Research Paper. S/U grading basis is used. PRQ: Consent of department.
GRADUATE FACULTY
Earl J. Seaver, chair, professor, Ph.D., University of Iowa
James R. Andrews, professor, Ph.D., Northwestern University
Deborah L. Gough, assistant professor, Ed.D., Northern Illinois University
Kelly D. Hall, assistant professor, Ph.D., University of Illinois
Pamela L. Jackson, professor, Ph.D., Purdue University
Janet D. Kresheck, professor, Ph.D., Northwestern University
James E. Lankford, professor, Ph.D., University of Oklahoma
Lidia Lee, assistant professor, Ph.D., Indiana University
Gregory A. Long, associate professor, Ph.D., University of Kansas
Nancy M. Long, associate professor, Ph.D., Northern Illinois University
Sue E. Ouellette, professor, Ph.D., Kent State University
Jodell N. Ryan, assistant professor, Ph.D., University of Texas, Dallas
Howard D. Schwartz, associate professor, Ph.D., Syracuse University
M. Irene Stephens, professor, Ph.D., Purdue University

The Department of Communicative Disorders offers a graduate program leading to the degree Master of Arts. The graduate program is adapted to the student's individual needs and academic background. Each student plans a program in consultation with an adviser from the graduate faculty of the department.

A student may pursue a specialization in speech-language pathology, audiology, or deafness rehabilitation counseling. The programs in speech-language pathology and audiology are accredited by the Educational Standards Board, American Speech-Language-Hearing Association. The deafness rehabilitation counseling program is accredited by the Council on Rehabilitation Education.

Master of Arts

Admission

To be assured consideration for admission to the master's degree program in communicative disorders, prospective students must submit completed application materials (application forms, official transcripts, GRE General Test Scores, and letters of recommendation) to the Graduate School no later than March 1 for the summer and fall sessions, and October 1 for the spring session. Only complete applications containing all required data are considered.

Admission to the master's degree program is for full-time study. Prospective students should have a cumulative grade point average of at least 3.00 (on a 4.00 scale). The total verbal and quantitative score on the GRE General Test should be 900 or above to be competitive. Exceptions will be considered by the admissions committee. Persons wishing to apply for the specialization in deafness rehabilitation counseling must successfully complete a pre-admissions workshop.

With the advice and consent of the adviser, a student may elect to earn a degree with or without a thesis.

All students must meet the following requirements.

Completion of the minimum academic and clinical requirements for the appropriate professional certification issued by the American Speech-Language-Hearing Association or the Commission on Rehabilitation Counselor Certification prior to graduation.

Fulfillment of an experience assignment during each semester of full-time registration. Such assignments will be of a research, clinical, or teaching nature, depending on the needs of the student and the availability of the assignment.

Successful completion of COMD 500, Introduction to Research in Communicative Disorders (3).

Requirements for students selecting a specialization in speech-language pathology or audiology.

A minimum of 36 semester hours is required for the master's degree. At least 30 of these must be earned in nonpracticum courses. Additional semester hours are normally earned in clinical practicum to fulfill the requirements of the appropriate clinical certification.

Degree with thesis

The student must earn a minimum of 36 semester hours of graduate credit.

A thesis must be submitted and approved. A maximum of 6 semester hours may be allotted to thesis research and writing.

The student is normally required to pass a comprehensive oral examination which assesses knowledge and ability in the specialization in graduate study, but this may be waived at the discretion of the thesis committee.

Degree without thesis

The student must earn a minimum of 36 semester hours of graduate credit.

The student must pass a written and oral examination which will assess knowledge and ability in the specialization in graduate study.

Certification by the Illinois State Board of Education (Type 10, Special/Speech-Language Impaired) may be fulfilled by meeting the following requirements from the graduate and/or undergraduate curriculum.
General requirements for the Standard Special Certificate (K-12): Oral communication (3 semester hours); written communication (6 semester hours); mathematics (3 semester hours); biological and physical science (9 semester hours including one laboratory course); humanities (15 semester hours including 3 semester hours in U.S. history and 3 semester hours in English); social science (9 semester hours including 3 semester hours in U.S. government); health and physical development (2 semester hours). At least 3 semester hours must be taken in non-western or third-world cultures from either the humanities or social science area.

Courses in professional education: 6-9 semester hours.

Courses in psychology: 9 semester hours.

Courses in normal aspects of speech and hearing: 15-18 semester hours.

Courses in speech-language disorders: 28-30 semester hours.

Courses in audiology: 7-9 semester hours.

COMD 576, Organization and Planning of Speech, Language, and Hearing Services (3), or equivalent.

Practicum in schools: 5 semester hours, with at least 100 clinical clock hours.

Requirements for students selecting a specialization in deafness rehabilitation counseling. A minimum of 51 credit hours is required for this specialization.

The student must complete the equivalent of two academic years of full-time study including the following required courses:

COMD 492, Medical Aspects of Disability in Rehabilitation (3)

COMD 500, Introduction to Research in Communicative Disorders (3)

COMD 528, Developmental Aspects of Deafness and Disability (3)

COMD 560, Introduction to Vocational Rehabilitation (3)

COMD 562, Vocational Analysis and Job Placement with Hearing Impaired Persons (3)

COMD 582, Counseling Theories and Techniques with Deaf and Hard-of-Hearing People (3)

COMD 583, Psychological and Vocational Assessment with Deaf and Hard-of-Hearing People (3)

COMD 586, Clinical Procedures in Deafness Rehabilitation Counseling (1)

COMD 590, Practicum: Deafness Rehabilitation Counseling (3)

COMD 594, Internship in Deafness Rehabilitation Counseling (10)

COMD 677, Seminar: Deafness Rehabilitation Counseling (3)

EPCO 525, Counseling Skills and Strategies (3)

EPCO 530, Counseling Theories and Practices (3)

EPCO 540, Group Counseling Theories and Procedures (3)

The student must demonstrate proficiency in American Sign Language by earning a passing score on the department's sign language proficiency examination.

A basic course in audimetric methods, if not completed at the undergraduate level, is considered to be a deficiency and is added to the graduate program.

The student may select either a thesis or non-thesis option. If the thesis option is selected, a thesis must be submitted and approved. Students selecting the thesis option must also pass a comprehensive examination which includes a defense of the thesis.

Students selecting the non-thesis option must pass an oral and written examination which will assess knowledge and ability in the specialization.

Because this program is fully accredited by the Council on Rehabilitation Education, a student who successfully completes the required curriculum, including a 600-hour internship under the supervision of a Certified Rehabilitation Counselor, is eligible to sit for the Commission on Rehabilitation Counselor Certification Examination.

Students are required to complete a total of 400 approved professional development hours including direct involvement, supervised counseling, professional meetings, and deaf community involvement.

Course Offerings

403. LANGUAGE DEVELOPMENT IN CHILDREN (3). Crosslisted as CIEE 403X. An overview of oral language acquisition including phonological, morphological, syntactic, semantic, and pragmatic development in children from infancy through adolescence.

420. HEARING PROBLEMS AND AUDIOMETRIC METHODS (3). An introduction to clinical audiology: etiology, diagnosis, and rehabilitation of auditory disorders. Observation and orientation in hearing testing. It is strongly advised that students complete COMD 325 prior to enrollment in COMD 420. PRQ: COMD 323 or consent of department.

421. AURAL REHABILITATION (4). Methods and materials for communication assessment and training with the hearing impaired. Emphasis on receptive communication including speechreading. Three hours of lecture and one hour of laboratory. PRQ: COMD 422 and COMD 430, or consent of department.

423. ARTICULATORY AND PHONOLOGICAL DISORDERS (3). Disorders of speech sound production and use including evaluation and treatment procedures; observations and demonstrations. PRQ: COMD 221, COMD 323. CRQ: COMD 403, or consent of department.

424. STUTTERING (3). An introduction to the identification and measurement of stuttering. Examination of theories of the onset and development of stuttering with some discussion of evaluation and treatment procedures.

425. NEUROPATHOLOGIES OF SPEECH AND LANGUAGE (3). Neurological bases of speech-language production and disorders including sensory organization, neuromotor control, central nervous system mechanisms, and clinical syndromes associated with central and peripheral nervous system dysfunction. PRQ: COMD 323 or consent of department.

429. ASSESSMENT PROCEDURES IN COMMUNICATIVE DISORDERS (4). Fundamental concepts underlying the evaluation of communicative disorders. Emphasis on the selection, administration, and interpretation of tests and other assessment procedures, conducting interviews, and report writing. PRQ: COMD 420 and COMD 423, or consent of department.

430. AMERICAN SIGN LANGUAGE I (3). Development of receptive and expressive skills in American Sign Language. Emphasis is placed on developing skills in a non-English syntax system, and communication with hearing impaired people in activities of daily living. Three hours of lecture and one hour of laboratory. PRQ: Consent of department.

431. AMERICAN SIGN LANGUAGE II (3). A continuation of COMD 430 emphasizing the improvement of communicative skills. Three hours of lecture and one hour of laboratory. PRQ: COMD 430 or consent of department.

432. AMERICAN SIGN LANGUAGE III (3). A continuation of COMD 431, with an emphasis on developing fluency in American Sign Language. Emphasis is placed on developing skills in the field of clinical evaluation, therapy exercises, report writing, and related production of reports, data, and files. The use of appropriate software available in the field of clinical evaluation, therapy exercises, report writing, and
clinical data files. Development of clinically oriented programs in BASIC
language.
492. MEDICAL ASPECTS OF DISABILITY IN REHABILITATION (3). A
rehabilitative perspective on the structure of medicine in the United States,
medical specialties, medical terminology, and the medical examination.
Survey of selected body systems, functions, basic etiologies, pathologies,
and treatments intended to provide the rehabilitation counselor with basic
information with which to determine eligibility and interpret case-related
medical reports.
493. COUNSELING IN COMMUNICATIVE DISORDERS (3). Counseling
principles and techniques as related to assessment, treatment, parent
conferences, staffings, and eliciting parent/client cooperation.
494. WORKSHOP IN COMMUNICATIVE DISORDERS (1-3). The
application of principles of communicative disorders to problems of
special interest to the participant. May be repeated to a maximum of
9 semester hours.
495. FAMILIES AND COMMUNICATIVE DISORDERS: A REHABIL-
tative perspective (3). The application of systemic epistemology to
the habilitation and rehabilitation of persons with communicative
disorders. Survey of major family treatment concepts, models, and
techniques as applied to communicative disorders and deafness
rehabilitation counseling. Opportunity to develop a personally useful
model of family-focused intervention.
500. INTRODUCTION TO RESEARCH IN COMMUNICATIVE DIS-
ORDERS (3). A study of the research areas in communicative disorders
including sources of reference, research design, and the formats of
professional writing. Current professional issues will also be considered.
502. MEDICAL ASPECTS OF DISABILITY IN REHABILITATION (3).
Identification of and intervention for communication disorders in children
ages birth to three years and their families. Topics will include the
speech-language pathologist's role in interdisciplinary assessment, communication intervention techniques, models of service delivery, relevant legislation, and speech and language resources available to families and service providers. PRQ: COMD 403 and COMD 429 or equivalent, or consent of department.
503. EARLY INTERVENTION IN COMMUNICATION DISORDERS (3).
The application of systemic epistemology to the habilitation and rehabilitation of persons with communicative disorders. Survey of major family treatment concepts, models, and techniques as applied to communicative disorders and deafness rehabilitation counseling. Opportunity to develop a personally useful model of family-focused intervention.
504. CHILD LANGUAGE DISORDERS: SPECIAL POPULATIONS (3).
Assessment procedures for and intervention with children with physical
and/or cognitive impairments. Topics covered include models of
intervention for individuals with autism, mental retardation, and
developmental delay and infants and toddlers at risk for developmental
disorders. Use of augmentative and alternative communication systems will be studied. Additional topics may include communication programming for children with syndromes, traumatic brain injury, multiple
disabilities, LEP language impairment, and selective mutism. PRQ: COMD 476 or equivalent, or consent of department.
524. SUPERVISORY TECHNIQUES IN SPEECH AND HEARING
SERVICES (3). Provides insights, techniques, and research information to
develop competence necessary for the supervision of speech, hearing,
and language services. Emphasis will be placed on information on supervision in public school, hospital, therapy center, and other agency programs.
525. ADVANCED HEARING SCIENCE (3). Normal and abnormal auditory
processes, advanced psychoacoustics, development of the auditory
mechanism, and speech perception. Study of clinical measures and
procedures. PRQ: COMD 527 and COMD 577, or consent of department.
526. ADVANCED SPEECH SCIENCE (3). Advanced study of the
acoustical, physiological, and perceptual aspects of speech. Laboratory
projects will be assigned. PRQ: COMD 326 or consent of department.
527. ANATOMY AND PATHOLOGY OF THE EAR (3). The study of
the anatomical aspects of the human auditory system. The mechanisms of
the auditory system as a function of the embryonic development and
the morphological development as they relate to the normal system
and the pathological system. PRQ: COMD 323 or consent of department.
528. DEVELOPMENTAL ASPECTS OF DEAFNESS AND DISABILITY
(3). The impacts of hearing impairment on the developmental, educational, personal, familial, social, and vocational aspects of life. Focus of study includes the deaf, hard-of-hearing, and multiply-disabled populations. PRQ: Consent of department.
529. AMPLIFICATION SYSTEMS FOR THE HEARING IMPAIRED (3).
The study of hearing aid systems and their history. Theories and
procedures used in hearing aid evaluations and delivery systems. Experience in measurement of acoustic parameters of hearing aids and
in making earmolds. CRQ: COMD 577 or consent of department.
530. ADVANCED AURAL REHABILITATION (3). Selected topics in aural
rehabilitation with emphasis on the receptive and expressive aspects of
communicative problems exhibited by children and adults with
impaired hearing. Discussion and center on diagnostic and rehabilitative
techniques. PRQ: COMD 421 or consent of department.
535. FAMILY BASED TREATMENT IN COMMUNICATIVE DISORDERS
(3). The study and application of a systemic paradigm to therapeutic
intervention speech-language pathology and audiology in a variety of
speech-language treatment settings, including family-focused
intervention, early intervention family-centered treatment, consultation
in schools, and transdisciplinary teams.
542. STUTTERING MANAGEMENT AND REMEDIATION (3). An in-
depth examination of the evaluation and treatment of stuttering including
management techniques for indirect therapy with parents and issues that affect decisions for treatment. PRQ: COMD 424 or consent of department.
547. INSTRUMENTATION FOR COMMUNICATIVE DISORDERS (3).
Theoretical communicative disorders and practical aspects of electronic
audio-frequency laboratory equipment commonly used for evaluation
and research in speech pathology and audiology.
560. VOCATIONAL REHABILITATION AND INDEPENDENT LIVING (3).
The historical and legislative development of vocational rehabilitation
and independent living services are described, with emphasis on the
 provision of rehabilitative and independent living services for people
with disabilities.
562. VOCATIONAL ANALYSIS AND JOB PLACEMENT OF HEARING
IMPAIRED PERSONS (3). Study of the basic theory, methods, and
techniques for obtaining and maintaining employment of hearing impaired
persons. Includes emphasis on job readiness, job development, vocational analysis, and job accommodation. PRQ: Consent of department.
570. VOICE DISORDERS: RESEARCH AND THERAPY (3). Discussion
and review of the literature bearing on the theory, etiology, and treatment
of voice disorders. PRQ: Consent of department.
571. ADVANCED CLINICAL PHONOLOGY (1-3). Selected topics in the
acquisition, assessment, and treatment of phonological disorders in children with an emphasis on case presentations. May be repeated to
a maximum of 5 semester hours. PRQ: COMD 423 and consent of department.
572. CRANIOFACIAL ANOMALIES (3). The study of craniofacial anomalies including cleft lip (with and without cleft palate), embryological
development of the craniofacial complex, language and hearing
problems, and other associated difficulties accompanying craniofacial
dysmorphology. Principles of assessment, treatment, and research are included.
573. CEREBRAL PALSY (3). The study of communication problems
associated with neuromuscular disorders with a focus on cerebral palsy. PRQ: COMD 425 or consent of department.
574. COGNITIVE-LINGUISTIC DISORDERS OF NEUROLOGICALLY
IMPAIRED ADULTS (3). The study of neuropsychological models of aphasia and cognitive-linguistic impairments accompanying head injury and right hemispheric lesions. Principles of
differential diagnosis, treatment, and research. PRQ: COMD 425 or consent of department.
575. PEDIATRIC AUDIOLOGY (3). The significance of early detection of
auditory disorders in the young child. Methods, techniques, and
procedures used in obtaining audiological diagnosis of the auditory
system of the pediatric case. PRQ: COMD 420 or consent of department.
576. ORGANIZATION AND PLANNING OF SPEECH, LANGUAGE, AND
HEARING SERVICES (3). Aspects of conducting a program for
communicative disorders in various settings including public schools,
hospital and service clinics, and private practice. A study of current
trends affecting the delivery of services in each of these areas.
577. AUDIOLOGIC ASSESSMENT I (3). Administration and interpretation
of the standard audiometric battery, as well as discussion of the
specialized tests of auditory function (Bekesy, SISI, tone decay, etc.). PRQ: Consent of department. Recommended: COMD 420.
578. AUDIOLOGIC ASSESSMENT II (3). Continuation of COMD 577
with emphasis on other specialized tests of auditory function (evoked
response audiometry, electrodermal audiometry, impedance audiometry,
etc.). PRQ: COMD 420 and COMD 577, or consent of department.
579. ELECTROPHYSIOLOGIC ASSESSMENT OF THE AUDITORY SYSTEM (4). Neuroanatomic and neurophysiologic bases of auditory evoked responses; administration and interpretation of the procedures used in evoked response testing, and relationship between pathology and evoked response results. Laboratory experience will be provided. PRQ: COMD 527 and COMD 577, or consent of department.

580. EVALUATION AND TREATMENT FOR BALANCE DISORDERS (3). Anatomy, physiology, neurology, and pathologies of the proprioceptive, vestibular, and central equilibrium mechanisms; instrumentation and procedures involved in evaluation of balance function; treatment for persons with equilibrium disturbances. PRQ: COMD 527 and COMD 579, or consent of department.

581. CENTRAL AUDITORY PROCESSING (3). Discussion of central nervous system processing leading to perception of an auditory event. Neurological bases of auditory perception, speech perception, understanding of language, normal and abnormal processing strategies, and neurological disorders. Evaluation of normal and abnormal central auditory processing and treatment of central auditory processing disorders. PRQ: COMD 425, COMD 527, and COMD 577, or consent of department.

582. COUNSELING THEORIES AND TECHNIQUES WITH DEAF AND HARD-OF-HEARING PEOPLE (3). Application of basic counseling theory to practical problems of serving deaf and hard-of-hearing clients. Includes emphasis on personal, family, educational, and vocational counseling as well as basic elements of program development. PRQ: EPCO 536 or consent of department.

583. PSYCHOLOGICAL AND VOCATIONAL ASSESSMENT WITH DEAF AND HARD-OF-HEARING PEOPLE (3). Application of basic principles of standardized testing and evaluation to serving deaf and hard-of-hearing people. Emphasis on the unique problems of selecting, administering, norming, and integrating test results for deaf and hard-of-hearing people. PRQ: COMD 528 or consent of department.

584. SPEECH AND SWALLOWING DISORDERS IN HEAD AND NECK CANCER PATIENTS (3). The study of speech and swallowing disorders in head and neck cancer patients following surgical and medical intervention. Emphasis is on the role of the speech-language pathologist in the rehabilitation process. May be repeated to a maximum of 6 semester hours. PRQ: COMD 528 or consent of department.

585. AUDIOMETRY PRACTICUM: SPEECH AND HEARING CLINIC (1). Observation, practice, and discussion of diagnostic and rehabilitative audiologic procedures. All students involved in on-campus practicum in audiology must enroll in this course. May be repeated to a maximum of 6 semester hours. PRQ: COMD 420 or consent of department.

586. CLINICAL PROCEDURES IN DEAFNESS REHABILITATION COUNSELING (1). Observation, discussion, and practice of clinical procedures employed in rehabilitation counseling with persons who have hearing impairments. Required of all students while engaged in clinical practice of counseling. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

587. SPEECH-LANGUAGE PRACTICUM: SPEECH AND HEARING CLINIC (1). Observation, discussion, and clinical practice of assessment and therapeutic procedures. All majors involved in on-campus practicum in speech-language pathology must enroll in this course. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

589. PRACTICUM: DEAFNESS REHABILITATION COUNSELING (3). Supervised practicum in deafness rehabilitation counseling in external settings that include vocational rehabilitation programs. PRQ: Consent of department.

591. SPEECH-LANGUAGE PRACTICUM: SCHOOLS (1-12) Includes assessment and intervention experience in speech-language services in the school setting. Five semester hours of credit will meet the minimum clinical clock-hour requirement in schools for Illinois School Certification. The course may be repeated to a maximum of 12 semester hours. It is recommended that students have a minimum of 175 hours of clinical contact prior to enrollment in this course. PRQ: COMD 476, COMD 576, and a minimum of 4 semester hours in COMD 587, or consent of department.

592. SPEECH-LANGUAGE PRACTICUM: HOSPITALS/CLINICS (1-12). Advanced practicum in speech and language assessment and treatment in hospital and clinic settings. May be repeated to a maximum of 12 semester hours. It is expected that students have a minimum of 175 hours of clinical contact prior to enrollment in this course. PRQ: COMD 574, COMD 584, and a minimum of 4 semester hours in COMD 587.
Department of Human and Family Resources (HFR)

GRADUATE FACULTY

Mary E. Pritchard, chair, associate professor, Ph.D., Purdue University
Mary Andrews, coordinator, Family Center, M.S., Northern Illinois University
Brent J. Atkinson, associate professor, Ph.D., Texas Tech University
Linda E. Berscheid, assistant professor, Ph.D., University of Iowa
Shi-Reui Sherry Pang, assistant professor, Ph.D., Michigan State University
Robert E. Keim, associate professor, Ph.D., Florida State University
Sondra King, associate professor, Ph.D., Kansas State University
Yoon Hee Kwon, professor, Ph.D., University of Wisconsin
Michael J. Martin, professor, Ph.D., University of Georgia
Sudha P. Wadhwa Mehta, associate professor, Ph.D., University of Wisconsin
J. Elizabeth Norrell, associate professor, Ph.D., University of Georgia
Soae Paek, professor, Ph.D., Texas Woman's University
Ellen S. Parham, professor, Ph.D., University of Tennessee
Laura S. Smart, associate professor, Ph.D., University of Connecticut
Josephine Umoren, associate professor, Ph.D., University of Nebraska
Linda J. Wark, assistant professor, Ph.D., Purdue University
Helen Bruce Winsor, associate professor, Ed.D., Oklahoma State University

The name of the Department of Human and Family Resources refers to those resources used by people in their personal and family life as represented by the programs in the department. At the graduate level the Department of Human and Family Resources offers programs leading to the Master of Science degree in the following major areas:

1. Applied family and child studies
2. Home economics resources and services
3. Nutrition and dietetics

A student pursuing an advanced degree in human and family resources is expected to meet the requirements of a major area. Deficiencies in the major area at the undergraduate level will be determined by a committee of graduate faculty and must be made up as directed by the committee.

Admission requirements and information regarding notification of a decision on admission are indicated below for each area of study.

Prior to initial registration, each student planning a major in human and family resources should have a conference with the graduate adviser.

Master of Science

Major in Applied Family and Child Studies

This major provides professional career enhancement for:

1. Programming and administration in family social services and child development settings in community and government agencies, including youth work, gerontological programming, child life programs in hospitals, infant and child care programs, family support services, and family life and parenting education.
2. Advanced graduate work and research.

Within the major, there is also the opportunity to specialize in marriage and family therapy.

A program of courses is developed cooperatively by the student and an adviser. In addition to taking the required courses, the student may focus on an individualized area of interest through the selection of courses within and outside the department.

Admission

An applicant is required to have a minimum of 9 semester hours of undergraduate courses in family and child studies, or the equivalent including a course in family relations and one in child development. A student may be required to make up deficiencies in the area of family and child studies by successfully completing designated courses. These deficiencies should be completed during the first semester after admission to the major. Failure to do so may result in removal from the program.

Required Courses

HFR 500B, Seminar: Family and Child Studies (3)
HFR 504, Research Methods (3)
9-12 semester hours from the following analytical and applied courses:

- EPSY 522, Educational Statistics II (3), or BIOS 570, Biostatistical Analysis (3), or PSYC 504, Advanced Psychological Statistics (3)
- HFR 431A, Internship: Child Development (3), or HFR 431B, Internship: Family Services (3)
  (See "Special Requirements" below.)
- HFR 539B, Practicum: Family Therapy (9)
  (HFR 539B is limited to students admitted to the specialization in marriage and family therapy)
- HFR 599A, Thesis (6)
- HFR 610, Teaching College-Level Human and Family Resources (3)

A 3-semester-hour course on social science research methodology, or statistics.

6-9 semester hours from the following subject matter courses, including at least one 500-/600-level course, from:

- HFR 432, Theories of Child Development (3)
- HFR 434, Administration and Supervision of Programs for Young Children (3)
- HFR 437, Parent-Child Interaction From Birth to Six Years (3)
- HFR 438, Parent Education (3)
- HFR 439, Infant Development in the Family (3)
- HFR 445, Management of Human and Family Resources (3)
HFR 486, Aging and the Family (3)
HFR 489B-D, Topical Issues in Family and Child Studies (3)
HFR 535, Behavior Assessment of the Infant and Young Child (3)
HFR 537, The Child in the Family (3)
HFR 584, The Family with Adolescents (3)
HFR 585, The Atypical Family (3)
HFR 589, Readings in Family and Child Studies (3)
HFR 684, Theoretical Foundations of Family Therapy (3)
6 additional semester hours elected with approval of the adviser.

Students must complete a minimum of 30 semester hours in the program for graduation.

Students may fulfill the above requirements by completing various sequences of courses which develop professional competencies in specific areas including, but not limited to, the following areas of study:

1. Programming for and administration in family social services with emphasis in human development and aging: HFR 500B, HFR 504, analytical and applied course requirements listed above, HFR 438, HFR 584, HFR 585, and 6 semester hours of electives.

2. Programming for and administration in child development settings, including hospitals: HFR 500B, HFR 504, analytical and applied course requirements listed above, HFR 434 or OR HFR 486, HFR 585, and 6 semester hours of electives. It is recommended that students have a baccalaureate degree in child development or a related area including upper-division courses comparable to HFR 330, HFR 331, HFR 331A, HFR 439, and HFR 490.

3. Programming for and administration in family social services with study in gerontology: HFR 500B, HFR 504, analytical and applied course requirements listed above, HFR 448, HFR 585, and 6 semester hours of electives. (Consult the gerontology program listing elsewhere in this catalog.)

4. Preparation for advanced graduate work: HFR 500B, HFR 504, HFR 599A, EPSY 522 or BIOS 570 or PSYC 504, HFR 432, HFR 537 or HFR 584, HFR 585, and 6 semester hours of electives.

5. Enhancement for secondary and college teaching: HFR 500B, HFR 504, HFR 610, and other analytical and applied course requirements listed above, HFR 432, HFR 537, HFR 585, and 6 semester hours of electives.

Special Requirements for HFR 431A
Prerequisites for enrollment in the child development internship, HFR 431A, are: (1) previous full-time employment for at least one year in a licensed early childhood program or another professional setting related to young children and their families, or the equivalent of the following: supervised on-campus internship (HFR 490 or equivalent), both guidance and planning courses (HFR 330, HFR 331, and HFR 331A, or equivalent), a parent-child interaction course (HFR 437 or equivalent), and an early childhood professional programs course (HFR 434 or equivalent); (2) attendance at the scheduled internships meetings; and (3) consent of the department.

Special Requirements for HFR 431B
Prerequisites for enrollment in the family services internship, HFR 431B, are: (1) previous employment for at least one year in a social service setting, or the equivalent of the following: 50 hours of approved volunteer work, a group process class (HFR 392 or EPCO 540 or equivalent), and a professional issues class (HFR 489A or HFR 592 or equivalent); (2) attendance at the program's intern orientation day (available on video tape); and (3) consent of the department.

