

1980

## Graduate Academic Catalog (1980-1981)

University of Nebraska at Omaha

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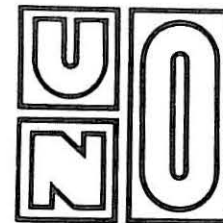
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**University of Nebraska at Omaha  
Graduate Catalog  
1980-81**

**\$1.00**  
**The Official Catalog of  
The University of Nebraska at Omaha  
Volume XXXVII, Number 2**

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**ACADEMIC CALENDAR**

**First Semester 1980-81**

July 11	Last day for submitting credentials for admission to Graduate Studies for First Semester 80-81.
July 14-Aug. 29	Orientation.
July 29	Last day for submitting credentials for admission to an undergraduate college for the First Semester 80-81.
Aug. 20,21,22	Registration (Fieldhouse)
Aug. 25	First semester begins at 7:00 a.m. both day and evening classes.
Aug. 25-29	Change of class schedules.
Aug. 29	Last day until 4:00 p.m. to: Add a course to student's schedule; Add an "audit" course; Change to "CR/NC" grade in a course.
Sept. 1	Vacation; no classes. University closed.
Sept. 2	Vacation; no classes.
Oct. 6	Last day for filing applications for degrees to be conferred in December.
Oct. 17	Due: Mid-term (8th week) report from faculty of grades under C for all undergraduates.
Nov. 7	Last day until 4:00 p.m. to: Drop a course with a grade of "W"; Change a course to "audit" credit; Change from "CR/NC" to grade registration in a course.
Nov. 26-30	Thanksgiving vacation; no classes.
Nov. 27, 28	University closed.
Dec. 1	Classes resume at 7:00 a.m.
Dec. 12	Status report for all prospective graduating students due in Registrar's Office by 12:00 noon.
Dec. 13-19	Last day for submitting credentials for admission to Graduate Studies for Second Semester 80-81.
Dec. 20	Last day of classes.
Dec. 25, 26	Finals.
Dec. 24	Commencement.
	Christmas Holiday; University closed.
	Grades due in Registrar's Office at 12:00 noon.

**Inter-session**

Dec. 29-Jan. 9 Special course offerings.

**Second Semester 1980-81**

Jan. 1	Holiday. University closed.
Jan. 2	Last day for submitting credentials for admission in undergraduate college for the Second Semester 1980-81.
Jan. 2-9	Orientation.
Jan. 7-9	Registration (Fieldhouse)
Jan. 12	Second Semester begins at 7:00 a.m. both day and evening classes.
Jan. 12-16	Change of class schedules.
Jan. 16	Last day until 4:00 p.m. to: Add course to student's schedule; Add an "audit" course; Change to "CR/NC" grade in a course.
March 6	Due: Mid term (8th week) report from faculty of grades under C for all undergraduates. Also last day for filing applications for degrees to be conferred in May.
March 27	Last day until 4:00 p.m. to: Drop a course with a grade of W; Change a course to audit credit; Change from CR/NC to grade registration in a course.
March 22-29	Spring vacation; no classes.
March 30	Classes resume 7:00 a.m.
April 13	Last day for submitting credentials for admission to Graduate Studies for the Evening Summer Session 80-81.
April 14	Honors Day.
April 23	Status report for all prospective graduating students due in Registrar's Office at 12:00 noon.
May 1	Last day of classes.
May 2-8	Finals.
May 9	Commencement.
May 11	Last day for filing credentials for admission to Graduate Studies for the First Summer Session, 1981.
May 13	Grades due in Registrar's Office by 12:00 noon.
May 29	Memorial Day; University closed

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Cover photo by Tim Fitzgerald.

## Summer Session 1981

May 18-July 10	Evening Session.
May 28	Last day for submitting credentials for admission to an undergraduate college.
June 3, 4	Registration.
June 8-10	Change of class schedules.
June 8-July 10	First Summer Session.
June 11	Last day for submitting credentials for admission to Graduate Studies for the Second Summer Session 1981.
July 4	Holiday; University closed.
July 6	Last day for filing applications for degrees to be conferred August 15, 1981.
July 11	Last day for submitting credentials for admission to Graduate Studies for the Fall Semester 81-82.
July 13-Aug. 14	Second Summer Session
July 30	Last day for submitting credentials for admission to an undergraduate college for the Fall Semester 81-82.
July 31	Status report for all prospective graduating students due in Registrar's Office by 12:00 noon.
Aug. 15	Summer Commencement.
Aug. 19	Final grades due in Registrar's Office by 12:00 noon.

\*The above dates are subject to change.

\*\*Modifications in the academic calendar could be necessitated by emergency condition.

## DEPARTMENTS OFFERING GRADUATE INSTRUCTION

Departments or areas which have been approved to offer courses for graduate credit and the degrees available in each department are as follows:

DEPARTMENT OR AREA	Minor Only	Master of Arts	Master of Science	Other
Art	x			
Biology		x	x	
Business Administration				MBA
Chemistry	x			
Civil Engineering			x	
Communication		x		
Counseling and Guidance				
Agency Counseling		x	x	
College Student Personnel Services		x	x	
Elementary Counseling		x	x	
Gerontology		x	x	
Secondary Counseling		x	x	
Criminal Justice		x	x	
Dramatic Arts		x		
Economics		x	x	
Educational Administration and Supervision				Ed.S.
Elementary Administration			x	
Secondary Administration			x	
Educational Foundations				
Urban Education			x	
Elementary and Early Childhood Education		x	x	
English		x		Certificate**
Foreign Languages				
French	x			
German	x			
Spanish	x			
General Science			x	
Geography		x	x	
Gerontology	x			Certificate
Health, Physical Education and Recreation		x	x	
History		x		
Home Economics		x	x	
Mathematics		x	x	MAT
Music	x			
Physics	x			
Political Science		x	x	
Psychology		x		Ph.D.*
Educational Psychology			x	
Industrial Organizational Psychology			x	
School Psychology				6th Yr. Certificate and Ed.S.
Public Administration				MPA
Secondary/Post-Secondary Education		x	x	
Social Work				MSW
Sociology		x		
Applied Sociology			x	
Special Education				
Reading			x	
Special Learning Disabilities			x	
Speech Pathology		x	x	
Teaching the Deaf			x	
Teaching the Emotionally Disturbed			x	
Teaching the Mentally Retarded		x	x	
Urban Studies			x	

\*\*English as a second language.

\*Ph.D. in the specialties of industrial psychology and developmental psychobiology offered in conjunction with the Psychology Department. UN-L. Ph.D. in the specialty of experimental child psychology is offered in conjunction with the Educational Psychology and Measurements Department. UN-L.

# General Information

## GRADUATE STUDIES AT UNO

The first Master's degrees were awarded in 1919 by a special vote of the Board of Trustees of the "old" University of Omaha. In 1932, after the University became the Municipal University of Omaha, a Graduate Committee was organized to supervise graduate education. In 1942, the Graduate Committee was replaced by the Committee on Graduate Studies. The degree Master of Science in Education was approved in 1948. In 1954, the Committee on Graduate Studies became the Graduate Council and the Chairman became the Director of the Graduate Division. In 1960, the Board of Regents authorized a year of graduate study in education beyond the Master's degree. The Master of Business Administration was authorized in 1965 and the Master of Public Administration was authorized in 1970.

Recognizing the growing importance of graduate education, the term "Graduate Division" was authorized in 1949. In October, 1962, the Board of Regents established the College of Graduate Studies as the sixth college of the University of Omaha. In 1966, the name was changed to The Graduate College. In 1973 the Graduate Colleges on the separate campuses were merged into one Graduate College of the University of Nebraska with one Graduate Faculty. The College is administered by a Dean of the Graduate College. The former campus Deans of the campus Graduate Colleges became Deans for Graduate Studies and Research and report to the Dean of the Graduate College.

Graduate studies provide the opportunity for more advanced education than the undergraduate work upon which all graduate programs are founded.

Qualified students at UNO are provided with opportunities:

1. To work toward these degrees: Master of Arts, Master of Arts for Teachers of Mathematics, Master of Science, Master of Business Administration, Master of Public Administration, Master of Social Work, and Specialist in Education.
2. To earn graduate credit for the issuance or renewal of certificates for teachers, administrators and educational psychologists.
3. To provide for scholarly and professional advancement.

To enable the student to attain these objectives, Graduate Studies at UNO provide graduate courses, workshops, institutes, seminars, practica, research and special problems courses, and the supervision of theses or special projects. Thus the Graduate Faculty at UNO promotes the spirit of free investigation in the various disciplines and, at the same time, serve to unite the various branches of the University in advancing human knowledge and providing intelligent, capable leadership for society. The UNO Graduate Council consists of fifteen members from among the Graduate Faculty and student body. The Council serves in an advisory capacity to the Dean for Graduate Studies and Research and is responsible for planning and policy development, review of courses and programs, and faculty and student affairs.

## ACCREDITED STANDING

The University of Nebraska at Omaha is fully accredited by the North Central Association of Colleges and Secondary Schools, and has programs which are accredited or approved by the National Council for Accreditation of Teacher Education, the National Council on Social Work Education, the Engineers Council for Professional Development, the American Home Economics Association (for undergraduate programs), the American Dietetic Association, the American Assembly of Collegiate Schools of Business (for undergraduate programs), and the American Chemical Society. Its courses are accepted for purposes of teacher certification by the Nebraska State Department of Education.

Course credits from the University of Nebraska at Omaha are accepted by other colleges and universities which are members of the North Central Association and by other regional accrediting agencies.

## EQUAL OPPORTUNITY/AFFIRMATIVE ACTION POLICY STATEMENT

The Bylaws of the Board of Regents of the University of Nebraska state: "Admission to the University and the privileges of University students should not be denied to any person because of their age, sex, race, color, national origin, or religious or political beliefs."

The University of Nebraska at Omaha declares and reaffirms a policy of administering all of its educational programs and related supporting services and benefits in a manner which does not discriminate because of a student's or prospective student's race, color, creed or religion, sex, national origin, age, handicap, or other characteristic which cannot be lawfully the basis for provision of such services. These programs, services and benefits include, but are not limited to, admission, class assignments, scholarships and other financial and employment assistance, counseling, physical education and recreational services, and the membership practices of student organizations.

Further, UNO commits itself to a program of affirmative action to encourage the application of minority, women and handicapped students, to identify and eliminate the effects of any past discrimination in the provision of educational and related services, and to establish organizational structures and procedures which will assure equal treatment and equal access to the facilities and educational benefits of the institution for all students.

Pursuant to this policy statement, UNO will undertake a continuing program of compliance with all federal, state, and local laws relating to equal educational opportunity and affirmative action, specifically those addressing the obligations of the institution under Title VI of the Civil Rights Act of 1964 as amended, Title IX of the Education Amendments of 1972, and Sections 503 and 504 of the Rehabilitation Act of 1973.

### PRIVACY ACT

In compliance with the Family Education Rights and Privacy Act of 1974, the University of Nebraska at Omaha guarantees students access to official records directly related to students and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading, or otherwise inappropriate. Also the institution must obtain the written consent of students before releasing identifiable data about students from records to other than a special list of exceptions, and that students must be notified of these rights.

An explanation of this Act and its application at UNO is available to all students, copies of which may be obtained at the Office of Student Activities, the University Information Center, the Registrar's Office, the Orientation Office, or the Office of Educational and Student Services.

**Special Note:** UNO welcomes handicapped students. Section 504 of the Rehabilitation Act of 1973 does not allow us to make preadmission inquiries regarding handicapped conditions. However, if you are handicapped and wish to receive information concerning available services, please notify us following your admission to UNO.

### DEGREE PROGRAMS

All graduate degrees are awarded by the University of Nebraska system, with each campus having the responsibility of establishing and maintaining individual standards and requirements.

All departmental requirements must be in accord with the policies and practices of the Graduate College.

#### Master of Arts or Master of Science Degree

A departmental or interdepartmental program for either the Master of Arts or Master of Science degree as approved by the Graduate Faculty will normally be arranged to conform to one of the following patterns:

- Option I. A 30 semester-hour program (maximum of 6-hour thesis credit included) as determined by the cognizant Graduate Program Committee.
- Option II. A 36 semester-hour non-thesis program as determined by the cognizant Graduate Program Committee.

#### Master of Arts for Teachers of Mathematics

This is a specialized graduate degree designed to provide secondary school mathematics teachers with more depth in mathematics combined with a core of relevant professional courses in education.

#### Master of Business Administration Degree

This is a professional graduate degree designed to provide a broad educational experience for students who wish to assume positions of responsibility in business.

#### Master of Public Administration Degree

This is a professional degree designed to provide broad educational experience for students who wish to assume positions of responsibility in government.

#### Master of Social Work

The Master's degree in social work is a professional degree which trains practitioners in developing skills for responsible practice in a wide variety of social service roles and settings.

#### Specialist in Education Degree

The Specialist in Education degree (Ed.S.) is an advanced degree, involving a minimum of one year of study beyond the Master's degree. It is designed to offer additional study for professional educators.

### UNIVERSITY REGULATIONS

The University and its various colleges, divisions, and departments reserve the right to change the regulations controlling admission to, instruction in, and graduation from the University or its various divisions.

Such regulations are operative whenever the University authorities deem necessary and apply not only to prospective students but also to those currently enrolled in the University.

The University also reserves the right to withdraw courses, to reassign instructors, and to change tuition and fees at any time.

Efforts will be made to enable students who maintain continuity in pursuing their degrees to follow the policies and requirements in effect at the time of their original enrollments ("Continuity" means that the student is enrolled in both semesters of every academic year or in at least one session every summer until all requirements for the degree have been satisfied). All students are, however, responsible for consulting their major advisers and checking on any changes promulgated. The Graduate College reserves the right to alter policies, practices, and requirements as would benefit the student through academic standards.

The student is advised to be familiar with the academic regulations of the University and graduate studies and the student is expected to assume full responsibility for knowing the relevant academic requirements. The student is responsible for complying with all regulations of the University, Graduate Studies, and the departments of instruction, and for meeting all degree requirements. The adviser should be consulted whenever there is a question concerning degree requirements.

### PROCEDURES AND REGULATIONS

#### Admission and Transcripts

Applications for admission, together with transcripts, must be filed not only by those students desiring to work for a degree, but also by students desiring graduate credit for a renewal of a teacher's certificate, for professional development, and for graduate credit to be transferred to some other school.

Foreign students must provide letters of recommendation, statements of financial independence, and evidence of ability to speak and write the English language. The baccalaureate degree must have been received from an institution accredited by the proper accrediting agencies.

New students should correspond with, or go directly to, the Director of Admissions in order to apply for admission. Each new student will be required to file with the Director of Admissions:

- (1) An application for graduate study at the University of Nebraska at Omaha.
- (2) *One (1) official transcript of all* undergraduate (and graduate, if any) college work previously taken. Transcripts and all other materials submitted in support of an application become the permanent property of the University and will not be returned. (Graduates of the University of Nebraska at Omaha need not submit transcripts.)
- (3) Scores on the GMAT which should accompany the application for admission to the Master of Business Administration program.

**NOTE:** For consideration for the Fall, Spring, Evening Summer, First Summer or Second Summer term, above credentials must be on file by July 15, December 15, April 15, May 15 or June 15 respectively. Those wanting to be considered for admission to the program in counseling and guidance should see page 35 for separate deadline dates.

Scores of the Graduate Record Examination, Miller Analogies Test or Graduate Management Admission must be filed in the Graduate Office.

The test(s) required and the minimum scores are dependent upon the department in which the student intends to enroll.

Admission to Graduate Study does not admit the student to candidacy for any graduate degree. (See "Admission to Candidacy for Graduate Degrees.") The University reserves the right to change the regulations included in this Catalog with respect to admission to Graduate Study, the continuance of graduate study, and the granting of a degree.

### MATRICULATION FEE

A matriculation fee of \$10 is payable upon initial enrollment in Graduate Studies. This fee is not refundable.

### EXAMINATIONS FOR GRADUATE STUDENTS

Three examinations: the Graduate Record Examination, the Graduate Management Admission Test and the Miller Analogies Test, are used by various departments to provide valuable evidence of a student's qualifications for graduate work and are helpful in planning courses of graduate studies.

These tests are given at UNO under the supervision of the Director, Counseling and Testing Center. Registration deadlines and testing dates are available from the Counseling and Testing Center, Eppley Building, or the Graduate Office, Adm. 283. A nominal fee is charged for these examinations.

**Graduate Record Examination (GRE)**

Graduate students are required to take the general aptitude test of the Graduate Record Examination (GRE) during their first semester of enrollment in Graduate Studies, unless they have taken it previously and have made the scores available to the Dean for Graduate Studies and Research. The advanced area test is also required unless this test has been waived by the cognizant Graduate Program Committee. The examination is not used to exclude admission at the Masters level.

A student who has not taken the GRE prior to application for admission to Graduate Studies but who is judged from other evidence to be capable of graduate study, is assigned provisional status. A final determination of classification will be made after the examination scores have been studied.

A Graduate Studies applicant already holding a Master's degree in the field in which he or she wishes to pursue further study and not enrolling into a degree program is not required to take the Graduate Record Examination.

Students who wish to be admitted to Psychology Department programs are required to submit GRE scores (verbal, quantitative and advanced) before being considered for admission.

The Counseling and Guidance Department requires those wishing to pursue a degree program in counseling to take admissions tests in addition to the Graduate Record Examination (see page 35).

**Graduate Management Admission Test (GMAT)**

Applicants for admission to the Master of Business Administration program are required to take the Graduate Management Admission Test in lieu of the Graduate Record Examination. Test results must be submitted *prior* to admission.

**Miller Analogies Test (MAT)**

Graduate students who have been admitted into the Department of Educational Administration and Supervision may take the Miller Analogies Test in lieu of the Graduate Record Examination. Students majoring in Special Education must take the Miller Analogies Test. This test is administered on an individual basis; an appointment to sit for the test may be scheduled through the Counseling and Testing Center.

**The Test of English as a Foreign Language**

The Test of English as a Foreign Language (TOEFL) scores must be on file in the Director of Admissions Office before an application for admission to Graduate Studies is mailed to a foreign student desiring to enroll for graduate work at UNO. This provision does not apply to those foreign students whose native language is English.

**CLASSIFICATION OF ADMISSION**

All recommendations for any type of admission are subject to the approval of the Dean for Graduate Studies and Research.

**Unconditional**

**Unconditional admission** to graduate study may be granted to a student who has a Bachelor's degree from a regionally accredited institution, who has earned at least a B average in the undergraduate work in his proposed graduate major and minor, and who presents at least 15 semester hours of undergraduate work that meet specific requirements of the departments in his graduate major and minor. In addition to the specified transcript record, appropriate scores of the Graduate Record Examination, Miller Analogies Test, or the Graduate Management Admissions Test must be supplied to the Dean for Graduate Studies and Research.

**Provisional**

**Provisional admission** may be granted to a student who has a Bachelor's degree from a regionally accredited institution but who has not completed all of the undergraduate prerequisite course requirements for admission to graduate study. This provisional status will continue until such time as the student has completed all of the undergraduate prerequisites for graduate study.

Provisional admission may occasionally be granted to a student who has less than a B average in the undergraduate work in his proposed graduate major and minor, (but in no case less than a C average) upon recommendation of the Chairman of the Graduate Program committee of the major department (and minor if one is involved) and written approval by the Dean for Graduate Studies and Research. This admission may be made for reasons of maturity, experience, or other extenuating circumstances under which the student may be deemed capable of high quality graduate study. This provisional admission will not be removed until the student has successfully demonstrated to the satisfaction of the Department and the Dean his ability to pursue graduate study.

Applicants to graduate study who have been graduated from unaccredited colleges may be admitted provisionally. Unconditional status may be attained upon completion of twelve semester hours of graduate courses with at least a B average. Specifically, a student must earn at least the

grade of "B" in each course involved in the first twelve hours of graduate study. A grade of "C" or below in any of these courses will result in automatic dismissal.

A student may not apply for admission to candidacy for any degree until he has met the requirements of unconditional admission.

No more than twelve semester hours credit may be earned within the University of Nebraska System while under Provisional Admission status without special approval from the Dean for Graduate Studies and Research.

**Non Degree**

Some students who do not anticipate pursuing a degree program may be admitted to graduate study as non degree students. This classification includes:

1. graduate students taking courses for teacher certification
2. graduate students taking courses for professional growth
3. graduate students taking courses for cultural advancement
4. graduate students taking courses for transfer to another institution.

Applicants in this non-degree category must meet graduate and departmental requirements for admission; each department has the right to establish policies for non-degree students enrolled in classes therein.

Credentials for admission include a completed application blank and one undergraduate transcript. Credit hours accumulated in this category could be counted toward a degree only if (a) the transition from non degree status is accomplished no later than the first opportunity to file candidacy for degree, and (b) the petition for change is accompanied by a departmental recommendation that the specified credit hours count toward the degree. For students desiring to change status, the Request for a Change — Graduate Degree Program Form should be used. Under no conditions may Non Degree students transfer more than nine (9) semester hours into a degree program. Any transfer up to that amount may be recommended for acceptance by the receiving department, which may also recommend less than that maximum.

No more than twelve semester hours credit may be earned within the University of Nebraska System while under Non Degree status without special approval from the Dean for Graduate Studies and Research.

**Acceptance of Senior Credits:** Seniors at an accredited institution who have obtained in advance the approval of the appropriate campus Dean for Graduate Studies and Research may receive up to 12 hours of credit for graduate courses taken *at any campus of the University of Nebraska System* in addition to the courses necessary to complete their undergraduate work, provided that such credits are earned within the 12 months prior to receipt of the baccalaureate.

Seniors in this University needing not more than nine hours of undergraduate credit to complete the bachelor's degree and wishing to register for graduate credit may be granted provisional admission to graduate study subject to receiving their baccalaureates within the twelve-month period immediately following such registration. They must file application for admission to graduate study and, if admitted, will register on graduate study registration forms.

Course work taken prior to receipt of the baccalaureate may not always be accepted for transfer to other institutions as graduate work.

**Admission to Professional Education Programs**

Students who plan to work for the Master's degree with a major in one of the fields of education must hold a valid teaching certificate or be eligible for such a certificate at the undergraduate level before entering the program. For certification requirements, communicate with the Dean's Office in the College of Education.

**CERTIFICATION OR PROFESSIONAL GROWTH**

Students who wish to take courses for graduate credit to be used for teacher certification or professional growth must meet the same admission requirements as other graduate students. They must also make application for admission to graduate study.

**TEMPORARY ADMISSION**

When unexpected circumstances preclude processing applications for Unconditional, Provisional or Non Degree status, the Dean for Graduate Studies and Research may issue a Temporary Admission. In these rare cases, the student must have all materials submitted for one of the regular admission categories within eight weeks after the beginning of classes (two weeks in summer sessions). Failure to fulfill this requirement by the deadline will result in disenrollment, no credit, and loss of tuition. A student using the Temporary Admission form is registering at his/her own risk because, even if the application and transcripts are received by the deadline, the student may be denied admission after the transcripts have been evaluated. If this should happen, his/her enrollment will be cancelled.



## GRADUATE PROGRAM COMMITTEES

Each department (or area) offering a graduate degree has a *Graduate Program Committee* of at least three members. This committee and its chairperson are recommended annually by the graduate faculty members of the department for appointment by the Dean for Graduate Studies and Research.

In its department the Graduate Program Committee has the responsibility for the planning of the graduate program, the general supervising of the candidates for graduate degrees and the examining of students by means such as the qualifying examination and the final comprehensive examination when these examinations are not given by a student's thesis or field project supervisory committee.

Each new graduate student, in conference with the chairperson of the Graduate Program Committee of the major department, shall select a major adviser. For the student who has a supervisory or advisory committee, the composition of the committee shall be recommended to the Dean for Graduate Studies and Research by the chairperson of the student's Graduate Program Committee after consultation with the student and the major adviser. At the master's level, committees of three members are usually sufficient. The chairperson should be a member of the Graduate Faculty and whenever feasible, the student's adviser and thesis director. The representative from a department other than the major must be a member of the Graduate Faculty. In addition to at least three voting members, faculty members in the university system may be appointed to serve *ex officio* (without vote) as consultants (or to gain experiences as special representatives of the Dean for Graduate Studies and Research. The Graduate Program Committees at UNO represent both the Graduate Faculty and the student's field of study. The word *program* denotes all kinds of academic requirements which must be satisfied by the graduate student in order to qualify for a particular degree (or-in the case of a non-degree student—the requirements of graduate-level certification or recognized stages of professional development). *Every degree candidate's plan of study* must be designed to satisfy the requirements of a program which has been approved by the Graduate Faculty. Both major and minor requirements, together with quality-of-work standards, are included under programs; also included are transfer credits and those electives which are not major or minor courses.

To assure accountability and maintenance of the standards, policies and procedures of the Graduate College, all graduate advisement must be provided by Members and Fellows of the Graduate Faculty (with exceptions possible only for persons with a primary advisement role under the direct supervision of a Member or a Fellow).

## REGISTRATION PROCEDURE

The student is to follow the usual procedure in registering for courses by filling out the proper class cards and other registration blanks and by paying fees at the Business Office. At each registration period the student must secure the signature of the major adviser (and of the Dean for Graduate Studies and Research if he/she is registering for more than twelve hours).

Students must have been formally admitted to graduate study prior to their first registration.

## ADMISSION TO CANDIDACY FOR GRADUATE DEGREE

Admission to graduate study does not admit the student to candidacy for any degree.

It is the student's responsibility to make application for candidacy for the degree as soon as qualified to do so. The qualifications are: (1) the scores on the Graduate Record Examination, the Miller Analogies Test, or the Graduate Management Admission Test must be on file in the Graduate Office; (2) a minimum of six (6) hours of graduate credit must have been completed within the Graduate College of the University System (these six hours must be necessary for his/her degree program); and (3) a grade average of "B", with no grade lower than "C" on all work taken which is included in the Plan of Study. Any Incomplete for any course in the student's major field of study or included in the Plan of Study must be removed before submitting the Application for Candidacy. At least one-half of the approved Plan of Study must be completed following the approval of the Application for Admission to Candidacy.

Transfer hours from universities other than the University of Nebraska will not be counted within the half (of the coursework) that must be completed after application for candidacy.

As a rule, no degree can be awarded in the same semester as candidacy for the degree is approved. A maximum of fifteen hours of course work used to satisfy the requirements of a previous graduate degree may be applied to a second graduate degree if such hours are approved by the Graduate Program Committee of the department in which the second degree is sought. Application forms should be filled out by the student—in consultation with the major and minor advisers—as soon as the student can qualify for admission to candidacy. Both the major and minor programs should be carefully and completely planned at this time and the application should be signed by both the major and minor advisers.

The application form and the plan of study should be filed with the major adviser who then secures the necessary signatures. The Graduate Office, after all signatures are secured, provides copies to the major adviser, the minor adviser and the student.

Plans of study should be planned with acceptable alternatives included. Once approved, any modification of a plan of study is permissible only upon recommendation of the major adviser if the major is concerned, the minor adviser if the minor is concerned, and the approval of the Dean for Graduate Studies and Research.

Until a student has been admitted to candidacy for the degree, the graduate work is governed by the rules and regulations as stated in the most recent Graduate Catalog, if he has not been in continuous enrollment.

## APPLICATION FOR THE DEGREE

The candidate for the degree must file an application for degree in the Registrar's Office in the semester or session in which the degree is to be granted. (See Calendar for date.)

## FINAL COMPREHENSIVE EXAMINATION

A final comprehensive examination is required of all candidates for the Master's degree near the conclusion of their graduate study. For those candidates not writing a thesis, the examination is a written one. For those candidates writing a thesis, the final comprehensive examination may be either written or oral at the option of the department concerned. If written, it must be arranged at the convenience of the major adviser. If the comprehensive is to be oral, it should be arranged at the time of the oral examination over the thesis, at which time one-half of the examination may be devoted to the courses taken by the candidate and one-half to the thesis.

For the degree Master of Business Administration, the course BA 880 is required in lieu of a final comprehensive examination.

If the course work has been of very high quality the minor adviser may suggest to the student's committee that the candidate be excused from the comprehensive examination covering the minor field. This does not prejudice the privilege of the minor professor giving a comprehensive, if the professor so desires. The minor comprehensive is given at a date arranged at the convenience of both the student and the minor adviser but falling within the limits established for all comprehensive examinations.

Most graduate departments require students to register for the comprehensive examination at the time of their final enrollment; however, students should check with their advisers early in their programs to determine departmental policy concerning the administration of the written comprehensive examination. (Note: In most departments, students who plan degree program completion in August should register for the comprehensive examination in the preceding June.)

Results of comprehensive examinations must be submitted to the Graduate Office by the departmental chairperson no later than twelve working days before conferral of degrees.

## THESIS

Students electing to pursue the Option I degree program described on page 9 are required to prepare a thesis under the direction of the major adviser supported by a committee. The thesis provides an opportunity for the student to obtain first-hand experience in research methods under competent direction. Up to six hours of credit is allowed for the thesis and the candidate must include the thesis as a course in his/her schedule during at least one semester. The thesis should be initiated at least eight months before the commencement in which the student plans to receive his degree.

It is the responsibility of the student to be familiar with the "Instructions for the Preparation of Theses," a copy of which may be obtained in the Graduate Office. The thesis must be approved by the student's thesis committee and submitted to the Graduate Office in final form with the signatures of the committee members on the approval sheets of all copies no later than twelve working days prior to the conferral of the degree.

The cost of binding three copies (see Fees) must be paid by the candidate at the time the thesis is submitted in final form to the Graduate Office. If the department conducting the thesis requires an additional copy, it is to be bound at the student's expense. The fees are payable in the Cashier's Office.

## ORAL EXAMINATION ON THESIS

The composition of a committee to approve the thesis proposal and to conduct the oral examination over the thesis and thesis field is recommended by the department and submitted to the Dean for Graduate Studies and Research for his approval and appointment. This committee shall consist of members from the major department and at least one graduate faculty member from another department of the University. If the thesis examination is to be combined with the oral

comprehensive (noted above), one-half the time may be devoted to the thesis and one-half to the graduate courses taken by the candidate.

Final comprehensive oral examinations are arranged by the department, and it is the student's responsibility to deposit the proper number of copies of the corrected and approved thesis in the Graduate Office together with the signed approval sheets at least twelve working days prior to the conferral of the degree.

The scheduling of oral examinations during the summer sessions will be contingent upon the availability of appropriate members of the Graduate Faculty.

### QUALITY OF WORK

A "B" average must be maintained in all graduate work taken as part of a degree program, with no more than two graduate courses in the degree program carrying a grade of "C." Notwithstanding a student's average, a grade of "C" in nine or more hours of graduate credit will result in automatic dismissal from any further graduate work in that specific degree program.

A grade of "D" or below for any course taken in the student's major field of study or in any course included in the Plan of Study is considered a failing grade and a student receiving such a grade will AUTOMATICALLY BE DROPPED from the degree program. The student thus dropped must secure the approval of the COGNIZANT GRADUATE COMMITTEE OR ACADEMIC ADVISER as the spokesperson for the committee and the approval of the Dean for Graduate Studies and Research in order to take coursework as a non-degree student. The student may NOT be a candidate for the degree unless reinstated by the Dean for Graduate Studies and Research.

The above quality of work standards also apply to non-degree students.

A student, upon consent of his adviser, may repeat a course in which he has previously received the grade of C, D, or F. Both grades will appear on the transcript but only the *second* grade will be counted in determining the grade point average.

**INC.** — The grade "I" is to be used by an instructor at the end of a term to designate incomplete work in a course. It should be used when a student, due to extenuating circumstances such as illness, military service, hardship, or death in the immediate family, is unable to complete the requirements of the course in the term in which the student is registered for credit. **Incompletes should be given only if the student has already substantially completed the major requirements of the course.**

Each instructor must judge each situation. The instructor must also indicate by a departmental record, with a copy to the student, how and by when the Incomplete is to be removed, and if he/she is at the University at the time of the removal, supervise the makeup work and report the permanent grade.

In the event that the instructor is not available at the time of the student's application for removal of an Incomplete, the department chairperson shall supervise the removal of the Incomplete and turn in the permanent grade for the student.

**NOTE:** Two or more incompletes (excluding research projects and thesis) will result in a stop enrollment for any new courses; the stop enrollment will stay in effect until the Incompletes are below two in number. Grades of Incompletes must be completed within one semester (excluding summer sessions) after they have been awarded or they will be turned into a grade of F. Any extensions to the one semester time frame must be arranged with the Dean for Graduate Studies and Research prior to the Incomplete being changed into a grade of F. Incompletes for research projects and thesis may not extend beyond two years from the date the "I" was recorded unless approval is granted by the Dean for Graduate Studies and Research and the student reenrolls for the credit.

All grades of "I" on courses which are part of the degree requirements must be removed at least twelve working days before conferral of the degree.

### CHANGE OF MAJORS

Students may not change majors while they have two or more "incompletes" on their record. The decision to accept students who wish to change majors shall be left to the Graduate Program Committee of the department in which they are seeking admission.

### POLICY ON CLASS ATTENDANCE

**The policy:** Classes are conducted on the premise that regular attendance is desirable and expected. The individual instructor has the responsibility for managing student attendance and for communicating at the beginning of each semester those class attendance policies which prevail in that classroom.

"If a student is absent or anticipates an absence, the student's primary responsibility is directly to the instructors, and the student should consult with them accordingly. A student who misses a class is nonetheless responsible for information and assignments communicated during that class session. If a student discovers that he or she is to be absent for an extended period, the student

should promptly notify the instructors and be prepared to document the reason for extended absences."

"Instructors or other University officials who may require students, individually or collectively, to be absent from their classes due to a field trip or similar officially-recognized activity are responsible for providing adequate information to the students involved so that the students may provide notice to other instructors."

**Appeals procedure:** "Should there be cause on the part of individuals involved to feel that the reasons for absence were not considered with equity, a decision with punitive consequences may be appealed. The initial appeals procedure is the same as that provided for in each departmental unit for other academic, classroom-related items (e.g., grades, cheating, etc.), involving the student submitting the justification for the appeal in writing to the department. If the initial appeal decision is unsatisfactory, the next step in the appeals process rests with the student submitting a written statement to the respective academic dean indicating the specific nature of the appeal to be considered and requesting the consideration of the appropriate collegial committee designated for hearing such grievances."

"The committee makes a recommendation to the respective dean, and the dean's decision is then conveyed to the student. If a student wishes to appeal further the decision of the academic dean, a written appeal may be submitted to the University Committee on Academic Standards, which serves an appellate function in hearing appeals of students who feel aggrieved on the basis of decisions rendered by the academic deans."

The University Committee on Academic Standards shall recommend appropriate action to the Provost and Vice Chancellor for Academic Affairs.

The routing of appeals shall be in the department and collegial unit offering the course in which the student is enrolled.

### GENERAL APPEAL PROCEDURES FOR ACADEMIC MATTERS

The following policy was approved by the University of Nebraska Graduate College's Executive Graduate Council on April 24, 1975. It applies to academic matters, other than those associated with class attendance.

- A. Graduate students holding admission with unclassified status in the Graduate College, admission with a master's objective, or admission with a doctoral objective (but prior to the appointment of a doctoral supervisory committee) should appeal as follows:
  1. Initially, the appeal should be submitted to the student's adviser.
  2. If denied, the appeal may be submitted to the Departmental or Interdepartmental Area Graduate Committee administratively responsible for the student's graduate program.
  3. If denied, an appeal may be made to the graduate council for the campus administratively responsible for the student's graduate program. Normally, this will be the final appeals body (for exceptions, see paragraph E).
- B. Graduate students holding admission with a doctoral objective in the Graduate College and for whom a doctoral supervisory committee has been appointed should appeal as follows:
  1. Initially, the appeal should be submitted to the student's adviser.
  2. If denied, the appeal may be submitted to the student's supervisory committee.
  3. If denied, the appeal may be submitted to the Departmental or Interdepartmental Area Graduate Committee administratively responsible for the student's graduate program.
  4. If denied, an appeal may be made to the graduate council for the campus administratively responsible for the student's graduate program. Normally, this will be the final appeals body (for exceptions, see paragraph E).
- C. When a student's graduate program consists of registrations essentially or entirely on one campus, the Graduate Council of the campus administratively responsible for the program will constitute the appeal board. When a student's graduate program includes substantial registrations on a campus other than the one administratively responsible for the program, three members of the Graduate Council for the other campus will be designated by the Dean for Graduate Studies on that campus to augment the Graduate Council on the campus administratively responsible for the program. In this case, the augmented council will constitute the appeal board. The decision concerning augmentation of a campus Graduate Council for a specific appeal involving registrations on a campus other than the one administratively responsible for the student's program will be made by the Deans for Graduate Studies on the campuses involved.
- D. In all cases, appeals should be made in writing to the appropriate adviser, committee, or council.

1. Only under special circumstances will Committee III of the Executive Graduate Council hear an appeal from the decision of the campus graduate council. These circumstances are limited to occasions where Committee III believes that:
  - a. The campus graduate council has violated some element of due process or fair procedure (example: has failed to allow the parties concerned to present their cases fully to the council);
  - b. The campus graduate council has failed to examine or give adequate weight to important evidence relevant to one party's position;
  - c. The campus council has given undue weight to evidence not pertinent to the case;
  - d. Some gross miscarriage of justice would be perpetrated if the decision of the campus council were allowed to stand.

It is up to the discretion of Committee III to decide if any of these conditions have been met.

2. Appeals to Committee III of the Executive Graduate Council must be made in writing and must specifically outline the grounds for the appeal. Such appeal must be made within 20 working days of the day the decision of the campus council is received (working days shall not include those days the University is not in session).
3. Committee III of the Executive Graduate Council must make a decision to hear the appeal or not to hear the appeal within 30 working days after receipt of the appeal. Acceptance or denial of jurisdiction over the appeal will be made in writing.
4. The decision of the Committee on the merits of the case will be made and transmitted to the concerned parties within 40 working days after the decision to hear the appeal.
5. No person who was a member of the department or campus graduate council involved in the case will be eligible to participate in the decisions of Committee III of the Executive Graduate Council either to decide whether the case should be heard or to decide the merits of the case.

Communications regarding appeals should be directed to the Dean for Graduate Studies and Research.

### OMBUDSMAN OFFICE

The Ombudsman's job is to assist you when you have a grievance or a problem with offices or individuals in the University. Advice on how to solve a problem, referrals to persons or offices that have the expertise you may need, and actions on your behalf by the Ombudsman, are just some of the duties of the office. The service is confidential and free. If you have questions about University procedures, or don't know where to turn when you are confronted with unusual problems, try the Ombudsman, Administration 217. A more detailed description of the Ombudsman is in the *Undergraduate Catalog*.

### STUDY LOAD

Full-time graduate students at the University of Nebraska shall be defined as graduate students enrolled for at least nine credit hours during an academic semester (or quarter) or at least three hours during a five-week summer session irrespective of whether or not the student holds a graduate assistantship.

Students carrying less than twelve hours may obtain a regular students activities card by paying the full-time fee of \$36.00.

NOTE: Students enrolling for more than twelve hours must have the approval of the Dean for Graduate Studies and Research. The Director of the Graduate School of Social Work may approve loads to fifteen hours for social work majors.

### DROPPING AND AUDITING COURSES

A student may not drop a course after the date stated in the Academic Calendar and the Class Schedule. Exceptions beyond that date will require the professor's certification that the student was earning a grade of "B" or higher as well as the approval of the Dean for Graduate Studies and Research.

The Dean's approval will require, in part, an uncontrollable circumstance interfering with the student's studies.

A student wishing to audit a course must secure the permission of the adviser, must register for the course to audit, and must secure the approval of the instructor of the course whose prerogative

it will be to determine privileges including examinations connected with the course. An audit study may not change to credit registration after the first week of a course. (A credit student may change to audit registration during the first eleven weeks of a semester, or during the first half of a class if it runs longer or shorter than a semester.)

### COURSES FOR GRADUATE CREDIT

Courses which are available for graduate credit are those which have been especially approved by the Graduate Faculty with syllabi on file in the Graduate Office.

Courses numbered 800V, 800U and 900 are open to graduate students only. Some courses numbered 800M are open to both seniors and graduates; the same is true of a selected few 800J numbered courses. It is expected as a rule that graduate students enrolled in those courses numbered 800J-800M will do work of a higher level than undergraduates. Typically, such differentiation might include depth studies, field studies, individualized research, and special interest projects.

### RESIDENCE REQUIREMENTS

A minimum of 30 semester credit hours in residence (36 in case of the Master of Science, Master of Public Administration, and the Master of Business Administration degrees), is required for granting of the Master's degree, except as provision is made for the transfer of credit. No credit will be allowed for correspondence work. NOTE: The Master of Social Work degree requires a minimum of forty-two semester credit hours.

### TRANSFER OF CREDIT

Students who have completed graduate courses at other approved graduate schools (including extension schools) may request the permission to transfer as many as six semester hours of credit on a thirty-hour program, or nine semester hours of credit on a thirty-six hour program provided the courses are pertinent to the student's graduate program.

The total hours of transfer credit may not exceed the number stated except by petition submitted by the student to his major adviser who forwards the petition with his recommendation to the Dean for Graduate Studies and Research for his approval.

Courses for which transfer is requested must not have been used to satisfy the requirements for any previously awarded degree. Grades in courses for transfer of credit must be the equivalent of "B" or higher. A written request must be made for transfer of credits from an ungraded course elsewhere; the student must have the former instructor submit an evaluation to the Dean for Graduate Studies and Research for review and consideration. Transfer of credit for prior graduate work shall be made at the same time that the student applies for candidacy for the degree. All work accepted for transfer of credit must have been taken within the six-year period allowed for the Master's degree.

In the Educational Specialist degree, six semester hours of work beyond the Master's level may count as transfer credit, upon recommendation by the major adviser and with the approval of the Dean for Graduate Studies and Research.

Students who wish to take graduate courses at the University of Nebraska at Lincoln or at the Medical Center for transfer to UNO should secure the Intercampus Registration form from the Graduate Office. There are no *a priori* limits on the transfer and applicability of credits earned in one program of the Graduate College of the University of Nebraska toward meeting degree requirements in another such program. However such credits must be individually evaluated and approved by the appropriate Graduate Program Committee and the appropriate Graduate Dean before they may be transferred from one program to another. Only grades of "B" or better may be transferred from other schools in the University System to apply toward degree requirements here.

### WITHDRAWAL FROM THE UNIVERSITY

To officially withdraw from all classes and thereby from the University, and to receive any refund due as well as appropriate posting of academic standing for the grading period in question, a graduate student is required to obtain the signatures of his adviser and the UNO Dean for Graduate Studies and Research or his designee prior to submitting the withdrawal form to the Registrar's Office. Any refund of fees will be based on the University catalog, Graduate Catalog, class schedule and Student Handbook, and as posted in the Cashier's Office. Failure to withdraw according to this procedure may cause forfeiture of refunds and inappropriate posting of grades.

### TIME LIMIT FOR GRADUATE DEGREES

The last thirty-six hours of work on the Plan of Study for any graduate degree must be completed within six consecutive calendar years. The first day of class of the earliest course which appears on the last thirty-six semester hours of

student's graduate education. Upon the recommendation of the department concerned, a graduate student may apply to the Graduate Council for permission to take a special examination, or the current semester final examination in courses for which graduate credit has been recorded and is obsolete. A report of the results of the examination, which shall be prepared, given, and graded by the department, shall be filed in the Graduate Office. Unless a grade of B or higher is obtained in the examination, the student shall be required to take additional work, the amount and nature of which will be determined by the major adviser and the Dean for Graduate Studies and Research. Time spent in the military service of the United States may be excepted in the application of this rule.

All requirements for an Ed.S. degree, regardless of major, must be completed during a six-year time period beginning with the date of entrance to the first course used in the plan of study following the completion of the Master's degree.

## TUITION, FEES, DEPOSITS AND REFUNDS

The University reserves the right to change the amount of tuition or fees at any time, and to assess charges for breakage, lost property, fines, penalties, parking, books, supplies, food, or special services not listed in this schedule.

Tuition and related fees are payable in full at the time of registration, or in accordance with delayed billing schedules. Students availing themselves of the delayed billing option must familiarize themselves with the due dates, as publicized. **Note:** Failure to receive the mailed billing notice will not excuse the student from payment responsibility, nor the late payment penalties. Students in need of financial aid must consult the Student Financial Aids Officer in the Eppley Building. Application for financial aid should be made at the earliest possible time.

Registration is not complete until cleared by the Cashier. Failure to pay tuition or fees when due, or to meet payments on loans when due, may result in cancellation of registration, legal collection efforts, or both.

**Matriculation Fee (Graduate College):**  
Payable upon first-time enrollment in the Graduate College .....\$10.00

**Tuition:**  
Per Semester Credit Hour. Undergraduate or Graduate .....\$26.50  
Resident of Nebraska (see residency statute).....\$72.00  
Non-Resident .....\$33.00  
Per Student Credit Hour through Off Campus Program .....\$33.00

**Audit Fee:**  
The Audit (not for credit) fee is set at one-half of the Resident tuition rate. Registration for audit requires the permission of the instructor and is subject to available class space after credit registration ends. Students who register to take a course for credit and who later change to audit registration will be required to pay the full resident or non-resident tuition rate.

**Special Instructional Fees:**  
Applied Music: Voice and all instruments except percussion and harp. (Fee may be waived by the Head of the Music Department for any full-time students who are music majors or minors.)  
One semester credit hour .....\$55.00  
Two semester credit hours .....\$75.00  
Three semester credit hours .....\$95.00  
Four semester credit hours .....\$115.00  
Conference, non-credit, and off-campus contract course fees are determined for each offering based upon the cost factors and peculiar circumstances involved.

**University Program and Facilities Fee (UPFF)**  
Full-time students (undergraduate or graduate) (12 credit hours or more) per semester .....\$43.00  
Part-time students (undergraduate or graduate) (less than 12 hours) per semester .....\$25.00  
This fee is assessed to every student each semester.

The UPFF receipts are divided into two separate funds. One portion is designated for student activities and is distributed according to an annual budget developed by the Allocation Commission. The Allocation Commission comprised of students, faculty and staff recommends disbursements of this fund to the University Chancellor. After he approves their recommendations he submits them to the President of the University and its Board of Regents for review and adoptions.

The second portion of the UPFF is designated for services, staff salaries, maintenance of facilities and related expense, and those additional items designated by the Chancellor. This portion is budgeted separately with emphasis upon continuing support. The Chancellor recommends to the President and the Board of Regents his plans for this portion.

The full-time fee of \$43.00 also entitles the student to a regular student activities card covering athletics, publications and general student activities. Part-time students may obtain a regular student activities card by paying the full-time fee of \$43.00.

### Special Service Fees:

Continuing Engineering Studies — Professional Studies — Development Degree Program  
Initial application .....\$25.00  
Attainment of 300 credit units (additional) .....\$25.00  
Attainment of 600 credit units (additional) .....\$25.00  
Attainment of 900 credit units (additional) .....\$25.00  
Attainment of 1200 credit units (additional) .....\$25.00  
Change of Program Fee .....\$ 5.00  
Transcripts of Academic Record per copy .....\$ 1.00  
Thesis Binding per copy .....\$ 6.00  
Cap and Gown Rental (to be arranged through the Bookstore)  
Graduation Fee .....\$ 3.00  
Degree in Absentia (payable in addition to graduation fee) .....\$ 2.00  
Returned Check — per check .....\$ 3.00  
Dishonored checks given in payment for tuition and fees must be redeemed in cash prior to the date for late registration, otherwise the late registration fee will be assessed in addition to the bad check fee.

### Teacher Placement Fee Schedule:

The following annual fees for teacher placement services are effective as of September 1, 1978. The registration fee is required of all graduates preparing for teacher certification.

**Registration and Credential Fee:**  
New Registrants .....\$27.50  
Fee covers establishment of permanent placement file, 10 sets of credentials, and the weekly Vacancy Bulletin may be obtained in the Office.  
Alumni Re-registrants .....\$33.00  
Fee covers update of placement credentials information, addition of new recommendations, 10 sets of credentials, and the Vacancy Bulletin if picked up in the Office.