Specialization in Marriage and Family Therapy
The specialization in marriage and family therapy, accredited by the Commission on Accreditation for Marriage and Family Therapy, emphasizes the practical application of systemic family therapy principles to the diagnosis and treatment of problems in human relationships. Through extensive course work, clinical experience with client couples and families, and supervision by approved supervisors of the American Association for Marriage and Family Therapy, students in the specialization learn to integrate theory and research while developing the clinical skills of marriage and family therapists. The specialization prepares students to function in mental health, family service, hospital business, and human service settings, and upon graduation students have completed all requirements for associate membership in the American Association for Marriage and Family Therapy.

The specialization in marriage and family therapy admits a limited number of students once a year in the spring semester. Applicants must submit completed applications for the specialization by February 15. Late applications will be considered if space is available. Once admitted to the specialization, students may begin courses in the summer or fall term.

The specialization in marriage and family therapy is available only to students who have also been accepted for admission into the graduate major in applied family and child studies. While students may apply simultaneously to the major and the specialization, applicants must meet all additional admission requirements for the major and all additional admission requirements for the specialization.

Admission requirements and procedures for the specialization in marriage and family therapy are fully described in an admission portfolio that is available from the program coordinator. Except in extraordinary circumstances, applicants must be available for a personal interview with the clinical faculty of the specialization.

To request the admission portfolio for the specialization, contact the program coordinator, specialization in marriage and family therapy, Department of Human and Family Resources, Northern Illinois University, DeKalb, Illinois 60115-2854.

Required Courses
EPSY 522, Educational Statistics II (3), OR BIOS 570, Biostatistical Analysis (3), OR PSYC 504, Advanced Psychological Statistics (3), OR another 3-semester-hour course in social science research methodology or statistics approved by the chair of the graduate faculty
HFR 500B, Seminar: Family and Child Studies (3)
HFR 500C, Seminar: Marriage and Family Therapy (9)
HFR 504, Research Methods (3)
HFR 539B, Practicum: Family Therapy (9)
HFR 592, Professional Issues in Family Therapy (3)
HFR 595, Strategies of Family Therapy (3)
HFR 684, Theoretical Foundations of Family Therapy (3)
Two of the following:
HFR 499C: Child Abuse and Neglect (3)
HFR 585, The Atypical Family (3)
HFR 589, Readings in Family and Child Studies (3)
One of the following:
HFR 584, The Family with Adolescents (3)
HFR 438, Parent Education (3)
HFR 486, Aging and the Family (3)
HFR 537, The Child in the Family (3)

In addition to the comprehensive examination, students are required to pass an oral examination which assesses their knowledge of the theory and practice of marriage and family therapy. This examination is usually taken in the term prior to graduation.

Students must complete a minimum of 45 semester hours in the program for graduation. This includes 500 supervised clinical contact hours completed within the field of marriage and family therapy. This may be done through required course work and work experience or internship.
Major in Home Economics Resources and Services

This program is individually designed to increase a student's ability to use subject matter, research, and communication for employment in apparel merchandising and home economics-related positions in business, education, or government.

Admission

Applicant is required to have a minimum of 18 semester hours of course work in home economics and/or human and family resources. At least 9 semester hours must be at the upper-division level.

Admission decisions are normally made within three weeks of receipt of the completed application.

Required Courses

EPSY 521, Educational Statistics I (3),
OR EPSY 522, Educational Statistics II (3),
OR BIOS 570, Biostatistical Analysis (3),
OR PSYC 504, Advanced Psychological Statistics (3)
HFR 500, Seminar (3)
HFR 504, Research Methods (3)
HFR 599A, Thesis (6)
OR HFR 598, Project (3-6),
OR HFR 599B, One-Person Show (3-6)

At least two courses supportive of subject matter and/or in methods of dissemination for selected audiences chosen with the approval of the adviser. Courses chosen may include, but are not limited to:

ENGL 508, Expository Writing (3)
HFR 522, Trends and Issues in Human and Family Resources (3)
HFR 525, Administration and Supervision in Human and Family Resources (3)
HFR 539E, Practicum: Textiles, Apparel, and Merchandising (3)
HFR 562, Current Problems in Consumer Textiles (3)
HFR 564, Fashion Process Analysis (3)
HFR 568, Readings in Textiles, Apparel, and Merchandising (3)
HFR 574, Clothing and Human Behavior (3)
JOUR 535, Public Relations Cases, Concepts, and Campaigns (3)
LEAC 501, Adult Learning: Maturity Through Old Age (3)
MGMT 505, Principles of Management (2)
MGMT 511, Legal Aspects of Business (2)

Two courses selected with approval of the adviser.

A minimum of 30 semester hours is required for the degree with at least 15 semester hours from the Department of Human and Family Resources.

Major in Nutrition and Dietetics

This major is designed to prepare students interested in community nutrition to work as registered dietitians in a variety of public and private health organizations in county, state, and government agencies or as patient-care dietitians in hospitals and other health-care settings. This program also prepares students to continue their studies in doctoral programs.

Students within this major may select additional courses in biology, chemistry, biochemistry, and psychology and receive certification from the Center for Biochemical and Biophysical Studies. (For details, see the section in this catalog specifically concerned with the center.)

Students planning to qualify for the Registration Examination of the American Dietetic Association must meet both academic and experience requirements. Completion of the Dietetic Practicum may be used to satisfy the experience requirements. The academic requirements for the Didactic Program in Dietetics (DPD) of the American Dietetic Association must be completed before students initiate the practicum hours. A list of courses may be obtained from the student's adviser. Any deficiency in courses required for admission must be removed within the time limitation determined by the admission committee.

Admission

Applicants are required to have had courses in general chemistry, organic chemistry, biochemistry, microbiology or bacteriology, human biology, human physiology, science of nutrition, applied nutrition, two semesters of nutrition in clinical care, principles of food preparation, and statistics. A minimum grade point average of 3.00 in these courses is required. Applicants will be admitted according to the vacancies in the program. Vacancies are determined by the number of graduate students completing degrees each semester. Applicants with the highest GPA and GRE scores will be given priority for available positions.

The majority of vacancies in the program are filled shortly after February 15 for summer session, April 15 for fall semester, and September 15 for spring semester.

Required Courses

EPSY 522, Educational Statistics II (3),
OR EPSY 522, Educational Statistics II (3),
OR EPSY 522, Biostatistical Analysis (3),
OR PSYC 504, Advanced Psychological Statistics (3)
HFR 500A, Seminar: Nutrition and Dietetics (2)
HFR 504, Research Methods (3)
HFR 545, Macronutrients (3)
HFR 546, Micronutrients (3)
HFR 599A, Thesis (6)

One of the following:
HFR 516, Nutritional Factors in Obesity and Eating Disorders (3)
HFR 539A, Nutrition in Growth and Human Development: Maternal and Child Nutrition (3)
HFR 539B, Nutrition in Growth and Human Development: Nutrition and Physical Activity (3)
HFR 539C, Nutrition in Growth and Human Development: Geriatric Nutrition (3)

Three semester hours selected in consultation with the assigned graduate program adviser (3)

One of the following:
AHPH 520, Primary Prevention and Health Promotion (3)
EPCO 525, Counseling Skills and Strategies (3)
HFR 410, Nutrition Education in the Community (3)
PSYC 417, Principles of Behavior Modification (3)

Two of the following:
AHPH 475, Economic Issues in Public Health (3)
AHPH 530, Organizational Leadership in Community Health (3)
AHPH 589, Community Health Planning (3)
HFR 551, Workshop in Dietetic Practice: Standards, Strategies, and Skills (2)
SOC 475, Health Organizations and Delivery of Services (3)

Students must complete a minimum of 32 semester hours in the program for graduation.

Dietetic Practicum

Majors in nutrition and dietetics may apply for admission to the dietetic practicum for additional experiences in dietetic practice. This 900 clock hour, three semester practicum, fulfills the experience requirements to qualify to take the Registration Examination in Dietetics. The practicum has been fully approved as a Pre-Professional Practice Program in Dietetics (AP4) by the American Dietetic Association. Admission is limited and competitive; admission to the major does not constitute admission to the practicum.

Admission

Applicants are required to be admitted to the major in nutrition and dietetics before applying for admission to the practicum. Students accepted into the program must complete at least 9 semester hours of degree requirements before initiating practicum experiences.
Applicants must have completed the academic requirements for the DPD of the American Dietetics Association. A "B" average in this course work is required. Applicants must be certified in food sanitation and must have successfully completed 150 clock hours of experience in dietetics including both food service and patient care. This experience may be paid or volunteer.

Students may enter the practicum in the fall or spring semester after completing at least one semester of course work. Applicants should inquire about application deadlines. Applications will be screened and ranked with the highest ranking applicants being invited to schedule interviews. Interviews will be scheduled within a month of the application deadline, and applicants notified of their status within two weeks of the last interview. Late applicants will be considered if space is available.

Required Courses
In addition to the courses required for the M.S. in nutrition and dietetics, including HFR 551 (2), students electing the practicum must complete:

- HFR 431C, Internship: Dietetics, Nutrition, and Food Systems (3)
- HFR 539C, Practicum: Food Systems Management (5)
- HFR 539D, Practicum: Nutrition Care in Dietetics (11)

Course Offerings

407. CONSUMER PROTECTION (3). Current trends in consumption; consumer movement in the United States; laws and agencies protecting and serving the consumer; product analysis using appropriate materials and skills. PRQ: Graduate standing or consent of department.

408. CURRENT PROBLEMS AND TRENDS IN NUTRITION AND FOODS (3). Readings in and discussion of selected classic studies and recent developments in the field of nutrition and foods. Implications for dietitians, nutritionists, teachers, extension workers and others. PRQ: Consent of department.

410. NUTRITION EDUCATION IN THE COMMUNITY (3). Nutrition problems, practices, and programs in the community Observation and participation in local programs. PRQ: Consent of department. Recommended: HFR 310.

424. CULTURAL AND NATIONAL FOOD PATTERNS (3). Food practices as influenced by social, cultural, and economic factors. PRQ: Consent of department.

428. EXPERIMENTAL FOODS (3). Application of scientific method in the study and design of experimental food problems. Development of evaluative and laboratory research techniques through group and individual projects. PRQ: HFR 200A, HFR 200B, and CHEM 370, or consent of department.

431. INTERNSHIP (2-15).
   A. Child Development. See "Special Requirements," Applied Family and Child Studies
   C. Dietetics, Nutrition, and Food Systems
   D. Home Economics Education
   Supervised participation in professional settings. Students will be assigned to experiences appropriate to their professional interest. A maximum of 6 semester hours may be applied toward a master's degree. No more than 2 semester hours may be applied to the M.S. with a major in nutrition and dietetics. S/U grading basis may be used. PRQ: Consent of department.

432. THEORIES OF CHILD DEVELOPMENT (3). Analysis of the major theories of child development and their implications in working with young children. PRQ: 6 semester hours in child development or consent of department.

434. ADMINISTRATION AND SUPERVISION OF PROGRAMS FOR YOUNG CHILDREN (3). Planning the total program: the administration and supervision of various types of group care for children under six. Work with inservice training, volunteers, personnel, and financial problems. PRQ: HFR 330 or HFR 331, or consent of department.

437. PARENT-CHILD INTERACTION FROM BIRTH TO EIGHT YEARS (3). Parent-child interactions in the home and in institutions (e.g., early childhood care and educational settings in public and private schools, community service agencies, hospitals, and parent-child centers). Survey of theory, research, and professional early childhood practice regarding parent-child interaction, and parent education and involvement. PRQ: 6 semester hours in child development and/or family relations or consent of department.

438. PARENT EDUCATION (3). Basic principles in organization, formulation, and presentation of parent study programs. Experience in ways of working with parents of children from preschool through adolescence. Uses of group dynamics and mass media. PRQ: A course in child or adolescent development, or consent of department.

439. INFANT DEVELOPMENT IN THE FAMILY (3). The infant in the context of the family. Opportunity to become familiar with major scientific findings concerning prenatal and postnatal development of the child from conception through the first two years of life. Integration of this information through observation, laboratory experience, and home visits. PRQ: HFR 230 or consent of department.

445. MANAGEMENT OF HUMAN AND FAMILY RESOURCES (3). The management process applied to resource allocation by individuals, families, and other units within a dynamic social and economic environment. PRQ: Consent of department.

452. APPAREL DESIGN I (3). Apparel design through the fundamental principles and processes of flat pattern methods. Emphasis on the development of a master pattern and original design. May be repeated once for advanced projects. PRQ: HFR 252 or consent of department.

453. EXPERIMENTAL TEXTILES (3). Standard textile testing methods used in determining the physical and chemical characteristics of fibres, yarns, and fabrics, and the statistical methods employed in data analysis and evaluation. PRQ: HFR 152, HFR 351, and CHEM 110A, or consent of department.

454. APPAREL DESIGN II (3). Draping based upon the interrelating factors of form, design, and material. Emphasis on experimentation with materials, techniques, and original design ideas. May be repeated once for advanced projects. PRQ: HFR 252 or consent of department.


466. ECONOMICS OF APPAREL AND TEXTILE INDUSTRIES (3). Factors affecting the production, distribution, and consumption of apparel and textile products; the role of the apparel and textile industries in the national economy. PRQ: ECON 261 and HFR 258, or consent of department.

468. CONSUMER BEHAVIOR RELATED TO APPAREL (3). Analysis of acquisition and consumption of apparel from perspectives of market, perception, learning, and attitude formation. Effects of factors constituting life style of families in various socioeconomic, ethnic, and age groups. PRQ: PSYC 102 and SOCI 170, or consent of department.

484. FAMILY RELATIONSHIPS (3). Interpersonal relationships within the family group as influenced by basic human needs, family member roles, and values and attitudes in a changing society. Problems unique to different stages of the family life cycle. PRQ: HFR 180 or PSYC 102 or SOCI 170, or consent of department.

486. AGING AND THE FAMILY (3). The multidisciplinary study of aging: changing family functions and the consequences with reference to workforce participation, financial status, health status of the aged and its implications for the family; housing needs; leisure in contemporary and future society; the role of public and private agencies and institutions in the provision of services for the aged. PRQ: PSYC 102 or consent of department.

489. TOPICAL ISSUES IN FAMILY AND CHILD STUDIES (3).
   A. Professional Practices in Family Social Services
   B. Social Policy, Children, and Families
   C. Child Abuse and Neglect
   D. The Family and Divorce
   Selected topics affecting child development and family life. May be repeated to a maximum of 12 semester hours when topic changes. PRQ: At least 6 semester hours in family and child studies or equivalent, or consent of department.
500. SEMINAR [1-12]
A. Nutrition and Dietetics
B. Family and Child Studies
C. Marriage and Family Therapy
D. Home Economics Education
E. Textiles and Clothing
Readings and reports in the designated areas of human and family resources. May be repeated to a maximum of 12 semester hours when topic changes.

504. RESEARCH METHODS (3). Study of the research process including the interplay of theory, research design, data collection, and analysis. Development of a research proposal required.

515. ADVANCED CLINICAL NUTRITION (3). An in-depth study of recent trends in clinical nutrition. PRQ: HFR 415, a course in biochemistry, and a course in human physiology, or consent of department.

516. NUTRITIONAL FACTORS IN OBESITY AND RELATED EATING DISORDERS (3). Exploration of the etiology, complications, prognosis, and treatment protocols for obesity and related eating disorders. Assessment of diet and eating behavior as factors in treatment and prevention of these conditions. Students will be required to participate as staff volunteers in an on-going weight control program. PRQ: HFR 309 or equivalent.

520. CURRICULUM IN HOME ECONOMICS EDUCATION (3). Principles of curriculum development involving theoretical and philosophical concepts with specific emphasis on home economics programs including elementary, secondary, continuing education, and college. PRQ: HFR 344 or consent of department.

521. EVALUATION IN HOME ECONOMICS EDUCATION (3). Methods of evaluation. Relationship to curriculum. Selection, construction, and use of evaluation devices for home economics programs. PRQ: HFR 344 or consent of department.

522. TRENDS AND ISSUES IN HUMAN AND FAMILY RESOURCES (3). Exploration of current issues in human and family resources at the secondary, post-high-school, and college levels. Consideration of trends contributing to the issues and proposed solutions.

525. ADMINISTRATION AND SUPERVISION IN HUMAN AND FAMILY RESOURCES (3). Theories and principles of leadership and supervision as related to human and family resources teaching, secondary departments, and state departments. Objectives, techniques, and evaluation of supervision.

535. BEHAVIOR ASSESSMENT OF THE INFANT AND YOUNG CHILD (3). Content and methodology of the assessment of behavior of the infant and young child. Specific discussions and materials on the measurement of personality, maturation and readiness, intelligence, social behavior, and interests and attitudes. Application of some of these tests and measurements will be an integral part of this course. PRQ: Consent of department.

537. THE CHILD IN THE FAMILY (3). Analysis of the reciprocal influences between family and child in the context of other important socializing influences. The biological, cognitive, affective, and social-personal domains of development are examined. Relevant information is included from historical, philosophical, anthropological, cross-cultural, and psychological perspectives. PRQ: Consent of department.

538. PRACTICUM [1-11]
A. Parent Education. Under staff supervision, the student develops and implements a program aimed at changing parental and family attitudes and behaviors. A maximum of 6 semester hours may be applied toward a master's degree. PRQ: HFR 438 and consent of department.
B. Family Therapy. Under faculty supervision, the student develops the professional skills of marriage and family therapists. A maximum of 9 semester hours may be applied toward a master's degree. Applicable toward AAMFT clinical contact and supervision requirements. Restricted to students admitted to the specialization and behaviors. A maximum of 6 semester hours may be applied toward a master's degree. PRQ: Consent of department.
C. Food Systems Management. Supervised participation in a variety of food service systems. S/U grading basis is used. PRQ: Consent of department.

D. Nutrition Care in Dietetics. Supervised participation in nutrition care in a health care institution. S/U grading basis is used. PRQ: Consent of department.

540. HOME ECONOMICS FOR TEACHERS OF THE VISUALLY HANDICAPPED (3). Techniques used by blind homemakers in meal preparation, shopping, house cleaning, selection and care of clothing, and child rearing; recreational and leisure time activities.

545. MACRONUTRIENTS (3). Study of the current knowledge of the metabolic basis of nutritional needs of macronutrients (carbohydrates, proteins, fats, calcium, phosphorous, magnesium, and electrolytes) including clinical implications. PRQ: HFR 309 or equivalent, a course in biochemistry, and a course in physiology, or consent of department.

546. MICRONUTRIENTS (3). The basis of nutritional needs for vitamins and trace minerals including nutrient interactions. PRQ: HFR 309 or equivalent, a course in biochemistry, and a course in physiology, or consent of department.

550. WORKSHOP IN HUMAN AND FAMILY RESOURCES [1-6]. Workshop designed for professional personnel to study current issues, trends, and programs in a specialized area. Emphasis varies and is announced in workshop title. May be repeated. Maximum of 6 semester hours of workshops may be applied toward master's degree. PRQ: Consent of department.

551. WORKSHOP IN DIETETIC PRACTICE: STANDARDS, STRATEGIES, AND SKILLS [1-2].
A. Clinical Care Issues
B. Management Issues
An exploration and evaluation of techniques, procedures, and policies associated with the contemporary practice of dietetics. PRQ: Consent of department.

553. NUTRITION IN GROWTH AND HUMAN DEVELOPMENT (3). A. Maternal and Child Nutrition
B. Nutrition and Physical Activity
C. Geriatric Nutrition
The interaction of the psychological and sociophysiological aspects of nutrition throughout the life cycle. Emphasis on integration of current literature. May be repeated to a maximum of 9 semester hours; however, each topic section may only be taken once. PRQ: Undergraduate course in applied nutrition or consent of department.

554. ADVANCED APPAREL DESIGN (3). Exploration of apparel design through draping and pattern drafting techniques. Emphasis is placed on the original ideas and interrelated factors of materials, design, and form. PRQ: HFR 452 or HFR 454, or consent of department.

556. CURRENT PROBLEMS IN CONSUMER TEXTILES (3). New development in textiles; analysis of quality control and production standards, evaluation of current problems. PRQ: HFR 351 or consent of department.

564. FASHION PROCESS ANALYSES (3). An interdisciplinary approach to fashion process analyses incorporating anthropology, economics, history, sociology, psychology, marketing, and consumer behavior. Applications of existing fashion concepts and theories to contemporary environments. PRQ: HFR 484 and consent of department, or HFR 468 or consent of department.

568. READINGS IN TEXTILES, APPAREL, AND MERCHANDISING (3). An analysis of selected readings including research in textiles, apparel, and merchandising. PRQ: Consent of department.

572. HISTORIC TEXTILES (3). Methods of textile formation and textile design processes over time and in diverse cultures. PRQ: HFR 152 or consent of department.

574. CLOTHING AND HUMAN BEHAVIOR (3). Clothing as a reflection of human behavior as related to the concepts from the behavioral sciences. Interpretation of research findings. PRQ: HFR 464 or consent of department.

584. THE FAMILY WITH ADOLESCENTS (3). Developmental tasks of the family with adolescents; parental and adolescent roles, communication networks, adolescent identity and sexuality.

585. THE ATYPICAL FAMILY (3). An analysis of the adjustments, crises, possible problems, and ways to strengthen the atypical family. PRQ: HFR 5008 or consent of department.
589. READINGS IN FAMILY AND CHILD STUDIES (3). Analysis of normative, developmental, and ecological changes across the life span. Focuses on developmental transitions such as childbirth, adolescence, and aging. PRQ: Upper-division course in family or child studies or consent of department.

592. PROFESSIONAL ISSUES IN FAMILY THERAPY (3). Survey and discussion of ethical, legal, and contextual issues in the practice of marriage and family therapy. PRQ: Consent of department.

595. STRATEGIES OF FAMILY THERAPY (3). An exploration of the specific perceptual, conceptual, and intervention skills of prominent family therapy approaches such as those of the Mental Research Institute, Haley, and the Milan teams. PRQ: Consent of department.

596. STRUCTURAL FAMILY THERAPY (3). An exploration of the specific perceptual, conceptual, and intervention skills of structural family therapy, developed by Salvador Minuchin. PRQ: Consent of department.

598. PROJECT (1-6). Individual application of student's area of study to the solution of a problem, under supervision of an adviser. Not open to students who select a thesis program. May be repeated to a maximum of 6 semester hours. PRQ: HFR 504 or consent of adviser.

599A. THESIS (1-6). Individual investigation of a problem under supervision of an adviser. May be repeated to a maximum of 6 semester hours. Continuous enrollment is required until the thesis is completed. PRQ: HFR 504 or consent of adviser.

599B. ONE-PERSON SHOW (1-6). Preparation of the one-person show and documentation from point of view of both content and form. May be repeated to a maximum of 6 semester hours. Continuous enrollment is required until the show is completed. PRQ: Major in textiles and clothing (field of design) and consent of adviser.

601. PROBLEMS IN HUMAN AND FAMILY RESOURCES (1-3). Independent study, individual problems, action, or other research. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

610. TEACHING COLLEGE-LEVEL HUMAN AND FAMILY RESOURCES (1-3). Teaching experience supervised by a faculty member. May be repeated to 12 semester hours. A maximum of 3 semester hours may be applied toward a master's degree. PRQ: Consent of department.

684. THEORETICAL FOUNDATIONS OF FAMILY THERAPY (3). Crosslisted as EPCO 634X. An examination and discussion of the theoretical foundations and historical development of family therapy, and of the various techniques currently employed in the field. PRQ: 6 graduate semester hours in the family or related areas or consent of department.
Department of Military Science (MILS)

FACULTY
Major Jann E. Stovall, chair, professor, M.S., University of Southern California
Captain Ralph Peterson, assistant professor, B.S., Northern Illinois University
Captain Arturo Thiele-Sardina, assistant professor, B.A., University of Wisconsin, Whitewater
Captain Richard W. Tom, assistant professor, B.S., University of Utah

The Department of Military Science offers graduate students training and experience in the art of organizing, motivating, and leading others, while completing their studies for a degree in an academic discipline of their own choice. Completion of the program leads to a commission in the U.S. Army. The Reserve Officers' Training Corps is open to all eligible students, both male and female. The curriculum is centered around an applied leadership training program which is designed to develop those personal traits and qualities essential to successful leadership in civilian life, as well as the military environment. Those who complete the advanced program will serve as commissioned officers with National Guard, U.S. Army Reserve, or regular U.S. Army units.

Program
Army ROTC offers a two-year program which meets the needs of most graduate students. To enter this program students usually attend a six-week basic camp the summer before entering the advanced courses. Application is made in the spring or early summer. Students are paid while attending basic camp. Upon completion of the camp students may enter directly into the advanced courses and start receiving a $100-per-month stipend.

Veterans' Option
In most cases, prior military service will qualify for placement credit so that veterans may enroll directly in the advanced course. Veterans are permitted to receive G.I. Bill benefits and state benefits as well as the $100-per-month stipend while enrolled in the advanced courses.

Commissioning Requirements
To be eligible for commissioning as a Second Lieutenant in the U.S. Army, the graduate student must have completed all military science advanced courses and be in good standing academically. Additionally, the student must have successfully completed several interdisciplinary studies at either the undergraduate or graduate level. These include, as a minimum, one course each in written communications, human behavior, and military history. Also recommended are studies in management and national security. Students should confer with the chair, Department of Military Science, to determine specific courses which fulfill this requirement.

Leadership Laboratory
A leadership laboratory is required each week for all military science students. Content varies with the student year-group and military science class.

Course Offerings (Advanced Courses)
NOTE: Credit earned in military science is not applicable toward graduate degree requirements.

301. MILITARY TRAINING AND TACTICS I (3).
302. MILITARY TRAINING AND TACTICS II (3).
350. PRACTICUM IN MILITARY SCIENCE (3).
401. MILITARY LEADERSHIP AND MANAGEMENT I (4).
402. MILITARY LEADERSHIP AND MANAGEMENT II (4).
495. INDEPENDENT STUDY (3).

Eligibility
Interested students should contact the department on enrollment procedures and specific eligibility requirements. Generally, to enroll in the military science program leading to an officer's commission the student must:

1. Be a citizen of the United States or have been lawfully admitted to the U.S. for permanent residence under applicable provisions of the Immigration and Naturalization Act, and be at least 17 years of age.
2. Be enrolled as a full-time student at NIU with at least four semesters remaining at NIU.
3. Be able to complete the ROTC program and receive a degree prior to reaching 28 years of age. Age requirements may be waived in some cases.

4. Be physically and mentally qualified and of good moral character.
5. Be selected by the professor of military science.
School of Nursing (NURS)

GRADUATE FACULTY
Sara E. Barger, chair, professor, D.P.A., University of Georgia
Wendy Burgess, assistant professor, Ph.D., University of Wisconsin, Milwaukee
Virginia Cassidy, associate professor, Ed.D., Northern Illinois University
Ruth Elliott, assistant professor, Ed.D., Vanderbilt University
Elaine R. Graf, assistant professor, Ph.D., Virginia Commonwealth University
Gloria Jacobson, assistant professor, Ph.D., University of Wisconsin, Milwaukee
Rebecca A. Johnson, assistant professor, Ph.D., University of Iowa
Ayhan A. Lash, assistant professor, Ph.D., University of Chicago
Lorys F. Oddi, associate professor, Ed.D., Northern Illinois University
Donna Rane-Szostak, assistant professor, Ed.D., Northern Illinois University
Julie Robertson, assistant professor, Ed.D., Northern Illinois University
Sandra Soldwisch, assistant professor, Ph.D., University of Wisconsin
Marilyn Stromborg, professor, Ed.D., Northern Illinois University
Georgia G. Whitley, associate professor, Ph.D., Northern Illinois University
Wendy Burgess, assistant professor, Ph.D., University of Wisconsin

Admission

Admission to graduate study in nursing requires compliance with the admission policies of the Graduate School and with the following standards of the School of Nursing:

1. Current licensure as a registered nurse in the U.S.
2. A baccalaureate degree from a National League for Nursing (NLN) accredited school (or from a program seeking initial NLN accreditation) which includes an upper-division major in nursing equivalent to the undergraduate nursing major at Northern Illinois University. If the applicant is a graduate of a non-graded baccalaureate program in nursing, NLN accreditation is required. The applicant must provide documentation of course work which is essentially equivalent to that required in the nursing major at Northern Illinois University.
3. A minimum grade point average (GPA) of 2.75 (based on a 4.00 system) for the last 60 hours of the baccalaureate program, or completion of 15 or more semester hours of graduate work at an accredited institution with a GPA of 3.20 or better.
4. A composite score on the Graduate Record Examinations in compliance with School of Nursing standards.
5. A statement of overall career goals submitted as an example of professional writing skills. The statement should be typewritten, single-spaced with a 300-word maximum limit and should include the student’s desired field of study.
6. The approval of the Graduate Admissions Committee of the School of Nursing.