### Optional Services

Vacancy Bulletin Mailing Fee  
3rd class mailing .....\$11.00  
1st class mailing .....\$19.50  
Bulletin may be mailed to your home address. Bulletin is published bi-weekly from October through January; weekly from February through August.  
Extra Credential Fee (over initial 10 sets)  
1 extra set .....\$2.00  
7 extra sets .....\$10.00

### Late Fees and Penalties:

Late Registration (day or evening classes) .....\$ 5.00  
Late Examination (each course) .....\$ 5.00  
Late Payment of Tuition Billing .....\$10.00  
Reinstatement of Cancelled Registration .....\$10.00  
Replacement of ID Activity Card .....\$ 1.00

### Deposits:

Key (per key with authorization) refundable .....\$ 1.00  
Locker and Travel Deposit-Refundable .....\$ 5.00  
Required for students taking HPER service classes.  
Also required of Faculty, Staff and students using Field House Facilities.  
Chemistry Laboratory Deposit-Refundable .....\$10.00

### Testing Fees:

Credit by Examination—per course (Departmental) .....\$25.00  
American College Testing (ACT), National .....7.50  
American College Testing (ACT), Residual .....11.50  
College Level Examination Program (CLEP) .....20.00  
Graduate Management Admission (GMAT) .....12.50  
Graduate Record Examination (GRE) .....10.50 per test  
Law School Admissions Test (LSAT) .....15.00  
General Educational Development (GED) .....10.00  
Miller Analogies Test (MAT) .....10.00  
Correspondence Tests .....5.00 per course  
Test of English as a Foreign Language (TOEFL) .....17.00

### Refund Schedule:

Refunds are computed from the date application is received by the Registrar, NOT from date of withdrawal from classes. Refund slips issued by the Registrar and given to students are void and not redeemable, unless presented to the Cashier (Eppley Building) within 30 days after date of issue. See policy entitled "Withdrawal from Classes".

Students paying tuition and fees on a deferred payment basis or under any other loan granted by the University, who withdraw before the account is paid in full are **not relieved from payment**

of the balance due. Refunds will first be applied to unpaid balances, and any remaining balance must be paid.

Refunds for withdrawals are figured from the official beginning of the semester as stated in the University's academic calendar, not from the beginning of students' individual class schedules.

Period of Drop/Withdrawal	Regular Semester	Percent Refunded	Percent Chargeable
Before first official day of semester		100%	0%
First week of classes		100%	0%
Second week of classes		75%	25%
Third week of classes		50%	50%
Fourth week of classes		25%	75%
Fifth week of classes		0%	100%
<b>Summer Sessions (5 and 6 Week)</b>			
Before first official day of semester		100%	0%
First three days of classes		100%	0%
Remainder of first week		50%	50%
Second week of classes		25%	75%
<b>Summer Evening and Special Contract (7 and 8 Week)</b>			
Before first official day of semester		100%	0%
First three days of classes		100%	0%
Remainder of first week		75%	25%
Second week of classes		50%	50%
Third week of classes		25%	75%
<b>Non-Credit and Special Courses (10 Weeks or More)</b>			
Withdrawal before classes start		100%	0%
Withdrawal before first week elapsed		50%	50%
Withdrawal before 2 weeks elapsed		20%	80%
Withdrawal after 2 weeks elapsed		0%	100%
<b>(Less than 10 Weeks)</b>			
Withdrawal before classes start		100%	0%
Withdrawal before second class		50%	50%
Withdrawal after second class		0%	100%

## RESIDENT STUDENTS

A student's right to classification as a resident for purpose of registration in a state educational institution must be determined under the provisions of Nebraska Revised Statutes of 1943, Sec. 85-502 (R.S. Supp., 1965). (See General Catalog.) Any student who has been classified as a nonresident who believes he can qualify as a resident should contact the Registrar's Office.

## STUDENT DEVELOPMENT SERVICES

### Career Development Center

The Career Development Center assists students, faculty, staff and alumni in exploring career alternatives and making career decisions.

More appropriate and satisfying career decisions will be made if individuals have more information about themselves and the world of work. To explore and clarify interests, values, needs, abilities and career goals; one may become involved in individual counseling, workshops, the utilization of career information, testing and test interpretations. Counselors also assist individuals and groups in becoming acquainted with information on employment trends, occupational responsibilities, and required training and qualifications for various career fields.

Stop by and explore the Career Development Center in the East Wing of the Eppley Building.

### Career Placement Services

Career Placement Services assists graduate candidates and alumni from all Colleges of the University in their search for career employment.

Employment Counselors aid in assessing student career goals and related employment opportunities. Literature on local and national employers, career fields, job descriptions, salary surveys, employment trends and job-search techniques are also available.

All first semester graduate students completing degrees are encouraged to register with Career Placement Services by completing a placement file, including a resume and Personal Data Form. The College Placement Annual, supplied without charge to registrants, is a valuable directory of organizations having positions available for college graduates.

Teacher credentials are prepared and permanently maintained for candidates completing requirements for certification. A complete listing of local and regional teacher vacancies is available to all teacher candidates.

Career Placement Services offers two programs:

**Campus Recruiting.** Each semester local and national employers seeking December and May graduates visit the campus to conduct interviews with candidates registered with the office. Interviewing facilities are provided.

**Candidate Referral.** Throughout the year, local and regional employers contact our office seeking potential employees. Career Placement refers qualified candidates directly to these employers and assists in arranging candidate interviews.

Career Placement Services sponsors programs covering numerous career employment topics. Programs include groups, seminars or individual sessions. Job-Readiness Workshops are offered each semester to help students develop interviewing skills and job-search materials, i.e., letters of application, resumes, and other items.

An effort is made to obtain positions for all registered candidates; however, employment cannot be guaranteed.

Students are encouraged to visit Career Placement Services, Milo Bail Student Center, Room 134.

### Counseling Services

Counseling services are provided to assist UNO students in their educational, emotional, personal and social development. The goal of the Counseling Center is to use all available resources to assist students in making positive adjustments in their academic and personal lives. Students use the Counseling Center to talk about concerns with courses, educational-vocational planning, family and personal problems, friends and financial difficulties.

The Counseling Center is staffed with professionally trained and experienced counselors. Students may come to the center at their convenience during the day or early evening hours. Students are assured that their privacy will be respected. Conversations with a counselor are held in confidence.

Frequently students do not know where to seek assistance or are confused about kinds of assistance available. The Counseling Center acts as a referral agency for students — opening the availability of a large number of university and community professional resources for the student.

General counseling services are provided at no charge for students and other members of the university community. Appropriate fees are charged for services to people who are not students or within the university.

The Counseling Center provides a professionally qualified resource team in assisting students to make academic, personal and vocational decisions with the assistance of various assessment tools. While there is no single test or group of tests that will magically reveal the information a person is seeking, the Counseling Center is expertly able to assist students to a clearer understanding of themselves. Testing is provided by the UNO Testing Center after consultation with a counselor. Interpretations and explanations of the results of these tests are provided by counselors from the center. Further examination of educational, personal and career opportunities can be developed from the exploration of information gained from the test results and counseling sessions.

The Counseling Center is located on the first floor, east wing of the Eppley Building (62nd and Dodge) and is open during the day and early evening hours with the exception of weekends and announced university holidays.

### Testing Center

A variety of testing services are available through the Testing Center, which is located on the main floor, east wing of the Eppley Building.

Aptitude, interest and psychological tests are administered on a daily basis upon the recommendation of UNO Counseling Center personnel. Other testing programs include the following:

#### Credit By Exam at UNO

Credit by Examination allows students the opportunity to gain academic credit for knowledge they have acquired by self-study or experience. Up to 30 hours of credit towards a bachelor's degree may be earned by achieving acceptable scores on examinations.

Two types of credit by examination are available at UNO: The College-Level Examination Program (CLEP) which offers tests in many subject areas; and UNO's Special Examination Program which involves challenging any course taught at the University by taking a departmental examination. (Students must be registered to attempt departmental exams.)

The following general provisions apply to credit by examination at UNO:

Credit earned by examination may not constitute any part of the terminal residency requirements (see residency requirements in this catalog).

Credit will not be granted as substitute credit for college courses which have been failed at university level. Neither will it be granted to raise a grade earned in any course.

Examinations for credit or placement may not be repeated. Credit by examination may not be earned in any course taken on an audit basis after September 1, 1972.

A reasonable fee (see fee schedule in this catalog) will be charged to administer and/or evaluate an examination for credit or placement. The credit earned by examination will be recorded as CR on the transcripts, and this credit will not be used in calculating grade point average.

A department giving a student a departmental test for credit by examination shall be responsible for reporting the grade to the Testing Center. The time lapse shall not be greater than the semester following the time examination was given.

Within these parameters, the department or departments concerned retain responsibility in all matters, including:

Determination of whether or not placement or examination credit should be offered in their areas.

Selection or preparation of examinations to be given for placement or examination credit.

Determination of the level of proficiency required for earning placement or examination credit.

Determination of the time, sequence, and level of examinations and amount of credit in departmental courses.

**Examinations for Admission to Graduate or Professional Schools.** The Testing Center also administers special examinations required to enter professional or graduate school. The following are among those examinations: Graduate Record Examination, Miller Analogies Test, Graduate Management Admissions Test, Law School Admissions Test, and Test of English as a Foreign Language.

Information and applications are available at the Testing Center, Eppley East, 554-2409.

### The Information Center

The Information Center located in the Eppley Building has available information about campus events and campus phone numbers and office locations for University employees. To give or receive information call 554-2800 from 7:30 a.m. to 7 p.m.

### Parents Association

Parents of students at the University of Nebraska at Omaha have a unique opportunity to become involved in the growth and development of the institution by joining the UNO Parents Association. Any parent of a UNO student is eligible to become a member. Membership in the Parents Association gives parents an opportunity to become better informed about UNO and to share their children's college experience. Family membership dues are \$5.00 annually. For information contact Student Development Services.

### Part-Time Student Employment Service

UNO students seeking off-campus part-time employment should visit the Part-Time Student Employment Service Office in Milo Bail Student Center, Rm. 134.

Employment counselors are available to assist students in finding employment, matching job with career interest where possible. Emphasis is placed on developing job-search skills and interviewing techniques, with the Part-Time Student Employment Service acting as liaison between employer and student.

Current listings of available jobs are posted on bulletin boards near Room 134 in Milo Bail Student Center and outside Room 150 in the Eppley Building.

Qualified students are referred directly to employers for job interviewing. **All services are free.**

### Special Programs

The Office of Special Programs is the coordinating arm of several service units which function to assist UNO students with their special needs. The units, which are a part of the Office of Special Programs, are the Women's Services, Minority Affairs, Student Health Services, Handicapped Student Services, and the Learning Resource Center. The Office of Special Programs is located in the East Wing of the Eppley Building.

#### Handicapped Services

This service provides counseling to handicapped students as well as a forum to discuss and initiate needed services for the students. An advisory committee assists the University in providing a more conducive environment for handicapped students.

#### Learning Resource Center

The Learning Resource Center at the University of Nebraska at Omaha offers a variety of academic support skills designed to aid all students. Services offered at the Center include a writing lab, a math lab, and a reading lab. Since the labs are offered at specific times, make certain to contact the Center to see when the lab you need to participate in is being held. Additionally the Learning Resource Center provides tutorial assistance in a wide range of courses. The Center is located on the second floor, East Wing of the Eppley Building.

#### Minority Affairs

The Office of Minority Affairs acts as a referral agent for persons seeking information and services at UNO and agencies located in the area. The Office disseminates information necessary in

the coordination of activities involved with the minority student population as well as those special interest groups (American Indians United, Black Liberators for Action on Campus, La Causa, and United Minority Students) which were organized to serve them.

The Office also provides cultural and academic programming for minority students on campus.

The Office minimizes the difficulty minority students encounter during their learning process at UNO. The financial transition is aided through minority financial aid files accessible to students through the office in addition to referrals to the UNO Financial Aid office.

#### Student Health Services

The Student Health Service, located in the Milo Bail Student Center, is available to all students, and provides free First Aid treatment for minor illnesses and emergency accidents with referral when necessary. Preventive health measures are a primary concern and include blood pressure checks, vision and hearing tests, throat cultures for possible Strep infection, a Tuberculin skin testing program, plus scheduled clinics and programs on selected topics of interest.

A Physician Assistant is available for free consultation, diagnosis, treatment and follow-up care two half days a week. A Registered Nurse is on duty Monday through Thursday, 8 a.m. to 7 p.m. and Fridays, 8 a.m. to 5 p.m.

Application must be made through the Health Service for both temporary and permanent handicap parking permits.

**Student Health Insurance.** All UNO students carrying 6 or more hours have the option of contracting for accident and sickness insurance through a group plan made available by the University with a commercial insurance carrier at reduced premiums. If you are not protected for accident and sickness under a policy held by your parents, or one that you have purchased privately, you are encouraged to participate in this or some other health care plan. A brochure describing coverage and benefits is available from the Health Center. Coverage for injury and sickness not due to University negligence is the full responsibility of each student.

#### Women's Services

Through the Coordinator for Women's Services, this program provides counseling services to women students at UNO as well as current information and referrals concerning women's issues and problems. The coordination of programs and services, which focus on the educational, social, political and professional needs of women, is a function of this special program. The Coordinator for Women's Services also serves as a University liaison with women's organizations within the Omaha community.

## FINANCIAL AID FOR GRADUATE STUDENTS

### GRADUATE ASSISTANTSHIPS

Available for qualified students who are enrolled in a graduate degree program are graduate assistantships in teaching, research or laboratory supervision. The assistant's assignment is designed to provide unexcelled opportunities for supervised educational experiences at the graduate level in conjunction with the degree program. Approximately twenty hours of work per week is required. The enrollment of students with assistantships will be limited to no more than twelve credit hours per semester unless the student has demonstrated extraordinary efficiency and the adviser recommends the abnormally high work load to the Dean for Graduate Studies and Research for his approval.

Graduate Assistants will be expected to carry at least six graduate credits per semester (with two five-week summer sessions equivalent to one semester). In those instances where the student is in the last semester before graduation and only three hours of graduate credit are required for graduation, an exception may be made by the Dean for Graduate Studies and Research in consultation with the student's advisor. No student may hold an assistantship for more than four semesters unless recommended by the Graduate Program Committee of the department and approved by the Dean for Graduate Studies and Research. Graduate assistants or interns who must earn money for self-support may be required to reduce correspondingly the number of hours for which they may register. Such adjustments shall be subject to the approval of the Dean for Graduate Studies and Research.

Applications and their supporting credentials must be received on or before March 1. Address requests for information and application forms to the Chairperson of the Department in which the assistantship is desired.

## TUITION WAIVERS FOR GRADUATE STUDENTS

Tuition waivers are often available for qualified students who have been admitted to graduate study. Eligibility is based on academic qualifications and financial need.

Information and application forms are available in the Graduate Office. Allow at least two months for processing applications.

## TRAVELING SCHOLAR PROGRAM

The University of Nebraska is a member of the Mid-America State Universities Association along with Iowa State University, Kansas State University, University of Kansas, University of Oklahoma, Oklahoma State University and the University of Missouri. Under the traveling scholar program, a graduate student who wishes to use special research facilities or take courses not available at the University of Nebraska at Omaha may do so with a minimum of red tape. If the major professor and the host institution agree, the student may spend a semester at another MASUA school simply by making appropriate arrangements at UNO. Nebraska residents pay resident tuition. The Graduate Office has further information.

## SCHOLARSHIPS

Phi Delta Gamma, a national fraternity for women, offers two annual scholarships of \$150 each, to women graduate students who have completed approximately one half of their graduate work with an excellent record: The Mary-Ellen Patterson-Phi Delta Gamma Scholarship and the Nelle Boyer-Phi Delta Gamma Scholarship.

Applications and details concerning these scholarships may be obtained from the Dean for Graduate Studies and Research Room 283, Administration Building. Applications should be in the Graduate Office by March 1 of each year.

## LOANS

Graduate Students are eligible to apply for National Direct Student Loans (NDSL) which are based upon financial need. Qualified women graduate students are eligible for a Phi Delta Gamma loan on a limited basis. To apply for loans from other sources as well, contact the Director of Financial Aid, Room 219, Eppley Building.

## WORK—STUDY

Graduate Students may apply for College Work-study positions. Eligibility for these positions is based upon financial need. To apply for work-study, contact the Office of Financial Aid, Room 219, Eppley Building.

## ORGANIZATIONS

*Phi Delta Gamma* is a national sorority for graduate women in all fields. Membership is by invitation.

*Phi Delta Kappa* is a national fraternity for men who are graduate students in Education. Membership is by invitation.

*Beta Gamma Sigma* is a national honorary society for students in Business Administration. Membership is by invitation.

*Psi Chi* is a national honorary association for graduate students in Psychology. Membership is by invitation.

*Omicron Delta Epsilon* is a national honorary association for graduate students in Economics. Membership is by invitation.

## ADMINISTRATION FOR GRADUATE STUDIES

### GRADUATE FACULTY

The Graduate Faculty prescribes the qualifications of all professors who offer graduate work and approves all courses which may be taken for graduate credit. The Dean for Graduate Studies and Research serves as Chairperson of the Graduate Faculty at UNO and of the UNO Graduate Council. Information about graduate programs, including qualifications of graduate faculty members, is available in the Graduate Office.

### GRADUATE FACULTY MEMBERS

#### RESPONSIBILITIES

Graduate Faculty Members may teach graduate courses, supervise students enrolled in subdoctoral graduate programs, serve on the final examining committees for these students, and vote on any matters presented to the Graduate Faculty including the election of the Executive Graduate Council for their specific campus.

#### CRITERIA

The following requirements for the nomination of Graduate Faculty Members were adopted by the Graduate Faculty to establish consistent standards for faculty members eligible for appointment to carry out these assignments:

1. The nominee must hold the rank of Assistant Professor or above.
2. The nominee must hold the terminal degree normally accepted for academic employment in the discipline or its clear equivalent as determined by the Graduate Committee of the nominee's department or interdepartmental area.
3. The nominee will as part of his or her regular duties be actively involved in graduate student research and/or graduate teaching.
4. The nominee must have demonstrated clear evidence of scholarly activity and potential beyond teaching. This evidence must be provided by the nominator.

### GRADUATE FACULTY FELLOWS

#### RESPONSIBILITIES

Graduate Faculty Fellows may teach graduate courses, supervise and serve on supervisory committees for students working towards post-baccalaureate degrees, vote on all matters presented to the Graduate Faculty, and vote on nominations for Graduate Faculty Fellows.

#### CRITERIA

The following requirements for the nomination of Graduate Faculty Fellows were adopted by the Executive Graduate Council to establish reasonably consistent standards for faculty members eligible for appointment to supervise doctoral students:

1. The nominee must be a Graduate Faculty Member or meet all criteria for Graduate Faculty Membership.
2. The nominee must have published research and scholarly work of quality, or have demonstrated comparable, creative achievement.
  - a. In disciplines where publication is the normal outlet for scholarly work or research, the nominator must provide evidence of the nominee's significant, refereed publications appearing under the imprint of recognized scholarly publishing houses or journals. Publication must have resulted from a judgment of quality by an editorial board.
  - b. Publication based on the nominee's terminal degree alone is not sufficient, although publication of the dissertation or parts of it is significant if the nominator indicates the manner in which the published version represents a substantial amount of scholarly work in addition to that required for dissertation.
  - c. In disciplines such as art, architecture, theatre, or music where publication is not the normal or singular end product, the nominator must provide evidence of creative work accomplished by the nominee. This creative work must bear evidence of acceptance by peers within the discipline.
3. The nominator must indicate current involvement of the nominee in research and/or creative work.
4. The nominator may provide supporting evidence for the nominee such as published textbooks related to graduate education, published instructional materials, published professional reports, or evidence of funded research and development projects.
5. The nominator may provide evidence of the nominee's teaching effectiveness in working with graduate students. This evidence may consist of peer and student evaluations or reports of student achievement subsequent to the receipt of advanced degrees.

### GRADUATE COUNCIL

The Graduate Council of the Graduate Faculty at UNO is composed of elected faculty members and three graduate students. This Council considers graduate policies, procedures and proposed academic offerings. Information about the structure of the Council, functions of the committees, and names of the Graduate Faculty members who are currently serving on the Council is available in the Graduate Office.

### FACULTY SENATE RESEARCH COMMITTEE

This is an advisory committee to the Dean for Graduate Studies and Research. The objectives of this committee are: (1) to foster fruitful research as an adjunct to teaching excellence, (2) to recommend allocation of the available funds for research toward these ends, (3) and to encourage solicitation of monies for research. Requests for various research activities will be solicited, evaluated, and recommended for approval or disapproval in keeping with the objec-

### EXTRAMURAL GRANTS

Through the Dean for Graduate Studies and Research, the Office of Grants Development provides advice and technical assistance to faculty and staff in the following areas: solicitation of funding sources; preparation of research proposals; preparation of grant budgets; preparation of grant financial reports; excess property programs; and implementation of workshops, seminars, and classes on grants development. The Director of Grants Development reports directly to the Dean for Graduate Studies and Research.

### CENTER FOR URBAN EDUCATION

The Center for Urban Education is a practical, problem-oriented off-campus laboratory which is not housed in any of the individual departments or colleges but reports to the Vice-Chancellor for Academic Affairs. The Center has an advisory council consisting of several deans and public citizens. The Center focuses upon problems of low-income areas (both urban and rural) but does not offer separate graduate degree programs. However, there will be provided appropriate opportunities for graduate students from several disciplines (e.g., Sociology, Psychology, Urban Studies, Business Administration, Home Economics, Social Work, Counseling, Educational Administration, and Urban Education) to have, as part of their regular graduate programs practicum-type experiences, and to interact on an interdisciplinary basis. This type of university out-reach into the low-income and poverty areas can be productive for the community and for students as well as faculty from all of the units of the University.

### POLICY ON PLAGIARISM

The prevention of, and the imposition of sanctions upon those who resort to, plagiarism is necessary in any university that espouses the ideals embodied in the concept of academic freedom. Plagiarism is the appropriation of the work (be it ideas or words) of another without crediting the source. Such a practice is particularly reprehensible in a community dedicated to the pursuit and advancement of knowledge.

#### Plagiarism by Faculty

The investigation of allegations of plagiarism by a faculty member at any major administrative unit shall be the responsibility of the Academic Freedom and Tenure Committee.

#### Plagiarism by Students

The investigation of allegations of plagiarism by a student or appeals therefrom, at any major administrative unit shall be carried out under the appropriate faculty-student appeals committee at that campus.

### POLICY ON ETHICAL CONDUCT

It should be understood that academic performance is not the only criterion for graduation. Students are expected to maintain the highest standards of ethical conduct pertaining to academic coursework, professional practice, and research activity. Any breach in ethical conduct shall be subject to disciplinary action, regardless of the student's prior or current academic performance.

### SUMMARY OF PROCEDURE FOR GRADUATE STUDENTS

1. File official transcripts of all undergraduate and graduate credit and an application for admission with the Director of Admissions, First Floor East, Eppley Building.
2. Contact an adviser within the department to which you are applying for admission to determine departmental admission requirements.
3. Arrange to take the appropriate entrance examinations for your department. These will normally include either the GRE, GMAT or MAT. If you have already taken the appropriate examination, have your scores sent to the Graduate College.
4. You will be notified by mail of your acceptance or non-acceptance into the Graduate College after your transcripts have been evaluated.
5. Arrange your class schedule with your adviser and have him/her sign your registration card. You will be asked to pay a \$10.00 matriculation fee the first time you enroll for graduate study.
6. Apply for candidacy as early as possible. This can be done as soon as you have satisfactorily completed six hours of graduate work at UNO, have your transcripts showing a Bachelor's degree and the GRE (or other specified test) scores on file in the Graduate Office, and have completed all undergraduate prerequisites and other departmental requirements. See your adviser for details. NOTE: Filing for candidacy is not the same as filing for a degree. It is necessary for you to make application for the degree in the semester in which you intend to graduate.
7. If you are a transfer student, you must consult with your department's Graduate Program Committee to determine which courses you will be allowed to transfer. These courses must be included on your application for candidacy.
8. You will be informed by mail of your admission to candidacy.
9. At the time of your final enrollment, arrange with your supervisory committee a time for your comprehensive examinations, if these have not already been taken. Also, inform the Graduate Office of your intent to graduate so that your graduate record may be compiled and reviewed.
10. If your approved program includes a thesis, obtain a copy of "Instructions for the Preparation of Theses" from the Graduate Office and prepare your thesis in accordance with Graduate College guidelines and departmental style requirements. Make arrangements with your department for oral examinations. The completed, fully corrected and approved thesis must be deposited in the Graduate Office together with the proper number of copies of it at least twelve working days prior to the conferral of the degree. The thesis binding fee must be paid in the Registrar's Office prior to the depositing of the thesis in the Graduate Office.
11. **Make application for the conferral of the degree in the Registrar's Office.** The deadlines for filing are usually well before graduation, so be aware of these dates. The deadlines will be stated in the current issue of the Graduate Catalog as well as posted during registration and in the Registrar's Office. If you apply for graduation and do not complete all of the requirements for the degree in time to graduate, you must **reapply** for graduation the following semester. No additional fee is charged to reactivate your application.
12. Pay all fees and fines and satisfy all obligations to the University at least twelve working days before conferral of the degree.
13. Order a cap, gown and hood from the Bookstore.



# Degree Requirements

## DEGREE REQUIREMENTS

### BIOLOGY

To enter a degree program with a major in biology the student must present approximately 24 semester hours of credit in the biological sciences including general botany, general zoology, and genetics plus adequate preparation in the supporting sciences of inorganic and organic chemistry, general physics, and mathematics. Students with inadequate backgrounds may be admitted provisionally. GRE (advanced and aptitude) is required and the scores should be submitted as soon as possible.

#### Master of Arts

Ordinarily every student will become a candidate for this degree. Only under appropriate circumstances will a student be allowed to become a candidate for the Master of Science degree.

To complete the Master of Arts degree with a major in biology the candidate must present 30 hours of graduate work in biology to include credit in thesis (a maximum of 6 hours), a minimum of 2 hours in departmental seminar (801V), and at least 22 hours of appropriate courses to be determined by the student and the faculty committee. Graduate students are expected to attend the departmental seminar even when not registered for it.

The candidate must pass a final oral examination and present his/her thesis results at an open meeting of the faculty and students.

#### Master of Science

A student may become a candidate for this degree only upon the recommendation of the student's advisory committee.

To complete the degree the candidate must present 36 hours of graduate work in biology to include at least 2 semesters of Biology 801V, 1 semester of Biology 802V, and other appropriate courses to be determined by the student and his/her faculty committee. Graduate students are expected to attend the departmental seminar (801V) even when not registered for it.

The candidate must pass a final written comprehensive examination.

#### Master of Public Administration — Environmental Option

The Biology Department cooperates with the Department of Public Administration in offering this degree. The degree is administered through Public Administration and is described under that department.

### BUSINESS ADMINISTRATION

#### The Master of Business Administration Degree

The MBA is a professional graduate degree designed to provide an intense educational experience for students who desire to assume positions of increasing responsibility in business.

Courses in the program give the students an understanding of the principles of management, marketing and finance and a proficiency in the use of accounting, computers, statistics, and quantitative methods as tools for analysis of business activities. Also, the student is made aware of the societal, economic, legal and political factors which influence business decisions and develops an appreciation of the social responsibilities of business.

Emphasis is placed on decision making and problem solving.

#### Admission Standards

The minimum admission standards for students in the MBA program are:

$$\text{Junior-Senior GPA} \times 200 + \text{GMAT} = 1020$$

The GMAT score must not be below 400 in computing the above total.

Students who do not meet the above criteria or who attain a GMAT score below 400 may be considered for admission on an exception basis only.

Students are admitted on a provisional status until all foundation courses have been completed. GMAT scores *must* be received prior to the student's admission to the MBA program.

#### Degree Requirements

**Foundation courses:** A student must have completed basic courses in the following areas either as an undergraduate student or in the early part of the graduate program:

College Algebra  
Economics

Accounting

Computers in Business

Math 131

BA 818H or Macro- and Microeconomics at the undergraduate level

BA 811H 1 year of Principles of Accounting at the undergraduate level DS231

Quantitative Methods and Statistics	BA 817H or an equivalent course in each at the undergraduate level
Production/Operations Management	MOB 350
Business Law	L&S 323
Corporation Finance	BF 325
Management Principles	MOB 349
Marketing	MKT 331

These foundation courses cannot be used to meet the 36 semester hours required for the MBA degree.

Courses successfully completed (A, B, or C grades) in the student's undergraduate program are considered as sufficient preparation. Otherwise, the student must include the course deficiencies in the program of study.

Students who through experience or self study consider themselves proficient in any of these areas may complete a "Satisfaction by Examination" in lieu of course work. It is recommended that students complete the majority of the foundation courses before enrolling in either core courses, option courses, or electives.

**Graduate Courses:** The degree requires a minimum of 36 semester hours for completion.

Core Courses	18
Option courses	12
Electives	6
	36

The six hours of electives must be in one or more areas different than the area of concentration and may be taken in an area outside the College of Business Administration, subject to *advance* approval by the Director of Graduate Studies.

A thesis is required in one option (Real Estate) and may be elected in others. No comprehensive examinations are required. Instead, the integrative course BA 880V must be successfully completed with a grade of A or B in the student's last nine hours of the degree program.

#### Core Courses

BA 800V	Quantitative Analysis	3 hours
BA 801V	Business and Society	3 hours
BA 810V	Managerial Economics	3 hours
BA 820V	Managerial Accounting (or either BA 821V, BA 823V, or BA 825V, if applicable)	3 hours
BA 831V	Human Behavior in Organization	3 hours
BA 880V	Policy, Planning, and Strategy	3 hours

#### Option Courses

##### Option #1 — Business Administration

BA 830V	Environment of Management	3 hours
BA 840V	Marketing Policies	3 hours
BA 850V	Financial Management	3 hours
BA 805V	Business Conditions Analysis	3 hours

##### Option #2 — Marketing

BA 840V	Marketing Policies	3 hours
BA 841V	Promotional Policies	3 hours
BA 845V	Seminar in Marketing	3 hours

##### One of the following courses:

BA 802V	Research Methods in Economics and Business	3 hours
BA 805V	Business Conditions Analysis	3 hours

##### Option #3 — Decision Sciences

BA 802V	Research Methods in Economics and Business	3 hours
BA 803V	Business Information Systems	3 hours
BA 804V	Applied Quantitative Analysis	3 hours

##### One of the following courses:

BA 808V	Business Forecasting	3 hours
Econ 830V	Econometrics	3 hours
BA 890V	Independent Research (In Decision Science)	3 hours

##### Option #4 — Real Estate

BA 860	Real Estate and Land Use Economics Theory	3 hours
BA 861	Current Problems in Real Estate and Land Use Economics	3 hours
BA 899V	Thesis	6 hours

##### Option #5 — Accounting

BA 821V	Accounting Theory (if not taken as a core course)	3 hours
BA 823V	Controllorship (if not taken as a core course)	3 hours

BA 825V	Seminar in Accounting (if not taken as a core course)	3 hours
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##### One of the following courses:

BA 803V	Business Information Systems	3 hours
BA 890V	Independent Research (in Accounting)	3 hours

(Note: If either one of the three courses—BA 821V, BA 823V, or BA 825V—is taken as a core course, both BA 803V and BA 890V must be completed.)

##### Option #6 — Economics

BA 805V	Business Conditions Analysis	3 hours
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Plus 9 hours from the following (no more than 6 hours of M-level courses may be included in the MBA program):

Econ 831M	Public Utility Economics	3 hours
Econ 832M	Energy Economics	3 hours
Econ 833M	Transportation Economics	3 hours
Econ 834M	Environmental Economics	3 hours
Econ 801V	Theory of Public Finance	3 hours
Econ 810V	Economic Security	3 hours
Econ 816V	Seminar in Labor Economics	3 hours
Econ 820V	Seminar in Micro Theory	3 hours
Econ 822V	Seminar in Macro Theory	3 hours
Econ 829V	Research Methods	3 hours
Econ 830V	Econometrics	3 hours
Econ 845V	Seminar in Money and Banking	3 hours
Econ 865V	Seminar in International Economics	3 hours
Econ 885V	Seminar in Urban Economics	3 hours

##### Option #7 — Management

BA 830V	The Environment of Management	3 hours
BA 835V	Seminar in Management	3 hours
BA 832V	Personnel Administration	3 hours

##### One of the following courses:

BA 803V	Business Information Systems	3 hours
BA 805V	Business Conditions Analysis	3 hours
BA 840V	Marketing Policies	3 hours

##### Option #8 — Banking and Finance:

BA 850V	Financial Management	3 hours
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##### Plus 9 hours from the following:

BA 851V	Security Analysis	3 hours
BA 852V	Seminar in Investment Management	3 hours
BA 855V	Seminar in Finance	3 hours
Econ 845V	Seminar in Money and Banking	3 hours
BA 853V	Banking and Financial Markets: Structure, Function and Policy	3 hours

BA 890V	Independent Research (in Finance)	3 hours
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##### Option #9 — Industrial Psychology:

BA 832V	Personnel Administration	3 hours
Psych 862V	Psychological Aspects of Industrial Training and Education	3 hours

Psych 961	Seminar in Industrial/Organizational Psychology	3 hours
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##### Plus one of the following four courses:

Psych 813M	Research Design	3 hours
Psych 814V	Nonparametric Statistics	3 hours
Psych 910	Proseminar: Analysis of Variance	3 hours
Psych 911	Proseminar: Multiple Regression and Factor Analysis	3 hours

##### Option #10 — Individually Designed Program:

A student under the guidances of the Director of Graduate Studies in Business and Economics and with the approval of the Graduate Faculty of the College of Business Administration may develop an option of 12 hours of study.

A minimum of 21 semester hours must be completed in courses designated as business administration (BA). Also, at least 30 hours must be at the "V" level of graduate work.

#### Student Responsibilities

It is the responsibility of each student admitted to graduate studies to be familiar with the procedures and regulations of the Graduate Catalog.

Each student should also consult with the Director of the MBA program at least once each semester to assure continued progress toward the degree objective.

Students must maintain a 3.0 (B) average to fulfill the program and graduation requirements. A maximum of 2 C's in graduate courses is permitted.

In selecting electives the student must be guided by the restrictions that a maximum of 6 hours of "M" level courses may be included in the graduate program of study.

## CIVIL ENGINEERING

### Master of Science

This is a professional graduate degree designed to provide a broad educational background for students who wish to gain greater proficiency and assume positions of greater responsibility in the field of Civil Engineering.

Courses in the program give students a better understanding of the basic principles and methodology used in the design of civil engineering projects. Emphasis is placed on Systems Analysis, Decision Making, and Problem Solving.

The degree program is offered by the faculty of the merged departments of Civil Engineering at Omaha and Lincoln, and will be administered by the Graduate College, UN-L. Requirements for the Master's Degree will be as stated in the Graduate Studies Bulletin, University of Nebraska-Lincoln. Upon admission by the Graduate College, UN-L, student records will be maintained on the campus at which the major portion of the graduate courses will be taken. Normally the faculty advisor will also be on that campus.

**Graduate Committee.** The Civil Engineering Department has a Graduate Committee of six faculty, selected from the Omaha and Lincoln campuses, appointed by the Department Chairperson and approved by the Graduate Dean, UN-L. The Graduate Committee has general supervision over the work of the candidates for the Master's degree. The committee may prescribe such tests as it deems necessary in order to determine whether an applicant is adequately prepared for graduate study. After all application materials are received by the Graduate College, UN-L, the chairperson of the committee will be asked to make a recommendation, after consultation with the committee, on admission to the Graduate College.

Admission to Candidacy  
Options for the Masters Degree  
Examinations

Consult current Graduate Studies  
Bulletin, University of Nebraska-  
Lincoln

**Graduate Work.** Graduate work in Civil Engineering is governed by the general requirements of the Graduate College. Selection of the option and program are subject to approval of the students' advisor and the departmental Graduate Committee.

A student applying for admission should designate the primary area in which he/she wishes to study. Major work for the Master of Science degree may be selected from the areas of structural, geotechnical, transportation, hydraulic, sanitary and water resources engineering. A minor area may be designated from any one of the related Civil Engineering areas, or from other related departments. Other supporting courses will be selected from advanced or graduate courses having some relation to the major group.

## COMMUNICATION

### Master of Arts

In order to be admitted without deficiencies to graduate study in Communication, the applicant must present at least 15 undergraduate semester hours of appropriate courses in communication arts and sciences, including advanced (upper division) work in the area of graduate concentration. Applicants who have more than 9 semester hours of deficiencies will be advised to remove them before re-applying for any type of admission.

All students who major in Communication are required to complete the 12 semester hours of core courses prescribed by the Graduate Committee. These core courses provide a basic, intensive and broad coverage of communication as a field of advanced study, including foundations of both mass and transactional communication in conjunction with research and theory. Currently the core courses are Communication 801V, 847V, 857V, and a theory or research seminar, above the 800M level, which may be in the student's area of concentration.

The student's plan of study must be approved by the student's committee and may include provisions for a minor or area studies. Every plan of study must be designed to meet the requirements of either the thesis option or the non-thesis option:

- Thesis option: Successful completion of 24 semester hours of course work, plus a thesis (6 credit hours) based on a proposal approved by the student's committee. The completed thesis is defended orally before the committee, and the committee conducts an oral comprehensive examination covering the student's field(s) of study (unless the written comprehensive examination was taken previously and passed).
- Non-thesis option: Successful completion of 36 semester hours of course work, at least 18 hours of which must be in courses open only to graduate students. At least half of the 36 hours must be in the student's area of concentration. In lieu of thesis, an independent research or creative project, based on a proposal approved by the student's committee, may be formulated in writing, video, or film; plus a written comprehensive examination covering the student's major emphasis in his/her area of study, judged by a faculty committee.

## COUNSELING AND GUIDANCE

Students may begin a program of studies in Counseling and Guidance at any one of three starting times during the course of the year. Once a program is begun, students are expected to pursue the program on a continuous enrollment basis. Fulltime study is encouraged, however, provision is made for those unable to devote more than part-time to their program. All students are required to follow a sequence of course-work, whether full or part-time, and must consult their advisor to determine this sequence. Failure to do so could possibly result in a delayed completion date.

Students obtain a Master's degree in Counseling and Guidance with an area of specialization. Current specialty areas include Elementary School Counseling, Secondary School Counseling (both of which require current teaching certificates for endorsement as a Counselor in Nebraska or Iowa), Agency Counseling, College Student Personnel Services, and Counseling in Gerontology.

Required courses are determined in relation to the student's previous coursework, experience and anticipated work setting. Most programs however would fit within one of the general outlines given below.

Students are admitted and permitted to continue programs in Counseling and Guidance on the basis of their potential for successful training and professional practice.

Major points where students are evaluated with respect to their suitability for continuation in the program are 1) initial admissions to Graduate Studies and Department, 2) admission to degree candidacy and 3) prior to taking the Counseling Practicum or Internship courses. Successful completion of a Counseling Practicum or Internship is a requirement for graduation.

The Counseling and Guidance Department has admissions requirements and procedures in addition to those applicable to Graduate Studies as a whole, and prospective students are strongly encouraged to contact the Department regarding these admissions requirements and procedures. One such exception from the general Graduate Studies procedures are the different admissions deadlines for Counseling and Guidance.

The last date for completing all requirements for admission to the Department of Counseling and Guidance is April 23 for either Summer Session and the Fall Semester, and November 30 for the Spring Semester. Students are admitted to the programs in Counseling and Guidance twice each year. If students wish to begin the program at a different time from those indicated, they may discuss this with faculty in the department.

**NOTE:** Non-counseling degree students may obtain an elective option in Affective Humanization Processes. This consists of a 12-hour block of courses which must be authorized by Dr. Harl Jarmin in the Counseling and Guidance Department and the student's advisor for this to be officially included as part of the student's degree program.

### Master of Arts

Programs for the Master of Arts degree with a major in counseling and guidance will be determined by the major adviser upon request.

### Master of Science

#### Specialization in Agency Counseling

- I. Foundation Course ..... 3 hours  
FED 801V, Introduction to Research
- II. Selected Cognate Courses ..... 6-15 hours  
These courses are selected in accordance with student's particular area of interest.
- III. Counseling and Guidance Courses ..... 22-28 hours  
COUN 890M, Principles of Guidance and Counseling  
COUN 820V, Introduction to Counseling Theories  
COUN 822V, Occupational and Educational Information  
COUN 823V, Appraisal Techniques in Counseling and Guidance  
COUN 824V, Counseling Practices  
COUN 825V, Counseling Practicum  
COUN 829V, Community Involvement for Urban Counselors  
Selected additional courses in the department.

#### Specialization in School Counseling — Secondary Level\*

- I. Foundation Course ..... 3 hours  
FED 801V, Introduction to Research
- II. Selected Cognate Courses ..... 6-15 hours  
These are most often selected from offerings of the Psychology, Sociology, Secondary Education and Special Education departments.
- III. Counseling and Guidance Courses ..... 22-28 hours  
COUN 890M, Principles of Guidance and Counseling  
COUN 820V, Introduction to Counseling Theories  
COUN 821V, Organization and Administration of Guidance Services  
COUN 822V, Occupational and Educational Information  
COUN 823V, Appraisal Techniques in Counseling and Guidance

COUN 824V, Counseling Practices  
 COUN 825V, Counseling Practicum  
 Selected additional courses in the department.

*Specialization in School Counseling — Elementary Level\**

- I. Foundation Course .....6 hours  
 FED 801V, Introduction to Research  
 PSYCH 851V, Advanced Educational Psychology
- II. Selected Cognate Courses ..... 6-12 hours  
 These are most often selected from offerings of the Psychology, Sociology, Elementary Education and Special Education departments.
- III. Counseling and Guidance Courses ..... 19-27 hours  
 COUN 890M, Principles of Guidance and Counseling  
 COUN 820V, Introduction to Counseling Theories  
 COUN 831V, Child Assessment in Elementary School Guidance  
 COUN 832V, Counseling Elementary School Children  
 Practicum or Internship .....(4-6 hours)  
 Selected additional courses in the department.

*Specialization in College Student Personnel Services*

- I. Foundation Course .....3 hours  
 FED 801V, Introduction to Research
- II. Selected Cognate Courses ..... 6-15 hours  
 These courses are selected in accordance with the student's particular area of interest. Most often these courses are taken in the departments of Sociology and Psychology.
- III. Counseling and Guidance Courses ..... 21-27 hours  
 The pattern of coursework is individually designed to prepare the student for specific roles within the field of student personnel services, i.e., Admissions and Registrations, Counseling, Housing, Financial Aids, Placement and Student Activities.

*Counseling with specialization in Gerontology*

- I. Foundation Course .....3 hours  
 FED 801V, Introduction to Research
- II. Counseling and Guidance Courses ..... 25-28 hours  
 COUN 890, Principles of Guidance and Couns.  
 COUN 820, Introduction to Counseling Theories  
 COUN 822V, Occupational and Educational Information  
 COUN 823V, Appraisal Techniques in Counseling & Guidance  
 COUN 824V, Counseling Practices  
 COUN 825V, Counseling Practicum  
 COUN 826V, Guidance Internship  
 COUN 827V, Group Techniques in Guidance

*Selected other courses in the Department*

- III. Gerontology Courses ..... 12-15 hours  
 These courses are selected with the major advisor's assistance and in collaboration with the Gerontology Program.

**CRIMINAL JUSTICE**

**Degree Programs**

The Criminal Justice Department offers the student a choice of either a Master of Science or a Master of Arts Degree in Criminal Justice. Both degree programs emphasize criminal justice research, planning and administration.

**Admission Requirements for the Criminal Justice Graduate Program**

All candidates must have a minimum of 18 semester hours of Criminal Justice or related courses which represent the core undergraduate curriculum. In addition, all candidates must have completed a basic statistics course, a research methods course, and a minimum of 15 hours in the Social Science area at the undergraduate level. Those students lacking these requirements will be required to make up these deficiencies during the first year of graduate work.

\*Teaching certificate required for institutional endorsement to serve as secondary or elementary school counselors in Nebraska or

**Master of Arts**

The Master of Arts degree is a 30 credit-hour program designed to emphasize research activity and independent inquiry, while simultaneously providing fundamental course work. This degree is especially recommended for those students seeking an interim degree prior to obtaining the Ph.D.

To earn the Master of Arts degree in Criminal Justice, the student must satisfactorily complete the following course requirements:

- Required Core Courses** ..... 9 hrs.  
 801V, Criminal Justice Planning and Innovation  
 802V, Seminar in the Administration of Justice  
 812V Criminal Justice Research Theory and Methodology
- Elective Courses** ..... 9 hrs.  
 (student selects three (3) courses with advisor's approval)  
 803V, Comparative Law Enforcement Systems  
 804V, Seminar in Community Services and Treatment  
 807V, Theoretical Criminology  
 808V, Seminar in the Processes of the Criminal Justice System  
 809V, Seminar in Delinquency Prevention, Control, and Correction  
 811V, Special Problems in Criminal Justice  
 814V, Independent Study
- Elective Cognate Courses** ..... 6 hrs.  
 In consultation with an advisor the student selects two (2) courses in a related field. Suggested fields include, but are not limited to: Business Administration, Psychology, Political Science, Social Work, Sociology, and Public Administration.
- Completion of and Successful Defense of Thesis ..... 6 hrs.

**Master of Science**

The Master of Science degree is a 36 credit-hour non-thesis program designed to emphasize research, planning, and administration, while simultaneously providing fundamental course work. This degree program offers the student a choice of either the standard Master of Science curriculum or a Master of Science with an option in Public Administration. The Public Administration option is especially recommended for administrators or future administrators within the Criminal Justice System.

To earn the Master of Science Degree in Criminal Justice, the student must satisfactorily complete the following course work:

- Required Core Courses** ..... 9 hrs.  
 801V, Criminal Justice Planning and Innovation  
 802V, Seminar in Administration of Justice  
 812V, Criminal Justice Research Theory and Methodology
- Elective Courses** ..... 12 hrs.  
 (student selects four (4) courses with advisor's approval)  
 803V, Comparative Law Enforcement Systems  
 804V, Seminar in Community Services and Treatment  
 807V, Theoretical Criminology  
 808V, Seminar in the Processes of the Criminal Justice System  
 809V, Seminar in Delinquency Prevention, Control, and Correction  
 811V, Special Problems in Criminal Justice  
 814V, Independent Study
- Elective Cognate Courses** ..... 15 hrs.  
 In consultation with an advisor the student selects five (5) courses in a related field. Suggested fields include, but are not limited to: Business Administration, Psychology, Political Science, Social Work, and Sociology.
- Satisfactory completion of the comprehensive examination is also required.

**Master of Science**

**Public Administration Option**

To earn the Master of Science Degree in Criminal Justice, Public Administration Option, the student must satisfactorily complete the following course requirements:

- Required Criminal Justice Core Courses** ..... 9 hrs.  
 801V, Seminar in Criminal Justice Planning and Innovation  
 802V, Seminar in Administration of Justice  
 812V, Criminal Justice Research Theory and Methodology
- Required Public Administration Core Courses** ..... 12 hrs.  
 840M, Public Budgeting or  
 848V, Seminar in Public Financial Management  
 if credit has been earned in 441/841M  
 842V, Seminar: Introduction to Public Organization  
 844V, Seminar in Organization Development in Public Agencies
- Elective Criminal Justice Courses** ..... 12 hrs.  
 (student selects four (4) courses with advisor's approval)

- 804V, Seminar in Community Services and Treatment
- 805V, Seminar in Criminal Jurisprudence
- 807V, Theoretical Criminology
- 808V, Seminar in the Processes of the Criminal Justice System
- 809V, Seminar in Delinquency, Prevention, Control and Correction
- 811V, Special Problems in Criminal Justice
- 814V, Independent Study

**Elective Public Administration Courses**

In consultation with an advisor the student selects one (1) course from the Public Administration electives.

Satisfactory completion of the comprehensive examination or an alternative problem solving exercise.

**DRAMATIC ARTS**

**Master of Arts**

An applicant for graduate study in Dramatic Arts must present a minimum of 15 undergraduate semester hours in appropriate courses in dramatic arts beyond the introductory course. Deficiencies must be made up during the first year of graduate study.

The graduate program in dramatic arts is designed to insure that students are familiar with the field as a whole and prepared to demonstrate their mastery in a written comprehensive examination at the conclusion of their course work. All candidates are required to take a course in research methods and to complete one of the following plans of study:

- Option I: Successful completion of 24 semester hours of course work including at least 12 hours in V-level courses; plus a thesis (6 credit hours) based on a proposal approved by the student's committee and defended orally when completed before the committee.
- Option II: Successful completion of 33 semester hours of course work including at least 12 hours in V-level courses; plus a final project (3 credit hours) in playwriting, directing, acting, scenic design, costume design, or lighting design which will be orally defended upon completion.

**ECONOMICS**

Applicants to the graduate program in Economics must have or complete the equivalent of 15 undergraduate semester hours in Economics.

**Master of Science**

The M.S. program consists of core requirements (15 hours), an elected specialization (9 or 12 hours), and electives (9 or 12 hours, depending on the specialization elected). No thesis is required for the M.S. degree. All courses are 3 credits. Total hours required: 36.

Each student must complete the core requirements.

**Core (15 hours)**

- ECON 820V, Microeconomic Theory
- ECON 822V, Macroeconomic Theory
- ECON 830M, Quantitative Applications in Economics and Business\*
- ECON 829V, Research Methods
- ECON 830V, Econometrics

\*Not required for students demonstrating satisfactory mathematical skills. In that case add 3 hours to electives.

Each student may elect a specialization from those suggested below. Other specializations may be approved by the Economics Program Graduate Advisor. Specializations consist of either 9 or 12 hours of interrelated graduate level course work.

**Suggested Specializations**

- I. Economic Theory.....12 hours
  - ECON 826M, Evolution of Economic Thought
  - ECON 823M, Advanced Macro Theory
  - ECON 845M, Monetary Theory and Policy
  - ECON 865V, Seminar in International Economics
  - Electives .....9 hours
- II. Energy and Regulatory Economics (select 3 courses) .....9 hours
  - ECON 821M, Competition and Monopoly in American Industry
  - ECON 831M, Public Utility Economics
  - ECON 832M, Energy Economics
  - ECON 833M, Transportation Economics
  - Electives .....12 hours

- ECON 801V, Public Finance
- ECON 845M, Monetary Theory and Policy
- ECON 845V, Seminar in Money and Banking
- BA 853V, Banking and Financial Markets
- BA 856M, State and Local Finance
- Electives .....9 hours
- IV. International Economics .....9 hours
  - ECON 865V, Seminar in International Economics
  - ECON 866M, International Economic Development
  - POLI SCI 820V, Seminar in International Politics
  - Electives .....12 hours
- V. Urban/Regional Economics (select 4 courses - 12 hours, 6 of which must be in Economics)
  - ECON 885V, Seminar in Urban Economics
  - ECON 887V, Seminar in Regional Economics
  - ECON 899V, Research in Urban/Regional Economics
  - GEO 812M, Urban Geography
  - HIST 843M, American Urban History to 1870
  - HIST 844M, American Urban History since 1870
  - SOC 814M, Urban Sociology
  - Electives .....9 hours
- VI. General (21 hours of graduate-level elective courses. Approval of Economics Program Graduate Advisor required.)

**Master of Arts**

The M.A. program consists of: core requirements (12 hours), an elected specialization (9 or 12 hours), electives (including 6 hours of thesis). Total hours required: 30.

**Core (12 hours)**

- ECON 820V, Microeconomic Theory
- ECON 822V, Macroeconomic Theory
- ECON 830M, Quantitative Applications in Economics and Business\*
- ECON 829V, Research Methods

\*Not required for students demonstrating satisfactory mathematical skills. In that case, add 3 hours to electives.

**Suggested Specifications**

- I. Real Estate and Land Use Economics .....15 hours
  - BA 860V, Real Estate and Land Use Economic Theory
  - BA 861V, Current Problems in Real Estate
  - BA 899V, Thesis\*\* .....6 hours
  - Electives .....3 hours
- II. All other specifications are the same as those described under the M.S. program.
  - Electives, include ECON 899 Thesis .....6 hours

\*\*Must be written under the supervision of a member of the REALUE program.

**EDUCATIONAL ADMINISTRATION AND SUPERVISION**

**Master of Science**

An applicant for admission to the program for the Master of Science degree in educational administration and supervision (with endorsement) must hold a Bachelor's degree from an accredited institution and be certificated at either or both the elementary or secondary teaching level. The degree program of at least 36 semester hours must include balanced coverage of the major areas of educational administration and supervision.

An applicant for admission to the program for the Master of Science degree in educational administration and supervision (without endorsement) must hold a Bachelor's degree from an accredited institution.

As part of the 36 hour program, graduate course work in related fields may be taken, up to a total of not more than 12 semester hours.

All programs will be designed with the student's needs in mind and will be developed by the student with advice and counsel of his major advisor.

**Specialist in Education**

An applicant for admission to the Specialist in Education degree (with endorsement) in the department of Educational Administration and Supervision must be certificated at either or both the elementary or secondary teaching level, hold a Master's degree from an accredited institution, and present evidence of having had appropriate administrative experience.

An applicant for admission to the Specialist in Education degree (without endorsement) in the department of Educational Administration and Supervision must hold a Master's degree from an ac-

These programs of study are designed to best harmonize the student's needs and ambitions. Articulated with the Master's Degree, the total program must accumulate to not less than 66 graduate semester hours. The program is carried out under the direction of a graduate faculty supervisory committee. Prior to admission to candidacy, all students must successfully pass the designated qualifying examination.

### EDUCATIONAL FOUNDATIONS

The following courses provide a broad foundational basis for more advanced work in graduate education. They are designed to initiate students in education into a more thorough and critical understanding of basic educational issues. As introductory courses, the following courses can be applied for credit in most graduate programs in education.

- FED 801, Introduction to Research (F:S:SS)
- FED 802, History and Philosophy of Education (F:S:SS)
- FED 806, Education and Society (S)
- FED 807, Alternative Strategies in Urban Education (S)
- FED 809, Urban School (F)
- FED 811, Conflict and Controversy in Urban Education (SS)
- FED 813, Field Research Techniques in Urban Education (F)
- FED 898, Growth and Learning Problems of the Disadvantaged (F:SS)

For more information call the Department of Educational Foundations and Urban Education, 554-2712.

### MASTER OF SCIENCE IN EDUCATION Major in Urban Education

The Master of Science program in Urban Education is designed for graduate students who are interested in exploring the contemporary issues confronting urban educational institutions. The range and depth of the inter-disciplinary course offerings in this program provide varied, challenging, and relevant experiences for both classroom teachers and community workers in allied professional fields. Students in this thirty-six hour program will increase their competence and expertise in functioning not only in the educational setting of the urban classroom, but also within the wider community milieu.

It is expected that students will be able to critically analyze the logic and structure of the educational institution, and the inter-relationship of education and other primary socializing agencies.

Many of the courses offered in the program are designed specifically to facilitate an analysis of the ethnic, racial, and social characteristics of the contemporary urban scene.

It is also expected that students will develop an awareness of and the ability to handle the learning problems of urban youth. The program emphasizes a cultural awareness and appreciation of the varied life-styles within the urban setting, and specific skills to function effectively as an educator. In addition, attention will be focused on a critique of existing programs and the development of new strategies for change and the improvement of education.

#### Entrance Requirements

Students interested in the degree program must initially:

- 1) Hold a Bachelor's degree from an accredited institution.
- 2) Submit completed application forms for graduate studies and a transcript of all previous college work, and complete a set of departmental forms.
- 3) Complete an interview (where possible) with the Urban Education Committee.

#### Advancement to Candidacy

Before students can be advanced to candidacy, they must fulfill the following requirements. This must be done prior to the completion of twelve (12) hours at UNO:

- 1) Complete the Graduate Record Examination (verbal and quantitative) or the Miller Analogy Test. A low score may require supplemental work.
- 2) Complete six graduate hours at UNO, one of which must be FED 801V, with grades of B or better.
- 3) Select one of the three program options for degree work.
- 4) Plan a program with an advisor.

#### Graduation Requirements

For a student to graduate from the program with the Master's degree in Urban Education he/she must fulfill the following requirements:

- 1) Complete a minimum of thirty-six graduate hours.
- 2) Assist and/or participate in departmental colloquim activities.

- 4) Complete Practicum Internship in the immediate locale, another American metropolitan area, or overseas.

### PROGRAM

To graduate with an M.S. degree in Education with a major in Urban Education students must successfully complete a minimum of thirty-six hours in one of the following three optional programs. Option I is designed for teachers and administrators in urban schools; Option II is designed for students working in urban education in non-school settings; Option III is designed for students wishing an emphasis on research and evaluation. The student must choose *one* option prior to the completion of twelve (12) hours. A maximum of twelve (12) hours may be transferred into any program.

#### OPTION I. M.S. for Urban Educators in school settings

(a) Required courses (taken in the following order):

- FED 801, Introduction to Research (F:S:SS).....3 hours
- FED 802, History and Philosophy of Education (F:S:SS).....3 hours
- FED 806, Education and Society (S).....3 hours
- FED 809, Urban School (F).....3 hours
- FED 807, Alternative Strategies in Urban Education (S).....3 hours
- FED 898, Growth and Learning Problems of the Disadvantaged (F:SS).....3 hours
- FED 811, Conflict and Controversy in Urban Education (SS).....3 hours
- FED 848, Practicum Internship (F:S).....3 hours
- FED 805, Seminar in Urban Education (F).....3 hours

(b) Nine (9) hours of elective course work to be taken in *one* other educational field. Selection made in consultation with advisor.

#### OPTION II. M.S. for Urban Educators in non-school settings.

(a) Required courses (taken in the following order):

- FED 801, Introduction to Research.....3 hours
- FED 802, History of Education.....3 hours
- FED 806, Education and Society.....3 hours
- FED 809, Urban School.....3 hours
- FED 807, Alternative Strategies in Urban Education.....3 hours
- FED 811, Conflict and Controversy in Urban Education.....3 hours
- FED 805, Seminar in Urban Education.....3 hours

(b) Fifteen (15) hours of elective course work outside education. A minimum of twelve (12) hours must be taken in one area. Selection made in consultation with advisor.

#### OPTION III. M.S. for Urban Educators with an emphasis on research and evaluation.

(a) Required courses (taken in the following order):

- FED 801, Introduction to Research.....3 hours
- FED 802, History and Philosophy of Education.....3 hours
- FED 806, Education and Society.....3 hours
- FED 813, Field Research Techniques in Urban Education.....3 hours
- FED 809, Urban School.....3 hours
- FED 807, Alternative Strategies in Urban Education.....3 hours
- FED 811, Conflict and Controversy in Urban Education.....3 hours
- FED 848, Practicum Internship.....2-8 hours
- FED 805, Seminar in Urban Education.....3 hours

(b) Three to six (3-6) hours of elective course work. Selection made in consultation with advisor.

### ELEMENTARY AND EARLY CHILDHOOD EDUCATION

#### Master of Arts

Programs for the Master of Arts degree with a major in elementary education will be determined by the major adviser upon request.

#### Master of Science

##### Admission to the Program

1. An applicant must hold a valid elementary school teaching certificate.
2. Unconditional admission is granted if/and when:
  - a. undergraduate major average is 3.0 or above.
  - b. Graduate Record Examinations are completed with acceptable scores.
  - c. any undergraduate deficiencies are made up.
3. Graduate Record Examinations (Verbal, Quantitative, and Advanced Education) must be taken before a second registration. An acceptable score must be earned.

##### Candidacy for the Degree

1. A plan of study and admission to candidacy are completed in conference with the student's adviser when six (6) hours of graduate work have been completed. This plan of study must be approved by the Department and the Graduate Office.

- A written comprehensive examination is required during the semester in which a student completes the program. Application for the examination must be made to the Director of Graduate Studies in the department. The examination covers coursework taken and its content is determined by each individual student's program.

#### Degree Program

- I. Required Courses ..... 21 hours
  - FED 801V, Introduction to Research
  - FED 802V, History and Philosophy of Education
  - EED 819V, Diagnostic and Corrective Instruction
  - EED 840V, Innovations and Trends in Elementary Education
  - EED 843V, Introduction to Curriculum Planning — Elementary
  - EED 844V, Seminar in Elementary Education
  - EDAD 846V, Administration and Supervision in Elementary Schools
- II. Area of Concentration..... 9-12 hours
 

Each student will include in his Plan of Study, an area of concentration in a special field which will provide depth in an area of his interest. All concentrations will be decided upon in conference with the student's departmental adviser.

Possible choices include: Reading, Early Childhood Education, Gifted Education, Guidance, Improvement of Instruction, Learning Disabilities, Urban Education, Educational Administration, Educational Media, or an academic concentration, e.g., history, English, mathematics.
- III. Electives ..... 3-6 hours

#### Non-Degree-Seeking Students

Students who are not planning to pursue the program leading to a Master's degree are allowed to take courses for which they meet the prerequisites. Their graduate adviser will confer with them in planning for such courses.

## ENGLISH

### Master of Arts

To be admitted to graduate study in English, a student should have completed at least eighteen credit hours in undergraduate English courses above the freshman level with an average grade of "B" or above.

All candidates for Master of Arts degrees with majors in English are required to take English 801V (Introduction to Literary Research) within the first nine hours of graduate study, and to complete one of the following plans of study:

- Plan A: Successful completion of 24 credit hours in course work, including at least 12 hours in 800V- or 900-level courses; plus a thesis (6 credit hours) on an approved topic accepted after oral defense before a faculty committee; plus a written examination prepared and judged by a faculty committee.
- Plan B: Successful completion of 36 credit hours in course work, including at least 18 hours in 800V- or 900-level courses; plus a written examination prepared and judged by a faculty committee.

The following English seminars in major periods vary in emphasis and may be repeated for credit: English 806V, 808V, 809V, 810V, 813V, 820V, 898V, 912, 915.

NOTE: The English Department offers a **Certificate in Course in Teaching English as a Second Language**:

- Satisfactory completion of the following four courses:
  - a. Eng. 858M, Introduction to Linguistics
  - b. Eng. 878M, Structure of English
  - c. Eng. 896M, Studies in Linguistics (Applied Linguistics)
  - d. Eng. 896M, Studies in Linguistics (Teaching English as a Second Language)
- For all students except those with a major or teaching field concentration in a foreign language, demonstrated oral and written competence in a second language as certified by the Department of Foreign Languages.
- For students whose language of nurture is not English, demonstrated oral and written mastery of English as certified by the Department of English.

The Certificate in Course, granted by the Board of Regents, is not a certificate to teach in the public schools of Nebraska or any other state. It is an academic credential only. Students who want certification to teach in the public schools must follow the procedures and courses of study prescribed by the College of Education. The requirements for certification to teach English as a second language in American public schools vary widely from state to state.

## THE MASTER OF ARTS DEGREE WITH A MAJOR IN GENERAL SCIENCE

This graduate degree is designed to provide a broad scientific background for students who wish to gain greater proficiency in the natural sciences. The program for the Master of Arts with a major in General Science will be directed by a Graduate Science Committee consisting of representatives (recommended by their respective graduate faculties and approved by the Dean for Graduate Studies and Research) of biology, chemistry, geology-physical geography, and physics. The Graduate Science Committee may prescribe such tests as it deems necessary in order to determine if an applicant is adequately prepared for graduate work, and will supervise the final oral examination. Each candidate will be assigned an advisor who will be responsible for the candidate's curriculum and thesis in accordance with the policies established by the Graduate Science Committee and the Graduate Council.

Prerequisites: An applicant for full admission to the graduate program must present a Bachelor's degree. In addition, eight semester hours of credit must be presented in each of the four natural science areas.

Degree Requirements: The degree requires a minimum of thirty-six (36) semester hours for completion. Candidates must complete a minimum of thirty (30) semester hours of approved course work and, in addition, submit a thesis, credit for which will be allowed to a maximum of six (6) semester hours. Courses leading to the degree will be distributed across the natural science areas according to the needs of the student, with a maximum of twenty (20) semester hours (not including thesis) allowed in any one field. In general, the student's program will include at least one course in each of the four natural science areas. Any deficiency in the prerequisites must be made up but may not be counted as a part of the thirty-six (36) hour graduate requirements.

## GEOGRAPHY AND GEOLOGY

The department offers the following degrees with a major in geography: the Master of Arts degree and the Master of Science degree.

The Master of Arts with a major in geography is intended for those preparing themselves in areas other than physical geography; whereas, the Master of Science with a major in geography is intended for students electing to do major work in physical geography. Each degree has two options:

Option I should be chosen by those concentrating on careers in research and scholarly work, or in college or university teaching. The option requires a minimum of 24 semester hours in geography courses numbered 800M-800V and 900, and thesis 1-6 hours for a combined total of 30 hours.

Option II may be chosen upon the advice and with the approval of the major adviser. This option requires a minimum of 36 semester hours in geography courses numbered 800M or 800V-900, or selected cognate courses in other departments. No thesis is required for this option. Students who have taken the degree under Option II and later elect to continue in graduate work for the Ph.D., will not be encouraged by the department to continue unless evidence of ability to carry on independent research is presented.

### Admission Requirements

An applicant for admission to either the Master of Arts or the Master of Science degree program in geography must present as a prerequisite a minimum of 15 undergraduate semester hours of geography including Physical (106 or 107 or 117) and Cartography (353) or the equivalent. Those students not meeting minimal course requirements must remove any deficiency during the first year of graduate study.

Individual programs of study will be designed for incoming graduate students on the basis of GRE scores and personal interview. This should enable each student and his adviser to construct a program oriented to individual needs and desires.

Basic courses required for either an M.A. or M.S. degree include Geography Concepts; History and Philosophy of Geography, 801V; and Geography Concepts; Quantitative Methods, 802V; and Field Geography, 861V. The remainder of the program shall consist of courses selected by the student with the advice and consent of an advising committee.

## GERONTOLOGY

### Certificate in Gerontology

While UNO does not offer a graduate degree in Gerontology, a Specialization in Gerontology is available. The Board of Regents has established a Certificate in Gerontology that will be awarded upon completion of requirements for the Specialization. The Specialization may serve as an academic minor for students majoring in many of the social and behavioral sciences at the graduate level.

### Requirements

- Students wishing to work toward the Certificate in Gerontology must make application and be accepted into the Gerontology Program. Those working toward a graduate degree must also be accepted into the degree program of their major department.

2. Coursework requirements consist of a minimum of 15 semester hours in Gerontology. The only required course is GERO 811M—Applied Social Gerontology (3 semester hours); the other 12 hours (usually four graduate level courses) in Gerontology are selected by the student in consultation with the Academic Coordinator of the Gerontology Program. In this manner, individualized programs of study are developed for each student to best meet his or her career goals and interests.
3. A one semester full-time practicum or its equivalent is also required. The goal of this is to give each student practical one-on-one experience with the aged in a service program or agency delivering services to the elderly. Practicum students must register for GERO 894M-Practicum and participate in periodic seminars with the Practicum Supervisor of the Gerontology Program.

**Example of a program of study**

Each individual program of study will be tailored to the needs and interests of each student. Below is an example of what one program of study might look like:

- GERO 811M—Applied Social Gerontology (3 semester hours) — required of all students at the graduate level.
- GERO 810M—Educational Gerontology (3 semester hours)
- GERO 846M—Aging and Human Behavior (3 semester hours)
- GERO 867M—Programs and Services for the Aging (3 semester hours)
- GERO 898M—Counseling Skills in Gerontology (3 semester hours)
- GERO 894M—Practicum (0-6 semester hours)

**HEALTH, PHYSICAL EDUCATION, AND RECREATION**

The School of Health, Physical Education, and Recreation offers graduate courses in the areas of health education (HED), recreation education (RED), and physical education (PE). At present, the Master of Arts and the Master of Science degrees are offered with a major in physical education.

The School of HPER requires that their students obtain a minimum score of 800 on the total of the verbal and quantitative parts of the GRE. This examination should be taken prior to or during the student's first enrollment. If the student does not attain the 800 level, the student must retake the GRE during the student's next enrollment for classes. If the student fails to obtain the 800 score on this second attempt, the student may appeal to the HPER Graduate Program Committee.

**Master of Science  
Major in Physical Education**

To be admitted to this degree program, students must possess an undergraduate major or minor in physical education or related field. Students pursuing the Master of Science Degree with a major in physical education will select course work from the four areas indicated below. Minimum and maximum hours that must be included from each area are indicated where such limits are applicable. The student in consultation with the major adviser will determine the exact courses leading to the degree.

AREA	HOURS	
	Min	Max
I. PE Core PE 822V Problems and Issues in Physical Education PE 828V Curriculum in Physical Education PE 840V Motor Learning and Performance PE 845V Kinesiological Analysis of Motor Skills	12	12
II. Research Research Methods, Statistical Methods	3	*
III. Professional Specialization Improvement of Instruction Teaching Seminars, Workshops, Independent Research, Special Studies	3	*
IV. Related Academic Courses	*	18

**Master of Arts  
Major in Physical Education**

To be admitted to this degree program, students must possess an undergraduate major or minor in physical education or related field. Students pursuing the Master of Arts Degree with a major in physical education will select course work from the five areas indicated below. Minimum and maximum hours that must be included from each area are indicated where such limits are applicable. The student in consultation with the major adviser will determine the exact courses leading to the degree.

AREA	HOURS	
	Min	Max
I. PE Core PE 822V Problems and Issues in Physical Education PE 828V Curriculum in Physical Education PE 840V Motor Learning and Performance PE 845V Kinesiological Analysis of Motor Skills	12	12
II. Research Research Methods, Statistical Methods	3	*
III. Professional Specialization Improvement of Instruction, Teaching Seminars, Workshops, Independent Research, Special Studies	3	*
IV. Related Academic Courses	*	18
V. Thesis	6	6

\*Minimums or maximums are determined by adviser.

**HISTORY**

**Master of Arts  
Admission to M.A. Program**

1. To be admitted unconditionally a student must present 21 (twenty-one) hours of undergraduate preparation in History with at least a 3.00 average in those hours; further, to be admitted unconditionally, the student must have achieved a grade average of 2.75 in his overall undergraduate work and must follow all other admission requirements for Graduate Studies.
2. Students may be admitted provisionally who have less than 21 (twenty-one) hours of undergraduate preparation, or who have not achieved a 2.75 overall grade average. They shall be removed from provisional status when they become eligible for and have achieved candidacy.
3. An incoming student, not having Historical Research (Hist 493) or its equivalent, must take Hist 493 on a non-graduate credit basis.

**M.A. Program with Thesis (Option I)**

The program for the Master of Arts degree (Option I) with a major in History will usually be arranged to conform to one of the following general patterns:

Ia. 24 semester hours of approved graduate courses in History, 9 of which must be in courses open only for graduate registration, i.e., seminars. The other 15 hours may be either lecture courses or courses numbered 801V and no more than 6 hours of credit may be taken by a student under this number. A balance of 15 and 9 must be maintained between major and minor areas of study. Seminar study should be divided two and one, depending upon the student's area of concentration.

Ib. 15 semester hours of approved graduate courses in History including 9 hours of seminars, plus 9 approved hours of graduate course work in a related field, such 9 hours constituting a graduate minor. The minor department must be consulted to determine the student's eligibility to do graduate work in that department.

In either program of study, a thesis, not to exceed 6 semester hours in independent study credit, is required under the direction of the major adviser.

**M.A. Program without Thesis (Option II)**

1. Under this plan the student may earn a Master of Arts degree by completing successfully thirty-six hours of course work, at least half of which must be earned in courses open only to graduate students (V series). No more than nine (9) hours of credit may be taken by a student under courses numbered 801V.
2. In addition to showing broad competency in history, the candidate must give proof of research ability and proficiency in writing. This normally will be done in research seminars and independent research projects.
3. While there is no requirement for a minor in some field other than history, the student may elect to take a minor in some other field, such minor to consist of no less than six graduate hours and no more than nine graduate hours. Permission to take a six hour minor may be gained by the adviser's permission, and the approval of the Graduate Program Committee.
4. Whether or not the student elects a minor in an outside field, he shall maintain a reasonable balance between American and non-American fields in history.
5. When the student initially enrolls, he shall, in conference with the chairperson of the Graduate Program Committee of the Department of History, choose his adviser. The chairperson of the History Graduate Program Committee shall, after consultation with the student and his adviser, recommend an advisory committee to the Dean for Graduate Studies and Research for



official appointment. The advisory committee shall be composed of members of the Faculty appropriate to the student's program and academic interests. The chairperson of the advisory committee (and the representative of the minor field, if such field is selected) must be members of the Graduate Faculty.

#### PROCEDURE FOR COMPREHENSIVE EXAMINATION FOR NON-THESIS MASTER OF ARTS CANDIDATES IN HISTORY

1. Early in the semester the candidate expects to take the degree, he/she must make arrangements with his/her sponsor to take the comprehensive written examination.
2. The examination in history will consist of two parts, one devoted to the major area, and one to the minor area of study.
  - a. If the major area of study is European/English history, the examination will be comprehensive, taking into consideration the student's program of study. The non-European/English portion of the examination will be over the specific courses taken for the minor. The major area examination will be of six hours duration (two three-hour segments), and the minor area examination will be of three hours duration.
  - b. If the major area of study is American history, the examination will be comprehensive, divided into two three-hour segments, with the breaking point for the two segments normally following the breaking point of the American history survey (History 111-112) course. The minor portion of the examination will be over the specific minor courses taken, and will be of three hours duration.
  - c. If the candidate offers an outside minor, the minor department and adviser will be responsible for the minor examination.
3. The reading committee will consist of the sponsor and one other graduate faculty member expert in the major area. The readers for the minor area will be the instructors of the courses offered in the minor. In the major area, the selection of the second reader shall be made by the sponsor and candidate. Both readers of the major and all readers of the minor area must agree that the candidate has passed the examinations for which they are responsible. In the event of disagreement, a third reader may be consulted as a mediator, and the result he/she supports will be the result of the examination.
4. The sponsor and the reading committee will select the items to appear on the examination, and determine the number of essays to be written. The candidate will have a choice of questions on each portion of the examination.
5. Once the examination has been administered and graded, the secretary has forms to be filled out by the sponsor, signed by the Graduate Program Committee chairperson, and sent to the Dean for Graduate Studies and Research, certifying the candidate for conferral of the degree.
6. In the event of failure of either all or a portion of the comprehensive examination at least four (4) months shall elapse before the examination in whole or in part may be retaken. Any reexamination must occur within twelve (12) months following the initial failure.
7. In no event shall a student be permitted to take all or a portion of the comprehensive examination more than twice.
8. In planning for a comprehensive examination (or reexamination), students should be cognizant of the six-year limit for completion of degrees as set forth by the College for Graduate Studies and Research.

#### HOME ECONOMICS

Home Economics graduate offerings at UNO may be used as a minor (HDR or FN) for those pursuing programs in another discipline. The minor portion should be determined in consultation with a designated member of the Graduate Faculty from Home Economics.

UNO courses may also be used to satisfy recertification.

**Admission** to a graduate program in the College of Home Economics requires presentation of the baccalaureate degree from an accredited institution. Departments within the college may determine specific course deficiencies.

**Application** for a graduate degree program in Home Economics is to be made to Graduate Studies, Lincoln Campus: In addition to this, an important step to initiate a graduate program is to consult with the chairman of the appropriate department in Lincoln. Dean Hall, Omaha Division, will assist in making such appointments. For a graduate degree in Home Economics, it will normally be necessary to take some courses on the Lincoln campus, though additional graduate course offerings from the Lincoln listings will be available in Omaha periodically dependent upon demand and staff.

**Interdepartmental area** offers graduate work leading to the Master of Science or Master of Arts degree.

Students applying for study in the Interdepartmental Area must hold a bachelor's degree in Home Economics or its equivalent. The undergraduate work must have included the equivalent of 24 hours

in Home Economics, distributed in at least three subject matter areas and 20 hours in Natural and Social Sciences including a minimum of 9 hours in the Natural and 6 hours in the Social Sciences.

Work leading to the master's degree in Home Economics may be completed under Option I, II, or III. (See Graduate Studies Bulletin-Lincoln) If Option I is selected the thesis research may be done in any one of the four cooperating departments. Under any option not more than one-half of the total program for the master's degree, including thesis research when applicable, may be completed in the major subject matter areas. These subject matter areas are, Education and Family Resources; Food and Nutrition; Human Development and the Family, Textiles, Clothing and Design. At least 6 hours of the remaining work must be completed in one or more of the subject matter areas other than the major one. Additional supporting courses to complete the program may be carried in cooperating departments or in the departments outside of the College of Home Economics. However, if Option II is selected the required minor must be completed in a department other than those in the College of Home Economics, which can be an approved graduate program at UN-O.

Separate programs leading to the master's degree are also offered by the Department of Food and Nutrition and the Department of Human Development and the Family.

**Food and Nutrition** — Candidates for the Master of Science degree in Food and Nutrition must hold a Bachelor of Science degree or a Bachelor of Arts degree from an accredited college and have completed undergraduate preparation the equivalent of that required in the Basic General Education Core in Home Economics plus at least 10 hours exclusive of freshmen courses in Biochemistry, in Microbiology, and in Physiology for a total of at least 18 hours in Food and Nutrition, Chemistry and Biological Science.

**Human Development and the Family** — Candidates for the Master of Science degree in Human Development and the Family must hold a Bachelor of Science or a Bachelor of Arts degree from an accredited college and have completed undergraduate preparation the equivalent of that required in the Basic General Education Core in Home Economics plus a major of at least 18 hours exclusive of freshmen courses in Human Development and the Family or the equivalent from Psychology, Education Psychology or Sociology.

#### MATHEMATICS

**Admission Requirements:** Admission to a degree program is based on evidence of mathematical ability. An applicant is usually expected to have completed fifteen acceptable credits in undergraduate mathematics beyond calculus, and to have an overall average of B or better during the last two undergraduate years. In some cases where the above criterion is not met, a provisional admission may be granted provided the applicant is willing to take some preliminary course work that will not apply towards the degree.

##### Master of Science

To obtain the Master of Science degree, the student must:

- a. Earn a total of 36 acceptable credits, at least 24 of which must be in mathematics.
- b. Choose mathematics courses which carry a number of 800M or above and at least 18 credit hours which carry a number of 800V or above.
- c. Include mathematics courses 823M-824M, 827M and one of the following sequences: 811M-812M, 830M-831M, 853M-854M.
- d. Maintain a "B" average in all of his work with no grade lower than a "C," and no more than two grades of "C."
- e. Pass a written comprehensive examination.

##### Master of Arts

To obtain the Master of Arts degree, the student must:

- a. Earn a total of 30 credits in mathematics.
- b. Complete a thesis not to exceed 6 semester hours, which may be applied toward the 30-hour total.
- c. Complete the requirements of b, c, d, and e above.

##### Admission Requirements for Master of Arts for Teachers of Mathematics (M.A.T.):

A student meeting the following two conditions will be admitted to the M.A.T. program:

1. has state certification for teaching secondary school mathematics.
2. has maintained at least a "B" average in previous mathematics course work including at least two courses beyond elementary calculus.

The above conditions are considered normative and a student not meeting them may be admitted to the program only as a result of special action by the M.A.T. program committee.

**Master of Arts for Teachers of Mathematics**

To obtain the M.A.T. degree, the student must:

- a. Earn a total of 36 credits, of which 24 must be in mathematics.
- b. Include in his program mathematics courses 801T, 802T, 803T, 804T, 823J-870J, and at least one math course at the 800M level or above (Courses 823J-870J may be waived if the equivalent undergraduate courses have been taken).
- c. Include in his program secondary education courses 850V, 853V, and at least one additional secondary education course selected from 825V, 830V, 833V, 890M, 846V, or 936V.
- d. As listed under the Master of Science above.
- e. As listed under the Master of Science above.

**POLITICAL SCIENCE**

**Admission Requirements:** An applicant for admission to the Master of Arts or Master of Science program must present, as a prerequisite, a minimum of fifteen semester hours of undergraduate course work in Political Science or their equivalent as determined by the departmental Graduate Admissions Committee. For unconditional admission the applicant must have at least a 3.0 grade point average in undergraduate political science course work and must satisfy the Graduate College GRE requirements. In addition, the department requires two letters of recommendation from persons who are in a position to evaluate the applicant's potential for graduate studies before an applicant can be considered for unconditional admission.

**Master of Arts**

**Degree Requirements:** The program is intended for those who expect to pursue a doctoral degree. The student must satisfactorily complete thirty semester hours, twenty-four of course work and six of thesis supervision. Students must maintain a B (3.0) average in their course work, receiving no more than one C. The thesis is expected to be a mature piece of scholarship. From the four subfields of Political Theory, American Politics, Comparative Politics and International Politics, the student will select an emphasis in two. Twelve hours of course work will be taken in one area of emphasis and six hours in the other. The remaining course work is elective and may include cognate courses in related disciplines. Of the twenty-four hours of course work twelve hours must be at the V level, including 800V (Research Methods). There will be comprehensive examinations in the two emphasized fields and an oral defense of the thesis.

**Master of Science**

**Degree Requirements:** This advanced non-thesis program is specifically designed to enhance career goals in the public service, education and business fields. Thirty-six hours of course work are required with a minimum of eighteen hours at the V level, including 800V (Research Methods). The student will select courses from the Political Science curriculum but may include up to nine hours of cognate courses in related disciplines. Students must maintain a B (3.0) average in their course work, receiving no more than one C. Degree candidates must pass comprehensive examinations covering their areas of study. The aim is to tailor each student's program to fit his or her personal or career interests.

**PSYCHOLOGY**

**Admission Requirements:** A minimum of 15 undergraduate semester hours of psychology courses including basic statistics and an upper level laboratory course emphasizing the experimental method, data collection, statistical analysis, and report writing; Graduate Record Examination scores on the Verbal, Quantitative, and Advanced Psychology sections. Letters of recommendation are not required. However, applicants who believe that such letters would provide information that is important and not clearly communicated in other documents are encouraged to have one or more letters submitted in their behalf. Three letters of recommendation are required of those applicants who are seeking a departmental graduate assistantship or are applying to a post-masters program. Exceptions to these admission requirements can be made on an individual basis.

**Master of Arts**

To complete the M.A. degree with a major in psychology, the student must present 30 hours of graduate course work in psychology, or 21 hours in psychology plus 9 hours in a related minor field. Up to 6 hours of thesis credit are to be included in this total.

The student must choose one course from each of the following four groups. These courses must be completed within the first 16 hours of graduate work.

- I. A. Psychology 904 (Proseminar in Learning)  
B. Psychology 956 (Proseminar in Development)
- II. A. Psychology 921 (Proseminar in Perception)  
B. Psychology 923 (Proseminar in Physiological Psychology)
- III. A. Psychology 910 (Proseminar in Analysis of Variance)  
B. Psychology 911 (Proseminar in Factor Analysis)

- IV. A. Psychology 943 (Proseminar in Personality)  
B. Psychology 944 (Proseminar in Social Psychology)

The student must earn a grade of at least B in the four required proseminars. If a C is earned, or a withdrawal (W) is recorded, in one proseminar the course may be repeated or the other in the group may be taken. Should two such grades (C and/or W) be recorded, the student will be dropped from the degree program. Under special circumstances (e.g. a W necessitated by illness, a unique academic record, etc.) the departmental Graduate Committee will entertain a petition for exemption from this rule.

The remainder of the student's course work is elective, but must be planned in conference with the academic adviser, in order to meet the individual needs and interests. Psychology 800V is a non-credit course intended to familiarize the beginning graduate student with the profession of psychology and is required of all graduate students in psychology. The student may emphasize one of the following areas: quantitative, physiological, general experimental, social, personality, developmental, educational, and industrial/organizational psychology. Final determination of a student's plan of study always resides with the adviser and the department. To meet the graduate college requirements, a student must take at least half of the work in courses which are open only to graduate students.

**Master of Science**

To complete the M.S. with a major in industrial/organizational psychology or the M.S. with a major in educational psychology, the student must present 36 hours of graduate course work in psychology, or 24 hours in psychology plus 12 hours in a related minor field. The M.S. degree has the same proseminar requirement as the M.A., and all rules concerning proseminar courses are the same in both degree programs, as well as the requirement of Psychology 800V.

Additional required course work may be designated by the department. This will ordinarily include up to 3 hours of practicum credit. Final determination of a student's plan of study always resides with the adviser and the department. To meet the graduate studies requirements a student must take at least half of the work in courses which are open only to graduate students.

**Specialist in Education**

The Ed.S. degree requires completion of sixty-six graduate hours including those taken for the Master's degree. The requirements for this degree are the same as for those leading to certification as a School Psychologist with one addition. The degree candidate must write and defend a thesis which deals with research or supervised experience in the area of school psychology.

**Doctor of Philosophy**

Through a cooperative program with the University of Nebraska-Lincoln, programs are offered in Omaha leading to the Ph.D. in industrial/organizational, experimental child, and in developmental psychobiology. Students may be considered for admission to a doctoral program if they have completed or are doing excellent work toward their Masters degree which includes a demonstration of research skills. There is no generally specified language or research skill requirement, but each student is expected to demonstrate proficiency in languages, research skills, or knowledge in collateral research areas appropriate for the student's research interests as determined by his Supervisory Committee and the departmental Graduate Committee. Specific requirements and procedures for the Ph.D. degree are printed in the Graduate Studies Bulletin of the University of Nebraska-Lincoln.

**Summary of Procedure for the Doctor of Philosophy Degree**

This summary of procedure should be studied carefully in connection with the Graduate College calendar.

1. Admission to the UNL Graduate College by the evaluation of official transcripts presented in person or by mail prior to registration.
2. Registration after consultation with advisers in major and minor departments.
3. Appointment by the UNL Graduate Office of a supervisory committee on the recommendation of the departmental or area Graduate Committee.
4. Submission to the UNL Graduate Office of a program approved by the supervisory committee setting forth the complete plan of study for the degree prior to completion of more than half of the minimum requirements.
5. Satisfactory completion of foreign language or research tool requirements set forth in the approved program and passing of comprehensive examinations in major and minor or related fields when the student's program of courses is substantially completed.
6. Submission to the UNL Graduate Office of a report from the supervisory committee on the specific research for the dissertation and progress to date.
7. Admission to candidacy for the Ph.D. degree by filing a report in the Graduate Office of the passing of the comprehensive examinations and the completion of language and research tool requirements (at least seven months before the final oral examination). The term of candidacy is limited to three years.
8. Filing of an application for the degree at the Registration and Records Office, Information Window, 208 Administration Building at UNL. This application is effective during the current term only. It must be renewed at the appropriate time if requirements for graduation are not completed until during a later term.

9. Presentation of the dissertation and the abstract to the members of the reading committee in sufficient time for review and approval, which must be obtained at least three weeks prior to the final examination.

10. Presentation to the Graduate Office of two copies of the approved dissertation, three copies of the approved abstract, and the application for the final oral examination at least three weeks prior to the date of that examination.

11. Passing of any required final oral examination.

12. Deposition of two copies of the dissertation in proper form, one copy of the abstract, and a signed agreement for microfilming the dissertation and publication of the abstract, with the UNL Director of University Libraries. Delivery of the certificate of deposit, signed by members of the supervisory committee, the UNL Director of University Libraries, and UNL Comptroller, to the Graduate Office. In addition, one bound copy of the dissertation is to be deposited with the student's major department.

### Professional Programs in the Area of School Psychology

#### Application

Application for admissions to the programs in school psychology must be filed with the School Psychology Committee of the Psychology Department. The application should include official transcripts of all previous college work, scores for the Graduate Record Examination Aptitude Test, a vita, and three letters of recommendation. Students who have not been admitted to Graduate Studies previously must apply to the Director of Admissions, also. Applications must be completed by April 1 for the following Fall semester. A second application period is possible, should openings exist. These applications must be completed by November 1 for the following Spring. Before a final decision is made concerning admission the applicant must be interviewed by at least two members of the School Psychology Committee.

#### School Psychologist

Students may take work leading to a recommendation for certification as a school psychologist. A minimum of thirty semester hours of work beyond the Masters degree is required for the recommendation. Filing of an acceptable plan of study with the Graduate Office will be required on admission to the program. Students will arrange their programs according to the subject matter areas below. In addition to the courses required for the thirty hours beyond the Masters degree the student must complete requirements for the Master of Science in Educational Psychology or its equivalent. Since individual students may have widely variant backgrounds, considerable flexibility is allowed in choice of electives. However, the final decision on the appropriateness of a program rests with the Psychology Department. Students should contact the School Psychology Committee when starting their studies in order to facilitate individual program planning. The student's advisor should be a member of the School Psychology Committee.

The Ed.S. degree in school psychology requires completion of sixty-six graduate hours including those taken for the Masters degree. The requirements for this degree are the same as for those leading to certification as a school psychologist with one addition. The degree candidate must write and defend a thesis which deals with research or supervised experience in the area of school psychology. The student must consult with the School Psychology Committee before starting the specialist project.

#### 1. Required Courses in Psychological Methods

Psychology 831M (or 431) Psychological and Educational Testing

Psychology 800V The Profession of Psychology

Psychology 853V Individual Tests I

Psychology 854V Individual Tests II

Psychology 851V Advanced Educational Psychology

Psychology 958 Personality Assessment

Psychology 979 Topical Seminar in School Psychology (3-9 hours)

One of the following three courses

Psychology 855V Introduction to Therapeutic Techniques with Children

Psychology 857V Behavior Modification

Psychology 957 Applied Behavior Analysis

One of the following three courses

Psychology 855M (or 455) Retardation

Psychology 859M (or 459) Psychology of Exceptional Children

SPED 860M (or 460) Introduction to the Mentally Subnormal Child

#### 2. Required Professional Education Courses

COUN 824V Counseling Practices

EDAD 835V Foundations of Educational Administration and Supervision

One of the following two courses:

Eled 843V, Introduction to Curriculum Planning-Elementary

SED 830V Emerging School Curriculum

#### 3. Required Supporting Work

One to three courses in basic psychology (outside the student's area of specialization) and/or one to three courses in Special Education, Counseling and Guidance, or other professional education fields other than those specified as requirements. The student must also have had course work in both learning and developmental psychology.

#### 4. Practicum in School Psychology

A minimum of 200 clock hours are required for certification in Nebraska. The general rule is that 50 clock hours is given 1 credit hour. The student is to have a minimum of 4 credit hours of practicum including testing and intervention experience. At least half is to be done in a school setting. The student's practicum is to be approved by the School Psychology Committee prior to initiation.

#### Psychological Assistant

Students who are pursuing work toward endorsement in Nebraska as a Psychological Assistant must simultaneously complete requirements for the M.A. or M.S. Those seeking such endorsement are encouraged to apply to the Psychology Department at the same time they make application for degree candidacy in order to ensure that required courses are included in the plan of study for the degree. In any event, students must have been accepted in this program before enrolling in Psychology 853V or 854V. Application should be made to the Psychology Department and three letters of recommendation are required. Required courses in this program are: Psychology 831M (431), 800V, 853V, 854V, and 897V. Also, one of the following is required: Psychology 859M (459), 855M (455), or SPED 860M (460). The student must also have had course work in both learning and developmental psychology.

#### Recommendation for Certification

Upon completion of the approved program of studies the student requests review for the School Psychology Committee's recommendation for certification as a school psychologist or psychological assistant. The student is expected to have completed the program satisfactorily (B or better) and maintained the professional standards of school psychology. The student in training is expected to behave in accordance with the ethical guidelines of the American Psychological Association and the National Association of School Psychologists.

NOTE: The requirements for the School Psychology Program and/or for certification as a school psychologist by the State Department of Education are presently under review and are subject to change without published notice.

## PUBLIC ADMINISTRATION

### Master of Public Administration

This is a professional graduate degree which is designed: (1) to prepare students for careers in the public service — national, state, or local; (2) for those already in the public service who are seeking professional training; (3) for research or teaching in this field.

Administrators are required for a wide variety of governmental programs and students in the M.P.A. program will likely come from widely differing backgrounds. Some may come from current public employment while others may enter with degrees in the social sciences, engineering, business administration, or the humanities.

The general prerequisite for admission to the M.P.A. program is a Bachelor of Arts or Bachelor of Science degree or equivalent.

For students to be admitted unconditionally to the M.P.A. program they must have completed as prerequisites a course in each of the following: Introduction to Public Administration, Accounting, and Statistics. The department will recommend a provisional admission to students who lack either statistics or accounting, but not both. In no case will it admit on a provisional basis students with a deficiency in Introduction to Public Administration. The deficiency is to be removed during the first semester the student is enrolled as a graduate student.

In addition, if the student's undergraduate preparation in the social sciences is insufficient or if he/she lacks prerequisites for certain graduate courses additional course work may be prescribed which must be completed before unconditional admission is accorded. If an applicant has more than 9 hours of deficiencies he/she will be advised to remove these before being considered for any type of admission. These additional courses do not carry graduate credit, but other courses for graduate credit may be taken simultaneously if the prerequisites for these courses have been met. No student will be permitted to take a graduate course in Public Administration without having had an introductory course in Public Administration unless expressly granted a waiver in writing by the Departmental Graduate Committee.

The student will be assigned an adviser in the Public Administration Department. If he/she chooses an option other than General Public Administration or Local Government, an adviser from that field will also be assigned to the student.

#### Degree Requirements

Thirty-six hours consisting of thirty hours of course work plus 6 hours of internship in a public agency for 4-12 months. In the event the governmental agency or jurisdiction sponsoring the intern-

ship cannot provide compensation, the student intern should be prepared to sustain the expenses of the internship. The internship may be waived for prior service in a civilian public or semi-public agency. Requests to waive the internship shall be submitted to the departmental graduate committee upon application for candidacy. In lieu of the internship, if waived, the student must take six additional hours of approved course work. Eighteen hours of the course work must be at the 800V level and a comprehensive written final examination is required.

#### Admission to Candidacy for Graduate Degree

It is the student's responsibility to make application for candidacy for the degree as soon as he/she can qualify for admission to candidacy. The qualifications are: (1) the scores on the Graduate Record Examination must be on file in the Graduate Office; (2) nine hours of graduate credit must have been completed at this University; and (3) a grade average of B" with no grade lower than C"; and (4) removal of all deficiencies specified for admission.

As a rule, no degree can be awarded in the same semester as candidacy for the degree is approved. Application forms should be filled out by the student — in consultation with the major and minor advisers — as soon as the student can qualify for admission to candidacy. Both the major and minor programs should be carefully and completely planned at this time and the application should be signed by both the major and minor advisers. The application form and the plan of study should be filed in the Graduate Office and copies should be provided for the major adviser, the minor adviser, and the student.

Plans of study should be planned with acceptable alternatives included. Once approved, any modification of a plan of study is permissible only upon recommendation of the major adviser if the major is concerned, the minor adviser if the minor is concerned, and the approval of the UNO Dean for Graduate Studies and Research.

#### Courses Required of all Options

P.A. 840M, Public Budgeting or 848V Seminar in Public Financial Management if credit has been earned in 440/840M

P.A. 841M, Public Personnel Management or 846V Seminar in Public Personnel Administration if credit has been earned in 441/841M

P.A. 800V, Seminar in Research Methods in Political Science and Public Administration

P.A. 842V, Seminar: Introduction to Public Organizations

P.A. 844V, Seminar in Organization Development in Public Agencies

P.A. 803U-804U, Internship

**General Public Administration** (15 hours from the following selected list in consultation with Adviser. It is possible under exceptional circumstances to substitute other courses with approval of Adviser.)

P.S. 804M, The Legislative Process

P.S. 805M, The Judicial Process

P.A. 843M, Municipal Administration

P.A. 810V, Seminar in Public Administration

Econ 856M, State and Local Finance

P.S. 815V, Seminar in Public Law

P.A. 830V, Seminar in Public Policy

P.A. 846V, Seminar in Public Personnel Management

P.A. 848V, Seminar in Public Financial Management

P.A. 860V, Seminar in Administrative Law

P.A. 881V, Urban Seminar in Metropolitan Planning and Development

Econ 887V, Seminar in Regional Economics

P.A. 892V, Readings in Public Administration

P.A. 894V, Research in Public Administration

**Gerontology Option** (15 hours to include the following plus one more course at the 800V level selected in consultation with Adviser to fit the students particular needs.)

Gero 811M, Applied Social Gerontology

Gero 855M, Health Aspects of Aging

Gero 858M, Gerontology Psychology

Gero 892M, Special Studies in Gerontology

**Local Government Option** (15 hours from the following selected list in consultation with Adviser. It is possible under exceptional circumstances to substitute other courses with approval of Adviser.)

Geog 812M, Urban Geography

P.A. 843M, Municipal Administration

Econ 856M, State and Local Finance

P.A. 810V, Seminar in Public Administration

P.A. 830V, Seminar in Public Policy

P.A. 860V, Seminar in Administrative Law

P.A. 881V, Urban Seminar in Metropolitan Planning and Development

Econ 885V, Seminar in Urban Economics

P.A. 892V, Readings in Public Administration

P.A. 894V, Research in Public Administration

**The Planning Option** (15 hours to include CRP 811 and CRP 828 plus nine hours of course work from the following list selected in consultation with Adviser.)

The option stresses the planning process and related skills and techniques. Students selecting this option should plan on taking one or more courses on the Lincoln campus in order to complete the program expeditiously.

*Required courses:*

CRP 811, Urbanism and Planning in the U.S.

CRP 828, Planning Administration and Implementation

*Elective courses:*

CRP 813, Planning Process and Theory

CRP 415/815, Housing Renewal and Development

CRP 822, Research Methods for Planning

CRP 913, Planning and the Natural Environment

CRP 915, Planning Within the Intergovernmental Context

CRP 917, Planning with Minority and Low Income Groups

CRP 924, Human Resource Planning

**Public Works-Civil Engineering Option** (15 hours from the following selected list in consultation with Adviser.)

Four fields of supplemental study available: Transportation, Sanitary, Water Resources and Design and Construction.