The applicant may be required to have a personal interview with the university and/or the School of Nursing Graduate Admissions Committee.

Admission decisions are normally made within three weeks of receipt of the complete application.

Master of Science

The School of Nursing offers a program of graduate study leading to a Master of Science degree with a major in nursing which is fully accredited by the National League for Nursing. Graduates are prepared for advanced practice in a selected field of clinical study.

Current licensure as a registered nurse in one of the jurisdictions of the U.S. is prerequisite to enrollment in all nursing courses unless otherwise specified. Registered nurses who hold the baccalaureate in nursing may enroll in graduate nursing courses as students-at-large. With the approval of the student’s academic adviser, a maximum of 9 semester hours of student-at-large credit may be applied to degree requirements. Exceptions to this 9-hour limit may be made only for students who are required to complete up to 15 semester hours of graduate work in order to demonstrate an acceptable GPA. (See “Admission” item #3.)

Enrollment in the practicum course (NURS 595) requires that all practicum arrangements be completed with the designated faculty during the semester prior to the experience. Successful completion of a clinically focused project in the field of clinical study is required in the practicum course in lieu of a final comprehensive examination.

The master’s degree in nursing may be pursued on either a full-time or a part-time basis. The program requires a minimum of 3 semesters. Students must have completed an introductory statistics course and an introductory research methods course prior to enrollment in NURS 505. An introductory health assessment course must be taken prior to beginning courses in a field of clinical study.

To maintain enrollment in the graduate program, evidence of current registered nurse licensure, professional liability insurance, CPR certification, and absence of active tuberculosis is required.

All field of clinical study courses are permit courses. In order to receive a permit for the course a student must complete the appropriate prerequisite courses and submit documentation of compliance with clinical requirements to the School of Nursing, Room 190. Clinical requirements include evidence of current registered nurse licensure, professional liability insurance, appropriate CPR certification, and required immunizations.

The graduate faculty committee may determine that a student not continue in the master’s program in nursing for failure to maintain professional standards.

The graduate student plans a program in consultation with an assigned adviser from the School of Nursing. With the advice and consent of the adviser, a student may pursue the degree with or without a thesis. Credits transferred from another college
or university may not exceed 6 semester hours. Students must select a field of clinical study in adult health nursing, parent-child health nursing, community health nursing, older adult health nursing, or psychiatric-mental health nursing. This is a 36-semester-hour program.

Requirements (36)

Nursing Core (18)

EPSY 522, Educational Statistics II (3)
NURS 500, Theories of Nursing (3)
NURS 505, Nursing Research I (3)
NURS 506, Nursing Research II (3)
NURS 507, Advanced Nursing Practice in Health Care Systems (3)
NURS 508, Biological and Behavioral Concepts for Advanced Nursing Practice (3), OR AHPH 555, Principles and Methods of Epidemiology (3)

Field of Clinical Study (15)

Adult Health Nursing
NURS 510, Advanced Adult Health Nursing: Regulating and Metabolizing Systems (3)
NURS 511, Advanced Adult Health Nursing: Coordinating and Metabolizing Systems (3)
NURS 595, Advanced Practicum in Nursing (6)

Community Health Nursing
NURS 571, Advanced Community Health Nursing: Analysis and Application (3)
NURS 572, Advanced Community Health Nursing: Home Health Care (3), OR NURS 573, Advanced Community Health Nursing: Health Promotion (3)
NURS 595, Advanced Practicum in Nursing (6)

Older Adult Health Nursing
NURS 556, Advanced Older Adult Health Nursing: Aging Processes (3)
NURS 557, Advanced Older Adult Health Nursing: Alterations in Mental Health (3), OR NURS 557, Advanced Older Adult Health: Societal Impact and Response (3)
NURS 595, Advanced Practicum in Nursing (6)

Parent-Child Health Nursing
NURS 545, Advanced Parent-Child Health Nursing: Bases for Practice (3)
NURS 595, Advanced Practicum in Nursing (6)

Psychiatric-Mental Health Nursing
NURS 566, Advanced Psychiatric-Mental Health Nursing: Individual Client Systems (3)
NURS 567, Advanced Psychiatric-Mental Health Nursing: Family, Group, and Community Systems (3)
NURS 595, Advanced Practicum in Nursing (6)

Thesis/Cognate (3)

In consultation with the adviser, the student must complete a thesis or cognate course work that supports the clinical field of study.

Course Offerings

500. THEORIES OF NURSING (3). Exploration of the present status of theory development within the profession of nursing. Importance of scientifically based theories as a rationale for advanced nursing practice. Opportunity for analysis and evaluation of proposed theoretical frameworks for nursing.

505. NURSING RESEARCH I (3). Analysis of the research process as a basis for advanced practice and as related to theory development in nursing. Preparation for proposal development. PRQ: An introductory statistics course, an introductory research course, and consent of department. CRQ: NURS 500 and EPSY 522 and consent of department.

506. NURSING RESEARCH II (3). Application of the research process to the development of a clinical nursing study. Exploration of resources available to support research, issues in research, and future research goals for the profession. PRQ: NURS 505 and consent of department.

507. ADVANCED NURSING PRACTICE IN HEALTH CARE SYSTEMS (3). Analysis of the U.S. health care system and those of other countries. Emphasis on using selected behavioral processes in advanced nursing practice to influence health care policy and delivery.

508. BIOLOGICAL AND BEHAVIORAL CONCEPTS FOR ADVANCED NURSING PRACTICE (3). Application of selected biopsychosocial concepts to advanced nursing practice. Integration of research from nursing and related disciplines.

510. ADVANCED ADULT HEALTH NURSING: REGULATING AND METABOLIZING SYSTEMS (3). Advanced nursing care of adults with selected alterations in cardiovascular, respiratory, and renal systems. Emphasis on an integrative conceptual approach to developing a theoretical and empirical basis for advanced nursing practice to enhance health. Theory will be validated in the practice setting. PRQ: NURS 508, an introductory health assessment course, or consent of department. CRQ: NURS 506 and NURS 507, or consent of department.

511. ADVANCED ADULT HEALTH NURSING: COORDINATING AND METABOLIZING SYSTEMS (3). Advanced nursing care of adults with selected alterations in neurologic, endocrine, and metabolic systems. Emphasis on an integrative conceptual approach to developing a theoretical and empirical basis for advanced nursing practice to enhance health. Theory will be validated in the practice setting. PRQ: NURS 508, an introductory health assessment course, or consent of department. CRQ: NURS 506 and NURS 507, or consent of department.

530. INDEPENDENT STUDY (1-3). Independent study under faculty supervision. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

531. PRACTICUM IN NURSING EDUCATION (1-3). Independent experience in nursing education under faculty supervision. May be repeated to a maximum of 9 semester hours. Credit not applicable toward the M.S. with a major in nursing. PRQ: Consent of department.

532. PRACTICUM IN NURSING RESEARCH (1-3). Independent experience under faculty supervision in selected components of the nursing research process. Activities may include proposal development, literature review, data collection, computer data entry, data analysis, and report writing. May be repeated to a maximum of 9 semester hours. Credit not applicable toward the M.S. with a major in nursing. Consent of department.
College of Visual and Performing Arts

Harold Kafer, Ph.D., acting dean
G. Allan O'Connor, M.M., associate dean

Art
Music
Theatre Arts
GRADUATE FACULTY

Richard M. Carp, chair, professor, Ph.D., Graduate Theological Union, Berkeley
Jerry D. Meyer, assistant chair, professor, Ph.D., New York University
Renie B. Adams, professor, M.F.A., Indiana University
Leif Allmendinger, associate professor, M.F.A., Rhode Island School of Design
Caroline C. Allrutz, professor, Ed.D., Illinois State University
Carmen L. Armstrong, professor, Ed.D., Indiana University
Jon Ashmann, associate professor, B.S., Illinois Institute of Technology
Walter N. Ball, professor, Ph.D., Ohio State University
Mary Beams, assistant professor, M.S., Boston University
Dorathea K. Beard, professor, Ph.D., Ohio State University
Richard E. Beard, professor, Ph.D., Ohio State University
Jay P. Bell, professor, M.F.A., University of Wisconsin
Dorothea A. Bilder, professor, M.F.A., Southern Illinois University
Rudolf M. Bisanz, professor, Ph.D., Syracuse University
Robert L. Bornhuetter, professor, M.F.A., Tulane University
David C. Bower, professor, M.A., Northern Illinois University
Richard M. Cooler, professor, Ph.D., Cornell University
Dennis DeLap, assistant professor, M.Arch., University of Illinois, Chicago
John N. DeLillo, professor, M.A., Ohio State University
Gordon J. Dorn, professor, M.F.A., University of Wisconsin
Yale Factor, professor, M.F.A., East Texas State University
Gary L. Fox, professor, M.S., Illinois State University
Lawrence J. Gregory, associate professor, M.F.A., Ohio University
Byron Grush, associate professor, M.F.A., School of the Art Institute of Chicago
Joshua B. Kind, professor, Ph.D., Columbia University
Jeff K. Kowalski, professor, Ph.D., Yale University
Frank Kulesa, associate professor, M.F.A., Northern Illinois University
Yih-Wen Kuo, assistant professor, M.F.A., Southern Illinois University
Susan R. Lally, assistant professor, M.F.A., Cranbrook Academy of Art
Avra S. Liatos, assistant professor, University of Athens
James D. Liatos, associate professor, University of Athens
Stanley Madeja, professor, Ph.D., University of Minnesota
Benjamin L. Mahmood, professor, Distinguished Research Professor, M.F.A., Ohio University
Ronald S. Mazanowski, professor, M.F.A., University of Wisconsin
John F. McCarthy, professor, M.F.A., School of the Art Institute of Chicago
Philip Melnick, professor, M.F.A., University of California at Los Angeles
Louis F. Mustard, associate professor, Ph.D., University of Iowa
Mark Nelson, professor, M.F.A., University of Michigan
Lee Be. Peck, professor, M.F.A., University of Wisconsin
Charlotte Rollman, associate professor, M.F.A., University of Illinois
John H. Rooney, Jr., professor, M.F.A., Syracuse University
Terri L. Swig, lecturer, M.A., Lindenwood College
Judith Testa, professor, Ph.D., University of Chicago
Bruce H. White, professor, Distinguished Research Professor, Ed.D., Teachers College, Columbia University
Harry J. Wirth, associate professor, B.S., University of Wisconsin, Milwaukee
Joseph M. Wood III, professor, M.F.A., Yale University
J. Terry Zeller, associate professor, Ph.D., University of Minnesota

The School of Art offers graduate programs leading to the degrees Master of Science, Master of Arts, and Master of Fine Arts. Its programs are accredited by the National Association of Schools of Art and Design.

The Master of Science degree with a major in art offers specializations in art education and art therapy. The specialization in education is designed for those students who wish to prepare for a specialist role in art education in addition to classroom teaching, while the specialization in art therapy is for those who wish to become registered art therapists. The Master of Arts degree is designed for those students who wish to concentrate their study in one of two specializations: studio art or art history. The Master of Fine Arts degree is designed primarily for those students who plan to prepare themselves for college teaching in one of the studio areas or for a profession in the fine and applied art fields.

Admission to graduate programs in the School of Art requires a baccalaureate degree in fine art, art education, art history, or a major in a closely related field. Students who do not have a major in art or in their field of specialization must remove deficiencies through the satisfactory completion of courses required by the School of Art. Students applying for fall, spring, or summer admission to any graduate degree program in the School of Art must submit all required credentials by March 1.

All M.A. and M.F.A. studio applicants must have successfully completed 27 semester hours of core courses (or the equivalent) as follows: basic drawing (6), life drawing (3), beginning design (6), art history survey (9), and art history elective (3). M.A. and M.F.A. studio majors should have 24 additional semester hours of undergraduate art courses (or the equivalent). Some or all of these additional 24 semester hours may be waived by a special portfolio review conducted by the adviser; the results of this portfolio review are to be reported to the graduate director of the School of Art. Any assigned deficiencies are to be listed on the required program of courses which must be filed for a graduate degree. An interim adviser is assigned for the student upon acceptance into the Graduate School. The student must establish contact with the interim adviser immediately. The interim adviser will offer guidance in the formulation of a three-member (minimum) graduate advisory committee which will administer the following: the planning of the program; examination of the portfolio for continuance (studio); preparation for the final comprehensive examination; and the completion of the research project, thesis, or one-person show requirements (students in M.S. programs exempted).

With the consent of the School of Art and the dean of the Graduate School, a maximum of 9 semester hours of graduate transfer credit may be accepted from other accredited colleges or universities toward a master of arts or master of science degree. Similarly, a maximum of 9 semester hours of graduate transfer credit from an M.A. program completed at another institution may be accepted toward the M.F.A. degree. A maximum of 9 semester hours of graduate credit earned at NIU as a student-at-large.
may be accepted toward an M.A., M.S., or M.F.A. degree. However, in meeting the requirements for a graduate degree in art, the credit transferred from other accredited institutions plus that earned at NIU as a student-at-large may not exceed 15 semester hours.

For a student pursuing the M.F.A. degree in art, up to 30 semester hours of course work from the M.A. program in art at Northern Illinois University may be counted toward meeting the requirements of the M.F.A. degree, with the consent of the student's M.F.A. advisory committee.

A graduate student admitted to any Master of Arts or Master of Fine Arts program may take up to 6 elective credits outside the School of Art, subject to prior approval of the student's graduate advisory committee. Courses in this category must be entered on the official program of courses.

The School of Art may retain for its collection any work produced in scheduled classes or presented for the one-person show. Information concerning the various programs can be obtained upon request from the Director of Graduate Programs in Art, School of Art.

Master of Science, Major in Art

Applicants for the Master of Science degree with a major in art and a specialization in art education must have an undergraduate degree with course work in art or art education subject to approval by the School of Art. Applicants for the specialization in art therapy must have an undergraduate degree in art, art education, psychology, or other related field approved by the School of Art. Students in either specialization must complete the following core courses:

**Required core courses (9)**

- ART 581, Learning Theory in Art Education (3) (Art therapy applicants with 12 hours of psychology may substitute ART 579)
- ART 583, Seminar in Art Education (3)
- ART 585T, Research Readings in Art Education (3)

**Additional art education requirements for the specialization in art education (12)**

- ART 582, Curriculum Development in Art Education (3)
- ART 584, History and Philosophy in Art Education (3)
- Electives in art education (6)

**Additional requirements for the specialization in art education (12)**

- Electives in art history, studio, related professional courses, or additional electives in art education (12)

**Total for the specialization in art education: 33 hours**

A maximum of 9 semester hours may be taken outside the School of Art. Any program requires the written approval of the major adviser.

**Additional requirements for the specialization in art therapy (24)**

- ART 575, Materials and Resources in Art Therapy (3)
- ART 576, Approaches and Techniques in Art Therapy (3)
- ART 577, Art as a Therapeutic Agent (3)
- ART 578, Case Studies in Art Therapy (3)
- ART 682, Clinical Internship in Art Therapy (6), OR AHPH 551, Clinical Supervision Practicum (6)
- ART 688, Supervision Seminar in Art Therapy (6)

**NOTE:** Prerequisites include 15 semester hours in studio art and 12 semester hours in psychology, including developmental and abnormal psychology.

**Special Requirements for Studio Degrees**

The School of Art requires a portfolio from all applicants for admission to the Graduate School who wish to pursue a studio degree in art (M.A. or M.F.A.). A prospective student must submit 10 35mm color slides of his or her work as it relates to the intended course of graduate study. An additional 10 slides may be submitted if desired in another area of competency in studio work. Each slide is to be identifiable with: name of applicant, title of work, date of execution, medium, and size. The slide should be marked with a red dot on the lower left.

Applicants may substitute film and/or electronic media where appropriate to the field of study. The materials must be submitted in reusable containers acceptable for the U.S. postal service mailing requirements, return postage included. All materials must be clearly identifiable with the name of the applicant, title of work, date of execution, medium, and return address. Although all possible care is taken, the School of Art cannot assume responsibility in case of loss or damage.

The final date for receiving all application materials (including portfolio, listing of works in the portfolio, a statement of career goals and objectives, transcripts, G.P.A., G.R.E. scores, and two letters of recommendation) is March 1.

Slides to be considered for admission purposes should be sent to the Director, Graduate Programs in Art, School of Art. Other application materials are to be submitted to the Graduate School.

**Master of Arts**

The degree Master of Arts provides for a specialization in one of two areas: studio art or art history. Students pursuing this degree must complete a minimum of 30 semester hours of graduate work and must choose their area of specialization early in their work toward the degree.
Specialization in Studio Art

Students who select the specialization in studio art must elect a particular area of study in studio courses, and pass a portfolio examination for continuance prior to the completion of 15 graduate semester hours.

ART 580, Seminar (3)
Art history electives (6)
Studio art electives (18)
ART 599B, One-Person Show and Documentation for the M.A. Studio Degree (3)

Three copies of a pictorial documentation of the one-person show with four copies of a catalog must be submitted to the Graduate School as the equivalent of a thesis. Guidelines for the documentation of the one-person show are available from the Director of Graduate Programs in Art.

Specialization in Art History

Students who select the specialization in art history must demonstrate a reading knowledge of one modern foreign language. A reading knowledge can be demonstrated by one of the following methods: receiving a grade of at least a B in FLFR 382, FLGE 382, FLFR 202, or FLIT 202; by achieving an average proficiency on the Graduate School Foreign Language Test of ETS in French or German; or by a translation examination prepared by the Department of Foreign Languages and Literatures, with the concurrence of the student’s major adviser, in one of those languages. Though the languages named above are customary, other languages may occasionally be substituted on recommendation of the student’s Graduate Advisory Committee.

ART 601, Seminar in Art History (6)
Art history electives (minimum—18)
ART 599A, Thesis (3)

A student in an art history degree program who has not taken ART 486 as an undergraduate must do so as a graduate student; this work may be for graduate credit.

Master of Fine Arts

Students in the Master of Fine Arts program must complete a minimum of 60 semester hours of graduate work and must choose a particular area of study in studio courses early in their work toward the degree. Students must pass a portfolio examination for continuance prior to the completion of 15 graduate semester hours.

ART 580, Seminar (6)
Art history electives (12)
Studio art electives (39)
ART 699B, One-Person Show and Documentation for the M.F.A. Studio Degree (3)

Three copies of a pictorial documentation of the one-person show with four copies of a catalog must be submitted to the Graduate School as the equivalent of a thesis. Guidelines for the documentation of the one-person show are available from the office of the Director of Graduate Programs in Art.

Foreign Study Programs

The School of Art sponsors a foreign study program designed to investigate, experience and analyze the art and culture of other parts of the world. This program was initiated in 1960 and has featured study tours to all the countries of Western Europe, to Russia, and to China and Japan, as well as to many of the Middle and Near Eastern countries. Residence programs have been sponsored in Italy, France, Austria, and Mexico.

A varied foreign study program is planned for the future. Interested students should contact the chair of the School of Art for current information.

Course Offerings

NOTE: All art courses designated with the phrase "may be repeated" are repeatable to a maximum number of semester hours to be determined by the student’s major adviser. Credit-hour limitations for other art courses are cited in their descriptions. Course enrollment of more than 6 credit hours per semester in one course requires consent of the School of Art.

410. MEDIA SYNTHESIS (3). Students will conduct research into the validity of combining and integrating various forms of electronic media. May be repeated up to 9 semester hours. PRQ: ART 370 or consent of the School of Art.

420. DESIGN FIELD EXPERIENCE (1-6).
A. Media Arts
B. Interior Architecture
C. Visual Communication
D. Photography

Cooperative work experience for design students. Cooperatively supervised professional practice with selected and/or approved design firms to provide a learning experience complementary to the student’s area of study in design. S/U grading system is used. May be repeated to a maximum of 6 semester hours. PRQ: Approval of the faculty field experience advisor in the design student’s area of study.

425. ART AND MUSIC (3). Crosslisted as MUSC 425X. The interrelationship of music and the visual arts in western Europe and the Americas. Offered jointly by the Schools of Art and Music.

455. ART OF CINEMATOGRAPHY (3). A continuation of the study of the concept and techniques of cinematography as an art form with an emphasis on independent projects. May be repeated to a maximum of 9 semester hours. PRQ: ART 355 or consent of the School of Art.

463. APPLICATION OF AESTHETICS, ART HISTORY, AND CRITICISM IN ART EDUCATION (3). A thematic and interdisciplinary approach to the application of aesthetic, art historical, and critical theory and methods to instructional practice in museums and elementary and secondary schools. Emphasis placed on alternative methods of presenting the content of aesthetics, art history, and criticism, and on the use of teacher-made and commercial instructional resources. PRQ: Consent of the School of Art.

465. INTRODUCTION TO MUSEUM STUDIES (3). Survey of the history and philosophy of museums and museum typology. Overview of the purposes, structure, and operations of museums with special attention to current issues and practices relating to ethics, collections, exhibitions, and education. Lectures, discussion, museum field trips, museum practicum. Research project. PRQ: Consent of the School of Art.

473. COMPUTER GRAPHICS (3). Intermediate and advanced concepts for programming aesthetic two- and three-dimensional computer graphics on the microcomputer. Emphasis on data construction and algorithmic imagery. PRQ: ART 370 or consent of the School of Art.

475. MEDIA AESTHETICS FOR ART EDUCATION (3). Exploring uses of visual technology to create aesthetic forms and effects for uses in teaching art. Conceptualization and development of innovative instructional materials, art performances or projects, and perceptual awareness units. May be repeated to a maximum of 9 semester hours. PRQ: Art major or consent of the School of Art.

476. ART OF THE EASTERN MEDITERRANEAN AND ANATOLIA (3). An analytical study of the art and architecture of the Eastern Mediterranean, Western Asia Minor, Anatolia, and the Levant Coast from the beginning of the Stone Age to the downfall of the Phoenician commercial empire.

480. ALTERNATIVE TEACHING EXPERIENCES (3-12). Internship teaching in community centers, social agencies, and other facilities offering educational programs outside of the public school pattern. Cooperatively supervised field experiences in alternative modes of instruction. PRQ: Successful completion of student teaching or approval of the art education faculty.

483. ART IN ELEMENTARY SCHOOLS (3). Adapting visual arts concepts derived from art history, art criticism, studio arts, and aesthetics as appropriate to the elementary child and the self-contained classroom.
Field trip, lecture, studio, critique, and micro teaching experiences. Not open to art majors.

484. INTERRELATED ARTS EDUCATION (3). Exploration of aesthetic concepts pertinent to education in the arts. Analysis of curricular structures that accommodate an education in combined arts and basic assumptions underlying these structures. Planning, developing, and implementing arts programs in the context of visual arts in K-12 educational systems.

486. ART HISTORICAL METHODOLOGY (3). Studies of various methodological approaches and tools employed in the discipline of art history. PRQ: 6 semester hours of art history survey or consent of the School of Art.


491. HISTORY OF PRINTS AND GRAPHIC PROCESSES (3). The development of woodcuts, etching, engraving, lithography, etc., in the history of art.

492. CONTEMPORARY ART (3). A study of current art directions, styles and attitudes and their relationships to contemporary society.

493. HISTORY OF ARCHITECTURE III: FROM 1900 (3). The study of building styles, theories, form, and construction as exemplified by the major architectural monuments from 1900 to the present.

496A. HISTORY OF DECORATIVE ARTS: FURNITURE (3). A chronological survey from ancient Egypt through the 20th century.

496B. HISTORY OF DECORATIVE ARTS: MINOR ARTS AND CRAFTS (3). A chronological survey from ancient Egypt through the 20th century.

497. HISTORY OF ARCHITECTURE I: TO 1400 (3). Building styles, theories, form, and construction as exemplified by the major architectural monuments from the ancient world through the end of the Middle Ages.

498. HISTORY OF ARCHITECTURE II: 1400-1900 (3). Building styles, theories, form, and construction as exemplified by the major architectural monuments from the Renaissance through the 19th century.

505. STORE PLANNING (3, 6, or 9). A study in interior space planning with emphasis on problem analysis and detailed problem solution. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

506. RESEARCH IN INTERIOR ARCHITECTURE (3). Examination of theoretical and empirical methodology for research in interior architecture culminating in designing and evaluating interior spaces. May be repeated. PRQ: Consent of the School of Art.

507. INTERIOR ARCHITECTURE I (3, 6, or 9). Special problems in interior architecture and space planning stressing preliminary proposals. Topics to be announced. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

509. ELECTRONIC MEDIA DESIGN I (3, 6, or 9). Selected problems in design with emphasis on computer-aided design. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

510. DESIGN (3). Selected problems in design. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

511. VISUAL COMMUNICATION (3 or 6). Advanced problems in visual communication. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

512. STUDIES IN DESIGN (3). Varied topics in design. Studio, lecture, and discussion or field trip. Topics to be announced. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

513. PHOTOGRAPHY I (3-6). Advanced work in photography with an emphasis on experimentation and the development of an individual approach. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

520. DRAWING I (3 or 6). Analytical studies of style and structure. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

523. PAINTING I (3, 6, or, with consent of the School of Art, 9). The development of individual style in painting. Extended independent study. May be repeated. A student may take two sections (3 credits each) concurrently with the same instructor or with different instructors. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

530. PRINTMAKING I (3 or 6). A. Intaglio. B. Lithography. C. Relief. D. Serigraphy. Individual development of skills and techniques in any of the stated areas of printmaking. May be repeated. Students may enroll in two separate areas concurrently. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

536. THE CONTEXTS OF DESIGN (3). Exploration of the contexts of professional design practice: global, business, and the design workplace. Examination of how design and business perceive their respective roles in the business marketplace and how design is used by business to make a significant contribution to business performance. PRQ: Consent of the School of Art.

537. DESIGN IN THE CONTEXT OF BUSINESS (3). Analysis of how design-oriented businesses are structured and evaluated with particular emphasis on the design function. The course examines the terminology, management, and controls which are essential to develop an understanding of how design is incorporated into successful businesses. PRQ: Consent of the School of Art.

538. THE VALUE OF DESIGN (3). Examination of design as translator and communicator to consumers of the determinants of value upon which business bases its prosperity. Particular emphasis is given to explicit methods for establishing the value of design applied to potential markets, products, and services. PRQ: Consent of the School of Art.

539. DESIGN AS A MANAGEMENT STRATEGY (3). Applied studies of the potential of design in the establishment and implementation of management strategy. Utilizes field and studio experiences to explore the relationship and role of design as an aspect of management strategy. PRQ: Consent of the School of Art.

540. DESIGN AND TECHNOLOGY (3). Impact of technology on the theory and practice of the design process from a historical as well as a contemporary viewpoint. Application of technology to design, both as a creative and as a management tool. Demonstrations, lectures, and case studies. PRQ: Consent of the School of Art.

541. CERAMICS I (3, 6, or, with consent of the School of Art, 9). Exploration of three-dimensional forms using clay and related materials. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

545. TECHNICAL PROBLEMS IN CERAMICS I (3). Theory and laboratory experience in glaze calculation and testing, clay body formulation and testing, engobe formulation, properties of glaze oxide, kiln firing, and kiln construction. Study of contemporary and historical examples of ceramics. Lecture and studio. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

551. METALWORK AND JEWELRY I (3, 6, or, with consent of the School of Art, 9). Intensive studio work in selected techniques and processes. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

554. MUSEUM ADMINISTRATION (3). Theory and practice of museum administration focusing on governance, legal issues, fund raising, financial and personnel management, planning, public relations, security, and physical facilities. Lectures, case studies, and discussion. PRQ: ART 465 or consent of the School of Art.

555. COLLECTIONS MANAGEMENT (3). Philosophy, practices, and issues involved in acquisition and care of collections, including collection development and cataloging methods, documentation/research of collections, conservation, and ethics. Lectures, case studies, museum visits, and museum practicum. PRQ: ART 465 or consent of the School of Art.