The objective of the program is to develop a broad based Civil Engineering plan of study for public administration students who have little or no formal engineering training. A tentative list of Civil Engineering courses requiring no prerequisites or engineering background is presented below. The student will be encouraged to select courses from at least three of the four fields of interest in order to encourage breadth in his educational experience. Other courses may be available to the student with instructor's consent or if sufficient student demand warrants additional offerings.

*Transportation*

CE 468, Traffic Engineering

CE 468A, Transportation Geometrics

CE 485, Urban Transportation Planning

CE 486, Transportation Planning and Economics

*Sanitary*

CE 800, Environmental Quality and Control — Land, Air, and Water

CE 826, Environmental Pollution Control

*Water Resources*

CE 914, Water Resources Planning

CE 916, Case Studies in Water Resources

*Design and Construction*

CE 469, Pavement Analysis and Design

CE 842, Construction Management

**Social Work or Social Welfare Option** (15 hours from the following selected list in consultation with adviser.)

SW 800V, Human Behavior and the Social Environment

SW 805V, Social Welfare Policy and Services

SW 850V, Task Groups in Macro Practice

SW 852V, Social Work Administration

SW 854V, Social Welfare Planning

SW 856V, Supervision in Social Work

SW 858V, Advanced Policy Analysis and Implementation

SW 860M, Social Work Practice in Mental Health

SW 866M, Social Work Practice in Child Welfare

SW 870V, Alcohol Abuse: Comprehensive Treatment Program

SW 890V, Special Studies in Social Welfare

**The Environmental Option** (15 hours to include at least one of the courses listed below, the remaining part of the program to be customized designed for the student at the discretion of the Graduate Program Committee of the Biology Department.) Students selecting this option must be approved for entrance into the graduate program by both the Department of Public Administration and the Department of Biology.

Biology 813V, Environmental Biology

Biology 873V, Environmental Physiology

Biology 815V, Plant Ecology

**The Law Enforcement Option** (15 hours to include CJ 801V, Seminar in Criminal Justice Planning and Innovation; CJ 802V, Seminar in the Administration of Justice; CJ 812V, Criminal Justice Research Theory and Methodology, plus six hours from the following list selected in consultation with Adviser.)

- CJ 803V, Comparative Law Enforcement Systems
- CJ 804V, Seminar in Community Services and Treatment
- CJ 805V, Seminar in Criminal Jurisprudence
- CJ 807V, Theoretical Criminology
- CJ 808V, Seminar in the Processes of the Criminal Justice System
- CJ 809V, Seminar in Delinquency Prevention, Control and Correction
- CJ 811V, Special Problems in Criminal Justice
- CJ 814V, Independent Study

**SECONDARY/POST-SECONDARY EDUCATION**

**Major in Secondary Education**

Programs in Secondary Education are developed on an individual basis by the student and the adviser. They are designed to extend academic background the instructional skills of secondary school teachers.

To pursue degree work in the Department, students must hold a valid secondary teaching certificate. During the first semester of enrollment students must take the Graduate Record Examination including the Advanced Test in Education. To be admitted to candidacy the combined scores on the Verbal, Quantitative, and Advanced GRE Tests must total at least 1200. Students are expected to file their Application for Candidacy before they complete more than 18 hours of graduate work and no more than 18 hours of completed course work may be included in the proposed program of graduate studies.

**Master of Science (with Minor)**

AREA	HOURS
I. SED Core Requirements SED 825V, Seminar in Secondary Education SED 830V, Emerging School Curriculum <i>A course selected from the following:</i> a. FED 801V, Introduction to Research b. A research course in an academic discipline c. Tests and Measurements d. Statistics SED 8 Improvement of Instruction for Appropriate Subject Area	12
II. Professional Supporting Work SED 833V, Analysis of Teacher Behavior SED 846V, Simulation/Gaming Laboratory SED 936V, Seminar in Application of Non-Verbal Communication Theory SED 827V, International Curriculum Practices	6
III. Related Professional Courses	0-6
IV. Related Academic Courses (by advisement)	12-18
	Total: 36 hours

**Master of Science (without Minor)**

AREA	HOURS
I. SED Core Requirements SED 825V, Seminar in Secondary Education SED 830V, Emerging School Curriculum <i>A course selected from the following:</i> a. FED 801V, Introduction to Research b. Tests and Measurements c. Statistics	9
II. Professional Supporting Work SED 833V, Analysis of Teacher Behavior SED 846V, Simulation/Gaming Laboratory SED 936V, Seminar in Application of Non-Verbal Communication Theory SED 827V, International Curriculum Practices SED 8 Improvement of Instruction for Appropriate Subject Area	6
III. Related Professional Courses Courses that support ultimate goal of the student are approved by adviser in advance of any course enrollment. Substitutions not approved by adviser in advance of enrollment may not be included in the program. Acceptable alternatives should be included in the graduate program at the time it is filed. Seminars, research projects, practica, etc., outside	3-21

- the Department of Secondary Education may be taken only with special permission of the adviser before enrollment.
- IV. Related Academic Courses

0-18  
Total: 36  
hours

**Master of Arts**

Students seeking the Master of Arts Degree with a major in Secondary Education are required to select work from the six areas indicated below. Minimum and Maximum hours that must be included from each area are indicated when such limits are applicable. Course names of types included in each are indicated where appropriate.

AREA	HOURS
I. SED Core Requirements SED 825V, Seminar in Secondary Education SED 830V, Emerging School Curriculum <i>A course selected from the following:</i> a. FED 801V, Introduction to Research b. A research course in an academic discipline c. Tests and Measurements d. Statistics SED 8 Improvement of Instruction for Appropriate Subject Area	12
II. Professional Supporting Work SED 833V, Analysis of Teacher Behavior SED 846V, Simulation/Gaming Laboratory SED 936V, Seminar in Application of Non-Verbal Communication Theory SED 827V, International Curriculum Practices	3
III. Thesis (SED 899)	6
IV. Related Professional Specialization Courses and/or Academic Courses	9
	Total: 30 hours

Students who seek the Master of Science Degree must take a written Comprehensive Examination. The examination is administered in two parts. Part I must be taken after the student has completed 18 hours of graduate work and before more than 24 hours are completed. This portion of the examination will deal with concepts common to the programs of all students who enroll in the Department.

Part II of the examination is administered during or after the semester or summer session in which the last course of the program of studies will be completed. This portion of the examination deals with those concepts that are unique to each student's program but may also re-examine areas of weakness revealed by Part I.

Registration for this part of the examination must be made with the Department not later than the end of the seventh week of the semester in which the examination will be taken. If the examination is to be taken during the summer, registration must be completed by the end of the second week of the first summer session.

**SOCIAL WORK**

**The Profession of Social Work**

Social work is one of the "helping professions" concerned with the quality of human life. Specifically, the social worker is concerned with man's ability to function meaningfully and effectively in transaction with his environment (i.e., his family, friends, associates, and the community at large). The social worker brings systematized knowledge to bear on his dealings with people individually, in families, in other group and collective associations, with communities, societies, and organizations with a view to helping in the resolution of problems which cause stress in social transaction.

In these endeavors, social workers are employed in public and private counseling agencies and services, medical settings, schools, residential and community agencies providing care for the mentally ill and retarded, court and correctional agencies, community planning, and development agencies and programs. Their endeavors and interventions are designed to promote more effective functioning of society as it struggles to "provide for the general welfare" as well as to help the people, families, groups, and institutions within the society toward self fulfillment.

**Requirements for the Degree of Master of Social Work**

1. A minimum of one year in residence.
2. There are two programs leading to the Master of Social Work degree. The Advanced Standing Program, for students with an approved Bachelor's degree in social work, requires 42 credit hours of graduate study in social work, which may be completed in a minimum of two semesters and a full summer. The Two Year Program for students with a Bachelor's degree not in social work, requires the same 42 credit hours plus up to 22 graduate credit hours of social work.

foundation courses. Specific foundation course requirements are determined on the basis of each student's previous course work and/or tested knowledge.

3. Details about research, practicum, and other course requirements may be obtained from the School of Social Work.

The type and credit value of each of the courses is indicated in the course descriptions below. Courses offered by the School are subject to change.

NOTE: Social Work students may transfer up to twelve semester credits from another university toward the 42-credit M.S.W. program; each course must be approved by the Dean for Graduate Studies and Research as being an appropriate substitute for a requirement or elective.

## SOCIOLOGY

Applicants for admission to the graduate program in sociology must present a minimum of 15 undergraduate semester hours in sociology including a course in statistics and research methods. Those students lacking either will be required to make up this deficiency during their first year of graduate study.

**Examinations:** Both the M.A. and M.S. (see below) degree programs with majors in sociology require the incoming student to complete an examination covering basic concepts and theorists of the field. The examination is used in counseling the student in his degree program. In addition the student must demonstrate proficiency in sociology through successful completion of four comprehensive examinations.

Two of these comprehensives — Social Theory, and Methodology and Statistics — are required of all graduate students; the two remaining examinations are selected by the student, in consultation with his graduate adviser, from a list available through the Sociology Office. The examinations are given a minimum of twice annually, and other times as required. Detailed explanations of graduate requirements should be secured through the Sociology Office.

The M.A. degree should be sought by students preparing for college-level teaching and continued academic work; the M.S. degree as preparation for field or action application of sociology.

### Master of Arts

The student is expected to complete Sociology 801V and a minimum of 21 additional graduate semester hours, including at least nine semester hours of 800V-level work. A thesis is required.

### Master of Science with a Major in Applied Sociology

A student contemplating this degree is expected to complete Sociology 801V and a minimum of 27 additional graduate semester hours, at least nine of which are from the 800V-level selection. In addition, the student must complete satisfactorily six semester-hour equivalents of a supervised work practicum related to his academic area of concentration, and write an acceptable report on the experience.

Detailed requirements for the M.S. degree with a major in applied sociology should be secured through consultation with the Sociology Office.

### Colloquia

Each graduate student in Sociology is required to attend, without credit, the departmental colloquia as scheduled.

## SPECIAL EDUCATION

### Graduate Requirements — STUDENT TEACHING

Students needing SPED 872, SPED 873, and/or SPED 850, SPED 851, SPED 852, must submit a completed application form for student teaching/practicum signed by their adviser before March 15 for a fall and/or summer placement and by October 15 for a spring placement.

Under no circumstances can a student take both SPED 872 and SPED 873 or SPED 850, 851 and 852 during the same semester.

### Master of Arts: Speech Pathology

The Master of Arts degree with a major in speech pathology involves these requirements:

1. Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.
2. Two letters of recommendation from people who know your undergraduate work well must be submitted to the department before the application can be processed.
3. Pass an examination to determine adequate personal voice and speech proficiencies and adequate hearing acuity for speech (Administered by the Speech and Hearing Clinic of the University).

4. Have successfully completed a minimum of twenty-four semester hours of work preparatory to admittance to the major. These hours are to include the following courses or their equivalents:
  - SPED 140, Introduction to Communication Disorders
  - SPED 433, Speech Reading and Auditory Training
  - SPED 437, Hearing Disorders
  - SPED 438, Speech Science I: Speech Mechanisms
  - SPED 439, Hearing Science
  - SPED 443, Speech Pathology I: Childhood Language and Articulation
  - SPED 444, Speech Pathology II: Rhythm and Symbolization
  - SPED 445, Speech Science II: Experimental and Applied Phonetics
  - SPED 450, Communication Disorders in the Elementary and Secondary Schools
  - SPED 451, Basic Clinical Practicum in Speech Pathology
  - SPED 475, Language Disorders in Childhood
  - PSY 213, Statistics
5. For those students who wish to work toward special state certification in the schools, adviser consultation should be sought early since additional coursework is required (this does not apply to those already holding state certificates in elementary or secondary teaching or a special services certificate in another field.)
6. Twenty-four semester hours of course work and practicum. These hours may be taken from the following:
  - I. Required Courses:
    - FED 801V Introduction to Research
    - SPED 851V Advanced Clinical Practicum in Speech Pathology (schools)
    - SPED 852V Advanced Clinical Practicum in Speech Pathology (externship)
    - SPED 846V Diagnostic Methods in Communicative Disorders
    - SPED 848V Advanced Audiology
    - SPED 870, Seminar in Special Education
    - SPED 899V, Thesis (6 hrs.)
  - II. Elective Courses:
    - Students may choose any of the courses in the area numbered 800V or above, contingent upon adviser approval.
7. Thesis:
  - Students must present a thesis representing six semester hours of work and which is deemed satisfactory to the members of the committee, following oral examination, which may include questions of a comprehensive nature over the curriculum as well as the thesis.

### Master of Arts: Mental Retardation

The Master of Arts degree with a major in mental retardation is a program primarily designed for persons certified or have near certification in special education. It involves a concentrated course of study designed to improve and advance competencies in the area of mental retardation and to provide investigative approaches to problems associated with children who are mentally retarded. Requirements include:

1. Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.
2. Applicants to the M.A. degree program with a major in Mental Retardation must be approved by the Dean for Graduate Studies and Research and the major adviser.
3. Applicants should hold a teaching certificate in special education or be within 15 credit hours of certification.
4. Students may undergo course work which will lead to:
  - a. a major of 24 hours in mental retardation.
  - b. a thesis not to exceed six semester hours.

OR:

  - a. a major of 15 semester hours in mental retardation.
  - b. a minor of nine semester hours in a related field of interest.
  - c. a thesis not to exceed six semester hours.
5. To be admitted as a candidate for the M.A. degree in Mental Retardation the student must have successfully completed twelve hours of course work and passed a comprehensive examination covering these first twelve hours.

6. Each candidate will submit a thesis proposal to his committee for approval. A thesis will represent six semester hours in independent study under the direction of the major adviser.
7. Subject to review of the applicants transcripts and related experiences with retarded children, required courses may be selected from the following:
  - a. **Required Courses:**  
 FED 801V Introduction to Research  
 SPED 870V Seminar in Special Education  
 SPED 872U Practicum in Special Education  
 SPED 899 Thesis
  - b. *Elective courses* may be chosen from any of the 800V level courses within the major and minor area of study.

**Master of Science: Reading**

The Master of Science degree with a major in reading conforms to standards of the International Reading Association for the professional training of Reading Specialists. Applicants for admission must be eligible for teacher certification at the undergraduate level. Upon successful completion of the program, the student is recommended for K-12 endorsement in reading in Nebraska.

Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.

- |   |          |
|---|----------|
| I. <b>Core Professional Courses</b> .....   | 18 hours |
| Including work in graduate reading courses SPED 911, 912, 813V, 814V, 815V, 917V or 918V or their equivalent.   |          |
| II. <b>Related Professional Courses</b> .....   | 6 hours  |
| Including Introduction to Research and selected work in such areas as foundation and general education, elementary education, secondary education, special education, and psychology. |          |
| III. <b>Related Cognate Courses</b> .....   | 12 hours |
| Including selected work in such areas as guidance and counseling and/or the various subject areas mentioned under sections I and II.  |          |

**Master of Science: Speech Pathology**

The Master of Science degree with a major in speech pathology involves these requirements:

1. Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.
2. Two letters of recommendation from people who know your undergraduate work well must be submitted to the department before the application can be processed.
3. Pass an examination to determine adequate personal voice and speech proficiencies and adequate hearing acuity for speech (Administered by the Speech and Hearing Clinic of the University)
4. Have successfully completed a minimum of twenty-four semester hours of work preparatory to admittance to the major. These hours are to include the following courses or their equivalents:  
 SPED 140, Introduction to Communication Disorders  
 SPED 433, Speech Reading and Auditory Training  
 SPED 437, Hearing Disorders  
 SPED 438, Speech Science I: Speech Mechanisms  
 SPED 439, Hearing Science  
 SPED 443, Speech Pathology I: Childhood Language and Articulation  
 SPED 444, Speech Pathology II: Rhythm and Symbolization  
 SPED 445, Speech Science II: Experimental and Applied Phonetics  
 SPED 450, Communication Disorders in the Elementary and Secondary Schools  
 SPED 451, Basic Clinical Practicum in Speech Pathology  
 SPED 475, Childhood Language Disorders  
 Psy 213, Statistics
5. For those students who wish to work toward special state certification in the schools, adviser consultation should be sought early since additional coursework is required (this does not apply to those already holding state certificates in elementary or secondary teaching or a special services certificate in another field.)

- I. **Required Courses:**  
 FED 801V, Introduction to Research  
 SPED 846V, Diagnostic Methods in Communication Disorders  
 SPED 848V, Advanced Audiology  
 SPED 851V, Advanced Practicum Speech(Schools)  
 SPED 852V, Advanced Practicum Speech (Externship)  
 SPED 853V, Seminar in Speech Pathology  
 SPED 870, Seminar in Special Education.
  - II. **Elective Courses in Communicative Disorders:**  
 Students may choose any of the courses in the area numbered 800 or above.
  - III. **Elective Courses in Related Area:**  
 Depending upon the student's preparatory work, courses may be taken in fields such as psychology, sociology, speech, English, Special Education and other related areas.
7. Pass a written comprehensive examination, administered under the direction of the Departmental Graduate Committee.

**Master of Science: Teaching the Deaf**

The Master of Science degree with a major in teaching the hearing impaired is based on the standards for the certification of teachers of the hearing impaired as developed by the Committee on Professional Preparation and Certification adopted by the Council on the Education of the Deaf. Students who plan to enter this program must show evidence of holding a valid certificate in one of the following areas: elementary education, secondary education, K-12 special content area.

A Nebraska pre-standard certification and a CED provisional certification will be recommended upon satisfactory completion of the program.

1. Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.  
 SPED 820M, History, Education and Guidance of the Deaf.....2 cr. hrs.  
 SPED 821M, Teaching of Speech to the Deaf I.....2 cr. hrs.  
 SPED 822M, Teaching Speech to the Deaf II.....2 cr. hrs.  
 SPED 823M, Teaching Language to the Deaf I.....3 cr. hrs.  
 SPED 824M, Teaching Language to the Deaf II.....3 cr. hrs.  
 SPED 833M, Speechreading and Auditory Training.....2 cr. hrs.  
 SPED 837M, Hearing Disorders.....3 cr. hrs.  
 SPED 838M, Speech Science I: Auditory and Speech Mechanism.....3 cr. hrs.  
 SPED 839M, Hearing Science.....3 cr. hrs.  
 SPED 863M, Curriculum Planning for the Disabled.....2 cr. hrs.  
 SPED 800V, Special Projects.....1 cr. hrs.  
 SPED 801V, Introduction to Research.....3 cr. hrs.  
 SPED 870V, Seminar in Special Education.....3 cr. hrs.  
 SPED 872V, Basic Student Teaching.....3 cr. hrs.  
 SPED 873V, Advanced Student Teaching.....3 cr. hrs.

Minimum of 38 hours required. Competency in manual communication is required for student teaching.

Comprehensive examination is required.

**Master of Science: Teaching the Mentally Retarded**

The Master of Science degree with a major in mental retardation provides broad study investigations for students who wish to improve and expand competency areas necessary for greater individual proficiency in teaching mentally retarded children. State certification in EMH and TMH teaching are also available through this program. The following program requirements must be fulfilled:

1. Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.
2. Applicants to the M.S. degree with a major in Mental Retardation must be approved by the Dean for Graduate Studies and Research and the Major adviser.
3. Applicants should hold a valid teaching certificate. Those not holding teaching certificates will be required to take preparatory courses in teacher education (the number of courses to be taken will be subject to a review of the applicant's transcripts and his/her related experiences in teaching children).

5. Thirty-six hours of course work and practicum may be taken from the following required and elective courses:

- I. Required Courses .....30 hours  
 FED 801V, Introduction to Research  
 SPED 806V, Interdisciplinary Approaches to Developmental Disabilities  
 SPED 860M, Introduction of the Mentally Subnormal Child  
 SPED 863M, Curriculum Planning for the Developmentally Disabled  
 SPED 864V, Theoretical Approaches for Teaching the Developmentally Disabled Child  
 SPED 864M, Methods and Materials for Teaching Mentally Retarded  
 SPED 872V, Basic Observation and Student Teaching  
 SPED 873V, Advanced Observation and Student Teaching  
 SPED 870V, Seminar in Special Education  
 One course surveying language difficulties (or other equivalent course)  
 SPED 875M, Language Development of Exceptional Children  
 One course concerning evaluation techniques (or other equivalent course)  
 SPED 895V, Diagnosis of Learning Disabilities  
 Psych 832V, Testing and Measurement  
 Psych 831M, Psychological and Educational Testing  
 SPED 812M, Reading Diagnosis and Remediation for the Elementary Classroom Teacher
- II. Electives .....6 hours  
 SPED 840M, Learning Disabilities  
 SPED 880M, Emotional Development  
 SPED 885M, Introduction to the Physically Handicapped  
 SPED 866V, Vocational Training of the Mentally Retarded  
 SPED 867V, Community Resources for the Mentally Retarded  
 SPED 871V, Parent-Professional Relationship in Special Education  
 SPED 886V, Methods and Materials for Teaching Crippled  
 SPED 890U, Administration and Supervision of Special Education  
 SPED 887U, Diagnosis and Remediation Techniques in Early Childhood Education for the Disabled

#### Master of Science: Resource Teaching in Learning Disabilities

Resource Teaching in Learning Disabilities is a specialized training program designed to prepare the graduate student in identification, analysis, and intervention techniques relative to children who have specific learning deficits. Since the program assumes a knowledge of "normal" learning development, the student should enter the program with a strong background in learning theory, child growth and development, curriculum development, and methods and techniques of teaching.

The training program is divided into three sequential steps which provide experiences necessary to develop competencies in theory, specific diagnostic and intervention skills, and practical application. The student will be comprehensively evaluated after each of the first two steps and during Step III.

Upon completion of this program, the student will receive a Master's degree in Special Education with a major and endorsement as a Resource Teacher in Learning Disabilities. Other roles which the student could assume as a result of this program are clinical teacher, diagnostic teacher, and self-contained learning disabilities teacher. These positions are available only according to local school district job descriptions.

#### Entrance Requirements:

- Admission to the University of Nebraska at Omaha Graduate College. The Miller Analogies Test (MAT) must be taken and scores submitted to the Special Education Department for consideration before applications are evaluated and processed to the Graduate College. A raw score of 35 on the MAT is required for initial entrance into the program.
- Teaching Certification
  - The applicant must hold a teaching certificate from a state education agency and be eligible to teach in elementary or secondary grades or special education.
  - Students accepted into the program without certification must complete the College of Education CORE Program. No student will be eligible to enter STEP II of the program without having first completed the CORE program.
  - No certification and/or endorsement in areas of special education will be offered at the graduate level where certification/endorsement is available at the undergraduate level.
- Teaching Experience  
 Students must have completed a minimum of two years of successful teaching in pre-school, kindergarten, elementary, secondary, special education, or special services before final endorsement is recommended. It is possible for students to enter and complete the program without teaching experience, however, endorsement will not be recommended until two years of teaching has been completed.

4. Pre-requisite courses

Regardless of the student's major area of study coming into the program, his/her transcript must show courses, graduate or undergraduate, which relate to:

- Child Development - 3 hours
- Learning Theory - 3 hours
- Curriculum Development - 3 hours
- Student Teaching (or equivalent) - 3 hours
- Methods Courses - 3 hours

5. Pre-competency Evaluation

Upon admission to the Graduate College and prior to entering Step I, the student must make arrangements with his/her program advisor to undergo pre-competency evaluation. This evaluation will include the following:

- Written — this will test the ability of the student to articulate in writing a position taken by him/her relative to previous work or teaching experience.
- Interview (informal) — an interview conducted by the faculty will be used to seek information from the student relative to his past experiences, general and specific attitudes, and approaches to various problems of teaching and pupil-teacher relationships.
- Objective Test — this is designed to examine the student's past and present exposure to theories and terms concerning the area of special education and learning disabilities.

#### Course Requirements:

1. STEP I (12 hours) — This is an entrance level step which will prepare the student in the theoretical aspects of learning/language and behavioral deficits. It is also designed to give the student a foundation for the inquiry approach to problem solving. Courses for Step I include the following:

Required:(9 hours)

- SPED 840-Learning Disabilities (3)  
 SPED 880-Social and Emotional Growth of Children and Youth (3)  
 FED 801-Introduction to Research (3)

Electives:(3 hours)

- SPED 911U-Problems in Teaching Reading-Elementary (3)  
 SPED 912U-Problems in Teaching Reading-Secondary (3)  
 SPED 806V-Interdisciplinary Approaches to Development Disabilities (3)  
 SPED 875M-Childhood Language Disorders (3)  
 SPED 847V-Neurophysiology of Speech (3)  
 SPED 871V-Parent/Professional Relationships (3)  
 Psy 856V-Learning in Children (3)  
 Psy 858V-Linguistic and Cognitive Development (3)  
 Psy 859V-Social and Personality Development (3)  
 FED 898M-Growth and Learning Problems of Disadvantaged (3)

Comprehensive Evaluation — At the end of Step I and prior to entering Step II, each student will be given a comprehensive evaluation of Step I experiences. This evaluation may take the form of a written exam or oral exam or both. Students must attain at least an 80 percent proficiency level before entering Step II. Students not attaining an 80 percent proficiency level may: (a) be evaluated a second time; and/or (b) be recommended to take additional elective courses, or (c) be dropped from the program.

2. STEP II (16 hours) — Upon successful completion of Step I, students will enter Step II which is the candidacy level. Step II combines both theory and practicum in preparing the student in the analysis of children's learning and emotional behavior and the application of intervention techniques relative to learning problems. During this step, students must submit to the Graduate College a completed Application for Candidacy Form. Courses for Step II include the following:

Required:(13 hours)

- SPED 895V-Basic Diagnosis of Learning Deficits (3)  
 SPED 896V-Advanced Diagnosis of Learning Deficits (4)  
 SPED 897V-Clinical Teaching in Learning Disabilities (3)  
 SPED 881M-Classroom Techniques for Behavior Control (3)

Electives:

- SPED 863M-Curriculum Planning for the Disabled (3)  
 SPED 813V-Diagnostic and Remedial Instruction in Reading (3)  
 SPED 887V-Diagnostic and Remedial Techniques for Early Childhood (3)  
 Psy 831M-Psychological and Educational Testing (3)  
 Coun 831V-Child Assessment in Elementary School Guidance (3)  
 ElEd 819V-Diagnostic and Corrective Instruction (3)  
 ElEd 843V-Introduction to Curriculum Planning-Elementary (3)  
 ElEd 829M-Learning Materials for Early Childhood Education (3)  
 SED 830V-Emerging School Curriculum (3)  
 SED 877V-Vocational Curriculum Construction (3)

Other secondary methods courses



SPED 810V-Research Projects  
 SPED 800V-Special Projects

**Comprehensive Evaluation** — At the end of Step II and prior to entering Step III, each student will be given a comprehensive evaluation of Step II experiences. This evaluation may take the form of a written exam or oral exam or both. Students must attain at least an 80 percent proficiency level before entering Step III. Students not attaining an 80 percent proficiency level may: (a) be evaluated a second time; and/or (b) be recommended to take additional elective courses, or (c) be dropped from the program.

**3. STEP III (9 hours)** — This is the final step in the student's program. Except for SPED 870, Seminar in Special Education, the student must demonstrate and be evaluated in those skills and competencies developed for practical use. The following courses are required:

SPED 870-Seminar in Special Education (3)  
 SPED 873-Advanced Observation and Student Teaching in Special Education (3)  
 SPED 872-Basic Observation and Student Teaching in Special Education (3)

#### Master of Science: Teaching the Emotionally Disturbed

##### Entrance Requirements

- The student must have completed the following courses:
  - Child Development — 3 hours
  - Learning Theory — 3 hours
  - Curriculum Development — 3 hours
  - Student Teaching (or equivalent) — 3 hours
- The student must demonstrate a "B" average for the last two years of coursework. The student may be granted provisional admission with less than a "B" average (but not less than 2.54) (See Graduate Catalog). The student must maintain a "B" average for graduate work.
- The Miller Analogies Test must be taken prior to evaluation of admission application. The student must score 35 for provisional admission and 45 for unconditional admission.
- The student will demonstrate his/her ability to articulate by writing a position paper in terms of previous work or teaching experience.
- An informal interview with the advisor.
- Student must hold a Bachelor's degree with a teacher's certification in one or more teaching areas.
- Student must have completed two years of successful teaching before endorsement will be granted.
- Students must fulfill all other entrance requirements as required by the Graduate College of the University of Nebraska at Omaha.

##### Program Requirements

- Thirty-six (36) hours must be completed for the M.S. in Special Education with a major in Emotionally Disturbed and endorsement as a teacher of the Emotionally Disturbed, K-12.
- The student will be required to pass a 2-hour comprehensive competency examination at the end of each step. This exam will be scheduled once a term.
- Courses

##### Step I — 12 hours

###### Required

SPED 801, Introduction to Research — 3 hours  
 SPED 882, Educ. Strategies for Ed Child and Adol — 3 hours  
 SPED 880, Emotional/Social Development of Children and Youth — 3 hours  
 SPED 840, Learning Disabilities — 3 hours

###### Electives

SPED 806, Interdisciplinary Approaches to Developmental Disabilities — 3 hours  
 PSY 844, Abnormal Psychology — 3 hours  
 PSY 845, Personality Theories — 3 hours  
 PSY 859, Psychology of Exceptional Children — 3 hours  
 PSY 851, Advanced Educational Psychology — 3 hours

Comprehensive Examination

##### Step II — 12 hours

###### Required

SPED 895, Diagnosis of Learning Disabilities — 3 hours  
 SPED 883, Practicum in Teaching Emotionally Disturbed — 3 hours  
 SPED 875, Childhood Language Disorders — 3 hours

SPED 872, Basic Observation and Student Teaching in Special Education — 3 hours  
 SPED 881, Classroom Techniques of Behavior Control — 3 hours

##### Electives

SPED 896, Advanced Diagnosis of Learning Disabilities — 3 hours  
 SPED 813, Diagnosis and Remedial Instruction in Reading — 3 hours  
 SPED 875, Childhood Language Disorders — 3 hours  
 PSY 831, Psychological and Education Testing — 3 hours  
 PSY 863, Techniques of Programmed Instruction — 3 hours  
 PSY 856, Learning in Children — 3 hours  
 PSY 857, Behavior Modification — 3 hours

Comprehensive Examination

##### Step III — 12 hours

###### Required

SPED 870, Seminar in Special Education — 3 hours  
 SPED 871, Parent/Professional Relationships — 3 hours  
 SPED 884, Advanced Practicum in Teaching Emotionally Disturbed — 3 hours  
 SPED 800, Special Projects — 1 hour  
 NPE 852, Group Dynamics — 2 hours

## URBAN STUDIES

### Master of Science With a Major in Urban Studies

This is a professional graduate degree which is designed: (1) to prepare students for human service careers in an urban setting; (2) for research or teaching in this field; (3) for those already involved in urban programs and are seeking additional professional training.

Qualified urbanists are being sought by a wide range of employers. Private corporations as well as public agencies are seeking employees who have a broad range of technical skills and an understanding of the problems of contemporary urban society.

The general prerequisite for admission to the Urban Studies Graduate Program is a Bachelor of Arts or Bachelor of Science degree.

For a student to be admitted unconditionally to the M.S. program he/she must have an undergraduate grade point average of at least 3.00 on a 4.00 system. In addition, if the student's undergraduate preparation in the social sciences is insufficient, additional preliminary work may be prescribed which he must complete before he is accorded unconditional admission. These additional courses do not carry graduate credit, but other courses for graduate credit may be taken simultaneously.

### Degree Requirements

Thirty-six semester hours of course work are required. A core of six required courses shall be completed, and nine credit hours must be taken from one of three areas of concentration. The required courses include Urban Studies 801V, 802V, 883V, 884V; a course in research methods; and one of the following: Urban Studies 890M, or Community and Regional Planning 811M, 813M, 815M, or 924. Courses applicable to the area of concentration may include but are not necessarily restricted to: Community and Regional Planning 811M, 813M, 815M, 924; Public Administration 805V, 830V, 842V; Gerontology 810M, 835M, 848M; Counseling and Guidance 879M, 800V, 829V; Geography 812M, 880V, 881V; Sociology 810M, 814M, 875M. A maximum of nine hours of optional credit may be selected from Economics 831M, 832M, 833M, 885V. History 843M, 844M, 847M; Geography 801M, 811M, 811V; or any of the courses listed above, subject to approval. Eighteen hours of the course work must be at the 800V level.

The GRE must be taken during the first semester of enrollment.

A comprehensive final examination is required, although a thesis is not required.

## NON DEGREE AREAS

### Art

Graduate Art courses are offered to fulfill requirements for a minor field or as cognate or selected courses on a plan of study.

### Chemistry

Graduate Chemistry courses are offered to fulfill requirements for a minor field or as cognate or selected courses on a plan of study.

### Curriculum and Instruction

This area includes those offerings which have or could have a broad (K-12) multi-grade level application.

Offerings in this area and having the Curriculum and Instruction prefix (CI) are meant to serve students within the education profession by broadening their skill levels, making available merged talents of collegiate faculty and functioning within different or multi-level educational settings.

### Foreign Languages

Graduate Foreign Languages courses are offered to fulfill requirements for a minor field or as cognate or selected courses on a plan of study.

### Gerontology

The Gerontology Program does not offer a degree. Graduate courses are offered to fulfill requirements for a minor field or as selected courses on a plan of study. Therefore, the courses offered are not concentrated in one particular area, but are offered in a variety of areas to afford the student the opportunity of specializing in Gerontology within his major field of study or as a non-degree student.

Persons admitted to the Gerontology Program may earn the Certificate in Gerontology upon completion of at least fifteen semester hours of coursework in gerontology plus an approved practicum. The Certificate in Gerontology program can serve as a cognate area for graduate candidates in many of the human service and behavioral science degree programs.

### Music

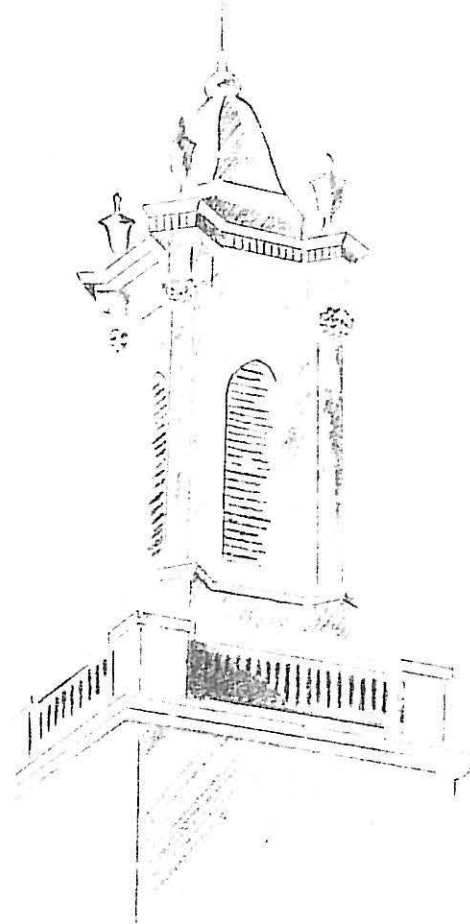
Graduate Music courses are offered to fulfill requirements for professional development or as cognate or selected courses on a plan of study.

### Physics

Graduate Physics courses are offered to fulfill requirements for a minor field or as cognate or selected courses on a plan of study.

### School of Engineering Technology

Graduate courses in the School of Engineering Technology are offered to fulfill requirements for a minor field or as cognate or selected courses on a plan of study.



## COURSE DESCRIPTIONS

## Course Descriptions

## Art

## Studio Art

**831M Advanced Sculpture** (3) Advanced work in area of student's choice with facilities for oxyacetylene welding, arc welding, and wood working. Prereq: Art 331 and permission of instructor.

**841M Advanced Painting** (3) Instruction in oil painting and related media permits each student the time and environment to work and develop individually. Strong emphasis on knowledge of contemporary art. Prereq: Art 341 and permission of the instructor.

**851M Advanced techniques in printmaking** (3) Intaglio, lithography, collagraph, and the embossed print, stressing color and technical proficiency in the various media. Prereq: 351 and permission of instructor.

**461/861M Advanced Ceramics** (3) Advanced work on the potter's wheel, glaze composition, loading and firing of a high-fire kiln. Prereq: Art 361 and permission of the instructor.

**831V Graduate Sculpture** (3) Advanced problems in sculptural media. Prereq: Art 431 and permission.

**841V Graduate Painting** (3) More complex problems in the oil medium and related material. Prereq: Permission and 12 credit hours of painting.

**851V Graduate Printmaking** (3) Advanced problems in printmaking in either intaglio or lithography techniques. Prereq: Art 451 and permission.

## Biology

**323/823J Microtechnique** (3) A course in the techniques of fixation, dehydration, staining, cleaning and mounting biological material in the manufacture of microscope slides. Prereq: Two years of biological sciences.

**334/834J Ecology** (4) Study of interrelationships between organisms and their biotic and abiotic environment; includes population biology, community dynamics, biotic interactions, and evolution. Prereq: Biology 145 and 175.

**855J Morphology of Plants** (5) An evolutionary survey of the major plant groups, including consideration of the morphology, ecology, life history, research use, and economic importance of each group. Prereq: Biology 145, Gen. Botany, or permission. Grad.

**353/853J Flora of The Great Plains** (3) The classification, identification, and recognition of common vascular plants, including weeds, ornamentals, and indigenous plants, found in the great plains. Prereq: For 353, Biology 145, junior-senior. For 853j, Biology 145.

**363/863J Plant Anatomy** (3) A study of cells, tissues, and organs of vascular plants with particular emphasis on internal structure of seed plants. Prereq: For 363, Biology 145, junior-senior. For 863j, Biology 145.

**373/873J Fauna of The Great Plains** (3) A survey of the common animal groups found in the great plains, including their evolution, ecology, distribution and specific adaptations to the environment of the temperate North American grasslands. Prereq: For 373, Biology 145, junior-senior. For 873j, Biology 145.

**374/874J Histology** (4) Analysis of the microscopic anatomy of tissues and organs, their adaptations and functional significance. Prereq: For 374, Biology 175, and a course in vertebrate anatomy, or permission of the instructor. Junior-senior. For 874j, Biology 175, and a course in vertebrate anatomy, or permission of the instructor.

**384/884J Embryology** (4) A study of the principles of development in multicellular organisms, including current concepts derived from experimental embryology, with emphasis on vertebrate morphogenesis. Prereq: General zoology, Biology 175, and a course in vertebrate anatomy.

**410/810M Plant Geography** (3) A study of the worldwide distribution of major vegetation types and the ecological and physiological factors that determine their location. Special attention to North America is included. Prereq: Biology 102 and Biology 145, botany, or permission.

**412/812M Problems in Ecosystem Management** (2) Directed study in the application and evaluation of methods used for managing native and reestablished ecosystems; the principal study site is the 65 ha. Allwine Prairie Preserve. Strong emphasis is placed on field work. Prereq: Graduate standing in Biology and permission of the instructor required.

**413/813M Experimental Genetics** (3) Laboratory studies in genetics emphasizing experimental techniques and laboratory experience with a variety of organisms. Prereq: Biology 214, or permission of instructor.

**414/814M Cellular Biology** (4) This course is a comprehensive study of the structure and function of plant and animal cells. Prereq: For 414, Biology 145 and 175; organic chemistry; or permission of the instructor. Junior-senior. For 814m, Biology 145 and 175, organic chemistry, or permission of the instructor.

**418/818M Limnology** (4) A study of the physical, chemical, and biotic relationships that serve to establish and maintain plant and animal communities in a freshwater environment. Prereq: For 418, Biology 145, 175, and organic chemistry. Junior-senior. For 818m, Biology 145, 175, and organic chemistry.

**423/823M Organic Evolution** (3) A study of organic evolution in terms of evidences which support the theory and the mechanisms involved in the process. Prereq: For 423, Biology 214. Junior-senior. Lecture and discussion only. For 823m, Biology 214. Lecture and discussion only.

**427/827M Animal Behavior** (3) Behavior of div-

tionships between nervous integration and the behavior manifested by the organism, as well as the evolution and adaptive significance of behavior as a functional unit. Prereq: For 427, Biology 175 and Psychology 101 or permission of the instructor. Junior-senior. Lecture only. For 827m, Biology 175 and Psychology 101 or permission of the instructor. Lecture only. (Same as Psychology 427/827m).

**428/828M Animal Behavior Laboratory** (1) Laboratory and field studies of animal behavior with an ethological emphasis. Classical laboratory experiences and independent studies will be conducted. Prereq: Biol/Psych 427/827M or concurrent enrollment.

**433/833M Bryology** (3) A course in the identification, classification, ecology, and distribution of bryophytes. Prereq: For 433, Biology 344 or permission of the instructor. Junior-senior. For 833m, Biology 344 or permission of the instructor.

**434/834M Ichthyology** (4) A study of the biology of fishes, including their evolution, anatomy, physiology, ecology, distribution, classification and identification with emphasis on North American freshwater fishes. Prereq: For 434, Biology 175. Junior-senior. For 834m, Biology 175.

**443/843M Mycology** (3) A lecture and laboratory course in the collection, cultivation, identification and life cycle of fungi. Prereq: For 443, Biology 145. Junior-senior. For 843m, Biology 145.

**444/844M Plant Physiology** (4) A study of plant processes and functions with emphasis on photosynthesis, growth and development, metabolism and mineral nutrition. Prereq: For 444, Biology 145, organic chemistry, or permission of the instructor. Junior-senior. For 844m, Biology 145, organic chemistry, or permission of the instructor.

**464/864M General Bacteriology** (4) The nature of microorganisms, their life processes, their biologic and economic significance. Prereq: For 464, Biology 145, organic chemistry, or permission of the instructor. Junior-senior. For 864m, Biology 145, organic chemistry, or permission of the instructor.

**472/872M Experimental Endocrinology** (2) Laboratory studies of the functions of the endocrine system emphasizing experimental techniques and laboratory experience. Prereq: For 472, a course in endocrinology, concurrent registration in Biology 473 or permission of instructor. Junior-senior. For 872m, a course in endocrinology, concurrent registration in Biology 873m, or permission of the instructor.

**473/873M Endocrinology** (3) A survey of endocrine physiology stressing the regulative and integrative roles of hormones, the control of hormone secretion, and mechanisms of hormone action. Prereq: For 473, organic chemistry, vertebrate anatomy, and physiology or permission of the instructor. Junior-senior. For 873m, organic chemistry, vertebrate anatomy, and physiology or permission of the instructor.

**474/874M Animal Physiology** (4) A comprehensive study of animal function emphasizing mechanisms of regulation and control. Prereq: For 474, Biology 175, vertebrate anatomy, organic chemistry, and physics, or permission of instructor. Junior-senior. For 874m, Biology 175, vertebrate anatomy, organic chemistry, and physics, or permission of the instructor.

**478/878M Vertebrate Zoology** (4) A study of the general biology of the subphylum vertebrata including the morphology, anatomy, physiology and ecology of vertebrate representatives. Prereq: For 478, Biology 175. Junior-senior. For 878m, Biology 175.

**479/879M Mammalogy** (4) The biology of mammals, including their evolution, functional morphology, physiology, ecology, zoogeography, behavior, classification and identification with emphasis on North American groups. Field trips. Prereq: Biology 478 or 495 or permission from instructor.

**484/884M Herpetology** (4) The biology of amphibians and reptiles, including their evolution, classification, anatomy, physiology, ecology, distribution and identification with emphasis on north american groups. Prereq: Biology 175.

**485/885M Developmental Biology** (4) A study of the principles of development of multicellular organisms. Current concepts of interactions at the biochemical, cellular, and tissue levels will be included. Prereq: Biology 145 and Biology 175, or permission of instructor.

**488/888M Invertebrate Zoology** (4) A field-oriented course emphasizing the taxonomy and natural history of the invertebrate animals. Prereq: For 488, Biology 175. Junior-senior. For 888m, Biology 175.

**491/891M Protozoology** (4) The biology of phylum protozoa, including their morphology, physiology, reproduction, genetics and ecology with emphasis on free-living groups. Prereq: Biology 175, general zoology.

**492/892M Parasitology** (4) Taxonomy, morphology, physiology, life history dissemination, and control of the parasitic protozoans, helminths, and arthropods. Prereq: Biology 175.

**494/894M Entomology** (4) The study of insects, their classification, morphology, physiology, behavior, life histories, ecology, and evolution. Prereq: For 494, Biology 175. Junior-senior. For 894m, Biology 175.

**495/895M Vertebrate Embryology and Anatomy** (4) Development and phylogeny of vertebrate organ systems. Dissection of major vertebrate types, and study of developmental stages from fertilized egg to adult condition. Prereq: Biology 175 and permission of instructor.

**496/896M Advanced Genetics** (3) A survey of the current concepts in genetics with emphasis on new gene concepts, advances in cytogenetics and population genetics, and the application of genetics to other areas of biology. Lecture and discussion of selected readings. Prereq: Biology 214 or permission of instructor, Graduate standing in biology.

**498/898M Ornithology** (4) An introduction to

anatomy, physiology, behavior, ecology, classification and identification with emphasis on North American groups. Prereq: For 498, Biology 175; junior-senior. For 898m, Biology 175.

**801V Seminar in Biology** (1) A study of current research in any of the divisions of biology. Graduate students in biology must complete this course twice for credit. Prereq: Graduate standing.

**802V Problems in Biology** (2) Research investigation in various areas of biology. Prereq: Sufficient work in biology and the ancillary sciences necessary to pursue adequately the area of investigation involved.

**804V Current Topics in Botany** (2) Survey of recent literature in one or more of the following areas of botany: Physiology, morphology, anatomy, ecology, taxonomy, economic botany, genetics, phytogeography. Prereq: Grad. Standing in biol, an advanced botany course or permission.

**805V Current Topics in Microbiology** (2) Survey of recent literature in one or more of the following areas of microbiology: Morphology and development, physiology, genetics, taxonomy, ecology, medical microbiology and immunology, virology, and food and industrial microbiology. Prereq: Grad. Standing in biol., Biol 864m, or permission.

**806V Current Topics in Zoology** (2) Survey of the recent literature in one or more of the following areas of zoology: taxonomy, morpho-logy, anatomy, ecology, physiology, behavior, zoogeography, genetics. Prereq: Graduate standing and permission.

**813V Environmental Biology** (3) A study of the recent advancements in environmental biology, concentrating on the areas of population dynamics, community interaction and ecosystems theory. Readings, discussions, laboratory, and a written report. Prereq: Graduate standing in biology and/or permission of instructor.

**818V Biosystematics** (3) A study of principles and techniques in animal and plant biosystematics. The course will focus on the species problem and upon the experimental investigation of the problem. Readings, discussions, laboratory, and a written report. Prereq: Graduate standing in biology and permission of the instructor.

**823V Biomorphology** (3) A study of the morphology and anatomy of organisms in relation to support, circulation, response, excretion and reproduction. Lecture, laboratory, selected readings, and a written report. Prereq: Graduate standing in biology and permission of the instructor.

**833V Advanced Topics in General Physiology** (3) Studies in general physiology including such topics as photo-physiology, hormonal regulation of metabolic pathways, temperature-related phenomena, and cytogenetic physiology. Lecture, laboratory, and written report. Prereq: Graduate standing in biology.

**883V Environmental Physiology** (3) A detailed study of selected dynamic environmental fac-

by organisms of various taxa. Prereq: General physics, algebra, animal physiology, or permission of instructor. Graduate.

**899 Thesis** (1-6) Independent research project written under the supervision of a faculty committee.

### Black Studies

**450/850M International African Community Field Research** (3-6) Comparative political culture observations of selected black communities in the United States in relation to counterpart communities in Africa, the Caribbean and Latin America. Section w: East Africa; x: West Africa; y: Caribbean; z: Latin America. Prereq: Permission of the instructor or graduate advisor. (Same as Pol Sci 450/850m)

### Business Administration

**811H Survey of Accounting** (3) The uses of accounting for purposes of control and decisions by managers, shareowners, creditors and others. Prereq: This course is for the graduate student who has not taken principles at the undergraduate level.

**817H Quantitative and Statistical Methods for Business Decisions** (3) Elementary concepts in quantitative and statistical methodologies. Emphasis is placed on multiplicity of applications to a wide variety of methods. Prereq: Graduate standing and one year of college mathematics.

**818H Analytical Foundations of Economics** (3) Fundamental principles of macro- and micro-economic theory for graduate students in business. The development of modern aggregate theory is examined along with an economic analysis of the business firm, its market structure, production possibilities, and cost factors. Prereq: Open to MBA candidates and other graduate students desiring this course. No credit is given to students having previously taken Economics 201 and Economics 202 or their equivalents.