556. MUSEUM EXHIBITIONS AND INTERPRETATION (3). Theory and practices of exhibition planning, design, installation, and evaluation with emphasis on the interpretative function of exhibitions through labels, brochures, AV, and interactive devices. Lectures, practicum, exhibit critiques, class projects, and museum visits. Culminates in an exhibition
by the class in an NIU gallery/museum. PRQ: ART 465 or consent of the School of Art.

557. MUSEUM EDUCATION (3). History, philosophy, and practice of museum education. Study and practical application through class projects and practicum of planning and implementing public programming, tour techniques, museum-school services, and development and evaluation of educational materials and outreach programs. Lecture, individual projects, observation in museums, and practicum. PRQ: ART 465 or consent of the School of Art.

551. SCULPTURE I (3, 6, or, with consent of the School of Art, 9). Advanced individual development through work in various media. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.A. degree program or consent of the School of Art.

556. MEDIA STUDIES I (3, 6, or 9).
A. Cinematography
B. Video Art
C. Multi-Image Programming
D. Interactive Arts
Advanced study in media arts with an emphasis on individual approaches and independent research. Students may enroll in one, two, or three of the above listed subject areas concurrently, for 3, 6, or 9 credit hours in one of these subject areas, or any combination thereof with a maximum of 9 hours per semester. May be repeated. PRQ: Acceptance into M.A. or M.F.A. degree program, or consent of the School of Art.

570. FIBER/FABRIC I (3, 6, or 9).
A. Weaving
B. Printing and Dyeing
C. Off-Loom Construction
Intensive studio course in fiber/fabric. May be repeated. Students may enroll in three separate areas concurrently. PRQ: Acceptance into M.A. or M.F.A. program, or consent of the School of Art.

575. MATERIALS AND RESOURCES IN ART THERAPY (3). Study of the types of expression relevant to the practice of art therapy. Experiential involvement with various art processes, materials, tools, and equipment appropriate to art therapy. A survey of resources available to the art therapist. Implementation of information and experiences in a variety of activities. Lecture/discussion, studio, field experiences. PRQ: ART 577 or consent of the School of Art.

576. APPROACHES AND TECHNIQUES IN ART THERAPY (3). Study of psychological and philosophical approaches as they relate to and provide foundations for art therapy practice. Exploration of art therapy techniques used in a variety of settings. Direct involvement with approaches and techniques in a variety of activities. Lecture/discussion, studio, and field experiences. PRQ: ART 577 or consent of the School of Art.

577. INTRODUCTION TO ART AS A THERAPEUTIC AGENT (3). Survey of the history, theory, and practice of art therapy as related to art and art education. Readings in the literature. Exploration of educational and training opportunities. Individual in-depth problem related to art therapy. Observation of activities demonstrating current art therapy practices. Lecture/discussion, studio, and field observations.

578. CASE STUDIES IN ART THERAPY (3). An introduction to the diagnostic approaches and procedures used in art therapy. The preparation and presentation of case studies. Individual in-depth problem related to case studies. Lecture/discussion and field experience. PRQ: ART 577 or consent of the School of Art.

579. ART EDUCATION FOR THE HANDICAPPED AND GIFTED (3). Philosophies, instructional methods, practice, and experience with appropriate materials, resources, and opportunities related to art education in special education. Individual in-depth problem relating to art education for the handicapped and gifted. Designed for elementary, secondary, special education, art education, and art therapy majors. Lecture/discussion and field experience.

580. SEMINAR (3). Discussion of historical and contemporary issues in the arts. Topics to be announced. May be repeated.

581. LEARNING THEORY IN ART EDUCATION (3). A study of those theories of learning that are specifically related to the creative experience. The results of this study are applied to the problems of learning and teaching in art education; to questions of method, scope, and sequence in art programs.

582. CURRICULUM DEVELOPMENT IN ART EDUCATION (3). An investigation of cultural, developmental, psychological, and perceptual forces influencing curricular emphases. Analyzing the history and current trends in curriculum development. Learning to structure varieties of curriculum, and to formulate objectives for development of concepts and skills in art.

583. SEMINAR IN ART EDUCATION (3). Investigation and discussion of topics in art education as they relate to issues in the visual arts, society, and education programs.

584. HISTORY AND PHILOSOPHY OF ART EDUCATION (3). Survey and appraisal of the historical and philosophical basis for teaching of art. Consideration of current objectives with implications for change.

585. RESEARCH READINGS IN ART EDUCATION (3). Critical evaluation of primary research. Applying criteria for evaluating: theoretical, descriptive (historical, ethnographic, empirical, and case studies), and experimental research.

586. ADMINISTRATION AND SUPERVISION OF ART PROGRAMS (3). An analysis of the role of administrators in the visual arts. Developing procedures for the examination of groups and interpersonal relations. Organizing, financing, staffing, and evaluating art programs.

587. EVALUATION IN ART EDUCATION (3). Intent, function, and consequences of evaluation in art education. Survey of evaluation of art programs and curricula. Diagnostic, formative, and summative evaluation of art. Methods and instrumentation related to evaluation in art education.

588. ALTERNATIVE METHODS OF INSTRUCTION IN ART (3). Exploration of teaching approaches in art that vary in response to desired outcomes of learning. Use of models in the identification of teaching styles and in obtaining feedback. Planning and teaching for learning situations specific to K-12 art education.

589. TOPICS IN ART (1-6). Concentrated study in art, Studio, lecture and discussion, or field trip. Topics to be announced. May be repeated for a maximum of 6 semester hours as elective credit to be applied toward an advanced degree with School of Art approval. May not be substituted for art history or seminar.

590. INDEPENDENT STUDY (1-9). Work on individual problems in the student's chosen field. May be repeated. PRQ: Consent of the School of Art and instructor.

591. STUDIES IN MEDIEVAL ART (3). Specific topics chosen from the following list. May be repeated, but credit is limited to 3 semester hours per topic.
A. Early Christian and Early Byzantine Art: ca. 330-843
B. Mid-Byzantine and Late Byzantine Art: ca. 843-1453
C. Post-early Christian Art in Western Europe and Romanesque Art: ca. 400-1200
D. Gothic Art: ca. 1150-1400

592. STUDIES IN ITALIAN RENAISSANCE ART (3). Specific topics chosen from the following list. May be repeated, but credit is limited to 3 semester hours per topic.
A. Early Renaissance Art
B. High Renaissance Art

593. STUDIES IN NORTHERN RENAISSANCE ART (3). Specific topics chosen from the following list. May be repeated, but credit is limited to 3 semester hours per topic.
A. 1300 to ca. 1480. Manuscript Illumination and Panel Painting.
B. 1480 to ca. 1600. Manuscript Illumination, Panel Painting, and Printmaking.

594. STUDIES IN 17TH AND 18TH CENTURY ART (3). Specific topics chosen from the following list. May be repeated, but credit is limited to 3 semester hours per topic.
A. Baroque Art in Southern Europe
B. Baroque Art in Northern Europe
C. 18th Century European Art

595. STUDIES IN 19TH CENTURY ART (3). Specific subjects in 19th century art from the time of the French Revolution to ca. 1900. May be repeated, but credit is limited to 3 semester hours per subject.

596. STUDIES IN AMERICAN ART (3). Specific subjects chosen from the development of art in America from ca. 1670 to the present. May be repeated, but credit is limited to 3 semester hours per subject.
598. STUDIES IN ORIENTAL ART (3). Specific topics chosen from the following list. May be repeated, but credit is limited to 3 semester hours per topic.
A. Chinese Art
B. Japanese Art
C. Indian and Southeast Asian Art
D. Islamic Art

599A. THESIS (1-3).

599B. ONE-PERSON SHOW AND DOCUMENTATION FOR THE M.A. STUDIO DEGREE (1-3).

600. STUDIES IN ANCIENT ART (3). Specific topics chosen from the following list. May be repeated, but credit is limited to 3 semester hours per topic.
A. Egyptian Art
B. Mesopotamian Art—Near East
C. Aegean Art: Minoan/Mycenaean
D. Classical Art: Greece
E. Etruscan and Roman Art

601. SEMINAR IN ART HISTORY (3). Investigation of specific topics in art history. Topics to be announced. May be repeated but credit is limited to 3 semester hours per topic.

602. STUDIES IN LATIN-AMERICAN ART (3). Specific subjects chosen from the arts of Central or South America. May be repeated, but credit is limited to 3 semester hours per subject.

603. INDEPENDENT STUDY IN THE HISTORY OF ART (3). A course designed for individual research in special problems and original subjects in art history as determined by the student and adviser. May be repeated. PRQ: Permission of adviser and graduate standing.

604. STUDIES IN AFRICAN, OCEANIAN, AND NATIVE AMERICAN ART (3). Specific subjects chosen from the arts of Africa, Oceania, or the Americas. May be repeated, but credit is limited to 3 semester hours per subject.

605. STUDIES IN 20TH CENTURY ART (3). Specific subjects chosen from the development of contemporary art form ca. 1900 to the present. May be repeated, but credit is limited to 3 semester hours per subject.

606. INTERIOR ARCHITECTURE II (3, 6, or 9). Advanced problems in interior architecture including both commercial and domestic fields. May be repeated. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

607. ELECTRONIC MEDIA DESIGN II (3, 6, or 9). Advanced research problems in computer-aided design. May be repeated. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

613. PHOTOGRAPHY II (3 or 6). The investigation of creative problems in photography through extended independent study. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

620. DRAWING II (3 or 6). Advanced problems in drawing. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

623. PAINTING II (3, 6, or, with consent of the School of Art, 9). Individual development of style. Extended independent study. May be repeated. Students may enroll in two separate sections concurrently. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

628. TECHNICAL AND HISTORICAL RESOURCES OF THE ARTIST: PAINTING, DRAWING, PRINTMAKING (3). The media and processes of the artist and their historical significance. The study emphasizes selected techniques from the 14th through 20th centuries. Studio and lecture. PRQ: Consent of the School of Art.

629. TECHNICAL AND HISTORICAL RESOURCES OF THE ARTIST: ADVANCED INDEPENDENT STUDY (3). In-depth research and/or studio application in specific historical techniques. May be repeated to a maximum of 12 semester hours. PRQ: Consent of the School of Art. Recommended: ART 628.

630. PRINTMAKING II (3 or 6).
A. Intaglio
B. Lithography
C. Relief
D. Serigraphy

631. PRINTMAKING II (3 or 6). Individual technical exploration and aesthetic development in any of the stated areas of printmaking. May be repeated. Students may enroll in two separate areas concurrently. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

640. TECHNICAL PROBLEMS IN CERAMICS II (3).
A. Clay Body Formulation
B. Glaze Formulation
C. Clay Body Selection
D. Glaze Selection

645. TECHNICAL PROBLEMS IN CERAMICS II (3). Advanced theory and laboratory experience in glaze calculation and testing, clay body formulation and testing, engobe formulation, properties of glaze oxide, kiln firing and kiln construction. Research into contemporary and historical examples of ceramics. Lecture and studio. May be repeated. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

651. METALWORK AND JEWELRY II (3, 6, or, with consent of the School of Art, 9). Advanced development of media arts. Students may enroll in one, two, or three of the above listed subject areas concurrently, for 3, 6, or 9 credit hours in one of these subject areas, or any combination thereof with a maximum of 9 hours per semester. May be repeated. PRQ: Acceptance into M.F.A. degree program or consent of the School of Art.

655. MUSEUM INTERNSHIP (3-6). A minimum of four months of full-time (40 hours per week) experience in one or more departments of a museum, gallery, or arts center under the supervision of a member of the professional staff. Requires experience in day-to-day museum operations and completion of a major project arranged with the intern's museum supervisor and a museum studies faculty member. Satisfactory/Unsatisfactory (S/U) grading system is used.

660. MEDIA STUDIES II (3, 6, or 9).
A. Cinematography
B. Video Art
C. Multi-Image Programming
D. Intermedia Arts

665. ADMINISTRATION AND SUPERVISION OF ARTS PROGRAMS (3).
A. Administration and Supervision of Arts Programs
B. Administration and Supervision of Arts Programs
C. Media Aesthetics
D. Special Topics

666. ADMINISTRATION AND SUPERVISION OF ARTS PROGRAMS (3).
A. Administration and Supervision of Arts Programs
B. Administration and Supervision of Arts Programs
C. Media Aesthetics
D. Special Topics

670. FIBER/FABRIC II (3, 6, or 9).
A. Weaving
B. Printing and Dyeing
C. Off-Loom Construction

680. TEACHING ART AT THE COLLEGE LEVEL: INTERNSHIP (3). Teaching art at the college level under the supervision of a master teacher. May not be used to meet the credit-hour requirements for the M.F.A. degree with a specialization in studio art or for the M.F.A. degree.

681. RESEARCH TOPICS: INDEPENDENT STUDY (3 or 6).
A. Art Curriculum
B. Ethnicity in Art Education
C. Evaluation in Art Education
D. Art Museum Education
E. Art Education
F. Art Education
G. Art Museum Education
H. Art Museum Education
I. Art Museum Education
J. Interrelated Studies in Art Education
K. Interrelated Studies in Art Education
L. Interrelated Studies in Art Education
M. Interrelated Studies in Art Education
N. Interrelated Studies in Art Education
O. Interrelated Studies in Art Education
P. Interrelated Studies in Art Education
Q. Interrelated Studies in Art Education
R. Interrelated Studies in Art Education
S. Interrelated Studies in Art Education
T. Interrelated Studies in Art Education
U. Interrelated Studies in Art Education
V. Interrelated Studies in Art Education
W. Interrelated Studies in Art Education
X. Interrelated Studies in Art Education
Y. Interrelated Studies in Art Education
Z. Interrelated Studies in Art Education

682. ADVANCED INDEPENDENT STUDY (3). In-depth research and/or studio application in specific historical techniques. May be repeated to a maximum of 12 semester hours. PRQ: Consent of the School of Art. Recommended: ART 628.
be repeated to a maximum of 6 semester hours. PRQ: ART 684, and
at least one 500-level course in art related to topic selected, and
completion of all other requirements for the M.S. degree and approval
of the art education adviser.

682. CLINICAL INTERNSHIP IN ART THERAPY (3). Practicum in a
clinical, rehabilitative, or educational setting with a registered art therapist.
Cooperatively supervised contact with a variety of clients as well as
related activities. Must be taken concurrently both terms with ART 688
to a maximum of 6 semester hours. PRQ: Successful completion of
course work and approval of the department. CRQ: ART 688 or consent
of the School of Art.

683. DOCTORAL SEMINAR IN ART EDUCATION (1). An analysis of
selected problems and issues in art education. PRQ: Admission to Doctor
of Education program, major in curriculum and instruction. May be
repeated to a maximum of 4 semester hours, but credit is limited to
1 hour each semester.

684. RESEARCH METHODS IN ART EDUCATION (3). Methods for
conducting theoretical, descriptive, and experimental research including
statistical analysis of data. PRQ: ART 581 and ART 585T, or consent
of the School of Art.

685. TOPICS IN ART HISTORY (3). In-depth research on specific artists,
movements, periods, or problems in the history of art. Topics to be
announced. May be repeated, but credit is limited to 3 semester hours
per topic.

688. SUPERVISION SEMINAR IN ART THERAPY (3). Designed for the
student engaged in the internship experience. Focus on professional
issues involving the role of the art therapist in specialized settings;
interface between art therapy and verbal therapy; advanced understand­
ing of graphic language; specific applications and populations; and
preparation for presenting art therapy inservices to internship site staff.
Must be taken concurrently both terms with ART 682 to a maximum
of 6 semester hours. PRQ: Consent of the School of Art. CRQ: ART
682.

699B. ONE-PERSON SHOW AND DOCUMENTATION FOR THE M.F.A.
STUDIO DEGREE (1-3).
GRADUATE FACULTY

Paul Bauer, acting chair, associate professor, D.M., Northwestern University
Stephen E. Squires, assistant chair, associate professor, M.M., California State University, Northridge
Shmuel D. Ashkenasi, professor, Diploma, Curtis Institute of Music
Jan M. Bach, professor, Distinguished Research Professor, D.M.A., University of Illinois
James Berkenstock, associate professor, Ph.D., Northwestern University
Timothy Blickhan, professor, D.M.A., University of Illinois
Robert Chappell, associate professor, M.M., North Texas State University
Lee Cloud, associate professor, D.M.A., University of Iowa
Stephen Duke, associate professor, M.M., North Texas State University
John Fairfield, associate professor, M.M., Northwestern University
Robert Fleisher, associate professor, D.M.A., University of Illinois
William Goldenberg, associate professor, D.M., Indiana University
Robert A. Green, professor, Ph.D., Indiana University
Kuo-Huang Han, professor, Ph.D., Northwestern University
Richard T. Holly, associate professor, M.M., East Carolina University
Marc Johnson, professor, M.M., Catholic University of America
Harold Kafer, professor, Ph.D., University of North Texas
William Koehler, associate professor, D.M.A., University of Texas, Austin
Peter Middleton, associate professor, M.A., University of California, San Diego
Ronald J. Modell, professor, M.M., University of Tulsa
Myron Myers, associate professor, M.M., University of Southern California
G. Allan O’Connor, professor, M.M., University of Illinois
James Phelps, assistant professor, D.M.A., University of North Texas
Mark Ponzo, assistant professor, D.M.A., Eastman School of Music
Diane Ragains, associate professor, M.M., Chicago Conservatory of Music
Lawrence R. Rast, professor, Ph.D., Northwestern University
Robert Reeves, professor, D.M., Northwestern University
Miguel A. Roig-Francoli, assistant professor, Ph.D., Indiana University
Elwood L. Smith, professor, D.M., Indiana University
Mathias J. Tacke, professor, Diploma, Northwest German Music Academy
Laurel Thurman, associate professor, D.M.A., University of Arizona
Donald L. Walker, professor, M.S., Juilliard School of Music
Melvin Warner, professor, M.M., University of Southern California
Richard Young, professor, M.M., Catholic University

The School of Music offers graduate majors in music education and in performance and pedagogy leading to the Master of Music degree. The School of Music also offers an individualized program in the Master of Music degree and a Performer's Certificate. The School of Music is fully accredited by the National Association of Schools of Music.

Master of Music

The Master of Music degree may be earned with a major in music education, performance and pedagogy in keyboard instruments, voice, or band and orchestral instruments, or with an individually designed program.

Only those persons whose undergraduate preparation has been at least equivalent to the comparable undergraduate music curriculum at Northern Illinois University will be admitted to a program leading to the Master of Music degree. Students whose previous work fails to meet these requirements may in some cases be permitted to begin graduate work in music. They will be required, however, to make up any deficiencies, as determined by the School of Music, before being admitted to a Master of Music program.

The completion of the degree Bachelor of Music with a performance major is the normal prerequisite for admission to a course of study leading to the Master of Music degree in performance and pedagogy. Students holding the B.S., B.A., or B.M.E. degree may be eligible, however, if, in the opinion of the music faculty, they have reached the necessary level of proficiency in the major performance area before admission. All students working toward all Master of Music degrees must perform an audition in their principal performance area and/or meet alternative requirements prescribed in the specific major.

Students who wish primary private study must pass an audition. Students will be considered for secondary private study without audition. All students must take the School of Music Diagnostic Examination prior to admission. As a result of this examination, some students may be required to take some specific courses for credit as part of their program of study.

Applicants to the master's program in music are normally notified of an admission decision within three weeks of receipt of the completed application.

In partial fulfillment of graduate requirements, a student pursuing the Master of Music degree in performance and pedagogy must prepare and perform a full-length public recital. Students pursuing the Master of Music degree must pass an audition in their principal performance area and present a formal public recital; write a thesis, a transcription, or an original composition; or elect a non-thesis option.

Students pursuing a master's program are permitted to take 6 semester hours of selected studies in music (MUSC 619, MUSC 639, MUSC 669, MUSC 689) toward their 32-hour master's degree. Students pursuing the individualized major program are permitted to take 12 semester hours of selected studies (MUSC 619, MUSC 639, MUSC 669, MUSC 689) toward that 32-hour requirement. With the approval of the School of Music and the office of the dean of the Graduate School, a maximum combined total of 6 semester hours of graduate credit for courses taken at other accredited institutions for which transfer credit is granted plus credit earned in courses at NIU as a student-at-large may be counted toward meeting the requirements for the Master of Music degree.
Major in Music Education

To be admitted to the music education program, students must satisfactorily meet two of the following four conditions:

1. Intensive interview with two faculty members from the music education area, one of them being the area coordinator.
2. Submission of tapes/cassettes and programs of choral and/or instrumental performances.
3. Classroom visit by faculty for the purpose of observing and evaluating the student in his or her teaching situation.
4. Audition in a major performance area.

Option 1 (thesis)

1. MUSC 584, Techniques of Research in Music (should be completed during first term of study) (3)
2. Music Education (9-12)
   a. MUSC 585, Foundations of Music Education (3)
   b. Music education courses (6-9)
3. Music history and literature and/or music theory and composition (10)
   a. MUSC 533, Seminar in Musical Research (3) (Should be completed during the first term of study.)
   b. Electives in history and literature and/or theory and composition (7)
4. Performance and pedagogy (13)
   a. Private voice study (8)
   b. MUSC 581, Pedagogy of Singing (3)
   c. Ensembles (2)
   MUSC 590B, Opera Workshop (1)
   Elective from the following (1)
   MUSC 590A, Madrigal Singers (1)
   MUSC 590B, Opera Workshop (1)
   MUSC 596, Concert Choir (1)
5. Music electives (3)
6. MUSC 599D, Thesis/Final Project (thesis, recital, transcription, or original composition) (4)
   If MUSC 599D results in a recital, two copies of the master tape recording must be submitted to the Graduate School.

Option 2 (non-thesis)

The basic requirements are the same as for Option 1, except that MUSC 599D is not required. Instead, 4 semester hours may be chosen from music or any other field with the adviser's consent.

Total: 32 semester hours

Major in Performance and Pedagogy

Audition: Applicants must be prepared to perform a full-length program of undergraduate "senior recital" caliber or higher. Where distance precludes an "in person" audition, a tape recording (7 1/2 ips) may be submitted. Such a tape should contain a full recital program.

Keyboard Instruments

1. Music history and literature or music theory and composition (3)
2. MUSC 533, Seminar in Musical Research (3) (Should be completed during the first term of study.)
3. MUSC 565, Accompanying (1)
4. Private keyboard study (6)
5. MUSC 591J, Keyboard Ensemble (1)
6. MUSC 599A, Final Recital (4)
   Two copies of the master tape recording must be submitted to the Graduate School.
7. Electives (5)

Students will choose one of the following areas of study, consistent with their educational goals:

Area 1. Performance and Pedagogy (9)
   Private keyboard study (2)
   MUSC 575A, Keyboard Methods and Materials: Piano (3), or
   MUSC 575B, Keyboard Methods and Materials: Harpsichord (3), or
   MUSC 575C, Keyboard Methods and Materials: Organ (3)
   MUSC 435 & MUSC 436, Organ Literature I & II (4), or
   MUSC 437 & MUSC 438, Piano Literature I & II (4) [Students who can demonstrate proficiency in these subjects may substitute any 4 semester hours within the area.]

Area 2. Accompanying and Chamber Music (9)
   MUSC 565, Accompanying (1)
   MUSC 591J, Keyboard Ensemble (1)

MUSC 537, Chamber Music Studies (3)
MUSC 567 & MUSC 569, Diction for Pianists I & II (4)
Total: 32 semester hours

Voice

1. Music history and literature and/or music theory and composition (10)
   a. MUSC 533, Seminar in Musical Research (3) (Should be completed during the first term of study.)
   b. Electives in history and literature and/or theory and composition (7)
2. Performance and pedagogy (13)
   a. Private voice study (8)
   b. MUSC 581, Pedagogy of Singing (3)
   c. Ensembles (2)
   MUSC 590B, Opera Workshop (1)
   Elective from the following (1)
   MUSC 590A, Madrigal Singers (1)
   MUSC 590B, Opera Workshop (1)
   MUSC 596, Concert Choir (1)
3. MUSC 599A, Final Recital (4)
   Two copies of the master tape recording must be submitted to the Graduate School.
4. Electives (5)
Total: 32 semester hours

Band and Orchestral Instruments

1. Music history and literature and/or music theory and composition (10)
   a. MUSC 533, Seminar in Musical Research (3) (Should be completed during the first term of study.)
   b. Electives in history and literature and/or theory and composition (7)
2. Performance and pedagogy (12)
   a. Private instrumental study (8)
   b. MUSC 570, Music Instructional Techniques and Materials: Woodwinds (2),
      OR MUSC 571, Music Instructional Techniques and Materials: Brasses (2),
      OR MUSC 572, Music Instructional Techniques and Materials: Percussion (2),
      OR MUSC 574, Music Instructional Techniques and Materials: Strings (2)
   c. Ensembles (2)
3. MUSC 599A, Final Recital (4)
   Two copies of the master tape recording must be submitted to the Graduate School.
4. Electives (6)
Total: 32 semester hours

Individualized Major Program

A student may design an individualized Master of Music degree program of 32 semester hours selected from existing courses, seminars, independent study, internships, or special projects, both on and off the campus. While a program so designed may share some features of the stated majors, its principal thrust should be distinctive. Individualized programs may consist in part of interdisciplinary or multidisciplinary courses which combine music study with such special areas as anthropology, art, business, computer science, dance, theater, electronics, ethnic studies, mental health, or special education; or they may concentrate entirely on music.

After satisfying published Graduate School and School of Music requirements for admission, the applicant must demonstrate qualifications for this program in at least one of the following ways:

1. Demonstration of outstanding musicianship in a performance audition.
2. Demonstration of creative ability through written compositions, tapes, or improvisations.

Total: 32 semester hours
3. Demonstration of scholarly competence in music history, music theory, or music teaching through the submission of investigative or research papers.
4. A distinctive record of professional achievement.

When competence in a selected field, other than music, is not evident at the time of application, provisional acceptance may be granted, provided deficiencies are removed in accordance with Graduate School time limits.

After acceptance, each student will be assigned an adviser with whom he or she will prepare a program proposal. Each program must be approved by a committee representing the School of Music, which may in turn seek the advice of another department whose courses are included in the program. Normally, at least one half of the program will be in the School of Music. At the conclusion of study, the student must substantiate to the committee that the specified goals have been met.

All students pursuing the individualized major are required to complete either MUSC 533, Seminar in Musical Research (3); or MUSC 584, Techniques of Research in Music (3). (Should be completed during the first semester of study).

**Performer's Certificate**

The Performer's Certificate program is a 24-semester-hour post-master's program which includes private instruction, ensemble experience, research related to performance, a master class, lecture-recital, and two full recitals, the second of which is prepared independently by the candidate without applied coaching or instruction. The purpose of the program is to develop fully independent professional musicians. Because the program is highly specialized and concentrated, all requirements (with the exception of the Final Recital) are expected to be completed in consecutive semesters.

Applicants for the Performer's Certificate program should consult with the School of Music chair or coordinator of graduate studies. To be eligible for admission, students must normally have completed equivalent to that required for the Master of Music degree at Northern Illinois University. Applicants will be required to perform an audition, or submit a complete recording representative of their performance ability.

The Performer's Certificate is not a formal graduate degree. In some cases, students who demonstrate exceptional performing abilities, as determined by the faculty of the School of Music for admission directly into the Performer's Certificate program.

Applicants may be granted, provided deficiencies are removed in accordance with Graduate School time limits.

**Course Offerings**

NOTE: All music courses designated with the phrase "may be repeated" are repeatable to a maximum number of semester hours to be determined by the student's major adviser. Credit-hour limitations for other music courses are cited in their descriptions.

680. INTERNSHIP IN MUSIC (1-4).
   A. Composition and Arranging
   B. Recording Techniques
   C. Performance
   D. Music Industry
   E. Music Education

Cooperatively supervised, full- or part-time professional field experience with approved organizations or individuals, to provide a learning experience complementary to the student's anticipated career goals. May be repeated to a maximum of 4 semester hours. S/U grading basis is used. PRQ: Consent of the School of Music.

**Music History and Literature**

421. TOPIC STUDIES IN ETHNOMUSICOLOGY (3). Studies and reports on special topics in world music: bibliography, discography, instruments, etc. May be repeated to a maximum of 6 semester hours. PRQ: MUSC 324 or MUSC 325, or consent of the School of Music.

422. JAZZ HISTORY (3). Significant changes and developments in jazz. May be repeated to a maximum of 4 semester hours. S/U grading basis is used. PRQ: Consent of the School of Music.

423. BLACK MUSIC (3). An historical examination of black music from 1619 to the present. Analysis of musical styles including blues, rag, jazz, rhythm and blues, and soul, within the social and cultural context of American life.

424. PERFORMANCE PRACTICE BEFORE 1750 (3). The study of music performance in the Medieval, Renaissance, and Baroque periods. PRQ: MUSC 321 or consent of the School of Music.

425X. ART AND MUSIC (3). ART 425. The interrelationship of music and the visual arts in western Europe and the Americas. Offered jointly by the Schools of Art and Music.

426. AMERICAN MUSIC IN THE CONCERT TRADITION (3). The development of solo, chamber, symphonic, and choral music, and opera from the Moravians of colonial America to the American experimental composers of the 20th century. PRQ: MUSC 322 or consent of the School of Music.
427. AMERICAN MUSIC IN THE FOLK AND POPULAR TRADITIONS (3). A survey of American vernacular and popular music since colonial times including folk songs and spirituals, the music of New England tunesmiths, music for social and entertainment purposes, and an introduction to the music of native Americans.

431. MUSIC OF SOUTHEAST ASIA (3). Study of the music of Southeast Asia with emphasis on the music of Indonesian gamelan.

432. MUSIC OF CHINA (3). Study of the music of China with emphasis on existing genres.

435. ORGAN LITERATURE I (2). A survey of organ literature from 1300 to 1800, excluding the works of J. S. Bach. PRQ: MUSC 202 or consent of the School of Music.

436. ORGAN LITERATURE II (2). A survey of the organ works of J. S. Bach and classical, romantic, and contemporary literature. PRQ: MUSC 202 or consent of the School of Music.

437. PIANO LITERATURE I (2). A survey of clavier and piano literature to the mid-19th century. PRQ: MUSC 202 or consent of the School of Music.

438. PIANO LITERATURE II (2). A survey of romantic and contemporary piano literature. PRQ: MUSC 202 or consent of the School of Music.

439. GUITAR LITERATURE (2). A survey of lute, vihuela, and guitar literature from the Renaissance to the present. PRQ: MUSC 202 or consent of the School of Music.

523. 20TH CENTURY IDIOMS I (3). Musical developments from 1890 to 1950; impressionism; primitivism; expressionism; jazz influences; early serial techniques.

526. MEDIEVAL MUSIC (3). Music from ca. 600-1400 with emphasis on musical style and musical style changes. PRQ: MUSC 321 and MUSC 322, or consent of the School of Music.

527. THE RENAISSANCE (3). Music in the Renaissance (ca. 1450-1600), with study of representative styles.

528. BAROQUE IDIOMS AND STYLES (3). Selected studies in music of the baroque period.

529. THE CLASSIC ERA (3). European music from ca. 1730-1820. PRQ: MUSC 321 and MUSC 322, or consent of the School of Music.

530. THE ROMANTIC ERA (3). European music from ca. 1820-1900. PRQ: MUSC 321 and MUSC 322, or consent of the School of Music.

531. 20TH CENTURY IDIOMS II (3). Historical, organizational, and theoretical aspects of avant garde and experimental compositions, including electronic and computer music. PRQ: MUSC 523 or consent of the School of Music.

533. SEMINAR IN MUSICAL RESEARCH (3). The technique of writing and speaking about music. Reading and critical evaluation of writings about music. Survey of resources for musical research, such as reference materials and the means of locating sources and editions.

534. SEMINAR IN MUSIC HISTORY AND LITERATURE (3). Research and analysis in selected areas of music history and literature. May be repeated to a maximum of 6 semester hours. PRQ: MUSC 420 or consent of the School of Music.

537. CHAMBER MUSIC STUDIES (3). Independent studies in chamber music analysis and performance practices.

599B. THESIS (1-4). The preparation and completion of a thesis. May be repeated to a maximum of 4 semester hours.

620. THE ART SONG (3). The history of the art song from the early 17th century to the present with particular emphasis on the German lied.

621. OPERATIC LITERATURE (3). The history and development of the opera from the Florentine camerata to the present.

622. SYMPHONIC LITERATURE (3). A study of orchestral music, with stress on the symphony and solo concerto. Analytical techniques applied to selected works.

639. SELECTED STUDIES IN MUSIC HISTORY AND LITERATURE (1-4). Independent or small-group study of selected topics. Participation in more than one independent study per semester permitted by consent of the School of Music chair. May be repeated. See specific degree requirements for limitations. PRQ: Consent of the School of Music.

Music Theory and Composition

400. RECORDING TECHNIQUES (3). Laboratory study of the techniques of professional recording as applied directly to all phases of musical storage and reproduction. Emphasis on gaining expertise with microphones, acoustics, multitrack recording, professional mixing techniques, etc. PRQ: Consent of the School of Music.

401. ADVANCED RECORDING PROJECTS (3). Continuation of MUSC 400. Microphone theory and applications, audio console operation including, but not restricted to, signal processing, monitor mixing, overdubbing, and multitrack techniques; preparation of master tape suitable for disc recording; some study of current practices in digital recording and console automation. May be repeated. PRQ: MUSC 400 or consent of the School of Music.

407. MODAL COUNTERPOINT (3). Class performance, analysis, and writing of counterpoint in Renaissance style as exemplified by works of such composers as Josquin, Lassus, Palestrina, and others. Preliminary study of Gregorian chant. PRQ: MUSC 202 or consent of the School of Music.

408. FORM AND ANALYSIS (3). The presentation of the standard historical forms of tonal music and the development of technical skills necessary to analyze tonal compositions. Emphasis on the development of analytical technique. PRQ: MUSC 202 or consent of the School of Music.

409. TONAL COUNTERPOINT (3). Class performance, analysis, and writing of counterpoint as employed in 18th century style. PRQ: MUSC 202 or consent of the School of Music.

410. PASSACAGLIA, CANON, AND FUGUE (3). The passacaglia, canon, and fugue as found in all types of musical forms and in all musical periods, past and present. PRQ: MUSC 202 or consent of the School of Music.

411. 20TH CENTURY TECHNIQUES (3). Aural study, analysis, and practical application of such 20th century compositional devices as modality, dissonant counterpoint, polytonality, atonality, serialism, tone clusters, polymeters, improvisation, aleatoric techniques, graphic notation, multiphonics, and others. PRQ: MUSC 202 or consent of the School of Music.

412. DEVELOPMENT AND PRACTICE OF ELECTRONIC MUSIC (3). A comprehensive examination of the development and practices of all phases of electronic and computer music with both historical and projected examinations of applications in composition, performance and research. PRQ: MUSC 202 or consent of the School of Music.

418. PHYSICS OF MUSICAL INSTRUMENTS AND SOUND (3). The science of musical sound and the physical principles involved in the production of music by the various instruments and the voice. Elements of architectural acoustics of music rooms and acoustical engineering of electronic recorders and reproducers. Open to nonmusic majors by consent of the School of Music.

500. COMPOSITION: SECONDARY (1). Selected studies in the techniques of composing for acoustic media. Not open to composition majors. May be repeated. PRQ: Consent of the School of Music.

504. SEMINAR IN THEORY AND COMPOSITION (3). Projects and studies in theory and composition. Topic to be announced. May be repeated to a maximum of 6 semester hours.

505. ORCHESTRATION (3). The scoring of original and other works for various combinations of instruments as well as one complete score for full symphony orchestra. PRQ: Consent of the School of Music.

507. WIND AND PERCUSSION SCORING (3). Scoring for diverse wind and percussion ensembles. PRQ: Consent of the School of Music.

508. VOCAL ARRANGING (3). The practical exposition of the principles of choral composing and arranging for various vocal combinations, as well as developing a style of writing for single voice with accompaniment.

509. JAZZ ARRANGING I (2). Scoring techniques for jazz and popular ensembles. PRQ: MUSC 202 and MUSC 205, or consent of the School of Music.
510. JAZZ ARRANGING II (2). Continuation of MUSC 509. Advanced scoring techniques for jazz and popular ensembles. PRQ: MUSC 509 or consent of the School of Music.


512. ELECTRONIC AND COMPUTER MUSIC II (2). Further study and experimentation with techniques introduced in MUSC 511. Electronic and Computer Music I. Emphasis on implementing techniques studied thus far in more extensive electronic music compositions. PRQ: MUSC 511 and consent of the School of Music.

590C. THESIS/FINAL PROJECT (1-4). The preparation and completion of a thesis or final project, the choice to be approved by the School of Music graduate faculty. May be repeated to a maximum of 4 semester hours.

600. COMPOSITION: PRIMARY (2). Individualized and/or group study and writing of small and large musical forms. May be repeated. PRQ: Major in composition or consent of the School of Music.

601. ELECTRONIC AND HARMONIC THEORIES (3). Music theory from antiquity through the present.

611. ELECTRONIC AND COMPUTER MUSIC III (2). Algorithmic composition. Study of how composers have used computers to create and perform musical works. Emphasis on the design of original algorithms and their use in the composition/performance of musical works. PRQ: MUSC 512 and consent of the School of Music.

612. ELECTRONIC AND COMPUTER MUSIC IV (2). Further study and experimentation with algorithmic composition. Emphasis on creating more expansive computer music systems through the integration of hardware and software. PRQ: Consent of the School of Music.

619. SELECTED STUDIES IN MUSIC THEORY (1-4). Independent or small-group study of selected topics. Participation in more than one independent study per term permitted by consent of the School of Music. May be repeated. See specific degree requirements for limitations. PRQ: Consent of the School of Music.

Music Performance

462. SURVEY OF THE MUSIC INDUSTRY (2). A study of the basic workings of the music business including copyright law, contracts, the record industry, music publishing, artist management, and other music-related careers.

464. WORKSHOP IN THE FELDENKRAIS METHOD FOR THE PERFORMING ARTS (3). Crosslisted as TH-D 464X. Lectures, demonstrations, and related activities regarding the Feldenkrais method as it applies to the training of performing artists. PRQ: Consent of the School of Music.

563. SPECIAL CONTEMPORARY PERFORMANCE SKILLS: EXPERIMENTAL MUSIC (2). Analysis and class performance of experimental music including the development of skills related to the interpretation of modernized and invented notation, improvisation, and verbal instruction. PRQ: Consent of the School of Music.

564. SEMINAR IN PERFORMANCE AND PEDAGOGY (3). Projects related to problems of performance and/or pedagogy. Topic to be announced. May be repeated to a maximum of 6 semester hours.

567. DICTION FOR PIANISTS I (2). Italian and introductory German pronunciation, using the International Phonetic Alphabet as a basis. Faculty-supervised vocal coaching in class and at rehearsals. Enrollment limited to graduate keyboard Area 2 students.

569. DICTION FOR PIANISTS II (2). Continuing German, and French pronunciation, using the International Phonetic Alphabet as a basis. Faculty-supervised vocal coaching in class and at rehearsals. Enrollment limited to graduate keyboard Area 2 students. PRQ: MUSC 567 or consent of the School of Music.

590A. FINAL RECITAL (1-4). The preparation and completion of a graduate recital. May be repeated to a maximum of 4 semester hours.

590B. SELECTED STUDIES IN MUSICAL PERFORMANCE (1-4). Independent or small-group study of selected topics. Participation in more than one independent study per term permitted by consent of the School of Music. May be repeated. See specific degree requirements for limitations. PRQ: Consent of the School of Music.

691. SUPERVISED RECITAL RESEARCH SEMINAR (3). Guided research and presentations related to the repertoire for the student's instrument and supervised recital. PRQ: Admission to the Performer's Certificate program. CRQ: MUSC 692.


693. LECTURE-RECITAL RESEARCH SEMINAR (3). Guided research and presentations related to the repertoire for the student's instrument and lecture-recital. PRQ: Admission to the Performer's Certificate program. CRQ: MUSC 694 and MUSC 695.


696. FINAL RECITAL (3). Independent preparation and performance of an approximately 75-minute recital, without applied instruction or coaching. PRQ: MUSC 693, MUSC 694, and MUSC 695, or consent of the School of Music.

Conducting

561. ADVANCED INSTRUMENTAL TECHNIQUES AND CONDUCTING (3). Advanced problems in baton techniques and score reading and the analysis of graded band and orchestra literature.

562. ADVANCED CHORAL TECHNIQUES AND CONDUCTING (3). A practical exposition of all facets of choral directing, effective rehearsal procedures, score study, and organization of choral ensembles.

Keyboard Instruments

Keyboard Instruments: Secondary

540. PIANO: SECONDARY (1)

541. ORGAN: SECONDARY (1)

542. HARP/SICHRD: SECONDARY (1)

Emphasis on performance with proficiency requirements. Individual and/or group instruction. Open to nonmusic majors by special consent of the School of Music. May be repeated. PRQ: Consent of the School of Music.

565. ACCOMPANYING (1). Practical study of accompanying by pianists as applied to standard solo instrumental and vocal literature. Involves rehearsals and in-class performance with soloists. May be repeated. PRQ: Consent of the School of Music.

Keyboard Instruments: Primary

640. PIANO: PRIMARY (2 or 4)

641. ORGAN: PRIMARY (2 or 4)

642. HARP/SICHRD: PRIMARY (2 or 4)

Individual study in the student's major medium of performance. Two semester hours credit per semester for students in the music education course of study; 4 semester hours credit per semester (2 in summer) for students in the performance and pedagogy course of study. May be repeated. PRQ: Consent of the School of Music.

Voice

Voice: Secondary

544. VOICE: SECONDARY (1). Emphasis on performance, with proficiency requirements. Individual and/or group instruction. Open to nonmusic majors by special consent of the School of Music. May be repeated. PRQ: Consent of the School of Music.

590. VOCAL ENSEMBLE (1)

A. Madrigal Singers

B. Opera Workshop

C. Women's Chorale

D. "Northern Lights" Show Choir

The study of vocal repertoire as developed through ensemble participation. May be repeated. Participation for credit in more than one ensemble during the same term is permitted. PRQ: Consent of the School of Music.
Music 233

594 UNIVERSITY CHOIR (1). Open to all students proficient in singing and interested in choral activities. PRQ: Consent of the School of Music.

595. CONCERT CHOIR (1). The study and performance of musical masterworks from the 16th through the 20th century. May be repeated. PRQ: Consent of the School of Music.

Voice: Primary

644. VOICE: PRIMARY (2 or 4). Individual study in the student's major medium of performance. Two semester hours credit per semester for students in the music education course of study; 4 semester hours credit per semester (2 in summer) for students in the performance and pedagogy course of study. May be repeated. PRQ: Consent of the School of Music.

Instrumental

543. HARP: SECONDARY (1). Stresses performance, with proficiency requirements. Individual and/or group instruction. Open to nonmusic majors by special consent of the School of Music. May be repeated. PRQ: Consent of the School of Music.

Band and Orchestral Instruments: Secondary

545. VIOLONCELLO: SECONDARY (1)
546. VIOLA: SECONDARY (1)
547. CONTRABASS: SECONDARY (1)
548. VIOLIN: SECONDARY (1)
549. LOADT: SECONDARY (1)
550. FLUTE: SECONDARY (1)
551. OBOE: SECONDARY (1)
552. CLARINET: SECONDARY (1)
553. SAXOPHONE: SECONDARY (1)
554. BASSOON: SECONDARY (1)
555. TRUMPET: SECONDARY (1)
556. FRENCH HORN: SECONDARY (1)
557. TROMBONE: SECONDARY (1)
558. TUBA AND EUPHONIUM: SECONDARY (1)
559. PERCUSSION: SECONDARY (1)

Emphasis on performance, with proficiency requirements. Individual and/or group instruction. Open to nonmusic majors by special consent of the School of Music. May be repeated. PRQ: Consent of the School of Music.

568. STUDIES OF FOLK AND TRADITIONAL INSTRUMENTS (1).
A. Study of Southeast Asian Instruments
B. Study of Chinese Instruments
C. Study of African Instruments
D. Study of Caribbean Instruments
E. Study of Renaissance and Baroque Instruments
F. Study of Indian Instruments

Development of skills necessary to play selected instruments from various cultures and historical periods. Individual and/or group study. Participation for credit in more than one category during the same term permitted. May be repeated. PRQ: Consent of the School of Music.

591. INSTRUMENTAL ENSEMBLE (1).
A. String Ensemble
B. Woodwind Ensemble
C. Brass Ensemble
D. Percussion Ensemble
E. Keyboard Ensemble
F. Mixed Ensemble
G. Neoteric Ensemble
H. Early Music Ensemble
I. World Music Ensemble
J. Chamber Orchestra
K. Jazz Combo

Ensemble performance. Participation for credit in more than one ensemble during the same term permitted. May be repeated. PRQ: Consent of the School of Music.

592. UNIVERSITY BANDS (1).
A. Wind Symphony
B. Wind Ensemble
C. All-University Band

Open to all students who play wind and percussion instruments. Participation in both A and B during the same term permitted. May be repeated. PRQ: Consent of the School of Music.

596. JAZZ ENSEMBLE (1). Performance and study of various styles of jazz and popular music. PRQ: Acceptance by audition.

597. ORCHESTRA (1).
A. NIU Philharmonic
B. Campus String Orchestra

Open to all qualified students. May be repeated. PRQ: Consent of the School of Music.

Music Education

566. PRACTICUM IN STUDIO INSTRUCTION (1). Supervised studio teaching in keyboard, voice, or band and orchestral instruments. May be repeated. PRQ: Consent of the School of Music.

570. MUSIC INSTRUCTIONAL TECHNIQUES AND MATERIALS: WOODWINDS (2). Techniques of class and individual instruction in orchestral woodwind instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

571. MUSIC INSTRUCTIONAL TECHNIQUES AND MATERIALS: BRASSES (2). Techniques of class and individual instruction in orchestral brass instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

572. MUSIC INSTRUCTIONAL TECHNIQUES AND MATERIALS: PERCUSSION (2). Techniques of individual and class instruction in the percussion instruments. Review and evaluation of solo and ensemble material at all levels.

573. MUSIC INSTRUCTIONAL TECHNIQUES AND MATERIALS: ELECTRONIC MUSIC (3). Techniques of class instruction in electronic instruments with particular emphasis on advanced tape recorder usages in elementary and secondary schools.

574. MUSIC INSTRUCTIONAL TECHNIQUES AND MATERIALS: STRINGS (2). Techniques of class and individual instruction in orchestral stringed instruments, with particular emphasis upon intermediate and advanced levels. Review and evaluation of solo, ensemble, and other instructional literature for all levels.

575. KEYBOARD METHODS AND MATERIALS (3).
A. Piano
B. Harpsichord
C. Organ

The methods and materials used in keyboard teaching either in the public schools or privately. Class keyboard methods, organization and materials. Observation of and participation in university keyboard classes.
576. MEASUREMENT, EVALUATION, AND GUIDANCE IN MUSIC (3). Measurement includes standardized tests, classroom or studio marking, auditioning and adjudication. Evaluation weighs such measures of aptitude in the light of professional and educational criteria. Guidance considers the use of these data in counseling programs in public schools and colleges.

577. SEMINAR IN SUZUKI PEDAGOGY (1-3). Study of the philosophy, psychology, repertoire, and pedagogy of the Suzuki Method including guided observation and supervised teaching. May be repeated to a maximum of 12 semester hours. PRQ: Consent of the School of Music.

578. CURRENT TRENDS IN ELEMENTARY MUSIC EDUCATION (3). A detailed study of the conceptual and behavioral approaches to the elementary general music program. Evaluation of current methods and materials.

579. CURRICULUM PROBLEMS IN SECONDARY MUSIC EDUCATION (3). A detailed consideration of the music program in the junior and senior high school. Particular attention given to the general music program as a part of the humanities, and music learning in performance groups.

580. WORKSHOP IN MUSIC (1). Concentrated study of particular topics of interest in music. Enrollment in more than one workshop per term is permitted. No more than 3 semester hours of workshop credit may be applied to any M.M. program.

581. PEDAGOGY OF SINGING (3). Techniques and procedures of teaching singing. Emphasis on how the singing voice works and practical methods for achieving proper function. PRQ: Permission of the School of Music.

583. SUPERVISION AND ADMINISTRATION OF THE MUSIC PROGRAM (3). Functions and techniques of supervision and administration of the music program. Emphasis on problems in curriculum equipment and materials, budget, schedules and programs. Techniques for inservice training in music for classroom teachers.

584. TECHNIQUES OF RESEARCH IN MUSIC (3). The nature of research and scientific method; application to problems in music and music education; problem of definition; development of a research design; probability and sampling procedure; specialized techniques for the location, collection, quantification and treatment of data. Required for the M.M. degree with a major in music education.

585. FOUNDATIONS OF MUSIC EDUCATION (3). The historical and philosophical bases of music education. The application of learning theories to problems of music teaching. Required for the M.M. degree with a major in music education.

589. SEMINAR IN MUSIC EDUCATION (3). Investigation of specific issues in the various areas of music education. Topics to be announced. May be repeated to a maximum of 6 semester hours.

599D. THESIS/FINAL PROJECT (1-4). The preparation and completion of a thesis or final project, the choice to be approved by the School of Music graduate faculty. May be repeated to a maximum of 4 semester hours.

675. PSYCHOLOGY OF MUSIC (3). The functions of the music mind and the factors involved in the development of musical skills and maturity.

689. SELECTED STUDIES IN MUSIC EDUCATION (1-4). Independent or small-group study of selected topics. Participation in more than one independent study per term permitted by consent of the School of Music chair. May be repeated. See specific degree requirements for limitations. PRQ: Consent of the School of Music.
Department of Theatre Arts (THEA, TH-D)

GRADUATE FACULTY

John H. Brooks, Jr., chair, professor, M.F.A., Pennsylvania State University
Alexander F. Adducci, professor, M.A., Northern Illinois University
S. Alan Chesler, associate professor, Ph.D., Kent State University
Judith Q. Chitwood, assistant professor, M.A., University of Cincinnati
Lila Dole, professor, M.S., Indiana University
Jo Anne S. Fox, professor, M.A., Northwestern University
Kent G. Gallagher, professor, Ph.D., Indiana University
Christopher Jones, assistant professor, Ph.D., Ohio State University
Michael Kachingwe, assistant professor, M.F.A., University of Iowa
Randall Newsom, associate professor, M.A., Eastern Kentucky University
Melanie Parks-Baumgartner, assistant professor, M.F.A., University of Illinois
W. Marshall Price, assistant professor, M.F.A., Florida State University
Patricia Ridge, associate professor, Ph.D., University of Colorado
Deborah Robertson, assistant professor, M.F.A., Smith College
Kevin L. Seligman, assistant professor, M.A., San Jose State College
Gene Terruso, associate professor, M.F.A., Rutgers University
Jere S. Tulk, assistant professor, M.A., University of Wyoming
Mark C. Williams, assistant professor, M.F.A., University of Cincinnati

The Department of Theatre Arts offers graduate programs leading to the Master of Arts and the Master of Fine Arts degrees. Its programs are accredited by the National Association of Schools of Theatre.

Master of Arts

The M.A. program is an initial graduate degree in theatre, broadening and deepening the student's understanding of theatre arts beyond the baccalaureate degree level. The program includes scholarly study and independent research. Beyond required courses, students select electives or an area of study suited to their needs, terminal degree plans, or career goals. The degree is a research-oriented program developed in consultation with a faculty adviser. Areas of study the student may select include theatre history and drama, dramaturgy, teaching of theatre, theatre management, playwriting, and other theatre fields.

Admission Requirements

Admission to the M.A. program requires a baccalaureate degree, preferably with a major in theatre. Students holding the baccalaureate degree in other fields may be eligible for admission to the program if they can demonstrate their ability to proceed at an advanced level. Students entering the M.A. program in theatre arts are expected to have acquired basic knowledge and skills in both the performing arts and the production aspects of theatre. They are expected to have a demonstrable ability in the analysis of dramatic literature and an awareness of the place of theatre in the cultural life of western civilization. For dance courses, students must have a demonstrable ability in either ballet or modern dance.

Graduation Requirements

1. Completion of the following core program of study (15)
   THEA 475, Contemporary Theatre (3)
   THEA 501, Bibliography and Research Techniques in Theatre Arts (3)
   THEA 570, Seminar: Theatre History (6)
   THEA 580, Theatrical Criticism (3)
2. Electives or area of study (9)
3. Satisfactory completion of a written comprehensive examination.
4. Satisfactory completion of a thesis (6) The student will be required to present an oral defense of the thesis.

Subject to departmental approval, no more than 9 semester hours of transfer credit may be counted toward the Master of Arts degree. Courses in other academic departments of the university which contribute to the student's program may be taken provided they have received prior approval of the student's faculty adviser.

Master of Fine Arts

The M.F.A. program is designed to provide intensive artistic training in theatre arts for students preparing for careers in theatre and theatre-related areas. Students will graduate with a specialization in acting, directing, or design and technology (the latter with areas of study in costume design, lighting design, scene design, and theatre technology).

Admission Requirements

In addition to Graduate School requirements, the following conditions apply to the theatre arts M.F.A. program:
1. An applicant must normally hold a baccalaureate or master's degree in theatre arts, with adequate experience in the specialization the applicant wishes to pursue as an M.F.A. candidate.
2. Applicants for the specialization in design and technology must submit a portfolio of their work. Applicants for the acting specialization are required to audition, but are not required to submit scores on the general test of the Graduate Record Examinations. Applicants for the directing specialization must submit a director's analysis of a play they have directed.
3. All applicants must submit a statement of their reasons for seeking admission to the program.
4. Applicants who appear qualified on the basis of 1-3 above will be invited to a personal interview with a departmental admission committee. Favorable recommendation by the committee is required for admission.
Candidacy Requirements

Upon admission, students embark on a probationary year, during which they must successfully complete course work and a major artistic project. In order to achieve candidacy, they must receive positive faculty evaluation for the work completed during this period.

Graduation Requirements

1. A minimum of 60 semester hours of credit (including internship and project).
2. Normally a minimum of three consecutive academic years of full-time enrollment is required to complete the degree. A reduction may be approved for students who enter the program with substantial transfer credit.
3. Three major artistic projects in an area of study or specialization, including a final project.
4. Completion of a core program of study (19 semester hours):
   - THEA 501, Bibliography and Research Techniques in Theatre Arts (3)
   - THEA 566, The Business of the Theatre (1)
   - Six semester hours from the following in consultation with a departmental adviser:
     - THEA 476, Theatre History (1-3)
     - THEA 570, Seminar: Theatre History (6)
     - THEA 576, Script Laboratory (2)
   - Courses outside the student's designated area approved by the department (9)
5. An internship (3-9 semester hours) or an equivalent experience prior to graduation.
6. Students in the specializations of acting and directing are required each semester to audition for and participate in department productions.
7. A final project (requiring enrollment in THEA 697), supported by a project paper, that is reviewed and approved by a committee of the faculty. The project may be done in conjunction with an internship.
8. The nature of the final examination will be determined by the student's advisory committee.
9. Completion of a minimum of 29 semester hours in consultation with the department in one of the following specializations:

   **Acting**
   - THEA 507A, Text Analysis for Acting: Poetic Realism (2)
   - THEA 507B, Text Analysis for Acting: Comic Techniques (2)
   - THEA 508, Acting Techniques (3)
   - THEA 509A, Advanced Voice and Diction: Freeing the Voice (1)
   - THEA 509B, Advanced Voice and Diction: Building the Voice (1)
   - THEA 509C, Advanced Voice and Diction: Voice Characterization (1)
   - THEA 509D, Advanced Voice and Diction: Musical Theatre Performance (1)
   - THEA 510A, Advanced Acting: The Actor's Inner Life (3)
   - THEA 510B, Advanced Acting: Clarity and Character (3)
   - THEA 510C, Advanced Acting: New Play Studio (3)
   - THEA 511A, Advanced Movement: Relaxation and Response (1)
   - THEA 511B, Advanced Movement: Expression and the Body (1)
   - THEA 511C, Advanced Movement: Specificity (1)
   - THEA 606, Audition and Interview Techniques (2)
   - THEA 608, Verse Drama (4)
   - THEA 610, Acting Studio: On-Camera (1-4)
   - Electives by advisement

   **Directing**
   - THEA 508, Acting Techniques (3)
   - THEA 512, Directing Techniques (3)
   - THEA 513, Advanced Stage Management (2)
   - THEA 514, Directing Styles (3)
   - THEA 612, Directing Studio (1-12)
   - THEA 613, Directing Laboratory (1-3)
   - Electives by advisement

   **Design and Technology**
   - THEA 478, Period Style for the Theatre I (3)
   - THEA 479, Period Style for the Theatre II (3)
   - THEA 549, Design and Technology Laboratory (1-4)
   - THEA 644, Scene Design Craft (3)
   - THEA 648, Technology Studio (3-12)
   - THEA 649, Design Studio (3-12)
   - Electives by advisement

Select by advisement course work from the following areas of study:
- **Costume Design**
  - THEA 536, Advanced Costume Design I (3)
  - THEA 537, Advanced Costume Design II (3)
- **Lighting Design**
  - THEA 541, Advanced Lighting I (3)
  - THEA 542, Advanced Lighting II (3)
- **Scene Design**
  - THEA 546, Advanced Scene Design I (3)
  - THEA 547, Advanced Scene Design II (3)
- **Theatre Technology**
  - THEA 535, Advanced Costume Technology (3-9)
  - THEA 545, Advanced Scene Technology (3-9)

**Course Offerings**

**Theatre (THEA)**

414. PROBLEMS IN CREATIVE DRAMATICS (3). A presentation of the theory of creative dramatics through a survey of research and methodological literature. Laboratory practice in creative dramatics and dramatic play with children will be required.