**456/856M State and Local Finance** (3) An inquiry into the facts, techniques, principles, theories, rules, and policies shaping, directing, influencing, and governing the spending, taxing, debt, and utilities of scarce resources for state and local governments. Prereq: Econ 201 and 202.

**800V Quantitative Analysis** (3) The study of quantitative techniques and models and their application in business decision making. Prereq: DS 213 or BA 816J.

**801V Business and Society** (3) Exploration of the diversity of societal forces and pressures which produce continued transition in the system of American capitalism. Prereq: L&S 323, 446 or BA 812J.

**802V Research Methods in Economics and Business** (3) A study of current research techniques in business and economics. The student will become familiar with these techniques through text material, journal studies and actual applica-

**803V Business Information Systems** (3) A study of how computer-based information systems are constructed and of the opportunities and problems associated with this activity. Prereq: BA 800V.

**804V Applied Quantitative Analysis** (3) A collection of quantitatively-oriented models and techniques applied to a variety of business problems in a case study format. Prereq: BA 800V.

**805V Business Conditions Analysis** (3) This course is concerned with the statistical measurement and evaluation of general business conditions, and the adaptation of business policies to changing business conditions. Emphasis is placed upon the practical application of the statistical techniques of analysis to the business situation, within the framework of the aggregate economy. Prereq: Econ 800J or 202.

**808V Business Forecasting** (3) This course includes a comprehensive survey of forecasting methods and in-depth study of selected techniques most commonly used in business environments. Emphasis is given to application and therefore students will be required to develop forecasting models and test their performance as part of their course. Prereq: BA 800V or ECON 830M or permission of instructor.

**810V Managerial Economics** (3) Economic analysis of the business firm and its environment, with emphasis on market structure, pricing, production possibilities and cost factors. Additional consideration is given the theory of the firm under conditions of uncertainty. Prereq: Econ 201 and 202 or Econ 800J.

**820V Managerial Accounting** (3) A study of concepts, analysis, and procedures of accounting utilizing internal financial and non-financial data which provides management with information for planning and controlling routine operations, for non-routine decision, policy making and long-range planning; and for external reporting to stockholders, governments, and interested parties. Prereq: Accounting Principles. Students with the equivalent of Managerial Accounting at the undergraduate level should enroll in BA 821V, BA 823V, or BA 825V.

**821V Accounting Theory** (3) The development of accounting, current accounting theory and present controversies, and suggested theory and practice. Prereq: BA 820V or the equivalent of Managerial Accounting at the undergraduate level.

**823V Controllership** (3) An analysis of the concept and basic techniques of the controllership function with emphasis on operational control and long range budgeting. Prereq: BA 820V or the equivalent of Managerial Accounting at the undergraduate level.

**825V Seminar in Accounting** (3) A study of problem areas which may be independent or interrelated in public, private, and governmental accounting. Prereq: BA 820V or the equivalent of Managerial Accounting at the undergraduate level.

**830V The Environment of Management** (3) A

course examines both the intra-organizational processes of managerial planning, decision making, organizing and controlling as well as the external environment's impact on these processes. A systems framework is used to examine the environment, which includes an examination of international factors on the practice of management.

**831V Human Behavior in Organization** (3) An interdisciplinary study presenting the major trends represented by a variety of theories of organizational behavior as well as major concepts and ideas of organizational psychology. Prereq: MOB 349 or BA 814J and written permission of the CBA Graduate Counselor.

**832V Personnel Administration** (3) Extensive treatment of the relevant developing theories, and coverage of certain new methods, techniques, and procedures that relate to personnel administration and human resource management. Efforts are made to select and present material to illustrate the practical, applied aspects of resource management and personnel administration, as related to human problems in organizations. Prereq: BA 831V.

**835V Seminar in Management** (3) A student participation course emphasizing current issues and problems in the areas of management theory and operation. Prereq: BA 830V and BA 831V.

**840V Marketing Policies** (3) A marketing management approach to the determination of policies employed in solving problems in marketing. Prereq: Mkt 331 or BA 815J.

**841V Promotional Policies** (3) Analysis of the methods, research, and policies needed to develop and administer an effective promotional program. Prereq: Mkt 331 or BA 815J.

**845V Seminar in Marketing** (3) Exploration, study and critical analysis of contemporary marketing problems, trends, methods and approaches for seminar discussion and written report. Prereq: BA 840V.

**850V Financial Management** (3) Examines the problems of managing the financial operations of an enterprise with emphasis on analysis and solution of long and short-term problems pertaining to policy decisions. Prereq: BF 325 or BA 813J.

**851V Security Analysis** (3) A study in the techniques of analysis of marketable securities. Statistical and financial ratio methods of analysis are examined as well as broader bases for appraisal of values of securities. Prereq: BF 325 or BA 813J.

**852V Seminar in Investment Management** (3) The theory of investment management and its application in formulation of policies for different types of investors. Prereq: BF 325 or BA 813J.

**853V Banking and Financial Markets: Structure, Function, and Policy** (3) A comprehensive study of the structure and functioning of financial firms and markets; recent policies affecting the financial system; proposals for structural and

**855V Seminar in Finance** (3) Selected topics from areas of business finance. Prereq: BA 850V.

**860V Real Estate and Land Use Economics Theory** (3) This course brings together the best of the technical literature dealing with the development of advanced tools of analysis and concepts of Real Estate and Land Use Economics. The tools are presented and developed which assist real estate decision-makers in identifying and evaluating professionally the complex factors which determine real estate productivity, value, investment, and land-use patterns. Prereq: Econ 201 and 202 or 800J.

**861V Current Problems in Real Estate and Land Use Economics** (3) A study of current problems in real estate markets affecting decision policies in the private and public sectors. Analysis of economics of land development and use and re-use of real property to provide a viable environment for all citizens. Prereq: RE 341, RE 346, RE 440, and RE 441 or equivalent experience.

**880V Policy, Planning and Strategy** (3) A comprehensive study of business problems, prospects and opportunities at varying levels of organizations. The student is responsible for demonstrating interrelationships between the various disciplines of study. Only an A or B is considered an acceptable grade. Prereq: Taken in last 9 hours of MBA program.

**890V Independent Research** (3) Individual research in the field of accounting, finance, management, marketing, quantitative analysis or the environment of business. Maximum of nine hours of three different fields.

**891V Special Studies in Business** (1-3; may be repeated up to 6) A series of special courses each designed to focus on current major issues and developments in a specific area of Business Administration, scheduled as a workshop or seminar according to purpose. Prereq: Graduate student in good standing and as indicated for specific workshop or seminar.

**899V Thesis** (1-6) A research project, under the supervision of a faculty thesis adviser in the College of Business Administration, in which the student establishes his capacity to design, conduct, and complete an independent, scholarly investigation of a high order of originality. The research topic and the completed project must be approved by the student's faculty thesis adviser, and two other faculty members, one of which must be from outside the program area. Prereq: Permission of graduate adviser.

## Chemistry

**335/835J Physical Chemistry** (3) A presentation of selected topics from the areas of quantum mechanics, classical thermodynamics, statistical mechanics. Prereq: Chemistry 226, 226L, 240, 240L with grade of C or better. Physics 212, Math 196.

**335L/835JL Physical Chemistry Laboratory** (1) Physical chemistry laboratory. Chemistry 335L should be taken concurrently with Chemistry

with grade of C or better. Physics 212, Math 196.

**336/836J Physical Chemistry** (3) A presentation of selected topics from the areas of classical thermodynamics, statistical mechanics and chemical kinetics. Prereq: Chemistry 335.

**336L/836JL Physical Chemistry Laboratory** (1) Physical chemistry laboratory. Chemistry 336L should be taken concurrently with Chemistry 336. Prereq: Chemistry 335L.

**340/840J Instrumental Analysis** (2) Instrumental methods of quantitative analysis. Normally taken concurrently with Chemistry 340L. Prereq: Chemistry 336 (May be taken concurrently.)

**340L/840JL Instrumental Analysis Laboratory** (2) Laboratory to be taken concurrently with Chemistry 840. Prereq: Same as Chemistry 840.

**423/823M Advanced Organic Chemistry** (3) An advanced lecture course in modern theories and special topics in organic chemistry. Prereq: Chemistry 226, 335 with grade of C or better (Chemistry 335 may be taken concurrently).

**424/824M Advanced Organic Chemistry** (3) An advanced lecture course in organic chemical reactions. Prereq: Chemistry 226, 336 with grade of C or better (Chemistry 336 may be taken concurrently).

**450/850M Advanced Inorganic Chemistry** (3) Theories of chemical bonding, the determination of chemical structures, and the application of modern chemical theory to classical and recent problems in inorganic chemistry. Prereq: Chemistry 336 (May be taken concurrently.)

**451/851M Advanced Inorganic Preparations** (1-2) Laboratory preparation of representative types of inorganic compounds by various standard and special experimental techniques. Prereq: Chemistry 450 (May be taken concurrently.)

**465/865M Biochemistry** (3) Chemistry and biochemistry of proteins, carbohydrates and lipids. Enzymes and energetics. Biological oxidation. Not open to students with credits in 365 or 366. Chemistry 465L must be taken concurrently with Chemistry 465. Prereq: Chemistry 226, 226L and 336, 336L.

**465L/865ML Biochemistry Laboratory** (1) Biochemistry laboratory for Chemistry 465. Chemistry 465 and 465L must be taken concurrently.

**466/866M Biochemistry** (3) Continuation of Chemistry 465. Chemistry 466L must be taken concurrently with 466. Prereq: For 466, Chemistry 465, 465L. For 866M, Chemistry 865, 865ML.

**466L/866ML Biochemistry Laboratory** (1) Biochemistry laboratory for Chemistry 466. Prereq: For 466L, Chemistry 465, 465L. For 866ML, Chemistry 865M, 865ML.

**493/893M Special Topics in Chemistry** (1-3) Selected special topics in chemistry. Prereq: For 493, Chemistry 226 and 240 with permission of the instructor. For 893M, graduate standing, Chemistry 226 and 240 with permission of instructor. Some topics will require more ad-

**499/899M Chemistry Problems (1-3)** Independent student research. To receive a passing grade the student must present a seminar on the research project to the Chemistry faculty. Prereq: Permission of instructor.

**499/899V Research in Chemistry (Arranged)** Provides the student with an opportunity for experience in the solving of an actual research problem in the field of chemistry. To receive a passing grade the student must present a seminar on the research project to the Chemistry faculty. Prereq: Permission of instructor, and an undergraduate chemistry major (not less than 32 hours).

### Civil Engineering

**360/860M Transportation Engineering II (3)** Introduction to planning and analysis of multi-model transportation projects. Governmental activities in the finance and control of transportation. Basic rural and urban planning techniques and their effect on land use, the environment and social and economic development. Economic, operational and control characteristics of existing and futuristic transportation modes. Prereq: For 360, junior standing or permission of the instructor. For 860m, graduate standing or permission of the instructor. Not available for graduate credit for engineering students.

**400/800M Environmental Quality and Control - Land, Air, and Water (3)** Application of the principles of ecology, engineering, and planning for the control and management of the physical environment (Land, air and water) including land and water ecosystems, air and water pollution, and environment planning. Prereq: For 400, senior standing. For 800M, graduate standing.

**426/826M Environmental Pollution Control (3)** An introduction to the engineering principles of control of air pollution, solid wastes, and radioactive wastes in relation to the total environment. Interrelations of air, water, and land waste disposal methods are stressed. Prereq: For 426, junior standing in engineering or permission of the instructor. For 826m, graduate standing or permission of the instructor.

**428/828M Application of Chemistry to Sanitary Engineering. (3)** Applications of chemistry in the analysis and treatment of water and waste water (Lecture 2, lab 3). Prereq: CE 226, 327.

**429/829M Applications of Microbiology to Sanitary Engineering (3)** Applications of microbiology related to the treatment of waste waters, and the bacteriologic examination of water and waste water. (Lecture 2, lab 1). Prereq: For 429, Civil Engineering 327. For 829m, graduate standing and Civil Engineering 327.

**834M Soil Mechanics II (3)** Application of the effective stress principle to shear strength of cohesive soils; analysis of stability of slopes. Development of continuum relationships for soils; solutions for stresses and displacements for an elastic continuum, solution of the consolidation equation for various initial and boundary con-

ditions. Prereq: Graduate standing and Civil Engineering 334.

**836M Foundation Engineering (3)** Subsoil exploration and interpretation; selection of foundation systems; determination of allowable bearing pressures from laboratory and field data; proportioning shallow foundations for bearing capacity and settlement; design of deep foundations; pile driving analysis; control of ground water. Prereq: Graduate standing, Civil Engineering 334; or equivalent.

**441/841M Structural Analysis II (3)** Analysis of statically indeterminate structures, including continuous beams, planar frames, and trusses. Numerical and classical methods of analysis, including an introduction to solutions by matrix methods. Effects of temperature and movements of supports. Influence lines. Relation of design to analysis. Prereq: For 441, Civil Engineering 340. For 841m, graduate standing.

**444/844M Steel Design I (2)** An introductory course involving the application of the basic principles of mechanics of materials and the current practices in proportioning of structural members in steel. Prereq: For 444, Civil Engineering 340 or permission of the instructor. For 844m, graduate standing.

**445/845M Structural Analysis III (3)** Computation of stress resultants in statically indeterminate structures including beams, and planar and three dimensional frames and trusses using matrix formulations (Finite element method), advanced moment distributing techniques and column analogy. Consideration of shearing and axial deformation in addition to the usual flexural deformations. Effects of temperature and prestrain, support displacements, elastic supports, and axial-flexural interaction. Prereq: For 445, Civil Engineering 441 and digital computer methods in engineering analysis. For 845m, Civil Engineering 841 and graduate standing.

**446/846M Steel Design II (3)** A continuation of Civil Engineering 444, but directed toward building systems. Steel and timber structural systems are studied. Prereq: For 446, Civil Engineering 444. For 846m, Civil Engineering 844 and graduate standing.

**447/847M Reinforced Concrete II (3)** The use of reinforced concrete design principles in special applications including columns and footings, and the study of additional design concepts including deflections, prestressing and torsion. Prereq: For 447, Civil Engineering 443. For 847m, Civil Engineering 843 and graduate standing or permission of the instructor.

**448/848M Plastic Analysis I (3)** Application of the basic principles of plastic analysis to frame structural systems, plastic collapse concepts, upper and lower bound theorems, and moment balancing are applied to various frame geometry. Member selection and deflection calculations. Prereq: For 448, Civil Engineering 441 or permission of the instructor. For 848m, Civil Engineering 841m and graduate standing or permission of the instructor.

**452/852M Water Resources Development (3)**

with emphasis on optimization and simulation techniques for evaluating alternatives in water resources developments related to water supply, flood control, hydroelectric power, drainage, water quality, water distribution, irrigation and water measurement. Prereq: For 452, Civil Engineering 351 or Civil Engineering 457 or equivalent. For 852m, graduate standing and permission of the instructor.

**854M Hydraulic Engineering (3)** Fundamentals of hydraulics with applications of mechanics of solids, mechanics of fluids, and engineering economics to the design of hydraulic structures, continuity, momentum, energy principles are applied to special problems from various branches of hydraulic engineering. Prereq: Graduate standing and permission of the instructor.

**456/856M Advanced Hydrology (3)** Advanced topics in hydrology including parametric and stochastic processes and systems analysis of hydrologic problem with particular emphasis on the application of techniques in the design of engineering projects. Prereq: For 456, Civil Engineering 351 or Civil Engineering 457 or equivalent. For 856m, graduate standing and permission of the instructor.

**457/857M Engineering Hydrology (3)** Introduction to the principles of engineering hydrology, with emphasis on the components of the hydrologic cycle: precipitation, evaporation, surface runoff, infiltration, drainage basin characteristics, streamflow, and precipitation runoff relationships. Emphasis is placed on utilizing these variables in forming engineering judgment. Prereq: For 457, Math 197 and GE 331 or equivalent. For 857m graduate standing and permission of the instructor.

**458/858M Ground Water Engineering (3)** The application of engineering principles to the movement of ground water. The influence of the physical and geologic environment on ground water hydraulics, water well hydraulics and aquifer evaluation. Emphasis is placed on practical ground water engineering problems. Prereq: For 458, Math 197 and GE 331 or equivalent. For 858m graduate standing and permission of the instructor.

**461/861M Urban Transportation Planning (3)** Development of urban transportation planning, objectives and goals, data collection procedures, land use and travel forecasting techniques, trip generation and assignment and modal choice analysis. Mass transit system design, operation and evaluation. Prereq: Upper class standing or permission of the instructor.

**462/862M Airport Planning and Design (3)** Principles in planning, locating and designing of airports. Analysis of airport financing, site selection and estimation of aeronautical demand, air traffic control and aircraft characteristics are discussed. Environmental effects of airports including noise and air pollution problems. Prereq: For 462, upper class standing and permission of the instructor. For 862m, graduate standing and permission of the instructor.

**463/863M Transportation Geometrics (3)** Functional design of transportation systems with em-

phasis on highway, railway and airport design considerations. Horizontal and vertical curves, sight distance, superelevation and intersection and ramp curve analysis. Design of highway interchanges, channelization and cross sections. Basics of airport, railroad, mass transit and pipeline design geometrics. Prereq: For 463, upper class standing and permission of the instructor. For 863m, graduate standing and permission of the instructor.

**464/864M Traffic Engineering (3)** Characteristics of traffic flow as influenced by the interaction of the driver, vehicle and roadway. Volume speed, delay, pedestrian and parking analyses. Traffic laws and ordinances, highway capacity, accident investigations, roadway illumination and traffic control devices. Prereq: For 464, upper class standing and permission of the instructor. For 864m, graduate standing and permission of the instructor.

**468/868M Portland Cement and Asphalt Concrete Laboratory (1)** Laboratory and field procedures used to obtain portland cement and asphalt concrete for engineered construction. Prereq: For 468, GE 326 or equivalent. For 868m, graduate standing.

**469/869M Pavement Design and Evaluation (3)** Thickness design of flexible and rigid pavement systems for highways and airports; design of paving materials; evaluation and strengthening of existing pavements. Prereq: For 469, CE 334 or equivalent. For 869m, graduate standing.

**470/870M Construction Management (3)** Estimating and bidding, scheduling (Cpm, pert), contracts, bonds and insurance, cost control systems, equipment utilization, code and zoning. Prereq: Permission of the instructor.

**472/872M Construction Techniques (3)** Job planning and management; construction equipment; construction materials; construction methods. Prereq: Permission of the instructor.

**474/874M Construction Cost and Controls (3)** A course emphasizing accounting, costing and management control as related to construction and construction organization. The various relationships between the accounting and management aspects will be presented with emphasis on the informational and controlling segments of costing. Estimating, bidding, cpm, pert, computers and office procedures as they apply to costing and control will be discussed. Prereq: For 474, permission of the instructor. For 874m, graduate standing and permission of the instructor.

**480/880M Engineering Economy (2)** Economic comparison of engineering alternatives. Studies of equipment selection and replacement, depreciation, break-even points and minimum-cost points. Prereq: For 480, senior standing. For 880m, graduate standing.

**843M Reinforced Concrete I (2)** A study of the principles of mechanics applied to reinforced concrete structural members. Emphasis is placed on flexure, shear, and bond. Prereq: Graduate standing.

**899 Graduate Research (Thesis) (3-6)**

**Communication**

**801M History of Mass Communication** (3) The American mass media from 17th Century origins to present, with emphasis on mass communication aspects of literary, intellectual, social and political history, and their relationships to current media issues. Prereq: Graduate standing and major/minor in Communication or instructor's permission.

**811M Development of Rhetorical Theory** (3) The origin and development of rhetorical theory and practice.

**812M Studies in American Public Address** (3) Study of representative American speakers from the eighteenth century to the present. Prereq: Nine hours of speech.

**817M Organizational Communication** (3) Communication in relation to problematic transactions within and between various types of organizations. Theoretical and practicable methodologies and procedures for comprehending and then preventing, alleviating, or solving communication problems in organizational settings will be emphasized. Prereq: An undergraduate major in Communication or permission.

**822M Literary Aspects of Journalism** (3) Survey of the journalistic works of pertinent American writers through readings, lectures, discussions, plus creative writing assignments.

**823M Public Relations** (3) A study of the principles, problems and techniques of the public relations function through lectures, discussions and case histories.

**831M Political Broadcasting** (3) A study of the evolving role of the electronic media in shaping political activities in our contemporary democratic society. Prereq: Political Science 100 or Comm 150, 151.

**834M Broadcasting History and Regulation** (3) A study of broadcasting in the United States through its regulatory history. Prereq: Permission.

**835M Issues in Broadcasting** (3) A study of current economic, legislative and sociological issues facing the American system of broadcasting. Prereq: Comm 150 or 151.

**837M Communication Workshop** (3) A workshop to explore communication theory and processes and to develop skills in their application. Prereq: Comm 150 or permission.

**838M Film Theory and Criticism** (3) Study of major trends in film criticism and theory in Europe and America, with concentrated analysis of selected films. Prereq: Comm 231 or DA 105 or permission of instructor.

**840M Mass Media and Society** (3) The study of mass media as social institutions, particularly in their interaction with government and the public, with emphasis on themes of criticism, normative statements and solutions to perceived media problems.

**841M Communications Law** (3) A discussion of laws, legal issues, court decisions and government regulations which have special application to the mass media, such as libel, privacy, con-

tempt of court, copyright, censorship, and the Federal Communications Commission.

**842M Theories of the First Amendment: Speech and Press** (3) An examination of freedom of communication in the United States with particular attention to freedom of the mass media and the many attempts at censorship. The course examines the philosophical and legal aspects of freedom of speech and press and the theories held by legal scholars. Prereq: Communication 440 or 441 or permission.

**850M Mass Communication and Public Opinion** (3) A study of the philosophy, process and effects of mass communication in the U.S.; the relationship between the mass media and public opinion, and the nature, function and measurement of public opinion.

**851M Persuasion** (3) Basic principles and psychological processes underlying persuasive communication; a review of various source, message, channel, and receiver variables and their influence on communication effectiveness. Prereq: Comm 101 and 3 hours of psychology or sociology, or permission.

**852M Psycholinguistics** (3) A discussion of the literature concerned with how such psychological variables as perception, learning, memory, and development relate to the linguistic variables of sentence structure, meaning, and speech sounds. Prereq: Permission. (Same as Psy 452/852M)

**853M Seminar in Cross-Cultural Communication** (3) This seminar will be directed towards understanding the components of cultural and subcultural misinterpretation, with the purpose of bringing to awareness those factors which disturb communication in cross-cultural situations. (Same as Sociology 453 and 853M)

**862M Directing Forensics** (3) To provide students planning to teach speech in high school or college with a philosophy and detailed knowledge of how to direct a forensic program. Prereq: Comm 112 or permission.

**890M/891M Seminar in Mass Communication** (3) A senior seminar applying historical and theoretical perspective to current issues and developments in mass communications.

**801V Introduction to Research in Communication** (3) Philosophy of scientific research, including process, components, and products; research methods, designs, and procedures in communication; preparation of a proposal; writing research reports. Prereq: Basic statistics (Psy 213 or equivalent).

**811V Seminar: Modern Public Address** (3) Studies in figures, movements and institutions prominent in modern public address. May be repeated. Prereq: Permission.

**830V Topical Seminar in Mass Media** (3) Substantive study of specialized areas and modes of broadcasting, film, and print communication. Content will vary. Course may be repeated. Prereq: Graduate standing and majoring in Communication or instructor's permission.

**847V Foundations Seminar: Transactional Communication** (3) This seminar was designed for students preparing to take the major, a minor,

or advanced seminars in Communication. Universals of human symbolizing processes (e.g., deleting, distorting, and generalizing) will be explored intensively and extensively. Principles underlying current issues in transactional (vs. Mass) communication will be emphasized by means of selections from recent developments and contemporary methodologies, including General Systems Theory, Modern Heuristic, and General Semantics. Prereq: Graduate standing and majoring in Communication or instructor's permission.

**850V Seminar in Communication Theory** (3) Analysis of current approaches to the study of communication, with emphasis on theoretical models, and their application to various professional interests. Prereq: Communication 847V or the instructor's permission.

**857V Foundations Seminar: Mass Communication** (3) This seminar was designed for students preparing to take the major, a minor, or advanced seminars in Communication. The mass communication system in the United States will be examined in terms of its basic philosophical and legal assumptions and the current political, cultural, sociological and psychological theories relating to the process and effects of mass communication. Prereq: Graduate standing and majoring in Communication or instructor's permission.

**898V Independent Research or Creative Projects** (1-6) Non-thesis projects for majors in Communication supplementing advanced graduate courses. Prereq: Admitted to candidacy (or application pending); written proposal of each project approved by the student's committee.

**899 Thesis** (1-6 each) Independent research project written under the supervision of an advisor.

**940 Seminar in Small Group Communication** (3) Research and theory in the process of small group communication and leadership; research procedures; methods for developing skills in small group communication. Prereq: Comm 801V or equivalent, or basic statistics, or permission. (Same as Sociology 940V and Psychology 940V)

**955 Seminar in Applications of Non-Verbal Communication Theory** (3) Theories and research on the development, facilitation and barriers of human non-verbal communications. Analysis of non-verbal interaction with specific applications to education, business, supervision, counseling, therapy and interpersonal speech communication. Prereq: Course in research methods or permission. (Same as Secondary Education 936 and Psychology 936)

**Counseling and Guidance**

**422/822M Vocational Decision Making** (3) This course is designed to acquaint students in the profession of teaching and the field of human services with the specifics relevant to how people make vocational choices. Prereq: Senior, graduate or permission.

**479/879M Practical and Experiential Training in Counseling** (1/2-6) An integrative course designed to acquaint students and practitioners with recent developments in the counseling profession. This course is repeatable up to a maximum of six hours of credit each time the conditions of this sequence are met. Prereq: Permission of instructor.

**480/880M Guidance Skills for Educators** (3) Course designed to familiarize educators with guidance activities of schools, the educator's role in these activities, and to develop appropriate guidance and listening skills. No credit for guidance majors. Prereq: For 480, senior. For 880m, senior or graduate.

**492/892M Guidance in The Elementary School** (3) A study of the teacher's role in elementary school guidance with emphasis on activities in the classroom. No credit for guidance majors. Prereq: For 492, senior.

**498/898M Counseling Skills in Gerontology** (3) This course is intended to help develop basic counseling skills for application in gerontology.

**800V Special Studies in Counseling and Guidance** (3) Intensive courses scheduled as regular seminars or workshops, according to purpose. Prereq: Permission of department.

**801V Humanistic Processes in Education** (3) A study of procedures to increase the effectiveness of humanistic processes in the classroom. Special emphasis will be placed on planning and implementing processes in specific situations. Prereq: ELED 436 or SED 458 or permission of instructor.

**805V Alcoholism Treatment Modalities** (3) An examination of alcoholism treatment modalities. Special attention is given to comparison with regard to theoretical perspectives, techniques, and effectiveness. Prereq: Graduate standing in Counseling and Guidance, Social Work, or Psychology. Graduate students in other disciplines with prior training or experience in counseling will be admitted with permission of instructor.

**810V Research Project in Counseling and Guidance** (3) Individual or group study and analysis of specific problems/issues in the field. Prereq: Permission of the instructor.

**812U Counseling With Parents** (3) A course emphasizing techniques used in working with families. Prereq: Coun 825v or Coun 832v or permission of instructor.

**815U Advanced Counseling Practicum** (2-3) Continuation of practicum in counseling. Prereq: Coun 825v or 836v and permission of department.

**815V The Student and Student Personnel Work in Higher Education** (3) An overview of the characteristics of college students and their interaction with campus environmental influences. The impact of student personnel work is considered as it affects personality growth, social development and career planning by college students. Prereq: FED 801v.

- 819U Research Project in Counseling and Guidance** (2-3) Research study on a problem in the area of guidance and counseling. Prereq: Permission of department.
- 820V Introduction to Counseling Theories** (3) Study of contemporary theories of counseling, the counseling process and methods. Prereq: Coun 890m.
- 821V Organization and Administration of Guidance Service in Secondary Schools** (3) Study of organizational patterns and administrative practices in guidance and counseling programs. Prereq: Coun 890M or 892M.
- 823V Appraisal Techniques in Counseling and Guidance** (3) Utilization of standardized and nonstandardized appraisal techniques in counseling and guidance. Prereq: Coun 890m, FED 801v.
- 824V Counseling Practices** (3) The process of establishing a counseling relationship, utilizing different approaches appropriate to client concerns, and developing basic counseling skills. Prereq: Coun 820v, 822v, 823v.
- 825V Counseling Practicum** (2-4) Counseling experience under the supervision of a practicum instructor of the university. Prereq: Coun 824v and permission of department.
- 826V Guidance Internship** (3-6) Field experience in an approved guidance program under the supervision of a qualified counselor and a guidance professor of the university. Prereq: Coun 824v and permission of department.
- 827V Group Techniques in Guidance** (2-3) The group process with emphasis on the experiential aspect. Prereq: Coun 890m and permission of instructor.
- 828V Counseling Older Adults** (2) Designed to provide basic information counselors need for work with older adults. For Counseling and Guidance Majors not specializing in Gerontology. Prereq: Counseling 890M, Principles of Guidance.
- 829V Community Involvement for Urban Counselors** (3) A wide range of experiences dealing with the ecology of the urban disadvantaged and its effects upon counseling. Prereq: Admission to Counseling and Guidance, Criminal Justice, or Home Economics, or Instructor's approval.
- 832V Counseling Elementary School Children** (3) A study of the methods and techniques applicable in counseling young children. Prereq: Coun 820v, 831v.
- 833V Elementary School Counseling Practicum** (4) Counseling in the elementary setting under the supervision of a counseling professor of the university. Prereq: Coun 832v and permission of department.
- 835V Elementary Counseling Internship** (6) Field experience in an elementary counseling program under the supervision of a counseling professor and appropriate in-school personnel. Prereq: Coun 832v and permission of department.
- 837V Group Counseling Theory and Practice** (3) A course designed primarily for Counselors

with a combination of theory and experiences necessary to the understanding of effective leadership skills involved in the group counseling process. Prereq: Coun 890M, Coun 820V, Coun 823V, and Coun 827V.

**839V Guidance Services and The Disadvantaged Youth** (3) A study of the methods and techniques in counseling disadvantaged youth. Prereq: Coun 820V and 824V.

**845V College Student Personnel Internship** (6) This course is designed to provide practical work experience under supervision in various areas within student personnel services. Prereq: Permission of instructor.

**847V Practicum in Group Counseling** (4) Supervised experience co-facilitating group counseling at an approved practicum site. Required as the third course for the cognate area of Group Work in Counseling. Prereq: Counseling major, Couns 824, 827, 837 and/or permission.

**860 Parent Education** (3) Review of literature relative to the role of parents in America and to programs in parent education. Study of the basic concepts in dynamics of group discussion, child development and family relations with emphasis on application to parent education programs. Same as HD&F 860. Prereq: Graduate standing.

**890M Principles of Guidance** (3) The introductory course for students majoring in the counseling and guidance department. A study of basic principles underlying guidance and counseling. (Non-counseling majors are encouraged to take Coun 880M, Guidance Skills for Secondary Educators, or Coun 892M, Guidance in the Elementary School.) Prereq: Adm. to the Guidance and Coun. Program.

**896V Directed Readings in Counseling and Gerontology** (1-3) A study of recent and current literature on counseling with older people. Prereq: Counseling Major and Coun-Gero 898M or permission of the instructor.

**897V Personal Values and Aging** (1) Course designed to increase students' self-awareness of personal values and feelings related to aging and the aged. (Same as Gero 897V.) Prereq: Coun 890M or permission of the instructor.

**899 Thesis** (1-6) Independent research project written under the supervision of an adviser. Prereq: Permission.

### Criminal Justice

**801V Criminal Justice Planning and Innovation** (3) A review of the literature in social psychology, public administration and sociology which relate to the effectiveness of alternate strategies of promoting change in criminal justice agencies, institutions, organizations and individual attitudes and values. Prereq: Permission of instructor.

**802V Seminar in Administration of Justice** (3) Justice in America from the standpoint of the offender and an inquiry into the influences and pressures upon individuals across the criminal justice spectrum who corporately deliver justice to the citizenry. More feasible and improved systems of delivery are examined. Prereq: None.

**803V Comparative Law Enforcement Systems** (3) A structural and functional examination of modern law enforcement systems, especially European. Emphasis placed upon historical development, current practices and trends. Prereq: CJ 203 and permission of instructor.

**804V Seminar in Community Services and Treatment** (3) An analysis of probation and other alternatives to incarceration in the community setting, and of the feasibility and effectiveness of treatment of individuals under sentence in the community based treatment spectrum. Prereq: CJ 435 and permission of instructor.

**807V Theoretical Criminology** (3) A study of the etiology of crime as a social phenomena and an objective analysis of the historical influences and thought which molded its development into an accepted contemporary science. Prereq: CJ/Soc 335, graduate standing and permission of instructor.

**808V Seminar in The Processes of The Criminal Justice System** (3) An examination of the interaction of the constituent elements of the American criminal justice system with emphasis on institutional and personnel interfacing. Prereq: Permission of instructor.

**809V Seminar in Delinquency Prevention, Control and Correction** (3) An inquiry in the social ramifications of the entire juvenile delinquency process including labeling, detention, incarceration and tolerance. Pre- and post-adjudicatory issues are dealt with as well as a realistic perspective given to delinquency prevention strategies. Prereq: None.

**811V Special Problems in Criminal Justice** (3) A course devoted to an exploration and analysis of contemporary special problems in the broad spectrum of law enforcement and corrections. Prereq: CJ graduate student and permission of instructor.

**812V Criminal Justice Research Theory and Methodology** (3) Research theory and methodology in the social sciences as applicable to criminal justice; preparation of research designs, conceptual models; sampling procedures; and development of individual research papers. Prereq: Permission of instructor.

**814V Independent Study** (1-3) Individual projects in research, literature, review, or creative production which may or may not be an extension of course work. The work will be supervised and evaluated by departmental graduate faculty members. Prereq: Graduate hours in major department and permission of instructor.

**899V Master's Thesis** (1-6)

### Curriculum and Instruction

**886M Audio-Visual Materials in Education** (3) An introduction to the theory, history, organization, selection, and utilization of educational technology for instruction, emphasizing the place of educational media in the learning/teaching process. (F,S,Su)

**487/887M Preparation of Instructional Materials** (3) A basic course in the production of inexpensive audio-visual materials for the class-

room. Graphic, photographic and auditory materials are considered, including such instructional materials as slides, transparencies, still pictures, video presentations, and exhibits. Prereq: C&I 486/886M or permission.

**489/889M Instructional Television Program Planning and Production** (3) Students will be introduced to the role of television as applied to instruction. Production training and practice, TV lessons and series planning, and viewing and evaluation of lessons will be included in addition to production of a major project of practical significance and application. Prereq: Graduate Standing.

**800V Special Studies** (1-3) A series of intensive courses especially for teachers in service scheduled as regular seminars, or workshops, according to purpose. Prereq: Graduate standing and departmental permission.

**810V Research Project** (1-3) Individual or group study and analysis of specific problems in schools. Typical problems will be concerned with curriculum and instruction in areas which have a broad scope of application rather than a specific level. Prereq: Graduate standing and departmental permission.

**834V Methods and Techniques for Identification and Teaching Listening Skills in the Classroom** (3) The identification of listening problems and analysis of teaching methodology for improving listening skills in today's classroom. Practical methods of teaching listening as applied to specific learning problems in the areas of Elementary and Secondary Education will be emphasized. (A research paper presenting an indepth analysis of deterrents to listening in the classroom with suggested solutions will be completed by each participant. Prereq: Admission to Graduate College, College of Education and one year teaching experience. FED 801 - Introduction to Research.

**864V Field Studies and Instructional Strategies in Earth and Environmental Education** (4) The course will cause students to focus on field techniques in earth and environmental science which are necessary to interpret such phenomena which are operating in particular local and regional locations. Effects and influences of these phenomena as they apply to the teachers local area as well as the field techniques themselves will be structured into an instructional package by the students for future use in their classroom. Additional student fees may be assessed depending upon field trip planning. Prereq: Graduate standing and/or permission.

**890V Introduction to the Education of the Gifted** (3) The course involves the processes of defining and identifying characteristics of giftedness, analyzing associated problems, examining relevant research, and relating these to the overall education of gifted individuals. Prereq: Admission to Graduate College; one year teaching experience.

**891V Gifted Children and Youth** (3) Gifted Children and Youth is a course that seeks to bring into focus (1) research findings uniquely attributed to gifted children and youth, (2) assess their contribution to the overall develop-



ment of gifted children and youth, and (3) develop an awareness for flexibility as a means of meeting the divergent potentials of gifted children and youth. Prereq: Graduate Standing.

**892V Teaching the Gifted and Talented (4)** This course will focus upon the processes for developing a total sequential K-12 program for the gifted and talented, upon the special qualities of teachers of the gifted/talented, current research-proven teaching techniques/methodologies for working with the gifted and talented. Prereq: Admission to Graduate College and C&I 890V - Introduction to the Education of the Gifted or permission.

### Dramatic Arts

**801M-802M Advanced Projects in Dramatic Arts (1-3)** Special projects in dramatic arts supplementing regular courses; individual research projects; combined study and practicum. Prereq: 9 hours of dramatic arts in the general area to be studied and permission of the instructor.

**806M Children's Theatre Production (3)** Study of the methods of direction, design, acting and production of plays for children. Students plan a complete children's theatre production or become actively involved in an actual production. Prereq: Undergraduate major or minor in theatre or permission of the instructor.

**809M Advanced Oral Interpretation (3)** Theories and forms of interpretation from antiquity to the present. Preparation and presentation of a recital. Prereq: DA 109.

**831M-832M Acting: Historical Periods and Styles (Each 3)** The fundamental theories and practices of major styles of acting from ancient Greece to the present, including interpretation of outstanding dramatic literature. Prereq: DA 331-332 or permission of the instructor.

**844M Directing: Rehearsal and Performance (3)** A practicum in play selection, analysis, casting, directing and performing. Prereq: DA 101, 206, 263, 331 or permission of the instructor.

**850/851M Costume Design (Each 3)** An introduction to the fundamentals of stage costume design, including line, silhouette, movement, color, texture and theatricality. Emphasis on the visual presentation of designs, including considerable work with life drawing and rendering technique. Prereq: DA 206-207, 351; Art 110, 121.

**861M Scene Design (3)** Principles of composition perspective and color for the stage; the designer's approach to the play, production of ground plans, elevations and sketches. Prereq: DA 101, 206, 207, 261, 263.

**867M Stage and TV Lighting (3)** Characteristics and control of light and color and their application to the theatre and television; elementary electricity; lens systems; reflectors; lamps, control systems. Prereq: DA 101, 206, 207, 261.

**871M History of the Theatre to 1642 (3)** A historical survey of the theatre and its literature from its origins to 1642.

**872M History of the Theatre Since 1642 (3)** A historical survey of the theatre and its literature from 1642 to the present.

**873M Seminar in Theatre History (3)** Selected subjects in theatre history from ancient to modern times. The subject of the course will change each year, according to the interest of the students and the instructor. Prereq: Permission of the instructor.

**883M Seminar in Dramatic Literature (3)** A seminar for graduate and advanced undergraduate students which will explore selected subjects in dramatic literature in depth. Research papers and seminar reports will be required. The subject of the seminar will change from year to year. Prereq: Permission of the instructor.

**843V Seminar in Play Direction (3)** An indepth study of the principles of play direction. Prereq: Graduate standing and permission of instructor.

**865V Technical Theatre Problems (3)** Research and dialogue in the aesthetics and physical results of the relationships between dramatic form, theatre architecture, and scenic design and lighting from historical and contemporary points of view. Prereq: DA 101, 461, 467, 471, 472 or permission.

**890V Dramatic Arts Research Methods (3)** This course is designed to introduce graduate students in dramatic arts to basic techniques of scholarly research: gathering material, defining the problem, and preparing the manuscript. Prereq: Admission to graduate program in Dramatic Arts.

**891V Dramatic Theory and Criticism (3)** For advanced students of dramatic literature. Important dramatic theories and criticism from antiquity to the present. Prereq: DA 101 or permission of instructor.

**892V Seminar in Contemporary Theatre Aesthetics (3)** Research and dialogue in the aesthetic theories and movements in the contemporary theatre. Emphasis on the sources, background, and configuration of theatrical styles in this century. Prereq: DA 101, 471, 472 and English 252 or permission.

**898V Final Project (3)** Final project for Option II. Prereq: Admission to candidacy and the approval of the project proposal.

**899V Thesis (1-3)** Independent research project written under the supervision of an advisor.

### Economics

**418/818M Collective Bargaining (3)** A study of the issues, structures, and procedures involved in collective bargaining, and the settlement of disputes, as centered around the labor-management contract. Prereq: Econ 315. Fall in even-numbered years

**421/821M Competition and Monopoly in American Industry (3)** An appraisal of the role of competition and monopoly in the American economy; examination of market structures, conduct, and economic performance in a variety of industries. Prereq: Econ 320.

**423/823M Advanced Macro-Theory (3)** A study of the level of income, production, employment, and growth. Classical and Keynesian systems are contrasted with recent theoretical paths being explored. Prereq: Econ 322.

**426/826M Evolution of Economic Thought (3)** Tracing the evolution of economic thought from the medieval to the Keynesian period. Focus is on the interactions of institutional milieu, thought, and economic doctrine. Prereq: Econ 201 and 202. Fall in even-numbered years

**430/830M Quantitative Applications in Economics and Business (3)** The study and application of modern quantitative techniques to problem solving in economics and business. Prereq: Econ 201, 202 and D.S. 212 or permission of instructor.

**431/831M Public Utility Economics(3)** This course is designed to develop the theoretical and empirical basis for economic analysis of public utilities in general with specific emphasis on the gas, electric, and telephone industries. Prereq: Econ 320 and 322, DS 213 or permission of instructor.

**432/832M Energy Economics (3)** This course develops the economics of supply and demand for alternative energy sources including gas, oil, coal, and nuclear power. Various economic analytical techniques including specific energy modeling are discussed. Prereq: 320 and 322, DS 213, or permission of the instructor.

**433/833M Transportation Economics (3)** Study of relationship between transportation industry and the national economy and to the other business sector. Emphasis on government regulation, passenger and freight transport and urban transit and energy and environment issues. Prereq: Econ 202 and DS 213 or permission of the instructor.

**434/834M Environmental Economics (3)** This course develops the theoretical and empirical basis for economic analysis of man's impact on the quality of the environment in general with specific emphasis on water, air, and solid waste pollution problems. Prereq: Econ 320 or permission.

**445/845M Monetary Theory and Policy (3)** This course traces the development of monetary theory from the classical theory to current monetary theories. Beside the classical theory, the monetary theories of Keynes, the neo-Keynesians, and the neo-classical are examined and compared. The implications of each school for monetary policy are examined. Prereq: BF 345. Fall in odd-numbered years.

**466/866M International Economic Development (3)** Problems relating to early stages of economic development; investment priorities, mobilizing savings and policies and programs are studied. Prereq: Econ 201 and 202. Spring in even-numbered years

**801V Theory of Public Finance (3)** This course is designed to develop the theoretical basis of modern tax and expenditure processes at the frontier of knowledge. Prereq: Econ 320, Econ 322 and Econ 822V or permission of instructor.

**805V Economic Education (I) (3)** Open to any graduate student with no previous college work in economics who is teaching K-12. Not open to majors in economics. A study and examination of economic principles and how they can be related to the teacher's classroom presentation. This course is designed to furnish the public school teacher (K-12) With sufficient background and understanding to aid in the recognition of economic issues and the teaching of economic concepts and principles.

**806V Economic Education (3)** A continuation of Econ 805v. Prereq: Econ 805v.

**807V Economic Education Institute (3)** A study and an in-depth examination of selected economic topics and their relation to citizens, students, teachers, community and society. Prereq: Permission by director of the institute.

**816V Seminar in Labor Economics (3)** A study and investigation of current developments and issues involving labor institutions, labor relations, wage theories and employment policies. Prereq: Econ 320, 322 and three hours of credit in undergraduate labor economics or permission.

**820V Seminar in Micro Theory (3)** This course deals with the current state of microeconomic theory. The major topics covered are the theory of consumer behavior, theory of production and cost, theory of the firm, distribution theory, and welfare theory. Prereq: Econ 320 and 322 or permission.

**821V Managerial Economics (Same As BA 810v) (3)** Microeconomics for graduate students of business. Economic analysis of the business firm and its environments, with emphasis on market structure, production possibilities, and cost factors. Additional consideration is given to the theory of the firm under conditions of uncertainty. Prereq: Graduate standing in the college of business administration.

**822V Seminar in Macro Theory (3)** This course traces the development of macroeconomic theory from the classical point of view to current schools of thought. Keynesian, neo-Keynesian, and neo-classical models are developed. Prereq: Econ 320 and 322 or permission.

**823V Business Conditions Analysis (Same As BA 805V) (3)** This course is concerned with the statistical measurement and evaluation of general business conditions, and the adaption of business policies to changing business conditions. Emphasis is placed upon the practical application of statistical techniques of analysis to the business situation, within the framework of the aggregate economy. Prereq: Econ 800J or Econ 202.

**829V Research Methods in Economics and Business (3)** A study of current quantitative research techniques in business and economics. The student will become familiar with these techniques through text materials, journal studies and actual application. Prereq: D.S. 213 or its equivalent. Not open to students who have had BA 802V.

**830V Econometrics (3)** The study of the underlying assumptions, techniques, and applications

**806V Education and Society** (3) A study of the problems that modern society is confronted with and the role(s) That education has in helping society meet its challenges. Emphasis will be placed on the interface between the educational institution and the other major arenas forming the social fabric. Attention will be given to the mechanism of change.

**807V Alternative Strategies for Education** (3) An intensive study of (A) The impact of present school organization and practice on the student and (B) Current alternative proposals for educational innovation. A brief overview of both the historical development and theoretical assumptions underpinning the traditional school program will serve as a foundation from which to analyze and evaluate the merit and utility of contemporary strategies. Stress will be placed on the wide social implications of the models discussed.

**809V The Urban School** (3) An analysis of the societal and institutional processes and problems which have bearing upon the education of children in urban settings. A study of the urban school.

**810V Research Project** (1-3) Individual or group study and analysis of specific problems in schools.

**811V Conflict and Controversy in Urban Education** (3) A course designed for students who wish to keep abreast of contemporary issues which confront the educational institution and the teaching profession in an urban milieu. Topics are modified annually to reflect current educational issues. Class meetings are scheduled once per month, September through May.

**813VA Field Research Techniques in Urban Education** (3) The basic purpose of this course is to give students an opportunity to design and conduct field research within the urban educational milieu. Anthropological field research and naturalistic studies will be given emphasis. Students will be assisted in developing a field research design and will learn to gather and collate data. The course will culminate in the completion of an urban educational field study. Prereq: Graduate standing, FED 801, 833, or permission of instructor.

**833V Anthropology and Urban Education** (3) This course is designed to examine ways in which education, conceptualized as cultural transmission, contributes to and is influenced by continuities and changes in culture. An understanding and working knowledge of the culture concept is basic to the course. Interrelationships among ecological, social, and ideological forms in a subculture or society will be stressed. A limited anthropological field study is a requirement of the course. Prereq: FED 801v — Introduction to Research.

**835V Futurism and Education-Learning for Tomorrow/The Role of the Future in Education** (3) Designed to make use of the telephone in order to receive first-hand, immediate information from individual Futurists who have expertise in the field of Futures studies. Participants in the course can expect to have four capabilities upon completion. They are: (1) knowledge of the

field, (2) an awareness of the values system that determines how one looks at the future and how these values have been shaped in our culture, (3) a knowledge of the resources available for use to Futures students, and (4) a structure for beginning to deal individually with change, i.e., a forum for action.

**848V Practicum Internship** (2-8) An integration of community and school experiences with special reference to the disadvantaged pupil. Each semester focuses upon a curriculum area of the junior high and elementary schools — language arts, social studies, evaluation procedures, classroom control and curriculum are the foci.

**899 Thesis** (1-6) Independent research project written under the supervision of an adviser.

### Elementary and Early Childhood Education

**420/820M Literature for Children and Youth** (3) Selection, evaluation and guidance in various types of literature for early childhood and elementary school levels with emphasis on developing a broad acquaintance with authors and works, and including the development of a better understanding of the significance of literature in meeting children's needs and interest. (F,S,Su)

**427/827M Current Trends in Early Childhood Education** (3) This course is intended for persons with an interest in the area of early childhood education and its current status at the local, national and international levels. Prereq: Admission to teacher education, FED 205, 208, EEd 225, 58 hours, required grade point average.