415. READERS THEATER (3). Dramatic literature and poetry for ensemble stage presentation. Emphasis will be on the composition and direction of scripts. PRQ: THEA 210 or THEA 215, or consent of department.

416. CHAMBER THEATRE (3). The adaptation, direction, and presentation of narrative literature for group interpretation performances in the theatre. PRQ: THEA 312 or consent of department.

419. PERFORMANCE (1-3). An in-depth research and performance preparation in one significant area of the performing arts. Open to students who are prepared for advanced and specialized study. Topics to be announced in advance. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

449. DESIGN AND TECHNOLOGY (1-3). Seminar in special problems and topics in design and technology. Open to students who are prepared for advanced and specialized study. Topics to be announced in advance. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

450. EDUCATIONAL THEATRE METHODS (3). The place of the teacher of theatre in the secondary school. The organization, content, material and procedure for teaching theatre as a curricular subject and as an extracurricular program within the educational system.

465. MANAGING THE PERFORMING ARTS (3). Managing performing arts organizations with special attention to areas of fiscal planning and control, public relations, grants acquisition, audience development, scheduling, organizational structure, and board participation.

475. CONTEMPORARY THEATRE (3). A study of theatrical art throughout the world since 1945. Consideration of theatre of the absurd, theatre of cruelty, epic theatre, documentary theatre, and happenings, including contemporary movements in acting, directing, scenic design, theatre architecture, and playwriting. PRQ: THEA 370 or THEA 371, or consent of department.

476. THEATRE HISTORY (1-3). Seminar in special periods of theatre history. Open to students who are prepared for advanced and specialized study. Topics to be announced in advance. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

478. PERIOD STYLE FOR THE THEATRE (3). An intensive investigation of period style from pre-Egyptian through the Renaissance as it relates to theatrical production. Exploration of period clothing, manners, decor, and architecture with projects from dramatic literature.
479. PERIOD STYLE FOR THE THEATRE II (3). An intensive investigation of period style from the Baroque through contemporary as it relates to theatrical production. Exploration of period clothing, manners, decor, and architecture.

490. SUMMER REPERTORY PRACTICUM (3). Extensive and concentrated production experience in the preparation and performance of summer theatre repertoire. Emphasis on the unique problems of repertory companies: performance, technology, and management. May be repeated to a maximum of 9 semester hours. PRQ: Consent of department.

501. BIBLIOGRAPHY AND RESEARCH TECHNIQUES IN THEATRE ARTS (3). Philosophy of and approach to graduate study. Review of historical, critical, and experimental methods as they apply to advanced degree programs; consideration of thesis and artistic project papers: preparation of bibliographies, prospectuses, and reports.

507. TEXT ANALYSIS FOR ACTING (2).

508. ACTING TECHNIQUES (3). Study in contact and truthful response, conversational reality, concentration, spontaneity, getting in touch with one's own behavior and that of others.

509. ADVANCED VOICE AND DICTION (1).

510. ADVANCED ACTING (3).

511. ADVANCED MOVEMENT (1).

512. DIRECTING TECHNIQUES (3). Exploration of directing as an art form. Study of directorial processes: analysis, research, conceptualization, designer interaction, rehearsal processes, and performance study.

513. ADVANCED STAGE MANAGEMENT (2). Advanced study of the stage manager in theatrical production. Examination of the prompt script, coordination of production personnel, and the management responsibilities in the pre-rehearsal, rehearsal, and performance periods.

514. DIRECTING STYLES (3). Study of the development of stage directors and the theatrical styles that were shaped by them. Practical applications of research discoveries. PRQ: THEA 512 or consent of department.

530. SEMINAR: DESIGN AND TECHNOLOGY (3).

532. SEMINAR IN THEATRE EDUCATION (3). A problem-solution approach to the difficulties encountered in teaching theatre as an integral part of the curricular and/or extracurricular program in school systems. Both hypothetical and practical problems will be explored. Particular emphasis will be placed upon investigation and research. PRQ: THEA 460 or teaching experience, or consent of department.

535. ADVANCED COSTUME TECHNOLOGY (3).

537. ADVANCED COSTUME DESIGN II (3). Continuation of THEA 536 with emphasis on complex problems in the performing arts. PRQ: Admission to M.F.A. program or consent of department.

541. ADVANCED LIGHTING I (3). Study of advanced lighting design and technology for the performing arts, including preparation of designs and practical experience.

542. ADVANCED LIGHTING II (3). Continuation of THEA 541. PRQ: Admission to M.F.A. program or consent of department.

544. DESIGN AND TECHNOLOGY LABORATORY I (1). The development of skills and creative tools necessary for specific fields in design and technology. May be repeated to a maximum of 4 semester hours. PRQ: Admission to M.F.A. program or consent of department.

556. THE BUSINESS OF THE THEATRE (1). Studies of contracts, taxes, unions, agencies, and other subjects relevant to the actor, director, designer, and technician.

570. SEMINAR: THEATRE HISTORY (3).

576. SCRIPT LABORATORY (2). The study of theatre and drama in special periods and genres. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

577. SEMINAR IN THEATRE RESEARCH (3). An intensive investigation of a single significant dramatic form or theatrical phenomenon. The selection of each topic will be made on the basis of current research needs and will be announced prior to each semester. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

580. THEATRICAL CRITICISM (3). The major contributors to the arts of dramatic and theatrical criticism from the Greeks to the present day as they have influenced dramatic and theatrical practices.


582. PLAYWRITING II (3). Advanced theory and practice of writing plays. Emphasis on the writing of long complete works. May be repeated to a maximum of 9 semester hours. PRQ: THEA 581 or consent of department.

595. INTERNSHIP IN THEATRE ARTS (1-9). Off-campus experience opportunities with selected organizations in theatre. Limited to qualified students. May be repeated to a maximum of 9 semester hours. S/U grading system. PRQ: Consent of department.

597. DIRECTED INDIVIDUAL STUDY IN THEATRE ARTS (1-3). Independent study of problems in any area of theatre. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.
599. THESIS (1-6). Open only to students engaged in writing a thesis in a Master of Arts program. May be repeated to a maximum of 6 semester hours. PRQ: Consent of the student's graduate adviser.

606. AUDITION AND INTERVIEW TECHNIQUES (2). The study and practice of audition and interviewing techniques used by the professional actor.

608. VERSE DRAMA (4). Integrated voice and performance work on scenes and monologues from Greek to Elizabethan drama. PRQ: Admission to the M.F.A. specialization in acting or consent of department.

610. ACTING STUDIO: ON-CAMERA (1-3). Artistic projects requiring acting for film and/or video. May be repeated to a maximum of 4 semester hours.

612. DIRECTING STUDIO (1-3). Development of skills in analysis, research, staging, and production. May be repeated to a maximum of 12 semester hours.

613. DIRECTING LABORATORY (1). Individualized development of techniques of directing. May be repeated to a maximum of 3 semester hours.

616. ADVANCED ACTING LABORATORY (1-3). Individualized development of techniques of acting. May be repeated to a maximum of 6 semester hours.

644. SCENE DESIGN CRAFT (3). The development of proficiencies in the essential crafts associated with the process of designing for the stage. PRQ: M.F.A. candidacy.

648. TECHNOLOGY STUDIO (3). Individualized development of technical proficiency and creativity of fields of theatre technology. May be repeated to a maximum of 12 semester hours. PRQ: M.F.A. candidacy.

649. DESIGN STUDIO (3). Individualized development in technical proficiency and aesthetics in costume, scene, and lighting design. May be repeated to a maximum of 12 semester hours. PRQ: M.F.A. candidacy.

697. FINAL PROJECT (1-6). Artistic projects undertaken by M.F.A. candidates. Includes analysis, completion of the project, oral examination, final project documentation. PRQ: M.F.A. candidacy and consent of student's graduate adviser.

468. DANCE NOTATION II (3). Continuation of Dance Notation I, including floor work and group scoring. Special emphasis on reading of dance scores and recording movement in Labanotation or Benesh Movement Notation. PRQ: TH-D 467 or consent of department.

474. DANCE PHILOSOPHY AND AESTHETICS (3). The philosophy of dance including aesthetic principles and critical evaluations of varying dance forms and styles.

477. SPECIAL STUDIES IN DANCE (1-3).
A. Spanish
B. Mid-Eastern
C. Advanced Theatrical Jazz
D. Character
E. Female Classical Variations
J. Male Classical Variations
M. Tap Improvisation
N. Repertory
Q. Other
Studies in dance forms. Open to students who qualify for specialized study. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

488. CHOREOGRAPHY II (2). Continued analysis of the elements of choreographic forms, styles, and trends with the development of dance studies of extended length; consideration of the theory and technique of advanced group work. May be repeated to a maximum of 4 semester hours. PRQ: TH-D 388 or consent of department.

496. TUTORIAL IN DANCE (1-3). Directed individual study in special areas of dance. May be repeated to a maximum of 6 semester hours. PRQ: Consent of department.

---

Dance Performance (TH-D)

NOTE: All dance performance courses designated with the phrase "may be repeated" are repeatable to a maximum number of semester hours to be determined by the student's major adviser. Credit-hour limitations for other dance performance courses are cited in their descriptions.

405. BALLET IV (1-2). Concentration on complex ballet techniques for performance. May be repeated. PRQ: Proficiency requirement.

406. MODERN DANCE IV (1-2). Concentration on complex modern dance techniques for performance. Movement quality and interpretative performance elements are emphasized. May be repeated. PRQ: Proficiency requirement.

408. POINTE II (1). Advanced pointe techniques. May be repeated. PRQ: TH-D 308 or consent of department. CRQ: TH-D 405.

409. PAS DE DEUX (1). Partnering techniques and principles in classical ballet. May be repeated. PRQ: Consent of department. CRQ: TH-D 305 or TH-D 405.

420. SEMINAR IN DANCE (1). Practical application of studies to business, artistic, and academic development in the profession. PRQ: Consent of department.

464X. WORKSHOP IN THE FELDENKRAIS METHOD FOR THE PERFORMING ARTS (3). MUSC 464. Lectures, demonstrations, and related activities regarding the Feldenkrais Method as it applies to the training of performing artists. S/U grading basis is used. PRQ: Consent of the School of Music.

467. DANCE NOTATION I (3). A theoretical and practical introduction to notation. The analysis and recording of movement through the systems of Labanotation or Benesh Movement Notation. Equal emphasis is placed on reading and writing dance scores. PRQ: Consent of department.
Other Academic Units

Center for Southeast Asian Studies
Center for Burma Studies
Center for Biochemical and Biophysical Studies
Center for Plant Molecular Biology
Social Science Research Institute
Center for Governmental Studies
College of Law
International Programs
University Libraries
Center for Southeast Asian Studies

FACULTY

Michael Aung-Thwin, director, associate professor of history, Ph.D., University of Michigan
Richard M. Cooler, professor of art, Ph.D., Cornell University
Lee S. Dutton, Southeast Asia librarian, M.A.L.S., University of Michigan
Kuo-Huang Han, professor of music, Ph.D., Northwestern University
John F. Hartmann, professor of foreign languages and literatures, Ph.D., University of Michigan
Patricia B. Henry, associate professor of foreign languages and literatures, Ph.D., University of Michigan
Dwight King, associate professor of political science, Ph.D., University of Chicago
Hsin Yi Ling, professor, Distinguished Research Professor of geology, Ph.D., Washington University
Donald W. Maxfield, associate professor of geography, Ph.D., University of Iowa
Arlene B. Neher, director of liberal arts and sciences outreach, Ph.D., Northern Illinois University
Dwight King, associate professor of political science, Ph.D., University of California, Los Angeles
Grant Olson, editor/research associate, Center for Southeast Asian Studies, Ph.D., Cornell University
Barbara M. Posadas, associate professor of history, Ph.D., Northwestern University
Ronald Provencher, professor of anthropology, Ph.D., University of California, Berkeley
Michael Rhum, assistant professor of anthropology, Ph.D., Harvard University
Kuo-Huang Han, professor of music, Ph.D., Northwestern University
Lee S. Dutton, Southeast Asia librarian, M.A.L.S., University of Michigan
Michael Aung-Thwin, director, associate professor of history, Ph.D., University of Michigan
Constance Wilson, professor of history, Ph.D., Cornell University
Barantly Womas, professor of political science, Ph.D., University of Chicago

Founded in 1963, the center is charged with coordinating academic courses dealing with Southeast Asia and with developing and administering other programs in the university which are concerned with this area. These programs include sponsoring conferences and lectures involving visiting scholars; exchange programs with Southeast Asian universities; assisting in the expansion of the Southeast Asia Library Collection; obtaining and administering funds for graduate students (including FLAS fellowships) and faculty research; operating a publications program on Southeast Asia; and advising students interested in a Southeast Asia concentration.

Concentration in Southeast Asian Studies

Since the center is not a degree-offering unit, all graduate degrees are obtained through the departments, whose special requirements must be met. A student earning a graduate degree may, with the consent of the departmental adviser, also take a concentration of courses in Southeast Asian studies. Completion of the concentration will be noted on the student's transcript of credits.

At the master's level, the graduate student must meet the following concentration requirements: Successful completion of four graduate courses (excluding thesis credit) dealing with Southeast Asia, at least two of which must be offered by departments other than that in which the student is earning a degree; demonstrated competence in a Southeast Asian language (equivalent to one year's course work); a thesis, if required by the department, or a special paper in lieu thereof, on a Southeast Asian topic.

At the doctoral level, the concentration requirements to be met by the student are as follows: Successful completion of six graduate courses (excluding dissertation credit) dealing with Southeast Asia, at least three of which must be offered by departments other than that in which the student is earning a degree; demonstrated proficiency (equivalent to two years' course work) in a Southeast Asian language other than one's native language; and a doctoral dissertation on a Southeast Asian topic.

The specific Southeast Asian courses which the student is permitted to take as part of the concentration requirements are selected in consultation with the departmental adviser. Departments currently participating are anthropology, art, English (TESOL), foreign languages and literatures, geography, history, music, political science, and sociology. Students in the M.A. program may also pursue this concentration. Southeast Asian courses are listed below:

Anthropology

ANTH 401, Peoples and Cultures of Southeast Asia (3)
ANTH 427, Southeast Asian Peasant Economy (3)
ANTH 528, Religion and Cosmology in Southeast Asia (3)
ANTH 590 A-J,2 Independent Study in Anthropology (1-3)
ANTH 690 A-J,2 Seminar in Anthropology (3)

Art

ART 487, Southeast Asian Art (3)
ART 598C, Studies in Oriental Art: Indian and Southeast Asian Art (3)
ART 603,2 Independent Study in the History of Art (3)

*To be decided on a case by case basis by the director of the Center for Southeast Asian Studies and the student's primary adviser.

1All departments are eligible to participate after approval by the center.

2Courses may meet the concentration requirements when they include substantial treatment of Southeast Asia.

3Graduate students enrolling in the following courses will not receive graduate credit for them but may use them to fulfill the language requirement of the Southeast Asian concentration: FLIN 103-FLIN 104, Beginning Indonesian, and FLIN 203-FLIN 204, Intermediate Indonesian; FLTH 103-FLTH 104, Beginning Thai, and FLTH 203-FLTH 204, Intermediate Thai; and FLST 381-FLST 382, Special Studies in Language (Advanced Indonesian and Thai).
### Foreign languages and literatures

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLIN 421</td>
<td>Introduction to Indonesian Literature</td>
<td>3</td>
</tr>
<tr>
<td>FLIS 481</td>
<td>Independent Study in a Foreign Language (Indonesian, Lao, Javanese, Malay, and Thai)</td>
<td>1-6</td>
</tr>
</tbody>
</table>

### Geography

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 439</td>
<td>Geography of Developing Areas</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 558</td>
<td>Readings in Geography</td>
<td>1-3</td>
</tr>
<tr>
<td>GEOG 571 A-J</td>
<td>Independent Research</td>
<td>1-3</td>
</tr>
</tbody>
</table>

### History

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 446</td>
<td>History of Thailand</td>
<td>3</td>
</tr>
<tr>
<td>HIST 447</td>
<td>History of Burma</td>
<td>3</td>
</tr>
<tr>
<td>HIST 448</td>
<td>History of Indonesia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 449T</td>
<td>History of Malaysia and Singapore</td>
<td>3</td>
</tr>
<tr>
<td>HIST 560</td>
<td>Reading Seminar in Asian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 560J</td>
<td>Independent Study: Asian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 560</td>
<td>Research Seminar in Asian History</td>
<td>3</td>
</tr>
</tbody>
</table>

### Music

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 421</td>
<td>Topic Studies in Ethnomusicology</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 431</td>
<td>Music of Southeast Asia</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 598A</td>
<td>World Music Ensemble: Gamelan</td>
<td>1</td>
</tr>
</tbody>
</table>

### Political science

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 432</td>
<td>Public Administration in Southeast Asia</td>
<td>3</td>
</tr>
<tr>
<td>POLS 562</td>
<td>Seminar in Political Culture</td>
<td>3</td>
</tr>
<tr>
<td>POLS 567</td>
<td>Seminar in Political Development</td>
<td>3</td>
</tr>
<tr>
<td>POLS 568</td>
<td>Seminar in the Political Economy of Developing Areas</td>
<td>3</td>
</tr>
<tr>
<td>POLS 570</td>
<td>Reading Seminar in Southeast Asian Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 57N</td>
<td>Foreign Area Politics: Thailand</td>
<td>3</td>
</tr>
<tr>
<td>POLS 573R</td>
<td>Foreign Area Politics: Indonesia</td>
<td>3</td>
</tr>
<tr>
<td>POLS 587</td>
<td>Southeast Asia and International Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 600D</td>
<td>Research Seminar in Political Science: Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSPA 572</td>
<td>Administrative Problems of Less Developed Countries</td>
<td>3</td>
</tr>
</tbody>
</table>

### Sociology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 457</td>
<td>Comparative Family Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 559</td>
<td>Social Structure and Development</td>
<td>3</td>
</tr>
</tbody>
</table>

---

*To be decided on a case by case basis by the director of the Center for Southeast Asian Studies and the student's primary adviser.

*All departments are eligible to participate after approval by the center.

*Courses may meet the concentration requirements when they include substantial treatment of Southeast Asia.

*Graduate students enrolling in the following courses will not receive graduate credit for them but may use them to fulfill the language requirement of the Southeast Asian concentration: FLIN 103-FLIN 104, Beginning Indonesian, and FLIN 203-FLIN 204, Intermediate Indonesian; FLTH 103-FLTH 104, Beginning Thai, and FLTH 203-FLTH 204, Intermediate Thai; and FLST 381-FLST 382, Special Studies in Language (Advanced Indonesian and Thai).
Center for Burma Studies

FACULTY ASSOCIATES

Richard M. Cooler, director, Center for Burma Studies, professor of art, Ph.D., Cornell University
Michael Aung-Thwin, director, Center for Southeast Asian Studies, associate professor of history, Ph.D., University of Michigan
U Saw Tun, assistant professor of foreign languages and literatures, M.A., Rangoon University
May Kyi Win, curator, Donn V. Hart Southeast Asian Collection, Dip. Lib, Rangoon University

The purpose of the Center for Burma Studies is to encourage and promote the scholarly study of Burma. The establishment of the center was made possible by the selection of NIU as the national repository for valuable Birmanica items and the appointment of a director to oversee the collections and to organize national and international gatherings.

Since its inauguration in 1986 the bibliographic and art holdings have quadrupled, most recently with a bequest from the private collection of Jerry Paul Bennett. Among the over 10,000 items in various Burmese collections are an impressive map series, located in the Davis Hall Map Library and the Rare Book Room of Founders Memorial Library.

The Burma Gallery in the NIU Museum exhibits selections from the permanent collection on a continuous basis as well as hosting visiting exhibitions.

The center publishes a regular newsletter, C.B.S. News, and distributes other relevant material including the Burma Studies Group Bulletin; the Burma Newsletter, a gathering of international journalistic commentary; and the Pagan Newsletter, a UNESCO publication.

The biennial Burma Studies Colloquium brings international scholars and Burma watchers to NIU. The center also collaborates with the (national) Association for Asian Studies to hold conjunctive annual meetings.

The Southeast Asian Collection located in Founders Memorial Library contains published works, periodicals, microfilm, and microfiche concerning Burma. These volumes offer the researcher considerable intellectual challenge and opportunity from their broad base of subject matter, time span, and cultural perspective.

The center supports 25 courses at NIU which offer significant opportunity to understand more of the anthropology, art history, economics, history, linguistic origin, literature, music, political science, and cultural development of Burma. In addition, the center supports the acquisition of funds for graduate students including Fulbright, FLAS, Luce, and private foundation grants. A Burmese librarian and a Burmese linguist have recently been hired.

The work of the center and the significance of its bequests have brought international recognition to Northern Illinois University.
Center for Biochemical and Biophysical Studies

FACULTY

Gordon C. Kresheck, director, professor of chemistry, Ph.D., Ohio State University
Mitchell Altshuler, assistant professor of biological sciences, Ph.D., State University of New York, Albany
Gary M. Baker, associate professor of chemistry, Ph.D., Purdue University
W. Elwood Bries, adjunct professor of biological sciences, Ph.D., University of Wisconsin
Sonya B. Conway, associate professor of biological sciences, Ph.D., University of California, Berkeley
Thomas P. Conway, associate professor of biological sciences, Ph.D., University of Illinois
Gary D. Coover, professor of psychology, Ph.D., University of Oregon
James V. Corwin, assistant professor of psychology, Ph.D., University of Kentucky
James E. Erman, professor of chemistry, Distinguished Research Professor, Ph.D., Massachusetts Institute of Technology
Kenneth W. Gasser, assistant professor of biological sciences, Ph.D., Washington State University
T. Daniel Griffiths, professor of biological sciences, Ph.D., University of Illinois
Richard Hahin, associate professor of biological sciences, Ph.D., University of Maryland
Arnold E. Hampel, professor of biological sciences and chemistry, Distinguished Research Professor, Ph.D., University of Wisconsin
Gabriel P. Holbrook, assistant professor of biological sciences, Ph.D., University of York
Christopher Hubbard, associate professor of biological sciences, Ph.D., Wake Forest University
Mitrick A. Johns, associate professor of biological sciences, Ph.D., University of Oregon
Barbara Johnson-Wint, associate professor of biological sciences, Ph.D., Michigan State University
Sondra L. King, associate professor of human and family resources, Ph.D., Kansas State University
Rangaswamy Meganathan, associate professor of biological sciences, Ph.D., Oklahoma State University
Sudha P. Wadhwa Mehta, associate professor of human and family resources, Ph.D., University of Wisconsin
John L. A. Mitchell, professor of biological sciences and chemistry, Distinguished Research Professor, Ph.D., Princeton University
Ellen Parham, professor of human and family resources, Ph.D., University of Tennessee
David M. Piatok, professor of chemistry, Ph.D., University of Maine
Neil O. Polans, associate professor of biological sciences, Ph.D., University of California, Davis
Josephine Umoro, associate professor of human and family resources, Ph.D., University of Nebraska
Patricia S. Vary, professor, Presidential Research Professor of biological sciences, Ph.D., Stanford University
Lidia B. Vitello, adjunct assistant professor of chemistry, Ph.D., Clarkson College of Technology
James F. Willott, professor of psychology, Presidential Research Professor, Ph.D., University of California, Davis
Linda S. Yasui, assistant professor of biological sciences, Ph.D., Florida State University

Jerrold H. Zar, professor of biological sciences, Ph.D., University of Illinois
Chong Zheng, assistant professor of chemistry, Ph.D., Cornell University

The Center for Biochemical and Biophysical Studies is charged with coordinating and encouraging research and studies within the university at the graduate level.

Concentration in Biochemistry or Biophysics

The center is not a degree-offering unit; consequently, all graduate degrees are obtained through the cooperating departments, whose special requirements must be met. A student earning a graduate degree may, with the consent of the department adviser and approval of the center director, also take a graduate concentration of courses in biochemistry or biophysics; completion of the special requirements will be noted on the student's transcript of grades.

At the M.S. level, the student must successfully complete five graduate courses [excluding thesis credit] dealing with biochemistry or biophysics, to be selected from the center's listing of courses. The student must also complete an approved research program dealing with a biochemical or biophysical topic and incorporate the results into a thesis, with the thesis committee to include one member of the graduate faculty of the center who is outside the student's department.

At the Ph.D. level, the student must complete eight graduate courses [excluding dissertation credit] dealing with biochemistry or biophysics, to be selected from the center's listing of courses. The student must also complete an approved research program dealing with a biochemical or biophysical topic and incorporate the results into a dissertation, with the dissertation committee to include two members of the graduate faculty of the center who are outside the student's department.

The specific courses dealing with biochemistry or biophysics which the student uses to satisfy the concentration requirements depend upon the student's goals. Courses may be chosen from the list below with the approval of the student's department adviser and the director of the center, except that all students are required to earn credit for CHEM 470, General Biological Chemistry, or CHEM 472, Chemical Biology I. Students may take crosslisted courses in the department of their choice.

Biological Sciences

BIOS 413, Microbial Physiology (3)
BIOS 440, Immunobiology (3)
BIOS 455, Comparative Physiology (3)
BIOS 461, Endocrinology (3)
BIOS 465, Cellular Physiology (3)
BIOS 467, Molecular Biology of Eukaryotes (3)
BIOS 525, Electron Microscopy (4)
BIOS 530, Radiation Biology (3)
BIOS 535, Molecular Genetics of Prokaryotes (4)
BIOS 536, Experiments in Molecular Genetics of Prokaryotes (3)
BIOS 540, Advanced Immunology (3)
BIOS 590, Molecular and Cellular Control Mechanisms (3)
Chemistry
CHEM 442, Principles of Physical Chemistry (4)
CHEM 470, General Biological Chemistry (3)
CHEM 471, Biological Chemistry Laboratory (3)
CHEM 472, Biological Chemistry I (3)
CHEM 473, Biological Chemistry II (3)
CHEM 474, Advanced Biochemical Techniques (3)
CHEM 570, Enzymes (3)
CHEM 575, Physical Chemistry of Macromolecules (3)

Human and Family Resources (Nutrition)
HFR 545, Macronutrients (3)
HFR 546, Micronutrients (3)
HFR 553, Nutrition in Growth and Human Development (3)
  A. Maternal and Child Nutrition, or
  B. Nutrition and Physical Activity, or
  C. Geriatric Nutrition

Psychology
PSYC 503, Biopsychology (3)
PSYC 529, Neurophysiological Bases of Behavior (3)
PSYC 530, Neurochemical Bases of Behavior (3)
Center for Plant Molecular Biology

FACULTY

Marvin J. Starzyk, director, professor of biological sciences, Ph.D., University of Wisconsin
Mitchell Altschuler, assistant professor of biological sciences, Ph.D., State University of New York at Albany
Gary M. Baker, assistant professor of chemistry, Ph.D., Purdue University
W. Elwood Briles, adjunct professor of biological sciences, Ph.D., University of Wisconsin
Jozef J. Bujarski, associate professor of biological sciences, Ph.D., A. Mickiewicz University
Thomas P. Conway, associate professor of biological sciences, Ph.D., University of Illinois
James E. Erman, professor of chemistry, Distinguished Research Professor, Ph.D., Massachusetts Institute of Technology
Elon W. Frampton, adjunct associate professor of biological sciences, Ph.D., University of Illinois
T. Daniel Griffiths, professor of biological sciences, Ph.D., University of Illinois
Arnold E. Hampel, professor of biological sciences and chemistry, Distinguished Research Professor, Ph.D., University of Wisconsin
Laszlo Hanzely, professor of biological sciences, Presidential Teaching Professor, Ph.D., Southern Illinois University
Gabriel P. Holbrook, associate professor of biological sciences, Ph.D., University of York (U.K.)
Michael E. S. Hudspeth, associate professor of biological sciences, Ph.D., Wayne State University
Mitrick A. Johns, associate professor of biological sciences, Ph.D., University of Oregon
Barbara Johnson-Wint, associate professor of biological sciences, Ph.D., Michigan State University
Gordon C. Kresheck, professor of chemistry, Ph.D., Ohio State University
Rangaswamy Meganathan, professor of biological sciences, Ph.D., Oklahoma State University
John L. A. Mitchell, professor of biological sciences and chemistry, Distinguished Research Professor, Ph.D., Princeton University
David M. Piatak, professor of chemistry, Ph.D., University of Maine
Neil O. Polans, associate professor of biological sciences, Ph.D., University of California, Davis
Robin D. Rogers, associate professor of chemistry, Ph.D., University of Alabama
Thomas Sims, assistant professor of biological sciences, Ph.D., University of Oregon
Drake Stenger, assistant professor of biological sciences, Ph.D., University of California, Berkeley
Ronald Toth, professor of biological sciences, Ph.D., University of Massachusetts
Patricia S. Vary, professor of biological sciences, Presidential Research Professor, Ph.D., Stanford University
Linda S. Yasui, associate professor of biological sciences, Ph.D., Florida State University
Jerrold H. Zar, professor of biological sciences, Ph.D., University of Illinois

The Plant Molecular Biology Center promotes and coordinates graduate study and research in plant molecular biology. Interaction among faculty members enhances the development of interdisciplinary approaches to the solution of specific research objectives. Faculty in the center utilize state-of-the-art equipment in elucidating molecular mechanisms influencing gene expression in plants. Activities of the center link the university's biotechnology research to the needs of local and national businesses and industries. The transfer of technology from the laboratory into industrial and commercial applications constitutes the conclusion of the center's research process. An autonomous unit, the center is affiliated with the Departments of Biological Sciences and Chemistry; graduate degrees are obtained through the affiliated instructional departments.
Social Science Research Institute

FACULTY

J. Harvey Smith, director, Social Science Research Institute, and associate professor of history, Ph.D., University of Wisconsin
Richard E. Dahlberg, director, Laboratory of Cartography and Spatial Analysis, and professor of geography, Ph.D., University of Wisconsin
Charles E. Trott, director, Center for Governmental Studies, and professor of geography, Ph.D., Ohio State University
Jon D. Miller, director, Longitudinal Study of American Youth, and professor of political science, Ph.D., Northwestern University
William C. McCready, director, Public Opinion Laboratory, and associate professor of sociology, Ph.D., University of Illinois, Chicago
Paul J. Kleppner, director, Office for Social Policy Research, and professor, Distinguished Research Professor of history and political science, Ph.D., University of Pittsburgh
Andrea Bonnicksen, professor of political science, Ph.D., Washington State University
Charles Cappel, associate professor of sociology, Ph.D., University of Chicago
Paul Culhane, associate professor of political science, Ph.D., Northwestern University
John D. Esseks, professor of political science, Ph.D., Harvard University
Ronald C. Flemal, professor of geology, Ph.D., Princeton University
Richard Greene, assistant professor of geography, Ph.D., University of Minnesota
Andrew J. Kremenec, associate professor of geography, Ph.D., Indiana University
David Marcotte, research associate, Social Science Research Institute, Ph.D., University of Maryland
Janet McConkey, assistant director, Public Opinion Laboratory, Ed.D., Northern Illinois University
Jeffrey Mirel, associate professor of leadership and educational policy studies, Ph.D., University of Michigan, Ann Arbor
Stephen Nord, professor of economics, Ph.D., University of Illinois
William O'Donohue, assistant professor of psychology, Ph.D., State University of New York, Stonybrook
Michael Pedtle, associate professor of political science, Ph.D., Northwestern University
Sherilyn F. Spear, associate professor of allied health professions, Ph.D., University of Iowa
Robert W. Suchner, associate professor of sociology, Ph.D., University of Wisconsin
Martin Williams, professor of economics, Ph.D., State University of New York, Binghamton
Joseph Yaney, professor of management, Ph.D., University of Michigan

The Social Science Research Institute (SSRI) is a multidisciplinary research organization. It is charged with developing and administering social science research and public service programs, and with securing external funding to support them. The institute itself is a central support office that supervises and coordinates a number of programs and centers. These include the Center for Governmental Studies; Laboratories for Cartography and Spatial Analysis, GIS, and Census Data; the Public Opinion Laboratory; the Program for Biosocial Research; and other externally funded social science research projects, such as the Longitudinal Study of American Youth, a major national study of educational scientific literacy funded by the National Science Foundation. Recent new programs in the SSRI include Business and Industry Services (BIS), an affiliate of the Center for Governmental Studies that offers management services; the Center for Agriculture in the Environment, supporting research and site projects in environmentally sound farming and sustainable agriculture; the Office of Applied Innovations (OAI), offering bilingual vocational education and skills development; and the Office of Social Policy Research, which conducts studies of urban social issues and policies focusing on demography, politics, and gender. While oriented towards external research and public service, the institute cooperates closely with the university's academic departments, awarding research assistantships and offering instruction in methodology and computer skills to students and to faculty. The institute offers unique opportunities to broaden and enhance learning, training, and employment opportunities.

Centers and projects in the institute contribute substantially to the university's mission in both applied and basic research and in public service. SSRI centers and projects are the largest single recipients of external funding in the university. As part of its activities, the institute maintains extensive social science data archives service and codebooks, and offers access to the holdings of major data collections such as the Inter-university Consortium for Political and Social Research and the Roper Center.
Center for Governmental Studies

GRADUATE FACULTY

Charles E. Trott, director, professor of geography, Ph.D., Ohio State University
Robert Albright, associate professor of political science, Ph.D., Northwestern University
James M. Banovetz, professor of political science, Ph.D., University of Minnesota
Paul Cullhane, professor of political science, Ph.D., Northwestern University
Richard E. Dahlberg, professor of geography, Ph.D., University of Wisconsin
John D. Esseks, professor of political science, Ph.D., Harvard University
Richard Greene, assistant professor of geography, Ph.D., University of Michigan
John M. Harlin, professor of geography, Ph.D., University of Iowa
Andrew J. Krmenc, associate professor of geography, Ph.D., Indiana University
David Merriman, associate professor of economics, Ph.D., University of Wisconsin, Madison
Steven Nord, professor of economics, Ph.D., University of Illinois
Michael Peddle, assistant professor of political science, Ph.D., Northwestern University
Irene Rubin, professor of political science, Ph.D., University of Chicago
Mark Skidmore, assistant professor of economics, Ph.D., University of Colorado, Boulder
Virginia Wilcox-Gök, assistant professor of economics, Ph.D., Washington University
Martin Williams, professor of economics, Ph.D., State University of New York, Binghamton
Joseph P. Yaney, professor of management, Ph.D., University of Michigan

The Center for Governmental Studies is a multidisciplinary research and public service organization. It is charged with promoting, coordinating, and administering research programs concerned with public affairs and policy issues, and with providing public service to governments at all levels, private enterprises, and public-private partnerships.

The center is not a degree-granting unit, but cooperates closely with a number of academic departments throughout the university. Through its externally funded projects, the center provides graduate students from a wide variety of disciplines with unique opportunities to become involved with research and technical assistance programs.
The College of Law offers a three-year, full-time day program and a limited enrollment part-time program leading to the J.D. degree. Student enrollment is approximately 300. The faculty numbers 21 including the dean, associate dean, and law librarian. The College of Law is fully accredited by the American Bar Association and is a member of the Association of American Law Schools.

The College of Law is housed in Swen Parson Hall, an impressive Gothic structure. The modern, comfortable interior of the hall promotes a community atmosphere in which law faculty and students work and study in close proximity. At the same time, the expansive law library allows for intensive study and reflection in quiet privacy.

Application for admission is made through the College of Law, not through the Graduate School. Information regarding degree programs, academic requirements, application procedures, and tuition and fees is available in the *College of Law Bulletin*, which may be obtained from the College of Law Office of Admissions and Financial Aid.
International Programs

Manfred Thullen, Ph.D., executive director

The Office of International Programs supervises and coordinates the international activities of the university. Of the programs supervised by the Office of International Programs, the following may be of particular interest to graduate students:

Study Abroad Programs
International Student and Faculty Office
International Training and Consultation Office

Study Abroad Programs

The university provides varied opportunities for graduate students to study and to conduct thesis research abroad. During the summer the International Programs division, in association with various university departments and colleges, sponsors specialized study abroad (overseas) programs for academic credit. In the past these opportunities have been offered in anthropology, art, biology, business, economics, education, English, foreign languages and literatures, history, home economics, outdoor teacher education, physical education, political science, sociology, and theatre arts. Although concentrated largely in Europe, the programs also have included Japan, Mexico, Belize, Hawaii, China, Honduras, Australia, and Canada. New programs are developed regularly. Summer programs are mainly in English.

During the regular academic year, the International Programs division also conducts on behalf of the university a wide range of study abroad (overseas) programs including graduate student exchange arrangements with foreign universities. In addition, it participates in several associations of universities which jointly conduct such programs in different parts of the world. All programs are designed to add to and supplement study and research opportunities available on campus.

Information is also provided on grants for research abroad as well as overseas teaching opportunities. Moreover, the International Programs office supervises graduate student applications for Fulbright-Hays Doctoral Dissertation Research Abroad Program grants (administered by the U.S. Department of Education), the Fulbright Graduate Study and Research Program grants (administered by the Institute of International Education), and the National Security Education Program grants (administered by the Academy for Educational Development). The office conducts the screening processes for these programs on behalf of the university.

Further details can be obtained through the International Programs office. Depending upon knowledge of a foreign language, opportunities for study abroad may involve, in addition to the courses designated in the Graduate Catalog, a variety of courses in the humanities, sciences, social sciences, visual and performing arts, education, and business. All provide regular academic credit. Overseas internship opportunities also exist.

IDSP 401. FOREIGN STUDY PROGRAMS (1-9). Under certain circumstances, credit for study abroad can be earned directly for this course.

IDSP 402. INTERNATIONAL STUDIES (1-9). Course work undertaken as part of approved university study programs abroad. May be repeated to a maximum of 18 semester hours.

International Student and Faculty Office

Director: Mark D. Thackaberry, M.B.A., University of Illinois
Assistant Director: Thecla Cooler, M.A., Northern Illinois University

The International Student and Faculty Office currently advises some 1000 international (foreign) students and faculty from approximately 85 countries. It provides information about NIU programs to prospective international students, admits international undergraduate students, and works with the Graduate School in the admission of international graduate students. A full orientation program is offered with additional advising on registration, financial, and immigration requirements. Regular monitoring of student progress and linkage with faculty assists in the student's adjustment to the university and cultural change. The office also provides some assistance in securing housing and advises foreign student organizations with their activities and programs. In addition, the office staff assists international faculty members at NIU with their visa and immigration requirements and responsibilities and prepares documentation to assist them in receiving visas or in changing status. It also maintains contact with federal personnel to assist in the timely adjudication of documents and effective implementation of the frequent modifications to federal law.

International Training and Consultation Office

Director: Franklin D. Van Buer, Ph.D., University of Illinois
Assistant Director: Jaya Gajanayake, Ed.D., University of Massachusetts

The International Training and Consultation Office is involved in the conduct of a variety of international technical assistance programs. Drawing upon NIU faculty specialists, these training programs are conducted both overseas and on the NIU campus under contract arrangements with American and foreign government sponsors as well as with international organizations. Included are programs for advanced undergraduate and graduate students whose purpose is to prepare them for international service; an example of this is the international career development program conducted each summer in Costa Rica.
University Libraries

LIBRARIES FACULTY

Arthur P. Young, director, professor, M.S., Syracuse University, Ph.D., University of Illinois
Elizabeth A. Titus, associate director, associate professor, M.U.P., Wayne State University, A.M.L.S., University of Michigan
Thomas A. Peters, associate director, associate professor, M.A., University of Missouri, Kansas City, M.A., University of Iowa
Byron Anderson, associate professor, M.L.S. & M.A., University of Wisconsin, Milwaukee
Mary C. Anderson, assistant professor, M.A., Northern Illinois University
Jo Ann Aufdenkamp, assistant professor, J.D., John Marshall Law School, Chicago
William Baker, professor, M.L.S., University of Loughborough, M.Phil. & Ph.D., University of London
Karen Becker, assistant professor, M.B.A., Rosary College, M.L.S., University of South Florida
Lee S. Dutton, Jr., assistant professor, A.M.L.S., University of Michigan, M.A., University of Hawaii
Michael Gabriel, associate professor, Library Science Specialist, University of Wisconsin, M.S.L.S., University of Illinois
Mary Frances Grosch, assistant professor, M.L.S. & M.B.A., University of Illinois
Lorraine Haricombe, assistant professor, M.S. & Ph.D., University of Illinois
Deanne Holzberlein, associate professor, M.L.S., Oklahoma University, Ph.D., University of Michigan
Samuel T. Huang, professor, M.A. & M.S., Northern Illinois University
Jitka Hurych, associate professor, M.A., Northern Illinois University, M.A., Purkyne (formerly Masaryk) University, Czechoslovakia
Dorothy Jones, associate professor, M.L.S., University of California, Berkeley, M.R.E., Union Theological Seminary
Kwan-Yau Lam, assistant professor, M.L.S. & M.S.E., Indiana University
Charles Larry, assistant professor, M.A. & M.F.A., Northern Illinois University
David F. Lonergan, assistant professor, M.A., Western Washington University, M.S.L.S., University of North Carolina, Ph.D., Pennsylvania State University
T. J. Lusher, assistant professor, M.A., University of Iowa
Sherry McCowan, assistant professor, M.A. & M.S.L.S., University of Illinois
Doris A. Miller, assistant professor, M.L.S., University of Pittsburgh
Chalermsee Olson, assistant professor, M.A., Northern Illinois University, M.A., University of Pittsburgh
Nestor L. Osorio, associate professor, M.A. & M.L.S., State University of New York, Geneseo
Joseph J. Parot, professor, M.A., DePaul University, Ph.D., Northern Illinois University
Kenneth J. Potts, assistant professor, M.A., Vanderbilt University, A.M.L.S., University of Michigan
Elaine C. Rast, professor, M.A.L.S., Rosary College
Marita M. Renshaw, assistant professor, M.A., Northern Illinois University
Robert B. Marks Ridinger, associate professor, M.L.S., University of Pittsburgh, M.A., Case Western Reserve University
David Shavit, associate professor, D.L.S., Columbia University
Earl R. Shumaker, associate professor, M.S., Louisiana State University
William E. Studwell, professor, M.S.L.S., Catholic University, M.A., University of Connecticut
Norman Vogt, associate professor, M.S.L.S., University of Wisconsin
H. Stephen Wright, associate professor, M.L.S. & M.M., Indiana University

Regional History Center and University Archives

Glen A. Gildemeister, director, Ph.D., Northern Illinois University
Cindy S. Ditzler, archivist, M.A., Western Illinois University

The Northern Illinois University Libraries system consists of Founders Memorial Library, branch libraries which include the Faraday Library, the Hoffman Estates Education Center Library, the Lorado Taft Instructional Materials Center, the Map Library, and the Music Library. In addition the Regional History Center houses historical material on the northern Illinois region. The University Libraries collections contain over 1.3 million volumes as well as periodicals, government publications, microforms, maps, recordings, and audiovisual materials.

NIU Libraries are participants in the Illinet Online (I/O) System, a network involving 40 academic institutions throughout Illinois. Using computer terminals, library users immediately determine which libraries own desired research materials. Books not owned by NIU can be obtained quickly from other I/O members.

Founders Memorial Library, the main library, has five levels with 290,000 square feet of space and seating capacity for 2,200 patrons. The first floor houses key library services including the circulation desk, the first floor reference desk, the information desk, computer reference services, library instruction services, interlibrary loans, the reserve reading room, and an area containing specialized equipment and research collections for the physically impaired. Microforms and government publications are located on the second floor; rare books and special collections are on the fourth floor. Each of the upper three floors houses circulating books and nonprint materials, and reference services sites for the social sciences (floor two), humanities and behavioral sciences (floor three), and sciences (floor four).

The Faraday Library serves faculty and students in the disciplines of chemistry and physics. Similarly, the Music Library serves the music curriculum; the Map Library contains maps and atlases vital to research in geography; and the Instructional Materials Resources Center complements the Outdoor Education Program at Lorado Taft Field Campus. The NIU Hoffman Estates Education Center Library, an extended campus facility, services the information needs of library users at that site. Regular, interim, and holiday hours are posted near the entrance to each library.

NIU libraries provide self-help user’s guides including printed self-guided tours, floor plans, and selected subject brochures. These materials are available at the information desk and at service sites throughout the building. Instruction in the use of the library is given to university classes by librarians as part of the University Libraries Library Instruction Program. Library instruction covers both basic library orientation and, for upper-level classes, in-depth instruction in subject disciplines.
Board of Regents

Northern Illinois, Illinois State, and Sangamon State Universities are governed by the Board of Regents, established July 1, 1967, by an act of the Illinois General Assembly. Eleven members are appointed by the Governor, and three students are selected by their respective student bodies.

Members

David T. Murphy, Cary, chair
Carol K. Burns, Peoria
Joseph B. Ebbesen, DeKalb
Carl E. Kasten, Carlinville
Nancy J. Masterson, Barrington Hills
Patricia A. McKenzie, Springfield
James W. Myles, Chicago
Barbara Scheibling, Springfield
Niranjan Shah, Chicago
William Sulaski, Normal
Willie Fowler (NIU student member), DeKalb
Miles McGrew (SSU student member), Springfield
Amy Mersinger (ISU student member), Normal

Board Staff

Roderick T. Groves, Ph.D., chancellor
W. John Pembroke, M.A., vice chancellor for administrative affairs
Phillip Adams, B.A., director for legislative and external affairs

Offices of the University

John E. La Tourette, Ph.D., president

President's Staff

J. Carroll Moody, Ph.D., vice president and provost
James E. Harder, Ed.D., vice president for business and operations
Thomas J. Mitchell, M.S., vice president for development and university relations
Eddie R. Williams, Ph.D., vice president for finance and planning and director, budget and planning
Barbara Henley, Ph.D., vice president for student affairs
Anne C. Kaplan, Ph.D., executive assistant to the president for administration and human resource services
Alan M. Voelker, Ph.D., assistant to the president for government relations
Marilyn Monteiro, Ed.D., director, affirmative action
George Shur, J.D., university legal counsel
Tim Griffin, Ph.D., Ombudsman
John E. Tuecke, M.S., associate vice president for systems

Academic Affairs

J. Carroll Moody, Ph.D., vice president and provost
Jerrod H. Zar, Ph.D., associate provost for graduate studies and research
Rosalie Hewitt, Ph.D., acting associate provost
Natalie L. Clark, LL.M., assistant provost (personnel)
Lynne M. Waldeland, Ph.D., assistant provost for academic planning
Nicholas N. Noe, Ph.D., assistant provost for resource planning
Jerrol S. Zar, Ph.D., dean, Graduate School
Carla W. Montgomery, Ph.D., associate dean, Graduate School
Irene H. Johnson, Ph.D., assistant dean, Graduate School
David K. Graf, Ph.D., dean, College of Business
Peter F. Kaminski, Ph.D., acting associate dean, College of Business
Wayne L. Albrecht, M.S., assistant dean, College of Business
Charles E. Stegman, Ph.D., dean, College of Education
Alfonzo Thurman, Ph.D., associate dean, College of Education
Corena C. Cummings, Ph.D., assistant dean, College of Education
Romualdas Kasuba, Ph.D., P.E., dean, College of Engineering and Engineering Technology
Dennis Stoia, M.B.A., P.E., acting associate dean, College of Engineering and Engineering Technology
James J. Alfini, J.D., dean, College of Law
Malcolm L. Morris, J.D., LL.M., associate dean, College of Law
Leonard B. Mandell, J.D., assistant dean, College of Law
James D. Norris, Ph.D., dean, College of Liberal Arts and Sciences
Joseph E. Grush, Ph.D., associate dean, College of Liberal Arts and Sciences
Donald A. Cress, Ph.D., associate dean, College of Liberal Arts and Sciences
Sue Warrick Doederlein, Ph.D., assistant dean, College of Liberal Arts and Sciences
James E. Lankford, Ph.D., dean, College of Professional Studies
Sharon M. Miller, Ph.C., associate dean, College of Professional Studies
Harold Kafer, Ph.D., acting dean, College of Visual and Performing Arts
G. Allan O'Connor, M.M., associate dean, College of Visual and Performing Arts
Daniel S. Oborn, Ed.D., director, Admissions
Denise Rode, Ed.D., associate director, Admissions/Orientation and Student Assistance
Leroy A. Mitchell, M.S.Ed., director, CHANCE Program, and associate director, Special Projects
James E. Russel, Ed.D., coordinator, Community College Relations
Janet Lessner, Ph.D., executive director, Continuing Education
Tendaji W. Ganges, M.A., director, Educational Services and Programs
Manfred Thullen, Ph.D., executive director, International Programs
Mark Thackaberry, M.B.A., director, International Student and Faculty Office
Franklin D. Van Buer, Ph.D., director, International Training and Consultation Office
Keith M. Collins, Ph.D., director, Media Services
Glen A. Gildemeister, Ph.D., director, Regional History Center
Richard F. Durfee, M.A., director, Registration and Records
Linda L. Schwarz, M.A., director, Sponsored Projects
Larry R. Sill, Ph.D., director, Technology Commercialization Office
Norman S. Gilbert, Ed.D., director, Testing Services
James L. Massey, Ph.D., director, University Honors Program
Arthur P. Young, Ph.D., director, University Libraries
Mary L. Lincoln, Ph.D., director, University Press
George Gutierrez, M.A., director, University Resources for Latinos
M. Sharon Howard, M.S., director, University Resources for Women

Student Affairs
Barbara Henley, Ph.D., vice president for student affairs
Donald R. Buckner, Ed.D., associate vice president for student affairs
Gary D. Gresholdt, Ed.D., assistant vice president for student affairs
Charles E. Bowen, M.B.A., director, University Health Service
Jerry D. Augsburger, M.A., director, Student Financial Aid
Michelle A. Emmett, M.S., director, University Programming and Activities
Gary J. Scott, Ed.D., director, Career Planning and Placement Center
Juliette R. Moore, M.S., director, Office of Campus Recreation
Larry D. Bolles, M.S., director, University Judicial Office
Kathy J. Hotelling, Ph.D., director, Counseling and Student Development Center
Christine K. Herrmann, M.S., director, Campus Child Care Center

Business and Operations
James E. Harder, Ed.D., vice president for business and operations
Patricia Hewitt, M.B.A., associate vice president for business and operations
Douglas J. Moore, M.S.Ed., controller
Judd Baker, M.S., director, Holmes Student Center
Richard W. Cochrane, M.S.Ed., bursar
John L. Pickens, M.A., director, Public Safety

Development and University Relations
Thomas J. Mitchell, M.S., vice president for development and university relations
Susan H. Peirce, B.S., assistant vice president for development
Michael P. Malone, M.F.A., assistant to the vice president for university relations
Carlos J. Granados, B.A., director, Publications
Patty Lam, M.A., director, Prospect Research
Michael H. Lazar, M.A., director, Northern Public Radio
Shey S. Lowman, B.A., director, Printing Services
Susan N. Lund, M.S., director, Alumni Programs
Melanie B. Magara, B.S., director, University Relations
Diane Reynolds, B.S., director, Annual Giving
Linda L. Spitzer, B.S., director, Development Systems and Records
Gerald K. Bloodsaw, M.B.A., director, Corporate/Foundation Relations
Ellen K. Jensen, M.A., director, Centennial and Special Events
Phillip Bolda, M.B.A., director of development, College of Business
Robert L. Woggon, B.J., director, NIU News Bureau

Finance and Planning
Eddie R. Williams, Ph.D., vice president for finance and planning
J. Daniel House, Ph.D., interim assistant vice president for finance and planning, and director, Institutional Research
Patricia Perkins, administrative assistant to the vice president for finance and planning
Lyle Sonnenschien, M.A., associate director, finance and planning
Steven G. Pace, M.B.A., assistant director, finance and planning

Richard A. Lazarski, M.S., associate director, budget and planning

Human Resource Services
Anne C. Kaplan, Ph.D., executive assistant to the president for administration and human resource development
George M. Nenonen, M.S., manager, operating staff services
Joanne Bergren, M.S., supervisor, insurance and employee benefits
Kenneth C. Mundy, B.S., supervisor, payroll and compensation
Steven Cunningham, A.M., director, human resource services
Mary Cusak, M.B.A., manager, contracts, records, and reports
Deborah Haliczzer, M.S.W., L.S.C.W., coordinator, employee wellness and assistance
Student Responsibility

See “General Regulations” section of this catalog.

Human Rights Statement

Northern Illinois University is an equal opportunity/affirmative action institution and does not discriminate on the basis of race, color, religion, sex, age, marital status, national origin, disability, status as a disabled veteran or Vietnam-era veteran, or any other factor unrelated to professional qualifications, in employment or in admission or access to, treatment in, or operation of its educational programs and activities. Such discrimination is prohibited by Titles VI and VII of the Civil Rights Act, Title IX of the Education Amendments, Sections 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination Acts of 1974 and 1975, the Vietnam-Era Veterans' Readjustment Assistance Act of 1974, and other federal and state statutes and regulations. Inquiries concerning application of Title IX, Section 504, and other statutes and regulations may be referred to the affirmative action director, Lowden Hall 302, telephone (815) 753-1118, or to the director of the Office of Civil Rights, U.S. Department of Education, Washington, D.C., 20024. The Constitution and Bylaws of Northern Illinois University afford equal treatment regardless of political views or affiliation, sexual orientation, or other factor unrelated to scholarly or professional performance (Constitution Article 9, Section 9.2; Bylaws Article 5, Section 5.211; Bylaws Article 7, Section 7.25 and Section 7.252; Bylaws Article 10; and Bylaws Article 18).

Course Offerings

Although the university attempts to accommodate the course requests of students, course offerings may be limited by financial, space, and staffing considerations or may otherwise be unavailable. Nothing in this catalog may be construed to promise or guarantee registration in any course or course of study (whether required or elective) nor may anything be construed to promise or guarantee the completion of an academic program within a specified length of time.

Immigration Reform and Control Act

The 1986 Immigration Reform and Control Act mandates that any person employed by Northern Illinois University after November 6, 1986, must be either a U.S. citizen or possess current employment authorization from the U.S. Immigration and Naturalization Service. All such employees, including graduate assistants, must be prepared to present original documentation to the employing department/cost center within three days of the start date of their employment contract or risk cancellation of the contract.

University Policy Under the Drug-Free Schools and Communities Act

In compliance with the Drug-Free Schools and Communities Act of 1989, as amended, Northern Illinois University prohibits the unlawful possession, use, or distribution of illicit drugs and alcohol on its property, or as part of any university activity.

The illegal use of controlled substances and abuse of alcohol may seriously injure health, impair performance, and endanger the safety and well being of students, faculty, staff, and members of the general public.