**428/828M Patterns of Parental and School Care** (3) Exploration of contemporary patterns of home and school care of the young child from birth to six years.

**429/829M Learning Materials for Early Childhood Education** (3) Designed to promote the development of sound criteria for use in selecting appropriate learning materials for children from three to eight years of age. (F,S)

**800V Special Studies** (3) A series of intensive courses especially for teachers in service — scheduled as regular seminars, or workshops, according to purpose.

**802V Individualization of Instruction** (3) This course is designed for experienced teachers who desire to study the philosophy and various aspects of individualization of instruction in the elementary school. Prereq: Admission to Graduate College.

**810V Research Project** (1-3) Individual or group study and analysis of specific problems in schools.

**819V Diagnostic and Corrective Instruction** (3) A study of methods of diagnosing children's difficulties in all subject areas of the educational program of the elementary school and corrective techniques for overcoming such problems.

**820V Improvement of Instruction in Elementary Science** (3) This course is designed for graduate students in education who wish to become bet-

ter informed about the recently developed programs for elementary science; the methods, materials, philosophy, and emphasis in instruction, which are characteristic of these programs.

**821V Improvement of Instruction in Elementary Mathematics** (3) An examination of the philosophy, content, methods, and materials of modern mathematics programs for the elementary school. The needs and backgrounds of the students enrolled during the semester are given special consideration.

**822V Improvement of Instruction in Social Studies** (3) This course is intended for those professionals wishing to learn about the "New Social Studies." Curricula, instructional strategies and research appropriate to this topic will be explored.

**823V Improvement of Instruction in Language Arts** (3) This course includes a study of language and its use in the areas of speaking, writing, and listening in the elementary school curriculum. The research in these areas is studied and application is made to classroom practices and to the evaluation of curriculum materials. Prereq: Admission to Graduate College.

**840V Innovations and Trends in Elementary Education** (3) Designed as an advanced study for the purpose of exploring current trends and developments within the various subject matter areas of the elementary school. Prereq: FED 801v.

**843V Introduction to Curriculum Planning-Elementary** (3) A study of the history, philosophy and current developments in the elementary curriculum with an emphasis on appropriate content and methods of curriculum reorganization. Prereq: FED 801v.

**844V Seminar in Elementary Education** (3) A study of educational problems as they relate to the elementary school, to be taken in the last nine hours in the program for the master of science degree. Prereq: FED 801v.

**845V Seminar in Supervision of Student Teachers-Elementary** (3) Designed for experienced teachers who are or may be serving as cooperating teachers, and who desire to study student teaching, its aims, procedures, objectives, trends and developments. Prereq: 2 years of teaching experience.

**850V Workshop: Newspaper in the Classroom** (3) A course designed to assist teachers in planning to use the newspaper as an aid to classroom instruction. The course content includes the importance of the newspaper, methods for using the newspaper, activities suitable for classroom use, and a study of available curricular materials.

**870V Practicum in Elementary and Early Childhood Education** (3-6) This practicum is designed for selected graduate students who are participating in the graduate program in elementary and early childhood education. The six-hour practicum experience will consist of one semester of full-time teaching in an elementary school under the supervision of graduate faculty of the department of elementary and early childhood education. (Half-time teaching

will grant 3 hours of credit.) Prereq: Permission of adviser.

**871V Advanced Practicum in Elementary Education** (3) Advanced practicum will demand an increased responsibility of the student for one semester and a concomitant increase in variety of experiences, based upon his individual needs. EEd 871v is a continuation and refinement of the quality of teaching based upon his performance during his first practicum experience (EEd 870v). Prereq: Permission of adviser and satisfactory completion of EEd 870v, practicum in elementary education.

**899 Thesis** (1-6) Independent research project required of all students taking master of arts degree. See major adviser.

### English

**415/815M Contemporary French and German Novel** (3) Comparative study of selected contemporary French and German novels in translation. Prereq: Permission of the instructor. (Same as French 415/815m and German 415/815m).

**417/817M Contemporary French and German Drama** (3) Comparative study of selected contemporary French and German plays. Conducted in English with English translations. (Same as French and German 417/817m). Prereq: Permission of the instructor.

**818M Mexican American Literature** (3) A study of representative works of Mexican American, Spanish American, and American writers, along with their cultured and historical antecedents. Prereq: Permission. (Same as Spanish 418/818M)

**832M Middle English Literature** (3) A survey of the principal writings in English, excluding those of Chaucer, from 1100 to 1500.

**433/833M Sixteenth Century Literature** (3) Poetry and prose of the English renaissance, from its continental origins to the end of the Elizabethan age.

**834M Chaucer** (3) A literary and linguistic study of the works of Chaucer, with emphasis on the Canterbury Tales.

**440/840M The Age of Pope and Swift** (3) Poetry, prose (exclusive of the novel), and drama of England during the Restoration and the first half of the eighteenth century, with emphasis on Pope and Swift.

**441/841M The Age of Johnson** (3) Poetry, prose (exclusive of the novel), and drama of England during the second half of the eighteenth century, with emphasis on Boswell and Johnson.

**448/848M Seventeenth Century Literature** (3) A study of the English poetry and prose from 1600 to 1660 with emphasis on Milton.

**850M Shakespeare's Contemporaries** (3) A study of the development of the English drama, exclusive of Shakespeare, from the beginning to 1642.

**858M Introduction to Linguistics** (3) An introduction to the concepts and methodology of the scientific study of language; includes language

description, history, theory, variation, and acquisition as well as semantics, lexicography, and foreign language learning.

**860M Shakespeare** (3) A critical study of selected comedies, histories and tragedies by Shakespeare.

**864M The Eighteenth Century English Novel** (3) Readings in the English novel from Daniel DeFoe to Jane Austen.

**465/865M The Nineteenth Century English Novel** (3) Readings in the English novel from Jane Austen to Thomas Hardy.

**466/866M The Twentieth-Century English Novel** (3) Readings in the English novel from Joseph Conrad to the present.

**868M History of English** (3) A study of the structural development of the English language. Prereq: English 458/858M or permission.

**875M Rhetoric** (3) A study of contemporary theories of invention, form, and style and their application in written discourse, with special emphasis on such contemporary rhetoricians as Kenneth Burke, Ross Winterowd, Edward P.J. Corbett, Francis Christensen, and others. Prereq: Eng. 458/858M.

**878M Structure of English** (3) A study of the phonology, morphology, and syntax of English as seen by the traditional, structural, and transformational-generative theories of language description. Prereq: English 458/858M or permission.

**881M Literature of The Romantic Period** (3) Poetry and prose (excluding the novel) of England from 1798 to 1830.

**482/882M Literature of The Victorian Period** (3) English poetry and prose (excluding the novel) from 1830 to 1900.

**885M Twentieth-century English Literature** (3) Readings in English literature from Shaw to Yeats to the present.

**486/886M Modern French Women Authors** (3) A comparative treatment of works by women in contemporary and recent French literature; the feminine perspective on society, politics and human values as expressed in those works. Conducted in English with readings in French or English. (Same as French 486/886M). Prereq: Permission of instructor.

**888M Linguistic Variation** (3) The methods and results of linguistic geography, sociological dialectology, and modern variation studies with emphasis on American English in the community and the classroom. Prereq: English 458/858M or permission.

**891M Contemporary Poetry of England and America** (3) A study of the English and American poetry, the important ideas it contains, and the relevant critical theory of the contemporary period.

**893M American Poetry** (3) The practice and theory of American poetry from the colonial period up to the contemporary period.

**894M Studies in Language and Literature** (3) Specific subjects (when offered) appear in class schedules. Complete syllabi available in English Department.

**495/895M Contemporary Literature: Major Figures and Major Movements** (3) A critical study of selected major literary figures or major literary movements which have appeared since World War II.

**496/896M Seminar: Linguistics** (3) A seminar in a selected sub-field or problem area of linguistics such as sociolinguistics, generative semantics, applied linguistics, descriptive linguistics, teaching English as a foreign language, etc. Prereq: English 458/858M and permission of the instructor.

**497/897M The American Novel** (3) A critical and historical study of the work of twelve or more significant American novelists of the nineteenth and twentieth centuries.

**898M The American Drama** (3) A study of the American drama and its theatrical background from the beginning to the present day, with concentration on the drama of the twentieth century.

**801V Seminar: Introduction to Literary Research** (3) A survey of literary research, history, and interpretation, with a primary emphasis on methods of scholarship currently useful to the study of English and American literature. Prereq: Graduate standing or permission of the chairman of the department of English.

**804V Seminar: Literary Criticism** (3) Literary criticism from the beginnings to the present, with emphasis on the criticism of ancient Greece and Rome, nineteenth century England and twentieth century America. Prereq: Graduate standing or permission of the chairman of the department of English.

**806V Seminar: American Literature** (3) Individual research and group discussion relating to a general topic in American literature. (The course may be repeated for additional credits under different topics.) Prereq: Graduate standing or permission of the chairman of the department of English.

**808V Seminar in The English Renaissance** (3) A seminar in a few significant literary figures of the English renaissance. Prereq: Graduate standing or permission of the chairman of the department of English.

**809V Seminar: The Restoration and Early 18th Century** (3) A detailed study of selected English authors and works of the Restoration and the Augustan Age (1660-1750). Prereq: Graduate standing.

**810V Seminar: Victorian Literature** (3) An intensive study of selected Victorian authors and their works. Prereq: Graduate standing or permission by the chairman of the department of English.

**813V Topical Seminar in English** (3) An intensive study of one or more authors, genres, literary movements or literary problems not covered by regular period or genre courses. (This course may be repeated for additional credits under different topics.) Prereq: Graduate standing or permission of the instructor.

**814V Seminar: John Milton** (3) Intensive seminar in the major works of John Milton and investigation of specific critical and scholarly

problems. Prereq: Graduate standing or permission of the instructor.

**820V Seminar in Middle English Literature** (3) A study of selected writings in middle English. Prereq: Graduate standing and one course in middle English language or writings.

**825V Seminar in Chaucer** (3) A study of selected works of Geoffrey Chaucer. Prereq: Graduate standing and one course in middle English language or writings.

**898V Independent Study** (3) Specially planned readings in a well-defined field of literature or language, carried out under the supervision of a member of the graduate faculty. Designed primarily for the student who has need of work not currently available in the departmental offerings and who has demonstrated capability of working independently. May be repeated for credit once. Prereq: Permission of the instructor, admission to candidacy, and no incompletes outstanding.

**899 Thesis** (3-6) Independent research project written under the supervision of an adviser. Prereq: Graduate standing.

**912V Seminar: Shakespeare** (3) Critical analysis of ten tragedies or ten comedies of Shakespeare. Prereq: Graduate standing.

**915V English Literature 1750-1830** (3) Studies in the transitions between English literature of the age of Johnson and that of the age of Wordsworth. Prereq: Graduate standing.

## Foreign Languages and Literature

### French

**415/815M Contemporary French and German Novel** (3) Comparative study of selected contemporary French and German novels. Conducted in English with English translations. Additional readings in French for French students. Prereq: Permission of the instructor. (Same as German 415/815M and English 415/815M).

**417/817M Contemporary French and German Drama** (3) Comparative study of selected contemporary French and German plays. Conducted in English with English translations. Additional readings in French for French students. Prereq: Permission of the instructor. (Same as German 417/817M and English 417/817M).

**458/858M Introduction to Linguistics** (3) An introduction to the concepts and methodology of the scientific study of language; includes language description, history, theory, variation, and acquisition as well as semantics, lexicography, and foreign language learning. Prereq: Junior standing or permission; Graduate standing.

**486/886M Modern French Women Authors** (3) A comparative treatment of works by women in contemporary and recent French literature; the feminine perspective on society, politics and human values as expressed in those works. Conducted in English with readings in French or English. (Same as English 486/886M) Prereq: Permission of instructor.

**490/890M Independent Study** (1-3) Guided independent study and research under tutorial su-

pervision. May be repeated with different topic but not in same semester for maximum of six semester hours total. Prereq: Permission of instructor.

**496/896M Pro-Seminar** (1-3) Detailed study of narrower phases of literature, language, or culture. Prereq: Permission of the instructor.

### German

**410/810M Introduction to Germanic Folklore** (3) An intensive familiarization of the student with the broad spectrum of folklore in modern and ancient societies of the indo-germanic continuum. Definition of folklore as an academic field and the delineation of the material studied by the student of folklore. Introduction to the folklorist's methodology in collecting, archiving, and research. To be taught in English. Prereq: For 410, at least three credit hours in any one of the following areas: Anthropology, art, music, literature, psychology, sociology, or history. For 810m, graduate standing and permission.

**415/815M Contemporary French and German Novel** (3) Comparative study of selected contemporary French and German novels. Conducted in English with English translations. Additional readings in German for German students. Prereq: Permission of the instructor. (Same as French 415/815m and English 415/815m).

**417/817M Contemporary French and German Drama** (3) Comparative study of selected contemporary French and German plays. Conducted in English with English translations. Additional readings in German for German students. Prereq: Permission of the instructor. (Same as French 417/817M and English 417/817M).

**431/831M German Literature of The 19th Century** (3) Survey of the literature of the nineteenth century from Romanticism to Naturalism. Prereq: For 431, German 303 or permission of the instructor. For 831m, German 303.

**432/832M German Literature of The 20th Century** (3) Survey of literature of the twentieth century from Expressionism to the literature after World War II. Prereq: For 432, German 303 or permission of the instructor. For 832m, German 303.

**438/838M German Civilization From The 18th Century to The Present** (3) Detailed analysis of German art, architecture, literature, music, and philosophy. The influence of the sciences and of technology upon modern German civilization and culture. Prereq: For 438, permission of the instructor. For 838m, graduate standing and permission of the instructor.

**440/840M German Novelle** (3) Survey of the German short story, its historical origin, characteristics. Prereq: 303 or permission of instructor.

**444/844M German Drama** (3) History of drama development, study of several of the more important dramas. Prereq: 303 or permission of instructor.

**449/849M German Literature of The Seventeenth Century** (3) The principal dramatic, epic and lyric works of 17th century German literature. Prereq: German 303 or permission.

**450/850M German Literature of The Eighteenth Century** (3) A study of representative authors of the enlightenment, storm and stress, and German classicism: Lessing, Herder, Schiller, and Goethe. Prereq: Permission of instructor.

**458/858M Introduction to Linguistics** (3) An introduction to the concepts and methodology of the scientific study of language; includes language description, history, theory, variation, and acquisition as well as semantics, lexicography, and foreign language teaching. Prereq: Junior standing or permission; graduate standing.

**459/859M Bibliography and Methodology** (1-2) An introduction to the basic bibliography and methodology of German literature and language. Prereq: Permission of instructor.

**490/890M Independent Study** (1-3) Guided independent study and research under tutorial supervision. May be repeated with different topic but not in same semester for maximum of six semester hours total. Prereq: Permission of instructor.

**496/896M Pro-Seminar** (1-3) A detailed study of narrower phases of literature, language, or culture. Prereq: Permission of the instructor.

### Spanish

**410/810M Theater of The Golden Age** (3) Foremost Spanish dramatists and plays of the sixteenth and seventeenth centuries, with emphasis on Lope de Vega, Tirso di Molina, and Calderon de la Barca. Prereq: For 410, Spanish 317 or permission of the instructor.

**411/811M Novel of The Golden Age** (3) Study of the prose masterpieces of the sixteenth and seventeenth centuries, including such works as *Lazarillo de Tormes*, *La Celestina*, and *Don Quixote*. Prereq: For 411, Spanish 317 or permission of the instructor.

**416/816M Spanish American Literature of The Twentieth Century** (3) Critical and analytical study of the foremost Spanish American dramatists, poets, and essayists from modernism to the present. Prereq: Spanish 322 or permission of the instructor.

**418/818M Mexican American Literature** (3) In English. A study of the representative works of Mexican American, Spanish American, and American writers, along with their cultural and historical antecedents. Does not apply toward foreign language requirements. Prereq: Permission of the instructor. (Same as English 418/818M.)

**420/820M Spanish American Novel** (3) Study of representative novels and novelists of the nineteenth and twentieth centuries, with emphasis on contemporary authors. Prereq: Spanish 322 or permission of the instructor.

**424/824M Generation of 1898** (3) Examination of the ideology, philosophy, and literary techniques of Unamuno, Martinez Ruiz, Valle-

inclin, Baroja, and Antonio Machado. Prereq: Spanish 318 or permission of the instructor.

**435/835M Spanish American Short Story** (3) Representative stories of the nineteenth and twentieth centuries, from Romanticism to current production. Prereq: Spanish 321 and 322 or permission of the instructor.

**455/855M Modern Drama of Spain** (3) Ideologies, techniques, trends, and influences of the major Spanish dramatists of the nineteenth and twentieth centuries. Prereq: Spanish 318 or permission of the instructor.

**456/856M Modern Novel of Spain** (3) Analytical study of the representative Spanish novelists of the nineteenth and twentieth centuries from P. A. de Alarcon to Cela. Prereq: Spanish 318 or permission of the instructor.

**458/858M Introduction to Linguistics** (3) An introduction to the concepts and methodology of the scientific study of language; includes language description, history, theory, variation, and acquisition as well as semantics, lexicography, and foreign language teaching. Prereq: For 458, junior standing or permission of the instructor.

**490/890M Independent Study** (1-3) Guided independent study and research under tutorial supervision. May be repeated with different topic but not in same semester for maximum of six semester hours total. Prereq: Permission of instructor.

**496/896M Pro-Seminar** (1-3) A detailed study of narrower phases of literature, language, or culture. Prereq: Permission of the instructor.

### General Engineering

**452/852M Experimental Stress Analysis I** (3) Investigation of the basic theories and techniques associated with the analysis of stress using mechanical strain gages, electric strain gages, brittle lacquer, photoelasticity, and membrane analogy. Prereq: GE 325.

**460/860M Vibration Theory and Applications** (3) Free and forced vibrations of mechanical and structural systems with various types of damping. Vibration isolation. Harmonic and nonharmonic disturbances. Shock spectrums. Rayleigh's method for beams. Lagrange's equation. Design of vibration absorbers. Theory of vibration measuring instruments. Experimental methods and techniques. Prereq: GE 373, Math 325.

**440/880M Digital Computer Methods in Engineering Analysis** (3) Computers and programming. Roots of algebraic and transcendental equations. Simultaneous algebraic equations. Numerical integration and differentiation. Ordinary initial-value problems. Error analysis. Ordinary boundary value problems. Two-dimensional problems. Digital computer simulation by CSMP. Emphasis is placed on the application of numerical methods to the solution of engineering problems. Prereq: Math 235; GE 112.

**493/893M Advanced Mechanics of Materials** (3) Stresses and strains at a point; theories of failure; pressure vessels and spinning disks; tor-

sion, bending and shear; elastic energy methods. Prereq: GE 325, Math 235.

**494/894M Advanced Dynamics** (3) Euler's equations of motion, gyroscopic motion, theory of vibrations; Lagrange's equation and Hamilton's principle; motion of a variable mass; central force problems. Prereq: GE 373, Math 235.

**495/895M Advanced Fluid Mechanics** (3) Ideal and real fluid flow; Eulerian and Lagrangian equations of motion; potential theory; conformal transformations; turbulent flow; boundary layer theory. Prereq: GE 318, Math 235.

**804V Experimental Stress Analysis** (3) Investigation of the basic theories and techniques associated with the analysis of stress using mechanical strain gages, lacquer, photo-elasticity and membrane analogy. Prereq: GE 493 or permission.

**810V Applied Elasticity** (3) Stresses, strains, hook's law and displacements, formulation of problems in elasticity, various methods of solution of two and three dimensional problems, thermal stresses, comparison with approximate solutions. Prereq: GE 493, CE 343, Math 235.

**812V Theory of Plates and Shells** (3-6) Plates: Governing equations for the bending and stretching of thin plates with small deformations; large deflection theory of thin plates. Shells: Membrane theory of barrel shells, domes, translation shells of double curvature; bending theory of domes, cylindrical shells; general theory of thin shells; analysis of thin folded plates. Prereq: GE 493, Math 235.

**813V Theory of Elastic Stability** (3) Beam columns, elastic buckling of bars and frames, inelastic buckling of bars torsional buckling, lateral buckling of beams, buckling of rings, curved bars and arches. Prereq: GE 493, Math 235.

**818V Similitude** (3) The principles and illustrations of dimensional methods, similarity and model testing, distorted and dissimilar models. Applications to structures, fluid flow, heat transmission, electromagnetic theory, acoustics and chemical engineering, differential equations and similarity. Prereq: Permission.

**819V Engineering Vibrations** (3) Systems with one degree of freedom; systems with non-linear and variable spring characteristics; systems with several degrees of freedom; vibrations of elastic bodies. Prereq: Math 235.

### Geography and Geology

#### 401/801M Conservation of Natural Resources

(3) A study of physical, cultural, and human resources of nations with emphasis on the United States. Includes the history of conservation in the U.S., the philosophy behind the movement, current conservation practices and problems, and the direction in which resource use and conservation is moving. Prereq: 3 hours of Geog., senior or graduate standing.

**403/803M Computer Mapping and Data Analysis** (3) Computer techniques in mapping and analyzing areal data. Emphasis is placed upon address systems as input to various mapping

and statistical programs. Prereq: Geog. 353, and a course in introductory statistics.

**410/810M Plant Geography** (3) A study of the worldwide geographic distribution of major vegetation types and the ecological and physiological factors that determine their location. Special attention to North America is included. Prereq: Biol. 102 and Botany 145, or permission. (Same as Biol. 410/810m)

**412/812M Urban Geography** (3) A geography of the city from the viewpoint of history, site, and situation, external relations, internal relations, and the comparative study of cities. Prereq: Junior standing. (Same as Econ 412/812m, and Soc 412/812m).

**413/813M Geography of Manufacturing** (3) A course which discusses methods of measurement and classification, as well as the function of manufacturing; major world manufacturing regions and industry analysis; location criteria and theory in the U.S.; and local community patterns. Prereq: Geog. 313 or Econ 201 and 202. Junior standing. (Same as Econ 413/813m).

**814M Urban Sociology** (3) Examines urban theoretical perspectives, urbanization processes, the diversity of metropolitan communities, urban stratification, metropolitan growth, urban neighborhoods, community power and urban policy and planning. (Same as Soc. 414/814M). Prereq: Graduate standing and permission of instructor.

**423/823M Great Plains and Nebraska** (3) A study of the major physical and cultural attributes of the region. Emphasizes settlement history and the role of agriculture on the regional economy. Prereq: For 423, 6 hours of Geography and Junior standing. For 823M, Graduate standing.

**425/825M Landform Studies I (Geomorphology I)** (3) Primarily a lecture course with quantitative work included. Emphasis on understanding the theoretical aspects of processes and conditioning factors which produce landforms. Should be regarded as first half of a two-semester landform studies course. Evolution of slopes is emphasized. Prereq: Geog. 107 or 117.

**426/826M Landform Studies II (Geomorphology II)** (3) Primarily a lecture and laboratory course. Emphasis on methodology and modern process-oriented geomorphology. Should be taken as second half of a two-semester landform studies course. Prereq: For 426, Geog. 107, or 117. Junior standing. For 826m, Geog. 107 or 117.

**432/832M Climatology** (3) A study of climatic processes and their effect on shaping the cultural and physical landscape. Emphasis on physical and applied aspects of the field. Prereq: GEOG 106 or 351, and Graduate Standing.

**453/853M Historical Geography of The United States** (3) An analysis of historical circumstances behind contemporary patterns of American cultural geography. Prereq: Graduate standing and Hist. 111 and 112 or GEOG 102 or 333.

**463/863M Environmental Remote Sensing (3)** Analysis of various sensor systems ranging from conventional low-altitude aerial photography through imagery obtained from earth-orbital platforms such as "Skylab" and "Landsat" with emphasis on practical application. Provides basic tools for environmental evaluation. Prereq: Graduate standing.

**490/890M Urbanization in Developing Areas (3)** The functions and morphology of various types of cities found in presently developing areas of the world. Emphasis will be upon contrasting the cities of the developed and developing areas. Prereq: For 490, 6 hours of geog., or junior standing and urban geog. For 890m, 6 hours of geog. and Urban Geog. 812m.

**801V Geography Concepts: History and Philosophy (3)** Introduction to history of geography. Emphasis on significant ideas, concepts, methodologies, and philosophies in geography from classical Greeks to present. Prereq: Permission.

**802V Geography Concepts: Quantitative Methods (3)** The understanding and appreciation of quantitative techniques in geography. Emphasis is placed on sampling theory and design, graph theory and spatial statistics. Prereq: Permission.

**804V Seminar in Educational Geography (3)** A survey of methods, instruction aids and goals for teaching geography. Designed to aid the teacher in the improvement of geographic instruction in the elementary and secondary schools as well as in higher education. Prereq: Permission.

**821V Cultural Geography (3)** The philosophical basis of human and cultural geography; interpretation of the cultural landscape. Prereq: Permission.

**831V Geography of Agriculture (3)** A systematic study of the characteristics of agriculture on a world wide basis. Prereq: Permission and Geog. 313 or Econ 313.

**851V Advanced Geomorphology (3)** A seminar and lecture course on the current concepts and literature in the field of landform studies. Discussion will emphasize classic ideas as well as the modern concepts of climatic, dynamic, and quantitative geomorphology. Some study of quaternary chronology will be necessary. Several optional Saturday field trips. Prereq: Geog 825M or 826M and 117, or 107. Permission.

**858V Soils (3)** An examination of the older geographical concepts of the distribution and morphology of soil and the new works concerned with soil forms on a regional, rather than zonal, basis. Prereq: Geog 106 or 107. Graduate, permission.

**860V Independent Research (1-3)** (May be repeated to a maximum of 3 hours). Advanced study in the form of a major paper to give the senior or graduate student knowledge of and experience in using government documents, professional and primary materials, concerned with a region. Must be under the supervision of the instructor who is particularly qualified for the topic chosen. Paper will be presented to either the graduate general seminar or the local chapter of GTU. national honorary geography fra-

ternity. Prereq: Permission of department chairman.

**861V Field Geography (3)** A systematic discussion of techniques for studying and analyzing terrain features, land use characteristics, and the nature of their patterns as a part of the whole geographic environment. Prereq: Permission.

**864V Remote Sensing: Advance Concepts and Applications (3)** Is designed for the graduate student desiring to do advanced work in remote sensing. The emphasis of the course is on non-photographic sensors and especially digital processing of multispectral satellite data. The applications are multi-disciplinary in nature. Prereq: GEO 463/863M and Graduate Standing.

**865V Land Use (3)** A field course designed to understand, by actual field investigation, land use patterns in urban areas through the comprehension of social, physical, and economic factors which tend to shape the land use of a given place. The major emphasis will be placed upon field investigations in the urban area, with the functional region receiving the major consideration. Prereq: Geog. 412.

**867V Cartographic Methods (3)** Teaches the student proper use of drawing instruments, effective map layout and exposure to the latest cartographic techniques, leading to a high level of competence in the design and interpretation of maps.

**871V Population Seminar (3)** The significance of differences from place to place in the number, kind, and qualities of human inhabitants and changes through time. Prereq: Permission. (Same as Soc. 871v)

**880V Internship in Environmental/Regional Planning (1-6)** (repeatable up to 6 hours). Internship with local planning agencies enabling students to gain knowledge and experience in comprehensive regional or environmental planning. Prereq: Permission, and 12 hours graduate credit in geography.

**881V Urban Seminar in Metropolitan Planning and Development (3)** An overview of the present status of planning in metropolitan areas with special emphasis on structure of planning departments, comprehensive plans, and problems of annexation. Prereq: Permission. (Same as Econ. 881v and P.A. 881v)

**883V/884V Interdisciplinary Seminar On The Urban Community (2-6)** An interdisciplinary course on the metropolitan community in which various departmental and college offerings concerned with urban problems are put on broad interrelated focus. Prereq: Undergraduate major in one of the social sciences plus 6 hours of graduate work in one of the social sciences. (Also listed under economics, political science, and sociology)

**899 Thesis (1-6)** Independent research project written under the supervision of an adviser.

**941 Seminar in Problems in Political Geography (3)** Case studies in land boundary problems. A review of important studies in political geography. Prereq: Permission and Geog. 393.

**955 Topics in Regional Geomorphology of North America (3)** A seminar on the landforms of North America from the perspective of a particular geomorphic process viewed on a regional basis rather than the general geomorphology of a specific region. Prereq: Permission.

**975 Seminar in Regional Geography (3-6)** Maximum 3 per semester, except in foreign country field work.

**991-992 General Seminar (0)** Required. Review of current research by geographers including national and international associations and initial thesis proposal.

## Gerontology

**410/810M Educational Gerontology (3)** An introduction to the field of education for and about the aging. The institutions and processes of education will be analyzed to determine their relationships and value to persons who are now old and those who are aging.

**411/811M Applied Social Gerontology (3)** An introduction to social gerontology with a special emphasis upon the effects of aging on social institutions and social participation and on examination of practice-oriented implications. Prereq: Nine hours of sociology. (Same as Sociology 411)

**435/835M Issues in Aging (3)** This course is intended for students in Gerontology and in other fields who are interested in a humanistic approach to understanding significant issues which affect the lives of older people. Prereq: Graduate standing.

**446/846M Aging and Human Behavior (3)** The course examines different kinds of behavior and the changes which may occur in older age. Applications of various personality theories concerning aging will be considered. Prereq: 3 hrs. gerontology or permission.

**448/848M Comparative Gerontology (3)** The study of aging around the world by a comparative method in a cross-cultural and cross-national framework. An explanation of some practical experiences and developments in Europe, Asia, and Africa will be examined. Prereq: Three hours gerontology or permission.

**850M Administrative and Legal Concerns of the Elderly (3)** Consideration of the legal concerns which are likely to arise as people age. Includes introduction to American legal system, and emphasis on underlying legal concepts and issues of special importance to older persons. Prereq: Gerontology 411/811, Applied Social Gerontology.

**455/855M Health Aspects of Aging (3)** The study of psychological, sociological and physiological factors that influence the health of the aging, with particular emphasis given to biological changes that have implications for disease and health disorders. (Same as HED 455)

**867M Programs and Services for the Aging (3)** This course is provided to give the student an historical overview of programs for the elderly; examine the national policy process as it relates to the older American; and review the principles and practices relative to the existing na-

tional programs for the aged. Prereq: 3 hrs. Gerontology.

**469/869M Working With Minority Elderly (3)** This course is an interdisciplinary one, designed to provide the student with knowledge of the differing status, attitudes and experiences of the elderly within four major minority groups and to examine various service systems and practice models in terms of their relevance and effectiveness in meeting needs of the minority elderly. (Same as Social Work 869M.) Prereq: Senior or graduate standing in Gerontology or Social Work or permission of the instructor.

**492/892M Special Studies in Gerontology (1-3)** Special studies designed around the interests and needs of the individual student in such areas as the psychology, sociology, economics, or politics of aging, as well as operation of various service systems. The studies may be either a literature review project or a field project in which experience is gained in the community identifying and analyzing needs and services related to older people. Prereq: Six hours Gerontology or permission.

**494/894M Practicum (0-6)** This course provides the opportunity to students to share field experiences; to obtain guidance concerning various relationships with agency, staff, and clients; and to develop a broadly based perspective of the field of aging. Prereq: Nine hours of Gerontology and permission.

**498/898M Counseling Skills in Gerontology (3)** This course is intended to help develop basic counseling skills for application in gerontology. Prereq: Permission of instructor.

**812V Seminar in Social Gerontology (3)** An interdisciplinary development of the impact of aging upon individuals and society, including the subsequent reaction of individuals and society to aging with particular emphasis given to changes during the later half of the life cycle (45 years). Both theoretical and programmatic implications of aging research are considered. (Same as Sociology 812V) Prereq: 9 hrs. of gerontology and permission.

**828V Counseling Older Adults (2)** Designed to provide basic information counselors need for work with older adults. For Counseling and Guidance majors not specializing in Gerontology. Prereq: Counseling 890M, Principles of Guidance.

**873V Thanatology-Study of Death (3 sm hours)** An examination of theory and research relevant to interaction with the older, terminally ill person, focusing on communication with widows and other survivors as well as the dying patient. Prereq: Graduate standing, 3 hours Gerontology, permission.

**896V Directed Readings in Counseling and Gerontology (1-3)** A study of recent and current literature on counseling with older people. Prereq: Gero 898M (or Couns898M), Counseling major, or permission.

**897V Personal Values and Aging (1)** Course designed to increase students' self-awareness of personal values and feelings related to aging and the aged.

**948 Geropsychology (3)** To become familiar with the psychology of aging from a research perspective. The focus will be on psychological research in the middle years and in later years. (Same as Psychology 948) Prereq: 12 hours of psychology and/or gerontology or permission.

## Health, Physical Education and Recreation

### General HPER

**800V Special Studies (1-3)** A series of intensive courses — scheduled as regular seminars, or workshops, according to purpose. Prereq: Permission of department.

**803V Research in Health, Physical Education and Recreation (3)** An introduction to the nature and significance of research in HPER. Attention will be given to reading, evaluating, conducting, and applying research results to classroom situations. Basic statistical techniques will be covered. Prereq: Graduate student in HPER.

**810V Research Project (1-3)** Individual or group study and analysis of specific problems in health, physical education or recreation. Prereq: Permission of instructor.

**899 Thesis (1-6)** Independent research project written under the supervision of an adviser. Prereq: Permission.

### Health Education

**455/855M Health Aspects of Aging (3)** The study of psychological, sociological and physiological factors that influence the health of the aging; with particular emphasis given to biological changes that have implications for disease and health disorders. Prereq: For 455, six hours of health of permission of the instructor. (S)

**801V Elementary School Health Education: Selected Content Areas (3)** This course is designed to provide the student with an in-depth study of selected content areas in health education. These selected content areas include: Drug education, nutrition, dental health, human sexuality, and safety education. In addition an abbreviated overview of health education in the elementary schools will be provided. Prereq: Graduate standing.

**825V Human Sexuality (3)** This graduate level course is aimed at providing an overview of the current scientific knowledge concerning human sexuality. The course is designed to be interdisciplinary in nature, providing the biological, behavioral and cultural aspects of human sexuality. Priority will be given to students from the helping professions. Qualified students from other related disciplines must have permission of the instructor.

**833V Alcohol Education for School Personnel (3)** A study of the problems associated with alcohol use and misuse. The patterns and trends of use, theories of dependence, pharmacological aspects and health consequences are explored. Emphasis is given concerning the identification of students with alcohol related problems and the role of the school in alcohol prevention, ed-

ucation, intervention and referral. This course is designed primarily for public school personnel.

**496/896M Topics in Sports Medicine (3)** This course covers selected topics regarding the science and medicine of sports participation. Some areas to be covered include pharmacologic aspects, orthopedic aspects, prevention and rehabilitation, pediatric aspects, legal aspects and aging. Prereq: Basic courses in human anatomy, physiology, kinesiology, exercise physiology, psychology and growth and development or special permission of the instructor.

### Physical Education

**822V Problems and Issues in Physical Education (3)** An examination of current problems and issues in college, secondary, and elementary physical education. Special emphasis is given to problems that relate to the general aims and purposes of physical education.

**824V Sport in American Culture (3)** The course is a study of sport and the ways in which it influences people in America.

**826V Supervision of Physical Education (3)** Concepts, principles, organization, and techniques of supervision for use by supervisors and teachers in the construction and supervision of programs in physical education.

**828V Curriculum in Physical Education (3)** A study of the foundations for curriculum development and related educational problems. Special consideration is given to curriculum change, curriculum patterns, and programs in physical education.

**830V Analysis of Research and Literature in Human Movement (3)** Survey of research and literature in human movement for the purpose of orienting the student to possible areas of research and developing an understanding and appreciation of writings in the field.

**837V Improvement of Instruction in Physical Education (3)** An examination and discussion of current programs, content, methods, and materials within physical education. Emphasized is the improvement of each individual's teaching in the physical education setting.

**840V Motor Learning and Performance (3)** A study of conditions and factors which influence the learning and performance of motor skills with particular attention being given to those skills having relevance for the teacher of physical education.

**845V Kinesiological Analysis of Motor Skills (3)** An investigation of the biomechanical basis of motor performance. Includes a descriptive analysis of sports skills and fundamental movement patterns and an examination of techniques for collecting biomechanical data.

**850M Behavioral Aspects of Coaching Athletes (3)** This course is designed to provide the graduate physical education student with an overview of the behavioral aspects of coaching athletes. The course will cover coaching as it affects skills, abilities, and personality of the elementary school, junior high school, high school, college, and post college athletes. Such personal factors as body build, intellectual attributes,

emotions, competition, cooperation, morale, sportsmanship, and leadership will be discussed in relation to the athlete. Practice factors that influence the athlete will be studied from a coaching standpoint. Research in sport will be reviewed; the coach himself will be analyzed. Prereq: Graduate standing.

**493/893M Measurement and Evaluation of Physical Education (3)** Analysis of tests, measurement apparatus and testing procedures used in physical education. Includes a review of basic descriptive statistics. Practical experience in test administration is provided. Prereq: For 493, junior standing and physical education 243. (S,Su)

**494/894M Physiology of Exercise (3)** A study of the major physiological systems of the human body and their response to exercise and the exercise programs. Includes application of physiological concepts to physical training and conditioning. Prereq: HPER 288 or equivalent, F, SU.

### Recreation/Leisure Studies

**424/824M Organization and Administration of Recreation (3)** Designed to provide a background of information on community recreation with special attention to organization, promotion, development from the administrative aspect. Prereq: For 824m, at least 9 hours of upper division courses in recreation or permission of the instructor.

**430/830M Recreation Programming (3)** An advanced study of recreational programming and planning through practical application of research techniques utilizing survey, analysis, case study and compiling study results. Prereq: For 430, recreation major or permission of instructor. For 830m, undergraduate recreation major or minor/or permission of the instructor.

**451/851M Recreation Programs for the Mentally Ill and The Mentally Retarded (3)** Designed to explore recreative programs for the mentally ill and the mentally retarded (children, adolescents and adults) in institutions, residential schools and training centers and other agency settings. Consideration is given to developing an understanding of the relationship between recreative experiences and the ill or retarded person's potential for social independent living. Prereq: Introduction to therapeutic recreation, coursework and/or experience in working with the handicapped, or permission of the instructor.

**841V Outdoor Recreation Resource Planning (3)** An in-depth view of outdoor recreation planning, policy formulation, administration, and significant current problems. Specific attention will be focused on statewide planning, recreation variables, cultural preferences, demand, financing, decision-making, and public policy. Prereq: Graduate standing, at least 6 hours undergraduate preparation courses, or permission of the instructor.

### History

**313/813J American Colonial History (3)** A study of the background settlement, and devel-

opment of the English colonies. Prereq: For 313, junior standing or permission of the instructor.

**315/815J The American Frontiers: 1600-1840 (3)** A study of the frontier systems of the thirteen colonies and of Spain and France, and the westward movement of the United States to the Mississippi river. Prereq: For 315, junior standing or permission of the instructor.

**316/816J The American Frontier: 1840-1900 (3)** The trans-Mississippi west from Spanish and French days to the disappearance of the frontier around 1900. Prereq: For 316, junior standing or permission of the instructor.

**333/833J Diplomatic History of The United States Before 1900 (3)** A study of the foreign relations of the United States before 1900. Prereq: For 333, junior standing or permission of the instructor.

**334/834J Diplomatic History of The United States Since 1900 (3)** A study of the foreign relations of the United States since 1900. Prereq: For 334, junior standing or permission of the instructor.

**341/841J History of Nebraska (3)** From the earliest known records to the present. Prereq: For 341, junior standing or permission of the instructor.

**344/844J History of The South (3)** Economic, social, and political development of the south as a region. Prereq: For 344, junior standing or permission of the instructor.

**353/853J Medieval Europe, 284-1095 (3)** Establishment and development of the medieval church and of feudal society from the declining years of the Roman empire to the beginning of the Crusades. Prereq: For 353, junior standing or permission of the instructor.

**354/854J Medieval Europe, 1095-1492 (3)** Religious, social, economic, philosophic and institutional developments of the era extending from the Crusades and the investiture struggle through the waning of the middle ages. Prereq: For 354, junior standing or permission of the instructor.

**355/855J The Age of The Renaissance (3)** An introduction to the economic, social, political, religious, and intellectual changes and to the principal thinkers, writers, and artists of the period extending roughly from 1300-1550. Prereq: For 355, junior standing or permission of the instructor.

**364/864J History of The British Empire and Commonwealth (3)** Britain in America, Africa, India and the Pacific. The development of a dependent empire and the transformation of many dependencies to the status of independent members of the Commonwealth of Nations. Prereq: For 364, junior standing or permission of the instructor.

**371/871J Europe and America in the Two World Wars (3)** A military, social and political history analyzing the causes, conduct and consequences of each war, the wartime transformation of European and American society, and the emergence of the United States as a world power. Prereq: Junior standing or permission

**391/891J Topics in History (3)** A pro-seminar on selected topics based on a consideration of interpretive historical writings and/or source materials. Prereq: Permission of the instructor.

**405/805M History of Women in The United States (3)** Study of women's history from the colonial period to the achievement of suffrage. Prereq: For 405, junior standing or permission of the instructor.

**406/806M History of Women in the United States, II (3)** This course discusses the history of women in nineteenth and twentieth century America including the study of feminist theorists and activists, female educational/professional and employment opportunities, current status of women and the New Feminism of the 1970's.

**411/811M American Social and Intellectual History to 1865 (3)** Primarily a non-political approach to American history, this course will examine significant topics in American thought and society. Prereq: For 411, junior standing or permission of the instructor.

**412/812M American Social and Intellectual History Since 1865 (3)** Primarily a non-political approach to American history, this course will examine significant topics in American thought and society. Prereq: For 412, junior standing or permission of the instructor.

**413/813M The Revolutionary Era, 1763-1789 (3)** An analysis of the imperial and internal forces which led to the revolution and an examination of the economic, social, and political problems of the emerging nation. Prereq: For 413, junior standing or permission of the instructor.

**414/814M The Early Federal Period, 1789-1815 (3)** A study of the interworkings of politics, economics, and foreign affairs in molding government and society during the formative years of the United States. Prereq: For 414, junior standing or permission of the instructor.

**416/816M The Jacksonian Era (3)** An interpretive study if the middle period of American history. Prereq: For 416, junior standing or permission of the instructor.

**418/818M Civil War and Reconstruction (3)** A period study from 1845 to 1877. The backgrounds of the Civil War, the war years, and the reshaping of the Union during reconstruction. Prereq: For 418, junior standing or permission of the instructor.

**424/824M The Emergence of Modern America: 1877-1901 (3)** A study of a transitional period in American history, this course considers the importance of industrialization, urbanization, immigration, and the emergence of the United States as a significant world power. Prereq: For 424, junior standing or permission of the instructor.

**427/827M Twentieth Century America to 1932 (3)** A study of the history of the United States from the end of the nineteenth century to the election of Franklin D. Roosevelt to the presidency in 1932. Prereq: For 427, junior standing or permission of the instructor.

**428/828M Twentieth Century America Since 1932 (3)** A study of the history of the United States since the election of Franklin D. Roosevelt to the presidency in 1932. Prereq: For 428, junior standing or permission of the instructor.

**433/833M Constitutional History of The United States to 1860 (3)** A history of constitutional theory and practice since 1860. Prereq: For 433, junior standing or permission of the instructor.

**434/834M Constitutional History of The United States Since 1860 (3)** A history of constitutional theory and practice since 1860. Prereq: For 434, junior standing or permission of the instructor.

**440/840M History of North American Indians (3)** A survey of traditional North American Indian cultures, their contact with transplanted European peoples, and the continuing problems faced today. Prereq: For 440, junior standing or permission of the instructor.

**442/842M History of American Science (3)** A study of the origins, development, and nature of American science and its relations with technology, social thought, and government. Prereq: For 442, junior standing or permission of the instructor.

**443/843M American Urban History to 1870 (3)** Historical survey of urban development in the United States from the colonial period through the 1860's; urban society, problems, institutions; role of cities in national history; American ambivalence toward cities. Prereq: For 443, junior standing or permission of the instructor.

**444/844M American Urban History Since 1870 (3)** American urbanization from 1870's to the present; influence of technology, transportation, industry, immigration; urban politics and reform movements; emergence of metropolitan America and problems of the contemporary super-city. Prereq: For 444, junior standing or permission of the instructor.

**447/847M History of American Medicine and Public Health (3)** Analysis of the relationship and interaction of medical thought and practice, public health problems and institutional development, and the changes in American society and culture from the 17th to the 20th century. Prereq: For 447, junior standing or permission of the instructor.

**451/851M Intellectual History of Modern Europe From The Renaissance to The French Revolution (3)** A study of historically potent political, religious, economic, scientific and philosophical ideas in the western European culture from the Renaissance to the French revolution as a basis for stimulating the spirit of philosophical inquiry in each student. Prereq: For 451, junior standing or permission of the instructor.

**452/852M Intellectual History of Modern Europe From The Early Nineteenth Century to The Present (3)** A study of the historically potent scientific, economic, and philosophical ideas of the last century and a half. Emphasis will be upon the answers of western European culture to life's great questions. Prereq: For 452, junior standing or permission of the instructor.

**453/853M The Age of The Reformation (3)** Study of an era characterized by the dissemination of Renaissance culture, the declining authority of the medieval church, nascent nationalism, changing economic and social patterns, religious upheaval, and interrelated political rivalries and strife. Prereq: For 453, junior standing or permission of the instructor.

**454/854M The Age of Absolutism (3)** The emergence of new power relationships on the European continent after the religious wars of the sixteenth century with an emphasis upon the political, military, and cultural factors that led to the French hegemony and the secularization of European politics. Prereq: For 454, junior standing or permission of the instructor.

**455/855M The Age of Enlightenment (3)** An examination of eighteenth century society and culture with the attendant rise of Prussia, the growing importance of Russia, enlightened absolutism, and the causes of the French revolution. Prereq: For 455, junior standing or permission of the instructor.

**456/856M The French Revolution and Napoleonic Era: 1789-1845 (3)** A study of the French revolution and the Napoleonic era with particular attention to the development of democratic practice concurrently with the development of modern authoritarianism. Prereq: For 456, junior standing or permission of the instructor.

**457/857M Europe Betrays Its Promise (1815-1890) (3)** A study of reform and reaction which resulted in the Balkanization of Europe.

**461/861M Tudor and Stuart England (3)** A study of England under the Tudors when the English people rose magnificently and experienced a golden age, and the Stuarts then cast off the last remnants of medieval things and formed new institutions foreshadowing those of our world of today. Prereq: For 461, junior standing or permission of the instructor.

**462/862M English History: From Empire to Welfare State (3)** A study of the change and development in Great Britain from the late 18th century to 1918.

**474/874M Nineteenth Century Intellectual History of Russia (3)** A pro-seminar emphasizing the nineteenth-century revolutionary tradition, prototypes, ideology and impact upon Russian society. Prereq: For 474, junior standing or permission of the instructor.

**477/877M Europe in Crisis: 1890-1932 (3)** A study of the conditions and forces immediately precedent to World War I, the war itself, the peace following the war and the rise of the modern dictatorships. Prereq: For 477, junior standing or permission of the instructor.

**478/878M Europe in The Global Age: 1933 to The Present (3)** A study of the ever increasing tensions between the Fascist and Communist dictatorships and the western democracies, World War II, the resultant dislocation of power and the emergence of the balance of terror. Prereq: For 478, junior standing or permission of the instructor.

**481/881M Comparative Imperialism (3)** Historical development of various forms of imperialism. Prereq: For 481, junior standing or permission of the instructor.

**483/883M Economic History of the Western World to 1850 (3)** This course discusses the evolution of capitalism and capitalistic forms of business, the price revolution of the sixteenth century, mercantilism, and the process of industrialization, particularly in England. In addition, attention will be given to related demographic, social, institutional, and intellectual developments. Prereq: Graduate standing.

**484/884M Economic History of the Western World Since 1850 (3)** This course discusses capitalism and its general acceptance in the western world and those modifications and criticisms which have emerged over the past century and a quarter. In addition, attention is given to the relations among the advanced industrial nations and between the less developed nations. Appropriate related demographic, social, institutional, and intellectual developments are also presented. Prereq: Graduate standing.

**801V Advanced Research Project in History (1,11, S) (1-5)** Special problems in advanced research in history, arranged individually with graduate students.

**806V Great American Historians (11) (3)** A survey of the history of American historical writing from colonial times to the present. Reports based on selected readings. Prereq: Graduate standing and permission of instructor. (Not open for credit to students who have taken Hist. 495 or the equivalent.)