Because it is readily available and its use is not necessarily illegal, the drug which has the greatest potential for harm to the most people is alcohol. Negative health and social consequences which are most likely to occur as a result of the use of alcohol include but are not limited to the following: accidents, assaults (racial, sexual, verbal, etc.), and problems related to sex and health. The use of alcohol by pregnant women, alcoholics, and people who are ill or on medication is dangerous.

Local, state, and federal laws make illegal the unlawful possession, use, or distribution of drugs or alcohol. The courts may impose strict legal sanctions upon an individual who is found to have violated any legal prohibition against the possession, use, or distribution of drugs and alcohol. The available legal sanctions include, but are not limited to, the imposition of fines, imprisonment, forfeiture of property, non-voluntary community service, probation, required attendance at or residence in a facility established for the instruction or residence of defendants on probation, required medical or psychiatric treatment, rehabilitation or treatment as approved by the Illinois Department of Substance Abuse, and restitution, where applicable. An individual's status as a university student or employee in no way prevents a court from imposing any of the above sanctions.

The university encourages those students and employees who have a problem with the illegal use of drugs or alcohol to seek professional advice and treatment. The university provides or can assist in arranging education, assessment, counseling, intervention, treatment, rehabilitation, and aftercare. Some of these services may be without charge and the cost of others may be partially paid by student or employee health insurance. Further information on any of these support services may be obtained from Health Enhancement Services at the University Health Service (753-9755), the Counseling and Student Development Center (753-1206), the Personnel Office (for operating staff—call 753-0457), the Assistant Provost for Personnel (for Faculty and Professional Staff—call 753-1898), or the director of the Employee Assistance Program.
In addition, there are numerous community agencies including Alcoholics Anonymous (756-8386), the Chemical Dependency Treatment Center at Kishwaukee Community Hospital (756-2722), the Ben Gordon Community Mental Health Center (756-4875), and various private clinics and counselors listed in the "yellow pages" under "Alcohol" and "Drug Abuse."

Northern Illinois University may impose disciplinary sanctions upon any student or employee who is found to be in violation of laws or policies relating to the unlawful possession, use, or distribution of drugs and alcohol. For employees, such sanctions may include, without limitation, the following: (a) referral for criminal prosecution, (b) employee discipline (including suspension or dismissal) pursuant to the protection of the NIU Constitution and By-Laws, personnel policies, or the State University Civil Service System, (c) referral for action under any other applicable university policy, and/or (d) referral to an educational or rehabilitation program.

Students are subject to the sanctions listed in the preceding paragraph, and, in addition and without limitation, the following: (a) referral for action under the Student Judicial Code (including the possibility of expulsion or suspension) and/or (b) referral for action under policies relating to residence halls.

**Storage in University Buildings**

Students electing to utilize university buildings and/or facilities for the storage of personal property owned by them, thereby accept the responsibility for such storage and waive any and all responsibility and liability on the part of the university and its employees for loss of or damage to such personal property by any cause whatsoever including, but not limited to fire, water, windstorm, or other casualty, theft, or improper or inadequate humidity control.

**Student Data**

Documents submitted in support of an application for admission or for student-at-large status become the property of Northern Illinois University and will not be returned to the applicant. Such documents will be retained by the Graduate School for a minimum period of one year; retention beyond that minimum cannot be assured.

Information and data concerning individual students are collected, maintained, and used by the university only as needed in relation to its basic educational purposes and requirements. Presently, relevant policy and procedures are designed and operated to be in compliance with federal legislation, specifically, the Family Educational Rights and Privacy Act of 1974 as amended by Senate Joint Resolution 40, signed into law by the President of the United States on December 31, 1974. The official university procedures and a directory of educational materials maintained by Northern Illinois University are available for review in the Office of Registration and Records and in the Graduate School office. All questions about interpretations or clarifications involving university policy and procedures are to be directed to the university legal counsel. See "Student Information and Records" for further information.

**Disruption of Instruction**

Graduate education is a privilege accorded to those students deemed able to profit from the associated intellectual experiences. When a student's behavior within a classroom, laboratory, or other formal instructional setting is such that the rights of other students to an effective learning environment are being violated, that student may lose the privilege of attending the class or receiving credit for the course in that term.

In any case of the disruption of instruction by a graduate student or student-at-large, the instructor may require that student to leave the class for the balance of that class session. Whether or not the student is immediately removed from the class, the instructor may file a statement of the incident with the department chair, providing the student with a copy, and may ask that the chair suspend that student from further participation in the course. The chair of the department may, upon recommendation of the instructor and after investigating the incident, suspend that student from class attendance and recommend to the dean of the Graduate School that the student be permanently barred from the class for the remainder of that academic term. The student must be notified in writing of such action and may appeal the department's recommendation to the dean within one week of the notification. Upon such written appeal, the dean or dean's designee shall conduct a hearing, providing for a presentation of the facts relative to the disturbance. The decision of the dean's office shall be final. Repetition of disruptive behavior constitutes grounds for dismissal from the university.

**Conduct and Discipline Regulations**

It is expected that all enrolled students intend to engage in serious educational pursuits. When students accept admission to Northern Illinois University, the university assumes that they thereby agree to conduct themselves in accordance with its standards.

The university expects all of its students, both on and off the campus, to conduct themselves in accordance with the usual standards of society and law-abiding citizenship. Every organization affiliated with the university or using its name is expected to conduct all its affairs in a manner creditable to the university.

While enrolled, students are subject to university authority. The university has the prerogative, in the interest of all of its students, to suspend or require the withdrawal of a student or group of students for acting in such a manner as to make it apparent that the student or group of students are not desirable members of the university. See also "Disruption of Instruction." Copies of the most current Judicial Code may be obtained at the university’s Judicial Office.

**General Regulations**

Students at Northern Illinois University are expected to abide by the university regulations set forth below as well as by applicable federal, state, and local laws. While the university will normally apply disciplinary sanctions only for violations of its regulations, a student is subject to public laws at all times, including the Revised Statutes of the State of Illinois which contain provisions specifically directed at maintaining the orderly operation of state colleges and universities. It is the responsibility of the student to be particularly aware of the provisions of the Criminal Code in the Compiled Statutes of the State of Illinois and to be aware of the penalties therein provided for Criminal Damage to State Supported Property, Criminal Trespass to State Supported Land, Unauthorized Possession or Storage of Weapons, and Interference with a Public Institution of Higher Education.1 Conviction for offenses enumerated in the Criminal Code additionally makes almost certain the loss of federal- and state-supported scholarships, loans, or other grants.

---

1 In addition, the Criminal Code in the Illinois Compiled Statutes contains provisions relating to disorderly conduct, theft, inflicting bodily harm, arson, property damage, gambling, the use of drugs, mob action, and sex offenses.
Failure to abide by the following regulations may result, after a hearing by one of the University Judicial Boards or a representative of the Judicial office, in disciplinary sanctions including, but not limited to, warning, disciplinary probation, suspension, and dismissal from the university.

Sanctions may result from:

1. Academic dishonesty. Plagiarism, cheating, knowingly supplying false or misleading information to university officials or on official university records, forgery, and alteration or misuse of university documents, records, or identification cards are prohibited.

2. Obstruction or disruption of university activities. A student or students may not knowingly or willfully interfere with the normal educational activities of the university including teaching, research, administration, disciplinary procedures, or other university activities, including its public service functions. Disruption of university activities includes but is not limited to obstruction of access to the facilities of the university including corridors and doorways; interference with classroom activities or other scheduled events; interference with the performance of the duties of any institutional employee. Picketing may be permitted, but only under the following conditions: Students who picket on university premises must do so in peaceful and orderly fashion. Picketing should not involve invasion of the rights or interference with the operations of the university, or jeopardy to public order and safety. Specifically, the following conditions must be met:
   a. Automobile, bicycle, and pedestrian traffic must not be obstructed.
   b. Entrances to buildings and driveways must not be blocked or traffic interfered with.
   c. Picketing inside university buildings is prohibited.
   d. There will be no disturbing of classes by noise or other means.
   e. There will be no harassment of passers-by or other interference with their activities.
   f. There will be no damage to property, including lawns and shrubs, nor littering of premises with signs, leaflets, or other materials.

3. Failure to abide by regulations governing the use of university premises and facilities. No student shall remain alone or with others in a university building beyond its normal closing hours unless duly authorized by a university official. No student or individual may remain in a university building after being notified to depart therefrom by an authorized university official. Unauthorized entry to or use of university facilities is also prohibited.

4. Theft or damage. A student or students may take no action or actions which damages or which as a probable consequence could damage property of the university or private property.

5. Physical abuse of persons. A student or students may take no action or actions which disrupts or which as a probable consequence could disrupt the public peace or which endangers the safety, health, physical or mental well being, or life of any person.

6. Dangerous or narcotic drugs. A student may not use, possess, sell, or distribute any of the narcotic, dangerous, or hallucinogenic drugs in any form except under the direction of a licensed physician or as expressly permitted by law.

7. Firearms. Students may not have or keep any firearm on their persons, in their quarters, or in their motor vehicles at any time while on university property except with the permission of the chief security officer of the university.

8. Alcoholic beverages. Delivery and sale of alcoholic beverages on university property is prohibited. Possession and use of alcoholic beverages on university property is restricted by the laws of the state of Illinois as to age and by the regulations of the university as to physical location.

9. Instructions from university officials. A student must follow the oral or written instructions regarding university regulations or state law given by any university official whom the Board of Regents or the President has vested with the authority to give such instructions.

10. University regulations. Students are responsible for knowing and abiding by university regulations and policies, including those not specifically enumerated in these general regulations, concerning such matters as the meeting of financial obligations to the university, university motor vehicle and parking regulations, registration of student organizations, as well as specific rules governing the use of particular facilities such as the residence halls, the libraries, and the University Center.

**Student Information and Records**

Documents submitted in support of an application for admission to the Graduate School or for student-at-large status become the property of Northern Illinois University and will not be returned to the applicant or transmitted to another institution. Such documents will be retained by the Graduate School for a minimum period of one year, retention beyond that minimum cannot be assured.

Information and data concerning individual students are collected, maintained, and used by the university only as needed in relation to its basic educational purposes and requirements. Presently, relevant policy and procedures are designed and operated to be in compliance with federal legislation, specifically, the Family Educational Rights and Privacy Act of 1974 as amended by Senate Joint Resolution 40, signed into law by the President of the United States on December 31, 1974. The official university procedures and a directory of educational materials maintained by Northern Illinois University are available for review in the Office of Registration and Records. All questions about interpretations or clarifications involving university policy and procedures regarding students' records are to be directed to the university legal counsel.

There are four basic types of student record: academic, financial, medical, and placement. The official academic record is established and kept current by the Office of Registration and Records. It is a cumulative history of the student's enrollment and academic performance and maintenance. Maintained in connection with the academic record is certain biographical and personal identification information as needed for enrollment purposes. In addition to certain elements of this record, the Graduate School maintains the student's graduate admissions record and a record of progress toward meeting requirements (Graduate School and departmental) of the student's graduate program(s). The Graduate School also maintains records relating to the academic progress of students-at-large. Some or all of these student data are provided by the Office of Registration and Records and the Graduate School as needed to the university's academic offices, colleges, schools, and departments for academic administration and advisement, and to other university administrative units as necessary for the functioning of various student and support services.

Student financial records are the responsibility of the Office of the Bursar, with respect to the billing, payment, and accounting of tuition and fees; the Student Financial Aid Office for operation of the university's student financial assistance program; and the Graduate School for graduate fellowships and assistantships. The Bursar keeps a complete record of the student's financial transactions relative to payment of the university charges accrued.

For those students who require medical assistance and care from the University Health Service, at the time of their first contact with the service a medical history record is created and maintained by the Health Service staff. Only information pertinent to the health of the individual is included therein. Health Service medical records may be destroyed six years after the last date medical services were provided.
The Office of Career Planning and Placement, with the student's voluntary participation, creates and distributes to potential employers a copy of a file which consists of a self-completed resume and various personal references.

Certain records within the university community are exempt from the above-cited federal legislation: records of instructional, supervisory, and administrative personnel which are the possession only of the maker and not accessible nor revealed to any other person except a substitute; files within the university's Department of Public Safety (University Police); and medical records used in connection with the provision of treatment for a student. Access to these is strictly limited to the university personnel immediately involved with their creation and maintenance except for certain specific qualifications.

Further, the university is not required to make available to the student the financial records of his or her parents or confidential letters and statements of recommendation which were placed in the student's files prior to January 1, 1975, if such are used only for the purpose specifically intended.

Access to or release of each of the above types of records or their respective parts, or of any personally identifiable information, with the previous exceptions noted, is restricted to the following: the student or former student; parents of a legally defined dependent student (reference Section 152 of the Internal Revenue Code of 1954); university faculty and staff who have a legitimate university-related educational or administrative interest; certain specified state and federal representatives primarily as concerns the evaluation and auditing of government-funded programs in which the university participates; officials of other colleges, universities, or schools in which the student intends to enroll, provided the student is informed of this type of request in advance of the information being released; independent educational or other organizations in connection with a student's application for or receipt of financial aid; state and local officials as directed by State Statute adopted prior to November 19, 1974; with certain restrictions, organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction; accrediting organizations; and appropriate persons in connection with an emergency, if knowledge of such information is necessary to protect the health or safety of a student or other person. In all other instances, access or release may be granted only with the student's written authorization. In cases where such records are to be furnished in compliance with a judicial order or pursuant to a lawfully issued subpoena, prior to their release the student shall be notified of such order or subpoena by personal service or certified mail to his or her last known address.

The student has the right to personally review his or her records in the presence of a university representative at an appropriate convenient campus location. This right pertains separately to each status to which the student has been in attendance at the university (i.e., undergraduate, student-at-large, law, graduate). Requests for review must conform with established university procedures and the right of review will be granted within a reasonable time following the request. Where necessary, interpretation of the record shall be provided by qualified university personnel. Original records cannot be removed from university premises. A copy may be provided where failure to provide a copy would effectively prevent a student from exercising the right to inspect and review the educational records.

While a charge may be made to cover costs of reproduction, in most instances this is not done. However, normal operational fees exist with respect to record reproduction within the Office of Career Planning and Placement, dependent upon the number of copies requested, and the Office of Registration and Records.

A student has the right to challenge the content of a record on the grounds that it is inaccurate, misleading, or otherwise in violation of privacy or other rights and to have inserted in the record his or her written explanation of its contents. (Academic grade review procedures are covered elsewhere.) To initiate such a challenge, the student shall, within 60 days after he or she has inspected and reviewed the record in question for the first time, file with the university office responsible for maintaining such record a written request for a hearing, in a form specified by the university. Within 30 days following receipt of such request the head of such office, or a designated representative, shall review the record in question with the student and either order the correction or amendment of such alleged inaccurate, misleading, or otherwise inappropriate portions of the record as specified in the request or notify the student of the right to a hearing at which the student and other persons directly involved in the establishment of the record shall have an opportunity to present evidence to support or refute the contention that the portions of the record specified in the request are inaccurate, misleading, or otherwise inappropriate. The student shall be given written notice of the time and place of such hearing no fewer than 10 working days in advance. The hearing will be conducted by a university representative who does not have a direct interest in the outcome. The student shall have the right to attend the hearing, to be represented and advised by other persons, and to call witnesses in his or her behalf. The student shall be notified in writing of the decision within 10 working days following the hearing or within 10 working days of a decision without a hearing. Such decision is final.

The student may waive the right of access to confidential statements submitted with respect to application for admission to the Graduate School or to another educational institution, an application for employment, or receipt of an honor or honorary recognition. However, the student may not do so if the student who does waive right of access will be provided, upon request, with the names of all persons making confidential recommendations.

Directory information pertaining to students, as defined below, may be released by the university at any time provided that it publishes this definition at least once each academic year in the campus student newspaper and the individual student is given a reasonable period of time to inform the university that such information is not to be released without his or her prior consent. Such information is never knowingly provided any requester for a commercial purpose.

Directory information includes the following: student's name, address, telephone listing, date and place of birth, major field of study, classification, gender, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student.
Index

Abbreviations, 5
Academic Computing Services, 44
Academic dismissal, 17, 24
for breach of academic integrity, 19
for failure on doctoral examinations, 34
of student-at-large, 18
Academic integrity, 19
Academic load, 20-21
Academic probation
for students-at-large, 18
and "fifth-year" master's thesis and examinations, 28-29
and M.F.A. documentation, 32
and Ed.S. thesis and examination, 31
and Performer's Certificate examination, 31
See also Academic standing
Academic records, 255-256
Academic regulations, 19-26
Academic reinstatement, 24
Academic schedule and religious observances, 25
Academic standing, 24
for students-at-large, 18
Accountancy, Department of, 60-61
Accounting Science, Master of, 27-29, 57-58
Accreditation and affiliation of university, 7
Adapted physical education, 108
Administration
and supervision (special education), 84-85
comparative and developmental, 188
fiscal, 188
human services, 188
of university, 251-252
See also Educational administration; Public administration
Admission
deferral of, 17
to graduate study, 14-18
to "fifth-year" master's degree programs, 27
to M.B.A. program, 29
to M.F.A. programs, 31-32
to Ed.S. programs, 30
to Performer's Certificate program, 30
to candidacy (doctoral), 34-35
to doctoral programs, 33
early, 16-17
provisional, 16
tentative, 16
termination of, 17
with stipulation, 16
See also individual colleges and departments
Adult continuing education
programs in, 98-99, 100
courses in, 100-101
Adviser (advisory systems)
for "fifth-year" master's degrees, 27
for M.B.A., 29
for M.F.A., 32
for Ed.S., 30
for Performer's Certificate, 30
See also individual departments
Allied Health Professions, School of, 204-205
Alumni Association, 53
American history, 172
American literature, 155
Ancient history, 170
Animals, experimental facilities for, 26
Anthropology, Department of, 130-132
Apartments, 49
Appeals
for academic reinstatement, 24
grade, 24
See also Graduate Council Appeals Committee
Application
for admission to Graduate School, 14-15
fee for, 36
for graduate assistantship, 40
for graduation, 27
Applied family and child studies, 210-211
Applied probability and statistics, 175-176
Archives, University, 45
Art, School of, 221-227
Art education, 222
Art history, 223
Art therapy, 222
Asian history, 171
Asian language course, 159
Asian studies, southeast, 240-241
Assistantships, 40-41
not available to students-at-large, 18
and course load, 20-21
See Directory for Correspondence
Audiology (communicative disorders), 206-207
Auditing, 21
Automobiles on campus, 51
Biochemical and Biophysical Studies
Center for, 243-244
concentration in, 243-244
Biological Sciences, Department of, 133-137
Biophysical studies, concentration in, 243-244
Black Studies, Center for, 52
Board of Regents, 251
British history, 171-172
Burma Studies, Center for, 242
Bus service, 51
Business, College of, 55-58
Business Administration, Master of, 29-30, 57-58
Business education, graduate study in, 55-59
Business management, school. See School business management
Calendar, 4
Campus activities and university services, 47-54
Campus Activities Board, 47
Campus communications media, 48
Campus Information Center, 50
Campus transportation, 51
Campus recreation, 51
Career Planning and Placement Center, 51
Certification, teacher. See Teacher certification/teacher education
Change of major/specialization, 17
Chemistry, Department of, 138-141
Child care, 51
Limitation of time
for "fifth-year" master's degrees, 28
for master's degrees in business, 56
for master's degree in chemistry, 136
for M.B.A., 30
for M.F.A., 32
for Ed.D., 31
for Performer's Certificate, 31
for doctoral degrees, 34
for doctoral degree in chemistry, 139
Linguistics. See Anthropology, Department of; English, Department of
Literary criticism, and rhetoric, 152
Loans, 41-42
Lorado Taft Field Campus, tuition for, 36
Maladjusted (special education), 84-85
Management
Department of, 63-65
industrial, 123
school business, 98-99, 105-106
urban, 188
Management information systems, 58-59
Marketing, Department of, 66
Marriage and family therapy, 211
Master of Accounting Science (M.A.S.), 27-29, 57-58
Master of Arts (M.A.), 27-29
See also individual departments
Master of Business Administration (M.B.A.), 29-30, 57
Master of Fine Arts (M.F.A.), 31-32
in art, 223
in theatre arts, 235-236
Master of Music (M.M.), 27-29, 228-230
Master of Public Administration (M.P.A.), 27-29, 188
Master of Science (M.S.), 27-29
See also individual departments
Master of Science in Education (M.S.Ed.), 27-29
See also individual colleges and departments
Mathematical Sciences, Department of, 175-181
Matriculation, 17
deferral of, 17
Meal plans, 48-49
Mechanical Engineering, Department of, 121-122
Medical care, 49-50
Medical insurance, 49-50
fee for, 36
Medical records, 255-256
Medieval history, 170
Meteorology, courses in, 162
Military Science, Department of, 216
Multiply handicapped, deaf or vision, 84-85
Music activities, 48
Music, School of, 228-234
Nonpenalty repeat option, 22
Non-thesis option. See individual departments
Northern Illinois University Foundation, 54
Northern Illinois University Press, 46
Northern Public Radio, 48
Northern Star, 48
Notices, 253-256
Notification of admission, 16
Nursing thesis, fee for microfilming, 36
Nursing, School of, 217-219
Nutrition and dietetics, 212-213
Off-campus courses. See External programming
Off-campus housing, 49
Ombudsman, Office of, the, 52
One-person show in art, 32
Operations Management and Information Systems, Department of, 67-68
Oral defense of dissertation, 35
Orientation for new students from abroad, 15
азе for, 36
Outdoor teacher education program in, 74
courses in, 79
Out-of-state students, tuition and fees for, 36
See also Illinois residence regulations
Parking on campus, 51
Performer's Certificate, 30-31, 230
Perkins Loan Program, Federal, 41
Personal property, storage of, 254
Petition. See Graduate Council Appeals Committee
Ph.D. See Doctor of Philosophy
Philosophy, Department of, 182-183
Physical Education, Department of, 107-112
Physics, Department of, 184-186
Placement, Career Planning and, 51
Placement records, 255-256
Plant Molecular Biology, Center for, 245
Political Science, Department of, 187-193
Portuguese, course in, 158
Postgraduate status, 18
Prerequisites (PRQ), definition of, 5, 6
Presidential Teaching Professorships, 43
Psychology, Department of, 194-198
Protection of human subjects, 25-26
Professional Studies, College of, 202-219
Program of courses, 25
See also individual programs
Programs, graduate
list of, 9-11
requirements for, 27-35
Radioactive substances, use of in research, 26
Reading
programs in, 73-74, 75
courses in, 79-80
Readmission, 17
Record encumbrance, 20
Records, student, policy on, 19, 255-256
Recreational facilities, 51
Recombinant DNA, facilities for, 26
Registration, 19-20
See also continuous enrollment
Regulations governing student teaching assignments in College of Education, 71
in College of Liberal Arts and Sciences, 128-129
Rehabilitation teaching of the adult blind, 84-85
Reinstatement, academic, 24
Religious observances and the academic schedule, 25
Repeat option, nonpenalty, 22
Repeatability of courses, 22
Requirements for graduate degrees
catalog governing, 19
for "fifth-year" master's degrees, 27-29
for M.B.A., 29-30
for M.F.A., 31-32
for Ed.D., 30-31
for Performer's Certificate, 30-31
for doctoral degrees, 33-35
See also individual departments
Research, protective standards in, 25-26
Research and Evaluation in Adult Continuing Education, Office of, 98
Research facilities and resources, 44-46
Research professorships, 43
Research-to-tool requirement for "fifth-year" master's degrees, 28
for Ph.D. degrees, 33
See also individual departments
Residence, Illinois, definition of, 38-39
Residence halls, 48-49
fees for, 38
Residence requirements for "fifth-year" master's degrees, 27
for doctoral degrees, 33
See also individual departments
See also Illinois residence regulations
Responsibility, student, 19. See also Notices
Retention, 17
See also individual colleges and departments
Rhetoric (communication studies), 143; and literary criticism (English), 153
Rhoden A. Smith Assistantship Program, 40
Roper Center, 45
ROTC (Department of Military Science), 216
Russian
history, 171
language and literature, courses in, 159
Scholarly activities, 43-46
Scholarships
Carter G. Woodson Scholars Program, 41
ROTC, 216
veterans', 51-52
School business management
program in, 98-99
courses in, 195-206
Second major, 25
Second master's degree, 25
Secondary education
programs in, 73-75
courses in, 80-81
Services, campus activities and university, 47-54
Services for students with disabilities. See Center for Access-Ability
Resources
Social Science Research Institute, 246
Sociology, Department of, 199-201
Southeast Asian Studies
Center for, 240-241
concentration in, 240-241
Spanish
language and literature, courses in, 157-158
specialization in, 156-157
Special Education, Educational Psychology, Counseling, and, Department of, 82-96
Speech and Hearing Clinic, 50
Speech-language pathology (communicative disorders), 206-207
Stafford Loan Program, Federal, 41
Standing, academic, 24
Statistics
probability and (mathematical sciences), 175-176
courses in, 180-181
Stipulation, admission with, 16
Storage of personal property, 254
Student-at-large status, 18
and grading system, 22-23
Student association, 47
Student-at-large credit
not applicable to doctoral residence requirement, 18
in computing G.P.A., 22-23
for 'fifth-year' master's degrees, 28
for M.B.A., 29
for M.F.A., 32
for Ed.S., 30-31
for Performer's Certificate, 30-31
for doctoral programs, 34
Student Center, Holmes, 49
Student employment, 42
Student organizations, 47
Student records, policy on, 255-256
Student responsibility. See Notices
Student teaching. See Teacher education
Students' Legal Assistance Office, 52
Studio art, 223
Studio degrees, special requirements for admission, 222
S/U grading, 23
Taxation, specialization in (accountancy), 58
Teacher education/teacher certification
in College of Education, 71
in College of Liberal Arts and Sciences, 128-129
in Department of Curriculum and Instruction, 74
in art, 222
in English, 153-154
in health education, 109-110
in mathematics, 177
in music, 229
in physics, 184
in special education, 85
Teaching assistantships. See Assistantships
Teaching in subject areas. See individual departments
Teaching professorships, 43
Technology, Department of, 123-126
Tentative admission, 16
Termination of admission, 17
TESOL (Teaching English to Speakers of Other Languages), 152
Test of English as a Foreign Language (TOEFL), for international students, 15, 16
Test of Spoken English (TSE)
and graduate teaching assistantships, 40
for the Department of Communication Studies, 142
Testing services, 52
Theatre Arts, Department of, 235-238
Therapy, art, 222
Therapy, marriage and family, 211
Thesis
for 'fifth-year' master's degrees, 28
for M.F.A. (documentation of one-person show or final project), 32
for Ed.S., 31
Thesis courses, incomplete in, 23
Time limitation for graduate degrees. See Limitation of time
TOEFL. See Test of English as a Foreign Language
Towers, 48
Transcripts
fee for, 36
policies on, 255-256
required for admission, 14-15
Transfer credit
in fulfillment of research tool requirement, 33
for 'fifth-year' master's degrees, 28
for M.B.A., 29
for M.F.A., 32
for Ed.S., 30-31
for Performer's Certificate, 30-31
for doctoral degrees, 34
Transportation, campus, 51
TSE. See Test of Spoken English
Tuition, 36-39
for audit hours, 21
Tuition, waiver of
for graduate assistants and fellows, 40, 41
for senior citizens, 39
Undergraduate courses, graduate students in, 21
Undergraduates in courses for graduate credit, 21
Undergraduates in graduate courses for undergraduate credit, 21
United States history, 172
University academic publications. See inside front cover
University Archives, 45
University Health Service, 49
University Libraries, 250
University Press, 46
University relations, 53-54
University research facilities and resources, 44-46
University residence halls, 48-49
fees for, 38
University Resources for Latinos, Office of, 52
University Resources for Women, Office of, 52
University services, 47-54
Urban management, 189
Variable course hours, 22
Veterans' educational benefits, 51-52, 216
Visual and Performing Arts, College of, 220-238
Visually handicapped, 84-85
Withdrawal, 22
WKDI, 48
WNLU, 48
Women, services for, 52
Women's studies, graduate concentration in, 128
Workforce preparation, 71
Workshop courses, tuition and fees for, 36
Work study program, 42