**807V Great European Historians (1) (3)** A survey of the history of European historical writing from Homer to Toynbee. Reports based on selected readings.

**810V/910 Seminar in American History.** Readings and research in selected topics of American history. This course will be offered at the 900 level when taught by a graduate faculty fellow.

**840V/940 Seminar: Economic History of the Western World (3)** This course, intended primarily for graduate students in history and economics, is a research course. As such, students will be expected to carry out a research project dealing with the economic history of the western world and/or its relations with less-developed parts of the world. Prereq: Permission.

**851V/951 Seminar in European History** Readings and research in selected topics of European history. This course will be offered at the 900 level when taught by a graduate faculty fellow.

**863V/963 Seminar in British History** Readings and research in selected topics of British history. This seminar will be offered at the 900 level when taught by a Graduate Faculty Fellow.

**899 Thesis (1,11, S) (1-6)** Thesis research project written under supervision of an advisor.

## Home Economics

### Education and Family Resources

**807 Occupational Experience Programs (1-6)** Philosophy and objectives of the project method. Providing adequate educational experience, organizing, administering, evaluating experience programs. May include supervised occupational experience.

**893 Special Topics (2-6)** Focus on problems of contemporary concern in the area. Implications for and application to the special setting in which learners serve in role of educator. Prereq: 12 hours home economics and permission of associate dean.

### Food and Nutrition

**453/853 Cultural Aspects of Diet (3)** Cultural approach to development of the dietary patterns of various population groups. Factors involved in food habit alteration. Offered alternate years only. Prereq: FdNutr 241, 9 hours social science or permission of instructor. S

**953 Ecology of Malnutrition (3)** Fundamental principles underlying the current world malnutrition problems. Investigation of projected future problems and schemes for their prevention or solution. Prereq: FN 850 and 853, or permission of instructor.

### Human Development and The Family

**455/855 Nutrition Throughout the Life Cycle (3)** Influence of normal physiological stress throughout the life span including pregnancy, lactation, growth and aging on nutritional requirements. Aspects of community nutrition. Prereq: 3 hours nutrition, 3 hours human development and family 6 hours natural science or permission of instructor. (F)

**463/863 The Child and Family in The Community (3)** Study of legislation and agencies pertaining to children and families. Field trips and supervised experiences through contacts with community agencies. Offered alternate years only. Lect 2 lab 3. Prereq: Permission of instructor.

### Textiles, Clothing and Design

**416/816 Principles of Tailoring (3)** Theory of tailoring techniques, the design factors and the specialized fabrics requisite to custom tailored and mass produced tailored garment. Lect 2 lab 2. Prereq: 12 hours textiles, clothing, and design including TCD 103. (F)

**422/822 Professional Study Tour -- International or Domestic A. Heritage of Fashion B. Interior Design (1-6 credit each, per semester, maximum 12)** A learning experience for broadening the scope of experience and understanding of the heritage of fashion or interior design. The experience includes visits to museums, ateliers, showrooms, manufactures and retail establishments. Sites selected from the following: New York City, Paris, London, Rome, Florence, Venice, Milan, Vienna and Cote d'Azur. Prereq: 12 hrs. textiles, clothing and design permission of department chairman

**808 History of Textiles (3)** A study of the historic role of textiles, in the artistic social, and economics development of various cultures. Prereq: 9 hours textiles, clothing and design, 3 hours art history or a course in history of western world or permission.

## Mathematics and Computer Science

### Computer Science

**311/811J Information Systems Analysis (3)** Decision-making processes, system life cycle, logical design of information systems. Prereq: CS 171 or 172.

**312/812J System Design and Implementation (3)** Principles and techniques of the design and implementation of information systems. Hardware and software selection and evaluation. Prereq: CS 311.

**322/822J Advanced Programming Techniques (3)** The study of software production and quality including correctness, efficiency, and psychological factors of programs and programming. Prereq: Completion of CS 250, 251 or 252.

**330/830J Numerical Methods (3)** Solving equations and systems of equations, interpolation, numerical differentiation and integration, numerical solutions to ordinary differential equations, numerical calculations of eigenvalues and eigenvectors, analysis of algorithms and errors, computational efficiency. Same as Math 830J.

**332/832J Data Structures (3)** Methods of representing arrays, stacks, queues, lists, trees, graphs and files. Searching and sorting. Storage management. Prereq: CS 230 and 235.

**345/845J File and Communications Systems (3)** Functions of file systems and communication systems within an information system. Prereq: CS 332.

**365/865J Stochastic Modeling (3)** Examination and construction of probabilistic models for queueing, inventory and simulation. Same as Math 865J. Prereq: Math/CS 205 and probability/statistics desirable.

**422/822M Programming Languages (3)** Definition of programming languages. Global properties of algorithmic languages including scope of declaration, storage allocation, grouping of statements, binding time. Subroutines, coroutines and tasks. Comparison of several languages. Prereq: For 422, CS 230 and 235. For 822M, CS 365.

**430/830M Linear Programming (3)** Theory of simplex method, obtaining of initial basic feasible solution, infeasible and unbounded problems, quality, sensitivity analysis, implementation of a commercial LP package, transportation and assignment algorithms, integer programming techniques. Same as Math 830M. Prereq: Math/CS 205.

**831M Optimization Techniques (3)** The mathematical foundations of optimization theory, applications, and computerized solution algorithms. Same as Math 831M. Prereq: Math 197, Math/CS 205 or Math 305. CS 170 or CS 172.

**435/835M Computer Architecture (3)** Basic digital circuits, Boolean algebra, combinatorial logic, data representation and digital arithmetic. Digital storage and accessing, control functions, input-output facilities, system organization and reliability. Description and simulation techniques. Features needed for multiprogramming, multiprocessing and realtime systems. Prereq: CS 231 and 235.

**450/850M Systems Programming I (3)** Operating System principles. The operating system as a resource manager; I/O programming, interrupt programming, and machine architecture as it relates to resource management; Memory management techniques for uni-multiprogrammed systems; Process description and implementation; processor management (scheduling); I/O device, controller, and channel management; file systems. Operating system implementation for large and small machines. Prereq: CS 231 and CS 332. CS 435 is recommended.

**451/851M Systems Programming II (3)** Advanced Topics in Operating Systems. State of the art techniques for operating system structuring and implementation. Special purpose operating systems. Pragmatic aspects of operating system design, implementation, and use. Prereq: CS 450.

**470/870M Compiler Construction (3)** Assemblers, interpreters and compilers. Compilation of simple expressions and statements. Organization of a compiler, including compile-time and run-time symbol tables, lexical scan, syntax scan, object code generation and error diagnostics. Prereq: CS 332 and 422. CS 450 and CS 172 recommended.

**849V Information Organization and Retrieval (3)** Introduction to language processing as related to the design and operation of automatic information systems, including techniques for organizing, storing, matching, and retrieving structured and unstructured information on digital computers. Prereq: CS 332 (CS 345 recommended)

**867V Algorithmic Combinatorics (3)** Classical combinatorial analysis, graph theory, trees, network flow, matching theory, extremal problems, block designs. Same as Math 867V. Prereq: Math/CS 205 and CS 235.

**881V Advanced Numerical Methods I (3)** Review of basic concepts from Linear Algebra. Direct and indirect methods for solving systems of equations. Numerical methods for finding eigenvalues and eigenvectors. Computation of inverses and generalized inverse, Matrix norms and applications. Same as Math 881V. Prereq: Math/CS 330.

**882V Advanced Numerical Methods II (3)** Solutions to equations, approximation, numerical solutions to boundary value problems, numerical solutions to partial differential equations. Same as Math 882V. Prereq: Math 881V/CS 881V.

**891V Advanced Topics in Optimization (3)** Topics selected from integer programming methods, optimization under uncertainty, constrained and unconstrained search procedures, advanced

dynamic programming, variational methods and optimal control. May be repeated for credit with permission of Graduate Advisor. Same as Math 891V. Prereq: CS 430, CS 431.

**895V Data Base Design and Organization (3)** Introduction to objectives of computer data bases, how these objectives can be met by various logical designs, and how these designs are physically represented. Prereq: CS 332 (CS 345 recommended)

### Mathematics

**311/811J Differential Equations (3)** Methods of solving ordinary differential equations, with applications to geometry and physics. Linear differential equations are emphasized. Prereq: Math 196. It is further recommended that the student has taken Math 197 or takes it concurrently.

**323/823J Introduction to Analysis (3)** Provides a theoretical foundation for the concepts of elementary calculus. Topics include the real number system, topology of the real line, limits, functions of one variable, continuity, differentiation, integration. Prereq: Math 197 and Math 201.

**330/830J Numerical Methods (3)** Solving equations and systems of equations, interpolation, numerical differentiation and integration, numerical solutions to ordinary differential equations, numerical calculations of eigenvalues and eigenvectors, analysis of algorithms and errors, computational efficiency. Same as CS 830J. Prereq: Math 196, Math/CS 205. Math 311 recommended.

**350/850J Selected Topics in Mathematics (1-6)** This is a variable content course with selected topics in the mathematical sciences which may be of interest to students in other disciplines such as mathematics education, psychology, and business. The course may be taken more than once for credit provided topics differ, with a maximum credit of 9 hours. Mathematics majors may apply no more than 3 hours of Math 350 toward the minimum major requirements. Math 850J does not apply to M.A. or M.S. in mathematics. Prereq: Permission of instructor.

**364/864J Modern Geometry (3)** Axiomatic systems, finite geometries, modern foundations of Euclidean geometry, hyperbolic and other non-Euclidean geometries, projective geometry. Prereq: Math 196 and Math 201.

**365/865J Stochastic Modeling (3)** Examination and construction of probabilistic models for queueing, inventory and simulation. Same as CS 865J. Prereq: Math/CS 205 and probability/statistics desirable.

**370/870J Introduction to Modern Algebra (3)** An introduction to abstract algebra to include: groups, rings, and fields. Examples and elementary proofs will be discussed. Prereq: Math 201 or permission of the instructor.

**411-412/811M-812M Abstract Algebra (Each 3)** An advanced undergraduate (beginning graduate) course in abstract algebra to include: groups and the Sylow theorems, rings and ideals, fields and Galois theory. Prereq: Math 370



or permission required for Math 811M; Math 305 and Math 811M required for Math 812M.

**423/823M Mathematical Analysis I** (3) Provides a theoretical foundation for the concepts of elementary calculus. Topics include functions of several variables, partial differentiation and multiple integration, limits and continuity in a metric space, infinite series, sequences and series of functions, power series, uniform convergence, improper integrals. Prereq: Math 305 and Math 323 or equivalent.

**424/824M Mathematical Analysis II** (3) Provides a theoretical foundation for the concepts of elementary calculus. Topics include functions of several variables, partial differentiation and multiple integration, limits and continuity in a metric space, infinite series, sequences and series of functions, power series, uniform convergence, improper integrals. Prereq: Math 305 and Math 423/823M.

**427/827M Complex Variables** (3) Differentiation, integration and power series expansions of analytic functions, conformal mapping, residue calculus, and applications. Prereq: Math 323 or advanced calculus.

**429/829M Theory of Ordinary Differential Equations** (3) Vector spaces, existence and uniqueness theorems, systems of linear equations, and two-point boundary problems. Prereq: Math 311 and 423, and an appropriate linear algebra course.

**430/830M Linear Programming** (3) Theory of simplex method, obtaining of initial basic feasible solution, infeasible and unbounded problems, quality, sensitivity analysis, implementation of a commercial LP package, transportation and assignment algorithms, integer programming techniques. Same as CS 830M. Prereq: Math/CS 205.

**431/831M Optimization Techniques** (3) The mathematical foundations of optimization theory, applications, and computerized solution algorithms. Same as CS 831M. Prereq: Math 197, Math/CS 205 or Math 305. CS 170 or CS 172.

**433/833M Fourier Series and Boundary Value Problems** (3) Heat conduction problems, boundary value problems, Sturm-Liouville systems, Fourier series, Fourier integrals, Fourier transforms. Prereq: Math 311.

**441/841M Introduction to The Foundations of Mathematics** (3) Logic, the axiomatic method, properties of axiom systems, set theory, cardinal and ordinal numbers, metamathematics, construction of the real number system, historical development of the foundations of mathematics, recent developments. Prereq: For 441, senior standing.

**451/851M Theory of Numbers** (3) Divisibility and primes, congruences, quadratic reciprocity, Diophantine equations, and other selected topics. Prereq: At least one math course numbered 300 or above.

**453/853M Probability and Statistics I** (3) Probability models, discrete and continuous. Prereq: Math 197 and at least one math course numbered 300 or above or permission.

**454/854M Probability and Statistics II** (3) Point estimation, confidence intervals, testing of statistical hypotheses. Prereq: Math 853M or equivalent required for Math 854M.

**460/860M Tensor Analysis** (3) A review of vector analysis, study of bivectors and space tensors, applications to geometry and mechanics. Prereq: Math 311 or equivalent.

**461/861M Elementary Topology** (3) Sets and functions, metric spaces, topological spaces, continuous functions and homeomorphisms, connectedness, compactness. Prereq: Math 323.

**801T Topics in Finite Mathematical Structures** (3) Discrete probability theory, stochastic processes, matrix algebra, linear programming, Markov chains. Prereq: Has secondary teacher certification or is working toward it, or permission of instructor.

**802T Topics in Geometry and Topology** (3) Selections from the following topics: Straight-edge and compass constructions; geometries and transformations — complex numbers and stereographic projection, non-Euclidean geometries; graph theory; topology of the plane; two dimensional manifolds; theory of dimension. Prereq: Has secondary teacher certification or is working toward it, or permission of instructor.

**803T Topics in The Algebraic Foundations of Mathematics** (3) Set theory and logic, Peano axioms, natural numbers, rings and integral domain, fields. Prereq: Has secondary teacher certification or is working toward it, or permission of instructor.

**804T Topics in Computer Science** (3) An introduction to digital computers and programming techniques. Brief history of the development of computing, a survey of the applications of computers, and the implications of the use of computers in education. Prereq: Has secondary teacher certification or is working toward it, or permission of instructor.

**825V Partial Differential Equations** (3) Linear and nonlinear first order equations, self-adjoint elliptic equations, linear integral equations, eigenfunctions, and boundary value problems. Prereq: Math 423 and 311 or equivalent.

**835V-836V Theory of Analytic Functions** (Each 3) Semester I: Complex numbers, analytic and elementary functions, complex integrations. Semester II: Calculus of residues, entire and meromorphic functions, normal families, and conformal mappings. Prereq: Math 423, 424 or 427, 835V needed for 836V.

**845V Calculus of Variations** (3) An introductory course devoted to the classical theory and problems, such as the brachistochrone problem and the problems in parametric form. Prereq: Math 423-424.

**850V Applied Complex Variables** (3) Applications of complex variables to potential theory, to the Fourier and Laplace transforms, and to other fields such as ordinary differential equations, number theory, etc. Prereq: Math 427.

**862V General Topology** (3) The concepts of Math 461/861M are studied at an advanced level in conjunction with ordinal and cardinal numbers, open and closed maps, separation axi-

oms and countable compactness. Prereq: Math 461/861M or permission of the instructor.

**863V Topics in Topology** (3) Topics from among the following: quotient spaces, convergence, compactification, completeness, function spaces, covering properties, homotopy, metrization, uniform spaces. Prereq: Math 862V or permission of the instructor.

**867V Algorithmic Combinatorics** (3) Classical combinatorial analysis, graph theory, trees, network flow, matching theory, extremal problems, block designs. Same as CS 867V. Prereq: Math/CS 205 and CS 235.

**881V Advanced Numerical Methods I** (3) Review of basic concepts from Linear Algebra. Direct and indirect methods for solving systems of equations. Numerical methods for finding eigenvalues and eigenvectors. Computation of inverses and generalized inverse, Matrix norms and applications. Same as CS 881V. Prereq: Math/CS 330.

**882V Advanced Numerical Methods II** (3) Solutions to equations and systems of equations, approximation, numerical solutions to boundary value problems, numerical solutions to partial differential equations. Same as CS 882V. Prereq: Math 881V/CS 881V.

**891V Advanced Topics in Optimization** (3) Topics selected from integer programming methods, optimization under uncertainty, constrained and unconstrained search procedures, advanced dynamic programming, variational methods and optimal control. May be repeated for credit with permission of Graduate Advisor. Same as CS 891V. Prereq: CS 430, CS 431.

**898V Graduate Seminar** (1-3) A graduate seminar in mathematics.

**899 Thesis** (3-6)

**899V Independent Graduate Studies** (3) Under this number a graduate student may pursue studies in an area that is not normally available to him in a formal course. The topics studies will be a graduate area in mathematics to be determined by the instructor. Prereq: Permission of instructor and graduate classification.

**911 Advanced Topics in Algebra I**

**912 Advanced Topics in Algebra II** (Each 3) Vector spaces, linear transformations, theory of a single linear transformation, sets of linear transformations, bilinear forms, Euclidean space, unitary space, products of vector spaces. Prereq: Math 411 and permission of instructor. Math 911 required for Math 912.

**923-924 Theory of Functions of Real Variables** (Each 3) The real number system, generalized convergence, continuity, semicontinuity, bounded variation, differentiation, Lebesgue-Stieltjes integration, abstract measure theory,  $L_p$  spaces. Prereq: Math 423-424/823-824 or advanced calculus. 923 needed for 924. 923 to be offered in the fall of odd-numbered years. 924 to be offered in the spring of even-numbered years.

**926-927 Functional Analysis** (Each 3) Semester I: Normed linear spaces, and operators, duality, Fredholm operators. Semester II: Spectral the-

ory, reflexive Banach spaces, Hilbert spaces, self adjoint operators. Prereq: Math 427 and two 800V or higher level courses one of which must be Math 862V or 923.

### Statistics

**800J Statistical Methods I** (3) Distributions, introduction to measures of central value and dispersion, population and sample, the normal distribution, inference: Single population, inference: Two populations, introduction to analysis of variance. Statistical packages on the computer will also be utilized in the course. Prereq: Math 131 or equivalent.

**801J Statistical Methods II** (3) Regression and correlation, analysis of covariance, chi-square type statistics, more analysis of variance, questions of normality, introduction to nonparametric statistics. Statistical packages are used when appropriate. Prereq: Statistics 800J or equivalent.

### Music

**854M Renaissance and Baroque Music Literature** (3) Study of representative compositions from the Renaissance and Baroque periods. Written project. Prereq: 6 hrs. of undergraduate music history and permission.

**855M Classical and Romantic Music Literature** (3) Study of representative compositions from the Classic and Romantic periods. Written project. Prereq: 6 hrs. of undergraduate music history and permission.

**856M Music in the Twentieth Century** (3) Study of representative 20th Century compositions in all performance media. Written project. Prereq: 6 hrs. of undergraduate music history and permission.

**820V-839V Applied Music** (1 or 3) Elective level for graduate students in the music education track for one credit hour. May be repeated. Required for graduate students in the performance track for three credit hours. To be repeated one time. Prereq: Audition and permission.

**820V Guitar** (1-3)

**821V Piano** (1-3)

**822V Voice** (1-3)

**823V Violin** (1-3)

**824V Viola** (1-3)

**825V Violoncello** (1-3)

**826V Bass Viol** (1-3)

**827V Flute** (1-3)

**828V Oboe** (1-3)

**829V Clarinet** (1-3)

**830V Bassoon** (1-3)

**831V Saxophone** (1-3)

**832V Trumpet** (1-3)

**833V French Horn** (1-3)

**834V Baritone Horn** (1-3)

**835V Trombone** (1-3)

**836V Tuba** (1-3)

**837V Pipe Organ** (1-3)

**838V Percussion** (1-3)

**839V Harp (1-3)**

**861V Seminar-Workshop in Music Education (1-3)** Seminars and workshops in music and music education for the graduate student and in-service teacher. Prereq: Permission.

**863V Advanced Instrumental Conducting (3)** Study of advanced conducting problems in band and orchestral literature and techniques for their solution. Prereq: Music 260 and 363 or 364 or equivalent.

### Philosophy and Religion

**430/830M Existentialism and Religious Thought (3)** A study of existentialism in its theistic (e.g., Kierkegaard) and atheistic (e.g., Sartre) forms, and its impact on recent Jewish and Christian thought.

**465/865M Philosophy of Mind (3)** A discussion of various accounts of the nature of minds which focuses upon philosophical problems such as whether the mind is identical with the brain, the extent of similarities between human minds and computers, the nature of personal identity, and the relationship of mental activity to behavior.

### Physics

**301/801J Elements of Electronics (3)** The background of theory, operation, and practice of electronic devices and circuits particularly as they apply to scientific instrumentation. Both solid state and vacuum tube principles and circuits are involved. Prereq: Calculus and Physics 112 or 212.

**302/802J Optics (3)** The nature of light energy as disclosed through studies of geometrical optics, physical optics and quantum optics. Prereq: Math 196 and Physics 112 or 212.

**315/815J Modern Developments in Physics (1880-1950) (3)** A modern physics course for science teachers at the secondary level. Concepts rather than mathematical rigor is stressed. Topics include spectroscopy, electronic structure, nuclear structure, basic quantum concepts of matter. Primarily for teachers who have not had an equivalent modern physics course within the past ten years.

**816J Current Topics in Science (1-3)** The subject matter of this course will generally not be presented in a standard physics course and may be of an interdisciplinary nature. The specific topics and prerequisites will be listed in the schedule. Prereq: Consent of instructor.

**375/875J Electricity and Magnetism I (3)** An advanced discussion of electrostatics and magnetostatics as well as a.c. theory. Prereq: Calculus, Physics 325, or permission.

**376/876J Electricity and Magnetism II (3)** A course in electrodynamics. Topics include Maxwell's equations and methods for their solution, boundary conditions, as well as energy, momentum, and transformations of the fields. Prereq: Physics 375.

**385/885J Thermodynamics and Statistical Mechanics (3)** The topics of thermodynamics include various equations of state, first and sec-

ond laws of thermodynamics, thermodynamic potentials and their uses. In addition, an introduction to classical statistics, Bose-Einstein and Fermi-Dirac statistics as well as transport phenomena is given. Prereq: Calculus and Physics 112 or 212.

**405/805M Solid State (3)** Behavior of materials in the solid state as concerns energy levels, wave mechanics, optical and electrical phenomena. Prereq: Calculus and Physics 325 or permission.

**407/807M The Special Theory of Relativity (3)** This course includes the general historical background, the important experiments, Lorentz transformations, covariant formulation, applications to electromagnetism and mechanics and philosophical implications of special relativity including relationship to the general theory. Prereq: Calculus and Physics 112 or 212.

**412/812M Atomic and Molecular Physics (3)** This course consists of applications of quantum theory to atomic and molecular physics. Topics include the Schrodinger theory, solutions of square wells and simple harmonic oscillator potentials and barriers, one electron atoms, atomic spectra, fine structure, orbit angular momentum, selection rules, magnetic effects, ionic and covalent bonding, molecular spectra, and the Raman effect. Prereq: Physics 111-112 or 211-212 and Physics 325 or the equivalent.

**414/814M Nuclear Physics (3)** Methodology and principles of nuclear science, nuclear structure, artificial and natural radioactivity, isotopes, tracer, techniques, radiation health physics, reactor theory. Prereq: Calculus and General Physics 112 or 212.

**435/835M Astrophysics (3)** Physics and theory of the physical characteristics, distribution, and space motion of stars and stellar systems; internal structure, evolution, and death of stars; structure of stellar atmospheres; interstellar matter and gaseous nebulae; structure and origin of the universe. Prereq: Physics 213 or 412 and Calculus I and II (Phys 135 is helpful).

**455/855M Quantum Mechanics (3)** In this rigorous introduction to quantum mechanics the student becomes familiar with the methods of Schrodinger's wave mechanics and Heisenberg's matrix mechanics. Using these techniques the following topics are discussed: Particles in potential wells, harmonic oscillator, angular momentum, hydrogen atom, time-dependent and time-independent perturbation theory and molecular bonding. Prereq: For 855m, calculus, Physics 325, or permission of the instructor.

**495-496/895M-896M Problems in Physics (Each 1-3)** Individual laboratory and/or library work in some field of energy. Prereq: General physics and permission of instructor. For 496: 495 and permission of instructor.

### Political Science

**403/803M The Presidency (3)** The rise of the institution from Washington to the present, to the position and prestige it holds and how the president uses this power and prestige to influence Congress, the courts, and the public.

Prereq: For 403, Political Science 110 and junior standing.

**404/804M The Legislative Process (3)** A comprehensive study of the legislative process of the Congress and state legislatures. The major emphasis is on legislative institutions, processes and behavior. Prereq: For 404, Political Science 110 and junior standing.

**405/805M The Judicial Process (3)** This is a course in the administration of justice. It examines the federal and state courts with respect to their powers, judicial selection, the bar, and the reform movements in the most basic of all of man's objectives, the pursuit of justice. Prereq: for 405, Political Science 110 and junior standing.

**412/812M Public Opinion and Political Behavior (3)** Analysis of the political socialization process as it relates to opinion formulation and participation and the effects of this process on the operation of the political system. Prereq: For 412, junior standing.

**417/817M Constitutional Law: Foundations (3)** Examination of the principles, design and intended operation of the American constitutional system. Analysis of Declaration of Independence, Articles of Confederation, Constitutional Convention, ratification debates. Stress laid on Federalist Papers and on reform criticism of Constitution.

**418/818M Constitutional Law: The Federal System (3)** Analytical examination of American constitutional law regarding the relations of nation and state (Federalism) and the powers of the national government (Judicial, Congressional and Executive).

**419/819M Constitutional Law: Civil Liberties (3)** Analytical examination of American constitutional law as it pertains to civil liberties. Emphasis on 1st, 4th, 5th, 6th, 8th, 13th, 14th, and 15th Amendment cases.

**420/820M International Politics of Asia (3)** Analysis of contemporary relations among the Asian nations as well as their interactions with the great powers; emphasis on the forces and issues which influence the international system of Asia. Prereq: For 420, junior standing.

**421/821M Foreign Policy of The U.S.S.R. (3)** A study of the foreign policy of the U.S.S.R., with emphasis on developments since 1945. Internal and external influences on Soviet foreign policy, the processes of foreign policy making, and the relations among members of the communist camp also will be considered. Prereq: For 421, junior standing.

**428/828M Inter-American Politics (3)** Analysis of the role of Latin American states in the international political arena. Emphasis upon developing, applying and testing an explanatory theory of international politics through the study of the inter-American system: The regional institutional and ideological environment, power relations, policies, and contemporary problems. Prereq: For 428, junior standing.

**431/831M Political Theory I (3)** Reviews and analyzes the leading political theories of western

man from the Hebrews and Greeks to the mid-17th century. Prereq: For 431, junior standing.

**432/832M Political Theory II (3)** Continues the review and analysis of the leading political theories of western man begun in Pol Sci 431, bringing the study down to the French revolution. Prereq: For 432, junior standing.

**433/833M Political Theory III (3)** Continues the review and analysis of the leading political theories of western man begun in Political Science 431 and 432 (Political theory I and II), bringing the study down to the present day. Prereq: For 433, junior standing.

**435/835M Democracy (3)** A basic study of theory, practice and practitioners of political democracy, its roots, development, present application and problems and future. Prereq: For 435, junior standing.

**436/836M Dictatorship (3)** A basic study of theory, practice and practitioners of political dictatorship, its roots, development, major 20th century application and bestiality, and threats to man. Prereq: For 436, junior standing.

**437/837M Communism (3)** The Marxian message, its use as an impulse to political power, its world-wide extension, and the threat it poses for the world in the hands of the Soviet Union and others. Prereq: For 437, junior standing.

**450/850M Government and Politics of Great Britain (3)** A comprehensive study of British politics and government. Emphasis will be focused on the formal institutions and informal customs and practices of the British political system. Prereq: For 450, junior standing.

**492/892M Topics in Political Science (3)** A pro-seminar on selected topics based upon analysis of the literature of political science and/or primary source materials. Prereq: For 492, junior standing or permission of the instructor.

**800V Seminar in The Research Methods of Political Science and Public Administration (3)** A critical investigation of the methods of data collection and analysis for political science and public administration research. Prereq: Permission of the graduate advisor. (Also listed under public administration)

**804V Seminar in American Government and Politics (3)** A thorough analysis of selected aspects of the structure and function of the American political system with emphasis on individual research by the student. Prereq: Permission of graduate advisor.

**815V Seminar in Public Law (3)** Practical methods of research as applied to specifically selected problems in the areas of administrative, constitutional, and/or international law. Problems studied will correspond to those encountered by government employees, officials, and planners at the national, state, and local level. Emphasis will be varied from semester to semester in accordance with the background and objectives of the students enrolled. Prereq: Three semester hours in public law or permission of graduate advisor.

**820V Seminar in International Politics (3)** An examination of the theoretical frameworks advanced for the systematic study of international

relations, with application to particular problems in international relations. Prereq: Permission of graduate advisor.

**830V Seminar in Political Theory** (3) Analysis of selected topics in normative, empirical and ideological political theory and their impact upon practitioners of politics. Prereq: Six hours of political theory or permission of graduate advisor.

**850V Seminar in Comparative Politics** (3) An examination of the purpose, theories and literature of the field of comparative politics, with evaluation of the theories by application to contemporary political systems. Prereq: Permission of graduate advisor.

**852V Seminar in Comparative Politics: Emerging Areas** (3) Research, analysis, and writing on topics of general and particular aspects of the governments, politics, and political problems of emerging nations. Prereq: Permission of graduate advisor.

**880V Independent Study in Topics of Urbanism** (1-2) Graduate student research on an individual basis under faculty supervision in topics pertaining to urbanism. Prereq: Undergraduate major in one of the social sciences. (Also listed under economics, geography, and sociology.)

**883V-884V Interdisciplinary Seminar On The Urban Community** (3-6) An interdisciplinary course on the metropolitan community in which various departmental and college offerings concerned with urban problems are put in broad interrelated focus. Prereq: Undergraduate major in one of the social sciences plus 6 hours of graduate work in one of the social sciences. (Also listed under economics, geography, and sociology.)

**890V Readings in Political Science** (3) Specially planned readings in political science for the graduate student who encounters scheduling problems in the completion of his degree program, or who has special preparatory needs and who is adjudged by the political science department to be capable of pursuing a highly independent course of study. Prereq: Permission of graduate advisor.

**899 Thesis** (3-6) A research project, written under the supervision of a graduate advisor in the Department of Political Science, in which the student establishes his capacity to design, conduct, and complete an independent, scholarly investigation of a high order of originality. The research topic and the completed project must be approved by the student's departmental committee. Prereq: Permission of graduate advisor.

## Psychology

**401/801M History of Psychology** (3) A study of the origins, development, and nature of psychology and its relation to external events; emphasis on the period since 1875. Prereq: For 401, junior standing.

**406/806M Environmental Psychology** (3) A study of effects of natural and artificial environments on human behavior. Particular emphasis

interactions with social distance, territoriality, privacy and such. Prereq: Basic Statistics or Experimental Psychology with laboratory or permission.

**407/807M Cognitive Processes: Thinking and Imagination** (3) An exploration of historical and contemporary research and theory concerned with higher cognitive processes including concept formation, problem solving, creativity, memory, and symbolic behavior. Prereq: For 807m, Psychology 301 or 904.

**413/813M Research Design** (3) Methods for gathering and evaluating information in psychology with emphasis on the design of experiments. Prereq: Psychology 213 or equivalent.

**425/825M The Limits of Consciousness** (3) A survey of theories, practices and research on altered states of consciousness. Emphasis on experiential as well as intellectual proficiency. Prereq: For 425, junior standing.

**427/827M Animal Behavior** (3) Behavior of diverse animals for the understanding of the relationships between nervous integration and the behavior manifested by the organism, as well as the evolution and adaptive significance of behavior as a functional unit. Prereq: Psychology 101 and Biology 175 or permission. (Same as Biology 427 and 827m)

**428/828M Animal Behavior Laboratory** (1) Laboratory and field studies of animal behavior with an ethological emphasis. Classical laboratory experiences and independent studies will be conducted. (Same as Biology 428/828M) Prereq: Biology/Psychology 427/827M or concurrent enrollment.

**431/831M Psychological and Educational Testing** (3) The use of standardized tests in psychology and education is considered with special regard to their construction, reliability, and validity. Prereq: Psychology 102 or 351.

**433/833M Individual Differences** (3) A critical study of experimental and statistical investigations of the influence of age, ancestry, sex, physical traits, and environment in causation of individual differences in mental traits. Prereq: 9 hours of psychology, including Psychology 101 and Psychology 213 or equivalent.

**443/843M Psychoanalytic Psychology** (3) The study of Sigmund Freud, psychoanalytic theories, and current theories of sleep and dreams. Readings are emphasized.

**444/844M Abnormal Psychology** (3) A course designed to examine the aberrant behavior of individuals. Symptoms, dynamics, therapy, and prognosis of syndromes are considered. Prereq: Psychology 213 or equivalent and Psychology 343.

**445/845M Personality Theories** (3) A comparative approach to the understanding of personality theory emphasizing the conflict, fulfillment, and consistency approaches to personality. Prereq: Psychology 343 and senior standing or permission.

**447/847M Jungian Psychology** (3) To become familiar with C. G. Jung: his life and words; his psychology, philosophy, theology, and litera-

**448/848M Eastern Psychology** (3) Theory and techniques of eastern psychology with emphasis on experiential understanding. Daily practice of meditation required.

**452/852M Psycholinguistics** (3) A discussion of the literature concerned with how such psychological variables as perception, learning, memory, and development relate to the linguistic variables of sentence structure, meaning, and speech sounds. Prereq: Permission of instructor.

**455/855M Retardation** (3) This course considers significantly subaverage intellectual functioning originating during the developmental period and associated with impairment in adaptive behavior. Research is emphasized. Prereq: Psychology 431/831m; or Psychology 213 or equivalent and Psychology 343 or 445/845m.

**459/859M Psychology of Exceptional Children** (3) A study of the special problems of children and adolescents with visual, auditory, or neurological impairments, orthopedic anomalies, intellectual retardation or superiority, speech disorders, emotional or social maladjustments, learning disabilities or cultural problems; and characteristic relationships of parents, professionals, and others with these persons. Prereq: None.

**461/861M Engineering Psychology** (3) The methods of experimental psychology are discussed as they relate to problems of designing machines for efficient human use. Prereq: Psychology 101 and permission of instructor.

**463/863M Techniques of Programmed Instruction** (3) An introduction to methods and technology in construction and use of teaching machine programs, with special emphasis on computer assisted instruction. Prereq: Psychology 101 and permission of instructor.

**800V The Profession of Psychology** (0) A required non-credit course for graduate students in psychology. Intended to familiarize the beginning graduate student with the profession of psychology including such topics as ethics, professional organizations, job and educational opportunities, the use of reference materials, licensing and certification, and other relevant material.

**805V Seminar in Social Psychology** (3-6) Assigned reading, discussion, specialized individual work leading to the writing and presentation of a paper applicable to a general topic in social psychology selected by the instructor. As seminar topics change, this course may be repeated in a student's program without implying duplication. Prereq: Permission. (same as Sociology 805V)

**806V Computer Concepts in Psychology and the Behavioral Sciences** (3) An introductory course emphasizing the applications of computers in the areas of psychology, sociology, and education. Includes a functional description of computers and a discussion of programming languages as well as specific uses. Prereq: Psychology 213 or equivalent.

**814V Nonparametric Statistics** (3) A study of distribution-free statistics with particular em-

phasis on research problems in social behavioral sciences. Prereq: Psy 213 or equivalent.

**820V Introduction to Counseling Theories** (3) Study of contemporary theories of counseling, the counseling process and methods. Prereq: Education 490 or department permission. (Same as Coun 820v)

**832V Psychometric Methods** (3) A study of the theoretical and practical problems related to the development and use of psychological tests covering such topics as measurement, test development, standardization, reliability, validity, and interpretation. Prereq: Psychology 213 or equivalent.

**850V Seminar in Communication Theory** (3) Analysis of current approaches to the study of communication with emphasis on theoretical models and their application to various professional interests. Prereq: Psychology 213 or equivalent or permission of instructor. (Same as Speech 850v)

**851V Advanced Educational Psychology** (3) A study of the principles of learning and testing and their applications to problems of contemporary education, particularly to those problems existing in the classroom. Prereq: Psychology 351.

**852V Clinical Assessment I: Foundations** (3) This is an introductory or survey course on the clinical and subjective aspects of human assessment. It is intended to serve as the foundation for more advanced study of assessment according to disciplinary specialization. Clinical considerations are applied to professional judgment, diagnostic interviewing, observational analysis, rating scales, standardized intellectual and personality tests, objective personality methods, and critical social issues (relevant to assessment). Prereq: Admission to graduate study in psychology, social work, sociology, or education; Psych 831M or equivalent recommended.

**853V Individual Tests I** (3) Administration, scoring, standardization, and interpretation of individually administered tests with special emphasis upon intelligence testing. Prereq: 16 graduate hours of psychology including completion of all required courses for the master's degree and Psychology 431/831m or 832v and admission to either psychological assistant or school psychologist program.

**854V Individual Tests II** (3) Administration, scoring, standardization, and interpretation of individually administered tests with special emphasis upon intelligence testing. Prereq: 16 graduate hours of psychology including completion of all required courses for the master's degree and Psychology 431/831m or 832v and admission to either psychological assistant or school psychologist program.

**855V Introduction to Therapeutic Techniques With Children** (3) The purpose of this course is to become familiar with play therapy, a technique for enhancing the adjustment and maturity of children. The history and methods of and the research with play therapy are considered.

**856V Learning in Children (3)** A course dealing with learning in infants, children and, for comparison purposes, adults. Research relevant to developmental differences in learning ability will be emphasized. Content areas included will be learning methodology with infants and children, learning in infancy, probability learning, transposition and reversal shift learning, imprinting, habituation and imitation learning.

**857V Behavior Modification (3)** A course in the techniques, rationale, and research literature of changing behavior through reinforcement procedures. Particular attention will be paid to institution and agency clients, from childhood to old age. Prereq: Psychology 102 and 343, or permission of the instructor.

**858V Linguistic and Cognitive Development (3)** Advanced, in-depth study of the theory and research on cognitive and linguistic development from infancy to adolescence. Prereq: Psychology 352 or equivalent or permission of instructor.

**859V Social and Personality Development (3)** A course which provides the student with an in-depth coverage of the research literature on social and personality development in infancy and childhood. Research methods and theory, as they apply to social and personality development, will be emphasized throughout the course. All students will be expected to design and conduct a mini-observational study in the area of social and personality development.

**860V Psychology of Women (3)** A course providing comprehensive coverage of psychological theory and research pertaining to women. Critical analysis of theoretical and experimental issues will be emphasized. Students will participate in the conduct of the course and will be expected to write an appropriate research proposal. Prereq: Graduate standing, any department, or by permission of instructor.

**868V Clinical Child Psychology for School Psychologists (2)** An advanced course in child psychology, with emphasis upon diagnostic classification, refinement of approaches and techniques of assessment, and correction of problem behavior in the school age child. Prereq: Permission. (Crosslisted with Psychiatry 868 at the University of Nebraska College of Medicine)

**890V Problems in Psychology (1-6)** A faculty supervised research project, involving empirical or library work and oral or written reports. Prereq: Written permission of the department.

**895V Practicum in Industrial Psychology (1-6)** Faculty supervised experience in industry or business designed to bridge the gap between the classroom and a job, emphasizing use of previously acquired knowledge in dealing with practical problems. Prereq: Written permission of your practicum committee.

**897V Practicum in Educational Psychology (1-6)** Faculty-supervised experience in an educational agency designed to acquaint the student with practical problems faced by psychologists who

**898V Practicum in Developmental Psychology (1-6)** Faculty-supervised experience in a setting designed to provide a practical understanding of theoretical concepts of human development. Emphasizes direct observation and/or personal interaction as a means of training, and can be directed toward various populations within the developmental life span (e.g., infants, preschoolers, middle childhood, adolescents, adults, aged persons). Prereq: Psychology 956 and permission of the Developmental Psychology Area Committee.

**899 Thesis (1-6)** Independent research project written under supervision of a faculty committee. May be repeated up to a total of 6 hours. Prereq: Written permission of your thesis committee.

**903 Seminar: Psychology of Motivation (3-9)** A topic area within the field of motivation will be explored in depth. Each year, the specific topic will be selected to coincide with that of the Nebraska symposium on motivation. Students enrolled in the course will be expected to attend the symposium which is held in Lincoln. Prereq: Graduate standing and instructor's permission.

**904 Proseminar: Learning (3)** A comprehensive and intensive coverage of the experimental literature on learning in humans and animals. Prereq: Permission of instructor.

**905 Advanced Seminar in Learning (3)** A course considering theorists who have most directly influenced the contemporary psychology of learning. Prereq: Psychology 301 or 904 or permission of instructor.

**910 Proseminar: Analysis of Variance (3)** A course providing a theoretical and practical understanding of inferential statistics emphasizing the analysis of variance model. Prereq: Permission of instructor.

**911 Proseminar: Multiple Regression and Factor Analysis (3)** Advanced problems and techniques of correlation and regression are discussed including special simple correlation methods and problems, multiple correlation, multiple regression, and factor analysis. Prereq: Permission of instructor.

**921 Proseminar: Perception (3)** A comprehensive and intensive coverage of the experimental literature on perception in humans and animals. Prereq: Permission of instructor.

**923 Proseminar: Physiological Psychology (3)** A systematic study of the physiological processes underlying behavior. Prereq: Permission of instructor.

**929 Seminar in Developmental Psychobiology (3-6)** A theoretical and empirical analysis of neuro- and other physiological changes correlated with and contributing to developmental processes in infra-human and human subjects. Prereq: Completion of the psychology proseminar sequence or equivalent and permission of instructor.

**931 Clinical Neuropsychology (3)** The course will cover the basic clinical data in the area of brain behavior relationships, examining the use

of the instructor. No previous course requirements. Course will cover all applicable areas itself.

**936 Seminar in Applications of Non-Verbal Communication Theory (3)** Theories and research on the development, facilitation and barriers of human non-verbal communication. Analysis of non-verbal interaction with specific application to education, business, supervision, counseling, therapy and interpersonal speech communication. Prereq: Course in research methods or permission of instructor. (Same as Speech 955 and SED 936)

**940 Seminar in Small Group Communication (3)** Research and theory in the processes of small group communication and leadership; research procedures; approaches to teaching a discussion course. Prereq: Communication 801V or equivalent, or basic statistics, or permission of instructor. (Same as Communication 940 and Sociology 940)

**943 Proseminar: Personality (3)** A course considering the effects of personality variables on behavior. A historical, theoretical, psychometric, and experimental approach will be emphasized. Prereq: Permission of instructor.

**944 Proseminar: Social Psychology (3)** Examination of theories, research findings and controversies in social psychology. Topics will include socialization; person perception; interpersonal attraction, leadership and group effectiveness; attitudes, attitude measurement, and attitude change; intergroup relations, power and social influence. New topics will be added as they become part of the research interests of social psychologists. Prereq: Permission of the instructor.

**945 Experimental Social Psychology (4)** Acquisition of basic research skills and a working understanding of key philosophical and methodological issues in social studies, either by oneself or as a part of a small group. Prereq: Psy 944 and 910 or 911 or permission.

**946 Personality and Prediction (4)** This course is intended to provide advanced graduate students in psychology and related disciplines with the methodological, psychometric, and statistical skills required to investigate the influence of personality variables on behavior. Prereq: Psych 943 or 944 and Psych 910 or 911 or permission of instructor.

**947 Psychopathology of Youth (3)** To consider basic psychological theories, principles, models, and research as they apply to youth, especially focusing on the psychology of abnormality. Prereq: Reading Avidness.

**948 Geropsychology (3)** To become familiar with the psychology of aging from a research perspective. The focus will be on psychological research in the middle years and in later years. (Same as Gerontology 948). Prereq: 12 hours of psychology and/or gerontology or permission.

**956 Proseminar: Developmental Psychology (3)** A comprehensive and intensive coverage of the

human development. Prereq: Permission of the instructor.

**957 Applied Behavior Analysis (3)** A comprehensive introduction to experimental methodology in applied behavior analysis. Topics covered include observational recording systems, reliability indices, procedural implementation of behavioral techniques, single-subject research designs, and a broad review of the research literature. Prereq: A minimum of one course in learning theory (Psy 856V, 857V, 904, or equivalent) and permission.

**957L Laboratory in Applied Behavior Analysis (3-6 hrs)** Laboratory work coordinated with Psychology 957 (Applied Behavior Analysis) consisting of the systematic application of behavioral technology within the context of single-subject experimental designs. Emphasis will be on the modification of behavior of children with cognitive, social, or behavioral problems. Prereq: Psy 957 or permission.

**958 Personality Assessment (3)** A course dealing with tests and techniques for evaluation of personality characteristics and intended for advanced graduate students in psychology who are enrolled in a program of studies leading to certification as school psychologists. Prereq: An introductory course in group testing; psychology 213 or equivalent, and permission.

**959 Seminar in Developmental Psychology (3-9)** Faculty and student presentations organized around one of the following three major subdivisions of child psychology: (1) Social and personality development, (2) Developmental changes in conditioning and learning, (3) Cognitive growth and functioning. The course may be repeated each time a different topic is covered, up to a maximum total of nine credit hours. Prereq: Completion of the proseminar sequence and permission of the instructor.

**960 Alcoholism and the Family** A review of the theoretical and research literature on alcoholism within a family context. The specific focus in this course is those areas of alcoholism which relate to child and family development. Such issues as genetic aspects of alcoholism, effects of progeny, socialization practices in an alcoholic family, and child and adolescent alcoholism are covered. Prereq: Permission.

**961 Industrial Motivation & Morale (3)** A course focusing on theory and research in the areas of work motivation, work behavior, and job satisfaction. Emphasis is placed on such topics as expectancy theory, job redesign, leadership, absenteeism, turnover, goal setting and behavior modification. Prereq: Psychology 965.

**962 Industrial Training and Development (3)** An analysis of the theoretical and practical problems of conducting training programs in industry including diagnosis, design, implementation, and evaluation. Emphasis is placed on practice in designing and implementing training programs in response to actual industrial situations. Prereq: Psychology 965.

**979 Topical Seminar in School Psychology (1-6)** A discussion of a specific advanced topic in

each time the course is offered. The course may be repeated each time a different topic is covered, up to a maximum total of 9 credit hours.

**991 Topical Seminar in Psychology (1-3)** A discussion of specific advanced topics which will be announced whenever the course is offered. Prereq: Permission of the instructor.

**995 Practicum in Organizational Behavior (1-6)** Faculty supervised experience in industry or business designed to bridge the gap between the classroom and a job, emphasizing use of previously acquired knowledge in dealing with practical problems. Prereq: Permission of department and admission to doctoral program.

**996 Research Other Than Thesis (1-12)** Research work under supervision of a faculty member. May be repeated up to a total of 12 credit hours. Prereq: Enrollment in a graduate program beyond the master's level and permission of the department.

**997 Practicum in School Psychology (1-6)** Faculty-supervised experience in an educational agency designed to acquaint the student with the practical problems faced by school psychologists. Prereq: Admission to school psychology program and written permission of department.

**998 Internship in School Psychology (3)** A systematic exposure to the practice of psychology in the schools. School consultation in a variety of educational settings will be undertaken. The student's responsibilities will be documented in a contractual agreement between the intern student and the local and university supervisors. Prereq: Completion of 4 hours of Psychology 997.

### Public Administration

**440/840M Public Budgeting (3)** A study of the processes and procedures involved in making budgets for governmental institutions. Prereq: For 440, P.A. 317, senior standing. For 840m, P.A. 317.

**441/841M Public Personnel Management (3)** A study of the personnel process in American governmental administration. The processes and problems of recruiting, structuring, and operating public bureaucracies are examined as well as problems in personnel leadership, neutrality, accountability and performance. Prereq: For 441, P.A. 317, junior standing. For 841m, P.A. 317.

**443/843M Municipal Administration (3)** The administrative structure and administrative practices of American cities covering such areas as finance, personnel, public works, public safety, health, utilities, and planning. Prereq: For 443, Pol Sci 301, junior standing. For 843m, Pol Sci 301, P.A. 317.

**800V Seminar in The Research Methods of Political Science and Public Administration (3)** A critical investigation of the methods of data collection and analysis for political science and public administration research. (Also listed under political science.) Prereq: 317, permission of graduate advisor.

**805V Survey of Public Administration (3)** This

have had no undergraduate Introduction to Public Administration course work. It involves a study of the environment of public administration, introducing the student to public organization theory and practice and functions and problems of the public administration process. This course does not count toward the 36 hours required for the MPA degree. Prereq: Course in American government or permission.

**810V Seminar in Public Administration (3)** An in-depth study of the relationships existing between the art and science of public administration, on the one hand, and the processes of government on the other. The emphasis is principally on broad categories of political and administrative issues as they condition each other. Prereq: Permission of graduate advisor.

**830V Seminar in Public Policy Analysis (3)** A study of the economic, social and political determinants of public policy in terms of administration and decision making and of measuring and evaluating policy impact. The course includes both study of general policy processes and, to a lesser extent, particular policy topics. Prereq: Permission of graduate adviser.

**842V Seminar: Introduction to Public Organizations (3)** A study of the various approaches to understanding public organizations and the relationship of these approaches to the design and functioning of public agencies. Prereq: Permission of graduate adviser.

**844V Seminar in Organization Development in Public Agencies (3)** A study of the theory and practice of organizational development in public agencies. Development of interpersonal skills in dealing with organizational problems is stressed. Prereq: Permission of graduate adviser.

**845V Seminar in Advanced Management Analysis in Public Agencies (3)** A study of theory and method related to analysis of problems of organization and workflow in public agencies. The course includes problem analysis, field study methods, design of improved methods and measures of impact. Prereq: Permission of graduate adviser.

**846V Seminar in Public Personnel Administration (3)** This course focuses on the principal consideration affecting the selection and utilization of personnel by government agencies. The emphasis is less in terms of description of processes than in terms of identifying and exploring solutions to problems. Prereq: Permission of graduate advisor.

**848V Seminar in Public Financial Administration (3)** Financial organization, intergovernmental financial relations, and the administrative and political aspects of budgetary planning and control. Prereq: Permission of graduate advisor.

**860V Seminar in Administrative Law (3)** A review of the principal elements of the role and character of legal processes in government administration, including delegation of powers, legal forms of administrative action, liability of

view of administrative action. Prereq: Permission of graduate adviser.

**881V Urban Seminar in Metropolitan Planning and Development (3)** An overview of the present status of planning in metropolitan areas with special emphasis on structure of planning departments, comprehensive plans, and problems of annexation. Prereq: Geo. 412 or recommendation from pol sci, soc, or econ departments. (Also listed under geo)

**890V Advanced Topics in Public Administration (1-3)** A pro-seminar on selected topics based upon special needs of graduate students in selected options. Normally taught by outstanding practitioners in the field. Prereq: Graduate standing, permission of instructor, prior course work and/or experience in the topical area.

**892V Readings in Public Administration (1-3)** Specially planned readings in public administration for the graduate student who encounters scheduling problems in the completion of his degree program, or who has special preparatory needs and who is adjudged by the department to be capable of pursuing a highly independent course of study. Prereq: Permission of graduate advisor.

**894V Research in Public Administration (1-3)** The course is intended for advanced graduate students in public administration. It is especially suited for those in-career students who have had their internships waived and who might profit more by in-depth research on a problem of public administration rather than additional classroom courses. Prereq: 15 hours graduate work in public administration and permission of faculty adviser.

**803U-804U Internship (3 per sm)** Maximum of 6 to be granted upon completion of written report on internship. Internship in some government: National, state, local. Prereq: All course work for the M.P.A. completed.

### Secondary/Post-Secondary Education

**480/880M Principles of Vocational Education (3)** A study of the basic philosophy underlying vocational education and the principles and practices in the various fields. F,Su

**481/881M Principles of Adult Education (3)** An introduction to the study of adult education as a major development in contemporary America. The course surveys the major forms and problems of adult education and the foremost agencies providing programs. F,Su

**482/882M Literature for The Adolescent (3)** This course is designed to assist library media specialists, English teachers, teachers of the humanities and other classroom teachers to gain information about adolescents, their reading and viewing habits and interests. Factors which affect reading, guidance in reading, and types of literature, regardless of format, will be examined. Cross-listed with LS 482. Prereq: For 882M, CORE 150 or Psychology 351 and graduate standing.

**485/885M Coordination Techniques in Vocational Education (3)** Reviews responsibilities

tional teacher-coordinator and or vocational coordinator, with special emphasis upon local administration of the part-time cooperative program and analysis of the laws and regulations governing this program. (S,Su)

**487/887M Adult Group Leadership (3)** A study of adult groups in modern society and the characteristics of effective leadership in all types of groups. (S,Su)

**490/890M Problems: Post-Secondary/Higher Education (3)** This course surveys the historical development, current status and future directions of post-secondary/higher education in the United States. Its major focus is on the problems and issues confronting postsecondary/higher education today. (S,Su)

**800V Special Studies (1-3)** A series of intensive courses especially for teachers in service-scheduled as regular seminars, or workshops, according to purpose.

**810V Research Project (1-3)** Individual or group study and analysis of specific problems in schools. Typical problems may include surveys, school finances, transportation, school building construction, maintenance and operation, curriculum and pupil personnel.

**815V Practicum Teaching-Community and Junior College (3)** The practicum experience is intended for graduate students who are or desire to become vocational or academic instructors at the community or junior college level. The eligible student will be placed in a practicum situation in a recognized teaching field under faculty supervision from the College of Education in association with the appropriate community or junior college faculty.

**820V Seminar for Cooperating Teachers (3)** A seminar for cooperating and prospective cooperating teachers. Discussion of problems, trends, research and evaluation of student teachers and student aides in the secondary school. Assessment of kinds of programs and experiences available to pre-service students.

**825V Seminar in Secondary Education (3)** Intensive study of problems of secondary education. Critical analysis of current research and related literatures; group and individual work on problems of group interest and relevance to secondary education.

**827V International Curriculum Practices (3)** An analysis of curriculum practices and procedures that are currently utilized in selected countries around the world. Units of study will include Belgium, France, Germany, England, China, Africa, and Russia. The course activities will include correspondence with foreign students and educators as well as in-depth research on assigned areas. Prereq: Graduate standing.

**830V Emerging School Curriculum (3)** Designed to provide the student with understanding of the nature and trends in secondary school curriculum development with the principles and practices utilized in curriculum planning. Strong emphasis is placed on curriculum construction.

**833V Analysis of Teacher Behavior (3)** Emphasis is placed upon current observational systems for analysis of teacher behavior in a

classroom setting. Specific topics include in-depth instruction to inter-action analysis, micro-teaching, non-verbal behavior and simulation. Student proficiency in these observational systems using video-tape equipment is stressed.

**835V Improvement of Instruction of Secondary School Speech** (3) Exploration of the implications and contributions of recent methodological and empirical research to instructional improvement in speech. Investigation of the speech process and the contribution of other disciplines to speech instruction.

**837V Improvement of Instruction of Secondary School Foreign Language** (3) This course is designed especially for the teacher who is interested in the improvement of instruction in foreign language. The course will encompass a whole range of opportunities for improvement of instruction of such languages, but will concentrate on current developments in audio-lingual-visual programs that have implications for the classroom teacher.

**840V Improvement of Instruction of Secondary School English: Language** (3) Exploration of the implications of recent research in language and linguistics for instructional improvement in the teaching of English.

**841V Improvement of Instruction of Secondary School English: Literature** (3) Exploration of the implications of recent research in the teaching of literature and rhetoric for instructional improvement in the secondary school English classroom.

**845V Improvement of Instruction of Secondary School Social Studies** (3) Designed especially for teachers who are interested in the improvement of instruction of the social studies. Will encompass the whole range of opportunities available for the improvement of social studies instruction; emphasis will be concentrated on current developments that have implications for the classroom teacher.

**846V Simulation/Gaming Laboratory for Secondary Teachers** (3) This course is designed to familiarize secondary school teachers with simulation/games. It is designed to provide them with the ability to understand, use, and create simulation/games for the classroom. Prereq: Graduate standing.

**847V Materials Laboratory for The Social Studies** (3) Designed to acquaint social studies teachers with new materials in the social studies. Students will develop criteria for the evaluation of materials from recent curriculum projects.

**849V Seminar in Social Studies Curriculum Construction** (3) This course is designed for social studies supervisors, department chairmen, team leaders and teachers who are interested in learning to design and construct curricula for the social studies.

**850V Improvement of Instruction of Secondary School Mathematics** (3) This course is designed for those students who wish to extend their knowledge of the secondary school mathematics curriculum and their skill in employing instructional techniques for teaching mathematics.

Emphasis is placed upon new curriculum developments and contemporary teaching strategies.

**852V Foundations in Business Education** (3) Designed to develop a deeper and broader understanding of business education; to identify and define business education and to examine its past, present, and future role in the total education pattern of our country in today's world.

**853V Seminar in Mathematics Education** (3) A graduate seminar in K-12 mathematics education emphasizing recent curricular developments, curriculum planning and evaluation, research, mathematics supervision, and contemporary issues in mathematics education. Prereq: Graduate standing and permission of instructor.

**855V Improvement of Instruction of Secondary School Science** (3) This course is designed for graduate students in education who wish to become better informed about the recently developed programs for secondary science; the methods, materials, philosophy, and emphasis instruction which are characteristic of these programs.

**865V Science Education Seminar** (3) A graduate seminar in K-12 science education emphasizing research, newly developed science curricula, curriculum planning, science supervision and treatment of one or more localized science education issues.

**868V Trends and Teaching Strategies in Science Education** (3) This course is designed for the graduate student whose study program emphasis is in the area of science education. Its focus will be K-12 and as such is meant to serve graduate students in both elementary and secondary education departments. The course will describe and analyze past and present trends in science education including curricula, teaching-learning strategies, the laboratory, and instructional materials. Particular strategies that have merit and relevance concerning today's students and teachers will be treated in depth.

**870V Introduction to Special Vocational Needs** (3) Designed for secondary education personnel who desire knowledge of the history and current status of Special Vocational Needs. Students will gain a better understanding of handicapped and disadvantaged students. Prereq: Admission to Graduate College.

**871V Improvement of Vocational Curriculum for the Special Needs Learner** (3) Designed for secondary education personnel who desire competency in vocational curriculum modification to meet individual needs of students who are unable to succeed in a regular classroom setting. Prereq: SED 870V--Introduction to Special Vocational Needs.

**872V Career Exploration and Occupational Readiness For the Special Vocational Needs Learner** (3) The course involves the processes of diagnosing students' needs in vocational education, communicating occupational information, and assisting students in the preparation for job entry-level employment. This course is intended for teachers, counselors, and educa-

tional support personnel. Prereq: SED 870V--Introduction to Special Vocational Needs.

**875V Improvement of Instruction in Vocational Business Education** (3) A course designed for teachers of business education to provide information, methods, and techniques relative to current practices and trends in vocational business education.

**876V Problems of Vocational Business Education** (3) Designed for teachers of business education to develop a better understanding of the purposes, philosophy, current practices and trends in business education.

**877V Vocational Curriculum Construction** (3) A course designed for teachers, supervisors, coordinators, and administrators of vocational education. The course includes principles, needs, factors, and trends that should be considered in developing a vocational education curriculum.

**883V Automated Information Systems** (3) To examine the historic, current, and future trends of automated information systems; to ascertain the flow of information through a retrieval system; to introduce vocabulary, methodology, theory and techniques utilized in operating automated systems; criteria for evaluation and selection of automated retrieval systems and services. Prereq: Graduate.

**899 Thesis** (1-6) Required of all students taking Master of Arts degree, see major adviser for information.

**936 Seminar in Applications of Non-Verbal Communication Theory** (3) Theories and research on the development, facilitation and barriers of human non-verbal communication. Analysis of non-verbal interaction with specific applications to education, business, supervision, counseling, therapy and interpersonal speech communication. (Cross listed as Psychology 936 and Comm. 955.) Prereq: Course in research methods or permission of instructor.

## Social Work

### Foundation Courses

**800V Human Behavior and the Social Environment** (4) A foundation course providing basic knowledge of the contributions of the biological, behavioral and social sciences to understanding of human functioning in transaction with social structure. Prereq: Admission to graduate program in social work or permission.

**805V Social Welfare Policy, Services & Analysis** (4) An examination of social policy development and the functioning of specific, delivery systems together with beginning policy analysis embodying socio-economic, political, legal, and psychological contexts. Academic background in economics, political science, and U.S. history is highly recommended. Prereq: Admission to the graduate program in social work or permission.

**809V Research Methods in Social Work** (2) Scientific inquiry, the general types and methods of research in social work, and the collection, analysis and presentation of social welfare data will be studied. The more commonly used statis-

tical techniques will be reviewed. Research in social work will be assessed and utilization in social work practice will be explored. Prereq: Admission to the graduate program in social work or permission.

**810V Social Work Practice I (Generic)** (2) This course is designed to serve as an introduction to the common core of concepts, skills, tasks and activities which are essential to the practice of social work and which serve as a foundation for further professional growth. Prereq: SW 800V; concurrent with SW 800V; or permission.

**812V Social Work Practicum II (Micro)** (2) An introductory course for graduate social work students focusing on basic theory and principles of social work practice with individuals, families and small groups. Prereq: SW 800V, SW 810V; concurrent with SW 800V; or permission.

**814V Social Work Practice III (Macro)** (2) This is an introductory course for graduate social work students which surveys basic theories and principles of social work practice with organizations, institutions and communities, and includes social action and planning, community development, community organization, administration, and program evaluation. Prereq: SW 800V, SW 810V, SW 805V; concurrent with SW 800V, SW 805V; or permission.

**816V Social Work Practicum I** (3) This course will provide supervised individualized learning experiences in selected social welfare agencies, introducing a variety of social work practice roles; emphasizing developing relationships with client systems, the problem solving process, and differential use of interventive modalities to effect change. Prereq: Concurrent with or subsequent to SW 810V.

**817V Social Work Practicum II** (3) This course is designed to provide supervised individual learning experiences, in selected social welfare agencies. It is designed to introduce graduate students to beginning micro and macro social work practice. Prereq: SW 816V, concurrent with or subsequent to SW 812V, 814V.

### Micro Practice Courses

**820V Micro Intervention I** (3) To provide the student with knowledge of theories and techniques in various modalities which are used in working with individuals, families and small groups. Prereq: BA, Social Work major, SW 817V, or permission of instructor.

**821V Micro Intervention II** (3) To provide the student with knowledge of theories and practice in techniques in various modalities used in working with individuals, families and small groups with emphasis on particular settings such as rural mental health clinics, schools, and family service agencies. Prereq: SW 820V or permission of instructor.

**825V The Family as the Client** (3) The family is considered as a system of social work intervention. Several theories of family interaction are considered; alternative modalities of family treatment are assessed; interventive skills are developed. Prereq: SW 820V or permission.

**826V Gestalt-Transactional Analysis (3)** An intensive didactic and experiential course designed to give students in-depth knowledge and practice skills in the combined use of transactional analysis (TA) and Gestalt therapy. Prereq: SW 820V or permission.

**827V Issues in Human Sexuality for Social Workers (3)** An intensive didactic review of current theory and research in human sexuality, with a primary focus on psychosocial aspects of human sexuality. It is designed to give the student in-depth knowledge of personal and socio-cultural dynamics influencing communication regarding sex, programs of sex education for specific client systems, current issues in human sexuality, and the causes of sexual dysfunction and current rationale for treatment. Prereq: Bachelor's degree; familiarity with counseling, psychology, or experience in a counseling relationship; HED 822V, or equivalent basic course in human sexuality, and permission of the instructor.

#### Practicum Courses

**840V Advanced Social Work Practicum I (3-4)** To provide individualized professional experience in micro or macro social work practice. Prereq: SW 817V or equivalent, SW 820V or SW 850V/852V/854V.

**841V Advanced Social Work Practicum II (3-4)** To provide individualized professional experience in micro or macro social work practice, building upon opportunities provided and competence achieved in Advanced Practicum I. Prereq: SW 840V.

**842V Advanced Social Work Practicum III (1-4)** To provide a third advanced practice opportunity in a selected social welfare agency or practice setting for refinement/addition of micro or macro social work practice skills. Prereq: SW 841V.

#### Macro Practice Courses

**849V Clinical Seminar in Mental Health (2)** A topical seminar exploring various aspects of clinical work in a mental health setting. There will be opportunity for presentation and discussion of cases and concerns encountered by students in their training settings. Prereq: SW 820 or permission of instructors.

**850V Task Groups in Macro Practice (3)** A study of the various types of task groups involved in social service delivery and planning and community organization and community development. Prereq: SW 814V, SW 817V, or permission.

**852V Social Work Administration (3)** A study of the role of the social work administrator in the creation and administration of social service agencies of varying sizes. Prereq: SW 814V and SW 817V; undergraduate equivalent; or permission.

**854V Social Work Planning (3)** An advanced course in social planning, including administrative planning for social services, comprehensive planning for social welfare programs, and planning for social change. Prereq: SW 814V and

SW 817V; undergraduate equivalent; or permission.

**856V Supervision in Social Work (3)** To provide the student with knowledge of theories and practice in techniques used in supervising paid or volunteer staff in social agencies, with emphasis on the leadership and helping functions of the supervisor in both educational and administrative roles. Prereq: Completion of accredited undergraduate social work major or one graduate year of social work courses, or permission.

**858V Advanced Policy Analysis and Implementation (3)** An advanced course in policy analysis techniques, policy development and implementation. Prereq: SW 805, SW 814 and SW 817; undergraduate equivalent; or permission.

#### Social Problem/Condition Courses

**460/860M Social Work in Mental Health (3)** This course is an elective for the advanced student who is seeking substantial specialized knowledge of current social work practice in mental health and mental retardation. Prereq: Senior social work majors, graduate social work students or permission of instructor.

**462/862M Social Welfare and Institutional Racism (3)** An examination of racism in social institutions, including social welfare, with particular attention to the implications for social work practice and the social work practitioners. To increase the students awareness of the impact of racism on the behavior of both racial minorities and whites. Prereq: Senior social work majors, graduate social work students or permission of the instructor.

**463/863M Social Work in Health Care Programs (3)** A critical review of social work practice in health care programs; as it was, its current status, emerging roles, plans for an ideal situation. The design of the course provides for learning in both micro and macro aspects of health care delivery. The students will have an opportunity to examine and experience several aspects of health care delivery and the social worker's role in it. Students will also be exposed to the various resources involved in the provision of health care and some of the administrative mechanisms that are currently utilized by these systems. Prereq: SW 810 or permission of the instructor.

**466/866M Social Work in Child Welfare (3)** The course is designed for the student to acquire an understanding of the primary child welfare programs and services designed to strengthen family living. The three primary types of child welfare services covered are: (1) supportive services; (2) supplemental services; and (3) substitutive services.

**867 The Human Ecology of Child Abuse and Neglect: An Analysis of Research and Intervention (3)** This course will provide a review of existing literature on the meaning, origins, and consequences of child abuse and neglect. It will acquaint the student with significant approaches to prevention and intervention and emphasize research issues in child abuse and neglect. Prereq: Graduate standing and basic

research methods course, or permission of the instructor.

**868 Social Work in the Juvenile Justice System (3)** To provide the graduate social work student understanding and knowledge of the practice of social work within the juvenile justice system.

**469/869M Working With Minority Elderly (3)** This course is an interdisciplinary one, designed to provide the student with knowledge of the differing status, attitudes and experiences of the elderly within four major minority groups and to examine various service systems and practice models in terms of their relevance and effectiveness in meeting needs of the minority elderly (Same as Gerontology 869M). Prereq: Senior or graduate standing in Gerontology or Social Work or permission of instructor.

**870V Alcohol Abuse: Comprehensive Treatment Programs (3)** An examination of problems and processes related to alcoholism which are common in a social work setting. Special emphasis is given to detection, intervention, referral, etiology, and treatment alternatives and resources.

**871V Alcohol Abuse: Comprehensive Community Programs (3)** An examination of the elements of a comprehensive service system for alcohol-related problems.

**480/880M Social Work and the Law (3)** An examination of some of the legal aspects of selected social welfare policy issues such as abortion, illegitimacy, alcoholism and drug addiction, creditor and debtor's rights, landlord and tenant relationships, housing law, right to treatment, status of the convicted individual, mental health commitment procedures. Prereq: SW 311 or its equivalent at the graduate level, SW 805 or permission.

**888M Topical Seminar in Social Work (2-4)** Advanced topics and experiences in social work theory and practice. Specifics will be announced when the course is offered. The topics selected will be consistent with faculty expertise and student needs. This course may be repeated for up to nine hours credit. Prereq: Permission.

#### Special Studies and Social Welfare Research Courses

**890V Special Studies in Social Welfare (1-3)** Special studies in a selected area of social welfare for deepening the student's knowledge in that particular area. Prereq: Permission.

**892V Seminar in Utilization of Research in Social Work (3)** Emphasis is placed on the utilization of research in social work practice. Prereq: SW 809 or equivalent, or permission.

**894V Evaluation of Social Programs (3)** A study of the various issues and methodology of social program evaluation. Evaluation of agency organizational structure, program design and effectiveness, and social impact will be covered. Prereq: SW 808 and 809 or equivalent, SW 852 or permission.

**896V Research Other Than Thesis (3)** Students prepare a research proposal, carry out the proposed study and prepare a detailed report of the purpose, design, outcome and meaning of the study. Prereq: SW 892 or 894 or permission.

**899V Master's Thesis (6)** Under the supervision of the thesis instructor and the thesis committee, the student will complete a thesis research. Prereq: SW 809 or equivalent, or permission.

#### Sociology

##### Anthropology

**420/820M Urban Anthropology (3)** The course is intended to examine the city from an anthropological point of view. Included will be an overview of its history and the processes by which cities are formed and grow as well as the internal structure and processes within the city. The course is intended to be comparative geographically and temporally. Topics covered will include urbanization and cities in both the so-called "third-world countries" as well as in the developed, industrialized ones. Graduate students will be required to do a substantive term paper on a topic mutually acceptable to both the instructor and the student. In addition to the written work, the student will also be required to make an oral presentation in class of the research done and the major findings. Prereq: Permission of the instructor.

**421/821M Cultural Anthropology (3)** Arts, economics, family, kinship, politics, religion, subsistence, technology, war and world view approached as parts of an integrated whole, a way of life in human society. Illustrations will be drawn from a number of societies, anthropological theories and methods of study. Prereq: Permission of the instructor.

**422/822M North American Archaeology (3)** American Indian culture history in North America, with emphasis on the peopling of the new world, origin and development of new world agriculture, development of middle American civilizations and their impact on core areas of village-farming in the continental United States; introduction to archaeological investigation techniques, dating methods, and taxonomic concepts. Prereq: For 422, Anthropology 105 or 421. For 822m, permission of the instructor.

**452/852M Psycholinguistics (3)** A discussion of the literature concerned with how such psychological variables as perception, learning, memory, and development relate to the linguistic variables of sentence structure, meaning, and speech sounds. (Same as Psychology 852M and Communication 852M.) Prereq: Senior or graduate standing or permission of the instructor. Recommended: Anthr. 105. (Same as Psychology 452 and Comm. 452)

**492/892M Seminar in Anthropological Problems (3)** The seminar will cover a specific topic which will be announced each time the course is offered. The students will work with the instructor on projects designed to increase the student's depth of knowledge in specific areas. Prereq: Permission of the instructor.

##### Sociology

**401/801M Social Control of Behavior (3)** The social processes by which the person's behavior is adapted to the group. External restraints,

roles, self control. Analysis and measurement of behavior in the context of socially defined fields. Prereq: For 401, 9 hours of sociology, including Sociology 101 and 301. For 801M, permission of the instructor.

**402/802M Collective Behavior** (3) Group and individual processes of ephemeral social action and institution formation are studied. The development of transitory groups and ideologies in new movements and organizations through opinion formation; case and comparative investigations of the origins and growth of collective movements are made and relevant social theories are applied. Prereq: For 402, 9 hours of sociology, including Sociology 101 and 301. For 802M, permission of the instructor.

**410/810M The Community** (3) A basic course in community sociology. Sociological theory and the techniques of empirical research are applied to published studies of communities in the United States and elsewhere. The comparative social scientific method is elaborated as it pertains to data derived from community investigation. Prereq: For 410, 9 hours of sociology including Sociology 101. For 810M, permission of the instructor.

**411/811M Applied Social Gerontology** (3) An introduction to social gerontology with a special emphasis upon the effects of aging on social institutions and social participation. Examines practice-oriented implications. Prereq: Permission of instructor.

**412/812M Urban Geography** (3) A geography of the city from the viewpoint of history, site, and situation, external relations, internal relations, and the comparative study of cities. Prereq: For 412, junior standing. For 812m, permission of the instructor. (Same as Geography 412 and Economics 412.)

**413/813M Sociology of Deviant Behavior** (3) A theoretical analysis of the relation of deviant group behavior and subcultures to community standards of conventional behavior as expressed in law and norms. Prereq: For 413, 9 hours of sociology, including Sociology 101. For 813M, permission of the instructor.

**414/814M Urban Sociology** (3) Examines urban theoretical perspectives, urbanization processes, the diversity of metropolitan communities, urban stratification, metropolitan growth, urban neighborhoods, community power and urban policy and planning. Prereq: Permission of instructor.

**415/815M American Family Problems** (3) (1) A theoretical treatment of the family as a social institution outlining the essential functions it provides for its members and the society. (2) An analysis of failures of function and attendant problems in a variety of American families: Parentyouth tensions, problems of sexual adjustment, role conflict, multiproblem families, desertion, divorce, others. Prereq: For 415, 3 hours of sociology; for 815M, permission of the instructor.

**851M Advanced Qualitative Methods** (3) This course familiarizes students with contemporary

which the social sciences explore social and cultural relations in natural settings. Students will conduct individual and/or group field projects. Prereq: Permission of the instructor.

**852M Advanced Quantitative Methods** (3) This course provides an advanced consideration of methodologies and techniques utilized in the generation and management of quantitative social science data. Students will gain first-hand involvement in the process of instrument construction and evaluation, building computer files, and index/scale construction and evaluation. Prereq: Permission of the instructor.

**453/853M Seminar in Cross-Cultural Communication** (3) This seminar will be directed towards understanding the components of cultural and subcultural misinterpretations, with the purpose of bringing to awareness those factors which disturb communication in cross-cultural situations. Prereq: For 453, junior standing and permission of the instructor. For 853m, permission of the instructor. (Same as Comm. 453/853M).

**462/862M Sociology of Formal Organizations** (3) Examines organizational theory and research. Analyzes organizational problems such as goals and effectiveness; authority, leadership and control; professionals in organizations; communications; clients; organizational change; and organizations and their environments. Comparative analysis of many types of organizations such as business, industry, schools, prisons, and hospitals with special attention given to human-service organizations. Prereq: Permission of the instructor.

**471/871M Development of Sociological Theory** (3) An intellectual history of sociology as an academic discipline surveying outstanding contributions to its body of theory. Stress is placed on the development of sociology as a science with illustrative materials drawn from the established works of recent decades although backgrounds to these are traced to their ancient and medieval antecedents where applicable. Prereq: For 471, senior standing and 12 hours of sociology. For 871m, permission of the instructor.

**472/872M Contemporary Sociological Theory** (3) A thorough and detailed presentation of a major theoretical integration of contemporary sociological research and theory with shorter descriptive presentations of alternative positions indicating similarities and differences. Principles of theory construction and a review of major sociological concepts and writers. Prereq: For 472, senior standing and 12 hours of sociology. For 872m, permission of the instructor.

**475/875M Social Change** (3) A discussion of theories and the basic models of change. Case and comparative examples from contemporary and historical change. Emphasis is placed on understanding causes and effects and larger trends current in American society and institutions. Prereq: For 475, Sociology 101 and junior standing or higher for 875M permission of instructor.

**485/885M Sociology of Religion** (3) Analysis of religious behaviors from a sociological and social-psychological perspective, and utilizing

class is designed as an introductory approach to the sociology of religion, and the first in a two-step sequence, undergraduate and graduate. Prereq: For 485, Sociology 101 or permission of the instructor. For 885M, permission of the instructor.

**499/899M Independent Study** (1-3) Guided reading in special topics under the supervision of a faculty member. Prereq: For 499, senior standing and permission of the instructor. For 899m, permission of the instructor.

**801V General Seminar in Sociology** (3) This seminar, required of departmental graduate students, gives a basic orientation to the profession, its leading figures, publications, organizations, and university departments. It emphasizes critical discussion of issues in the discipline and selected substantive problems of sociology. Prereq: Graduate standing and permission of instructor.

**805V Seminar in Social Psychology** (3-6) Assigned reading, discussion, specialized individual work leading to the writing and presentation of a paper applicable to a general topic in social psychology selected by the instructor. As seminar topics change, this course may be repeated in a student's program without implying duplication. Prereq: Permission (same as Psych 805V).

**810V Seminar in Applications of Sociology** (3-6) Sociological theory and method applied to a practical problem of relevance to general social issues. As seminar topics change, this course numbers may be repeated in a student's program without implying duplication. Prereq: Permission.

**811V Social Problems of The Disadvantaged** (3) A survey of the social problems existing in disadvantaged communities. The effects upon individuals of such settings. The subculture of poverty. Prereq: Graduate standing and permission of instructor.

**812V Seminar in Social Gerontology** (3) A topical seminar focusing on the sociology of aging. Students are encouraged to develop proposals for research, programs, or social policy. Focus is upon generational differences and age changes throughout the adult life. Prereq: Permission of instructor.

**850V Seminar in Research Methods** (3-6) A complete research project carried out under the supervision of an instructor particularly qualified in the area of concern. Students participate in the background work, question formulation, selection of (or construction of) test instruments, data gathering by methods such as interviewing and participant observation, and analysis. As seminar topics change, this course may be repeated in a student's program without implying duplication. Prereq: Permission.

**855V Seminar in The Sociology of Religion** (3-6) A seminar dealing with religion as a social and cultural phenomenon. The study theme will vary from time to time in keeping with the special interests of the instructor. As seminar topics

program without implying duplication. Prereq: Permission.

**860V Seminar in Social Organization** (3-6) Assigned reading, discussion, specialized individual work leading to the writing and presentation of a paper applicable to a general topic in social organization selected by the instructor. As seminar topics change, this course may be repeated in a student's program without implying duplication. Prereq: Permission.

**865V Seminar in Occupations & Professions** (3) Assigned reading, discussion, specialized individual work leading to the writing and presentation of a paper applicable to the sociology of occupations and professions. Questions relating to theory, research, and practical application are considered. Prereq: Graduate and permission of instructor.

**870V Seminar in Sociological Theory** (3-6) Assigned reading, discussion, specialized individual work leading to the writing and presentation of a paper applicable to a general topic in sociological theory selected by the instructor. As seminar topics change, this course may be repeated in a student's program without implying duplication. Prereq: Permission.

**871V Population Seminar** (3) The significance of differences from place to place in the number, kind and qualities of human inhabitants and changes through time. Prereq: Graduate standing and permission of instructor. (Same as Geography 871v)

**880V Independent Study in Topics On Urbanism** (1-3) Graduate student research on an individual basis under faculty supervision in topics pertaining to urbanism. Prereq: Undergraduate major in one of the social sciences plus 6 hours of graduate work on one of the social sciences. (Also listed under economics and geography.)

**883V-884V Interdisciplinary Seminar On The Urban Community** (3-6) An interdisciplinary course on the metropolitan community in which various departmental and college offerings concerned with urban problems are put on broad interrelated focus. Prereq: Undergraduate major in one of the social sciences plus 6 hours of graduate work in one of the social sciences. (Also listed under economics, geography, political science, and urban studies.)

**885V-886V Seminar in Urban Economics** (3-6) An examination of the theoretical basis for the analysis of urban economic problems with emphasis upon the policy alternatives applicable toward their possible solution. Separate credit may be received for each course. Prereq: At least 6 hours of upper division course work in economics or permission of the instructor. (Same as Geography 885v-886v and Economics 885v-886v)

**895V-896V Practicum in Applied Sociology** (Each 3) A practical work experience under supervision which provides opportunity for applying principles from the student's academic area of concentration. Prereq: Graduate sociology major for the M.S. Degree.



**940V Seminar in Small Group Communication (J. Brillhart)** (3) Research and theory in the processes of small group communication and leadership; research procedures; approaches to teaching a discussion course. Prereq: Communication 801V or equivalent, or basic statistics, or permission of the instructor. (Same as Communications 940 and Psychology 940)

### Special Education

**808 Introduction to Design of Human Service Systems** (3) This course is designed for graduate students interested in the design of human service systems, especially those serving older or handicapped citizens. The course will provide an interdisciplinary analysis of (1) history of services, (2) current trends, and (3) future directions. The basic service philosophy, attitude toward human and legal rights, etc., for several different service areas (services for mentally and physically handicapped; older citizens, etc.) will be examined. Prereq: None.

**411/811M Assessment and Curriculum in Cognitive Development for the Severely/Profoundly Handicapped** (3) This course will involve a combination of lectures, demonstrations and practicum experiences designed to prepare the student to be able to assess cognitive development in the severely handicapped student, and apply that information to the development of individual educational plans for severely handicapped students. The course will include weekly presentations and practicum. Prereq: Graduate student, permission of instructor. Undergraduate student: Junior standing in special education, PSY 101 or PSY 351, CORE 210, 250, 280 or equivalents, and permission of instructor.

**420/820M History, Education, Guidance of Deaf** (2) An introductory investigation of deafness and the education of the deaf, historical development of the field, educational and social problems associated with impaired hearing, current educational strategies, and programs, the vocational adjustment of deaf individuals. For students beginning course work towards provisional level certification in the area of deafness. Prereq: FED 801.

**421/821M Speech for the Deaf I** (2) To provide prospective teachers of the hearing impaired with an understanding of the importance of speech for the hearing impaired child, the process of acquisition of speech in the normal child, and the speech and language needs of children with severe and profound hearing losses. To investigate the methods and techniques for developing speech in the hearing impaired child, the use of several orthographic systems in the teaching of speech, and the methods employed in correcting speech in the older deaf child. This course is designed for undergrad/grad level students preparing to be teachers of the hearing impaired.

**422/822M Teaching of Speech to the Deaf II** (2) A continuation of SPED 421, an investigation of diagnostic speech procedures used with hearing impaired children, the development of speech unit plans, the writing of individual speech prescriptions, the application of distinctive

feature theory and generative phonology procedures to the teaching of speech to the deaf, and an in-depth study of the intonation patterns of English and methods employed in teaching them to hearing impaired students. For students preparing for students preparing for provisional level certification as teachers of the hearing impaired. Prereq: SPED 821 and FED 801.

**423/823M Language Development of Hearing Impaired Children** (3) An investigation of the nature and structure of language, the various disciplines studying language, the acquisition of language in normally hearing children. The effects of the hearing loss on language development, language development in the hearing impaired infant and preschool child. This course is designed for students preparing to be teachers of the hearing impaired. Prereq: FED 801.

**424/824M Teaching of Language to the Deaf II** (3) Continuation of SpEd 423 with further consideration of criteria for selection and utilization of teaching materials; special emphasis on language principles for the older deaf pupil. Prereq: For 424, Special Education 423. S

**433/833M Speech Reading and Auditory Training** (2) An investigation of the receptive modes of oral communication employed by and for the hearing impaired, the processes employed in perceiving language through speech reading, the limitations to speech reading factors affecting speech reading ability, and the prominent methods of teaching speech reading to the hearing impaired. Also, an investigation of the importance of the auditory channel in the development of communication skills of the hearing impaired, the use of amplification in educational settings, the available procedures for providing amplification to the hearing impaired, an evaluation of these procedures, and the techniques and methods employed in developing audition within the hearing impaired population. Prereq: FED 801.

**435/835M Teaching School Subjects to the Deaf II** (2) Consideration of problems in deaf education; approaches to school subjects considered in detail. Prereq: For 435, Special Education 434. (S)

**438/838M Speech Science I: Auditory and Speech Mechanism** (3) Basic structure and functions of the organs involved in hearing and speech. Prereq: For 438, junior standing. 2.5 GPA. (F)

**839M Hearing Science** (3) This course is designed for undergraduate majors in speech pathology and audiology and for graduate students in education of the deaf. The purpose of the course is to introduce basic concepts important for understanding the process of human audition. The course will include basic terminology, anatomy and physiology of the hearing mechanism, acoustics and physics of sound, the processes of human hearing, elements of basic hearing measurement, psychophysics. Prereq: 938M, Graduate major in Deaf Education. Not available to Speech Pathology majors as a graduate course.

**440/840M Learning Disabilities** (3) Study of

view problems of terminology, criteria, and definition; causal factors of learning disabilities; evaluative techniques for identification of the problem; therapy techniques for habilitation or rehabilitation of children with specific learning disabilities. Prereq: For 440, junior standing. Teacher education and 2.5 GPA. (F,S,Su)

**445/845M Speech Science II: Experimental and Applied Phonetics** (3) Analysis of phonetic and phonetic elements in major American English dialects; practice in transcription of standard and defective speech, use of the sound spectrograph, spirometer and other equipment. Prereq: For 445, junior standing. 2.5 GPA. (F,Su)

**451/851M Basic Clinical Practicum in Speech Pathology** (1-3) Minimum of 45 clock hours per credit hour of supervised practice in speech and hearing clinic; speech and hearing evaluation, therapy sessions, lesson plans, records, and a weekly colloquium. Prereq: For 451, Special Education 443 or Special Education 444. For 851m, graduate standing and permission of the instructor. (F,S,Su)

**459/859M Disorders of Communication in Older Adults** (3) This course is designed to familiarize the student with the identification and symptomatology, basic assessment and intervention strategies associated with disorders of communication affecting older adults and geriatric patients. It is beneficial to students majoring in gerontology, or speech pathology, as an elective course or as a professional enrichment course for persons working in these or related fields. Students are assigned contacts with and written reports of contacts with an older adult who manifests a disorder of communication. Prereq: GERO 455/855M - Health Aspects of Aging, or permission of instructor.

**460/860M Introduction to Mental Retardation** (3) This modular competency based course covers background information on mental retardation; the needs of and services available for the mentally retarded; the history of the field and its contributions; an introduction to teaching techniques and methods; the problems caused because of mental retardation in a family and society; and the status of and trends in the field of mental retardation.

**463/863M Curriculum Planning for The Disabled** (3) This is a modular competency based course where students study the terminology of curriculum, its goals and aims, objectives and taxonomies, curricular development, units and lesson plans, task analysis assessment and evaluation, programming. Project, small group discussion, and a final test make up the evaluation techniques used in this class. Prereq: Special Ed 460 and working experience with handicapped children. (F,S,Su)

**464/864M Methods and Materials for Teaching Mentally Retarded Children** (3) The retarded child as he relates to a variety of educational processes designed for his learning needs; methodology and teaching materials; practice in the design and implementation of curriculum units, preschool through vocational; consideration of programs for the trainable and educable.

tion, Special Education 306 and Special Education 460, and 2.5 GPA. (F,S,Su)

**466/866M Vocational Training for the Mentally Retarded** (3) Concerned with the vocational training of the Mentally Retarded from various perspectives: the individual; the community; the school or training center; the employer; and the government. Interaction with agencies that deal with vocational training, projects, and small group discussions make up the format of the course. Prereq: SPED 460/860M.

**480/880M Emotional Development of Children and Youth** (3) The study of psychological, biological, and environmental factors that affect social and emotional development of children and adolescents. Emphasis is placed on symptoms, causative emotional handicaps and educational strategies for classroom intervention. Prereq: Student teaching, graduate standing.

**481/881M Classroom Techniques for Behavior Control** (3) This course will introduce the student to a variety of techniques for managing behavior in the classroom. Three major areas will be presented and specific techniques within each will be practiced both in the class and in the student's own teaching situation. Applications and adjustments of techniques will be accomplished in class. The course is intended for undergraduate students who are currently enrolled in student teaching and for graduate students who are currently teaching in elementary, secondary, or special education programs. Prereq: for 481, Junior standing and student teaching; for 881M, graduate standing. (S)

**883 Practicum In Teaching Emotionally Disturbed** (3) The first semester of participation in a clinical or classroom situation in the field of teaching Emotionally Disturbed children. The course is required for students in the program preparing to teach emotionally disturbed and is open to others who may be interested. Major emphasis is on the development of problem solving skills to be used in the classroom. Prereq: SPED 840, SPED 880.

**884 Advanced Practicum In Teaching Emotionally Disturbed** (3) The second semester of participation in a clinical or classroom situation in the field of teaching the emotionally disturbed. The course is required for students in the program preparing to teach emotionally disturbed and is open to others who may be interested. Prereq: Successful completion of Steps I and II in the training program for teaching emotionally disturbed (see catalog).

**485/885M Introduction to The Physically Handicapped** (3) Nature and educational needs of children and youth who are physically handicapped; definitions; prevalence and types of children in educational programs; history; trends. (F) Prereq: For 485, junior.

**800V Special Projects** (1-3) A series of intensive courses especially for teachers in-service scheduled as regular seminars or workshops, according to purpose.

**803V Help for the Regular Educator with Mainstreamed Children** (3) This is a course with the

discovers that a handicapped child is going to be (or has been) placed in their class. Because of the structure of the class it will not be restricted to regular educators. People concerned with the total process of mainstreaming will find this course to be of value. Prereq: FED 801V or permission of the instructor.

**806V Interdisciplinary Approaches to Developmental Disabilities** (3) This is an introductory course dealing with the various developmental principles as viewed by different disciplines at Meyer children's rehabilitation institute. The different disciplines will come in and present an overview of their role in working with the developmentally disabled child. (F) Prereq: FED 801.

**810V Research Projects** (3) Individual or group study and analysis of specific problems.

**812V Reading Diagnosis and Remediation for the Classroom Teacher** (3) This course is designed for in-service teachers who are interested in diagnostic and remedial techniques appropriate for the disabled reader. Diagnostic instruments will be analyzed, constructed, and administered during the course. Remedial techniques for disabled readers will be examined. Prereq: One reading course and Graduate standing.

**813V Diagnostic and Remedial Instruction in Reading** (3) A course for advanced students in reading which will provide the student with the essential information for the diagnosis and remediation of reading disabilities. (F,S,Su) Prereq: SpEd 911 or 912.

**814V Measurement and Evaluation of Reading** (3) A course for advanced students in reading which will provide the student with the necessary training for establishing and operating a reading center (i.e., initiating and accepting referrals, forming evaluation schedules, administering appropriate evaluative devices, writing case reports and establishing follow-up sessions). (F,S) Prereq: SpEd 813v.

**815V Clinical Practice in Reading** (3) A laboratory-oriented course for advanced students in reading which will provide them with practicum training in the use of proper remedial reading techniques in order that they might qualify as reading specialists. (F,S,Su) Prereq: Permission and SpEd 814v.

**834V Pediatric Audiology** (3) The course is designed for graduate majors in speech pathology and audiology and for students in education of the deaf. The purpose of the course is to introduce basic concepts important to the understanding of the development of human hearing in the child. The course will include basic terminology, techniques for testing and assessment of children categorized as neonates, infants and preschool children. Disorders of hearing commonly found in children will be stressed. Remedial procedures and approaches for hearing disabilities will be developed. Prereq: Hearing Disorders, SPED 438.

**837M Hearing Disorders** (3) This course will focus on the problems caused by disease pro-

Appropriate intervention and remedial techniques will be discussed and applied. For students majoring in Speech Pathology and Education of the Deaf programs. Prereq: SPED 439. course to be of value. Prereq: FED 801V or permission of the instructor.

**842V Advanced Studies in the Disorders of Voice** (3) Types and causes of voice disorders; rationale for case selection; cleft palate; special emphasis on rehabilitation procedures associated with individual involvements; practicum. (F)

**843V Advanced Studies in the Disorders of Rate and Rhythm** (3) Types and causes of rate, rhythm and stress pattern disorder; rationale for case selection; survey of stuttering theories and therapies; special emphasis on rehabilitation procedures associated with individual involvement; practicum. (S)

**844V Advanced Studies in The Disorders of Aphasia and Related Problems** (3) Types and causes of language symbolization disorders; rationale for case selection; childhood aphasia and autism; special emphasis on rehabilitation procedures associated with individual involvements; practicum. (S)

**845V Current Practices in Speech Pathology** This course provides for study and experience in speech therapeutic programming utilizing behavioral modification techniques based on Skinnerian-behaviorist principles. It includes a review of current literature and emphasizes operant articulatory and language remedial procedures. (Su) Prereq: SpEd 850m.

**846V Diagnostic Methods in Communicative Disorders** (3) Tests and procedures for evaluating individuals with speech disorders; principles in differential diagnosis and report writing; observation during evaluation periods in speech and hearing centers. (F) Prereq: Graduate standing and 6 hours of speech pathology.

**847V Speech Science III: Neurophysiology of Speech and Language** (3) Introduction to human neuroanatomy and neurophysiology. Emphasis is placed on gaining familiarity with the brain mechanisms and sensory and motor functions which underline human communication and its disorders; individual projects. (F,Su)

**848V Advanced Audiology** (3) This course is intended for graduate students majoring in speech pathology. It is designed to present information pertinent to clinical certification of the speech pathologist. Course content includes specialized techniques applicable to the assessment and diagnosis of auditory dysfunction. Application of basic hearing techniques combined with special tests for assessment of site of lesion will be stressed. The use of case histories, otological considerations, identification audiometry, and equipment maintenance will be considered. Prereq: SPED 437.

**850V Basic Clinical Practicum in Speech Pathology** (3) This course in practicum follows the course 451 which is the student's first experience in clinical practicum. It is designed to give graduate students who need more than one semester of closely supervised practicum an op-

placed in a setting away from the university. (F,S,Su) Prereq: Permission and SPED 451 or equivalent.

**851V Advanced Clinical Practicum in Speech Pathology** (3) This course provides the student with an externship experience for clinical practicum in either a school or a medical setting. A minimum of 45 clock hours of work is required for each credit hour per semester. (F,S,Su) Prereq: 451 and graduate standing.

**852V Advanced Clinical Practicum in Speech Pathology** (3) The second semester of advanced clinical practicum. The student is placed in an externship setting with a cooperating master clinician. A minimum of 45 clock hours of work is required for each credit hour per semester. (F,S,Su) Prereq: SpEd 851v.

**853V Seminar in Speech Pathology** (3) Student selects and investigates three different areas of current concern in speech pathology; initial survey, annotated bibliography, presentation of observation and conclusions, seminar discussion of findings. Instructor will base his lectures on topics chosen by students for study; clinical demonstrations of selected voice, speech and language problems. (S,Su) Prereq: Twenty-four hours speech pathology and graduate standing.

**854V Cleft Palate** (3) This course in speech pathology is designed for graduate students and public school speech clinicians. This course is designed to expose students to the problems of communication by which the child with a cleft of the palate is confronted. Developing competencies for remediation procedures and methods will be the primary aim of the course. (S)

**855V Alaryngeal Speech Rehabilitation** (2) Problems of voice and speech rehabilitations for the individual without a functional larynx; social, emotional, and medical considerations as well as clinical procedures for esophageal, pharyngeal and buccal speech; implications for use of artificial larynx; current research pertinent to this area. (F) Prereq: Graduate standing and 6 hours speech pathology courses including voice problems.

**856V Speech Problems of Cerebral Palsied Children** (3) Identification of types of cerebral palsy by a location of lesion, motor symptomology, and additional handicaps; the role of the speech clinician on the team; types of speech therapy, with special emphasis on the bobath approach; current research and controversial issues will be discussed. (S) Prereq: SpEd 847v.

**861V Teaching Severely/Profoundly Handicapped** (3) The course is designed to meet the needs of those who desire a basic overview of skills and techniques needed in the education and training of the severely/profoundly handicapped. Since the problems of educating the severely and profoundly handicapped are not limited to public school settings, all efforts will be made to involve community personnel who have expertise or concerns in specific areas. The course is open to students desiring graduate credit, for those seeking professional development, and for students desiring to work for a

**864V Theoretical Approaches to Teaching The Developmentally Disabled Child** (3) This is an advanced methods course for students majoring in Special Education. It will be offered to graduate students in the following areas: retardation, learning disabilities, education of the deaf, and early childhood education for the handicapped. (F,S,Su) Prereq: SPED 806V and SPED 860V.

**867V Community Services for The Handicapped** (3) An introduction to community and regional resources providing services to the handicapped. Program goals, objectives, activities, manpower needs, and involvement, coordination with related programs, administration of services, financing, and priority settings are studied for each agency. (S,Su)

**870V Seminar in Special Education** (3) Graduate course primarily for special education majors and professional workers in the fields of speech and hearing, teaching the deaf, teaching the mentally retarded, remedial reading and teaching the physically handicapped. Familiarity with philosophy, major literature and practices in each area; student will research and present a paper reflecting his personal professional interests. Discussions, forums, and panels; visiting experts. (F,S,Su)

**871V Parent-Professional Relationships in Special Education** (3) This course includes interviewing parents of handicapped children, identifying both family and professional concerns, and a student project in one of four areas: (1) challenges of parenting the handicapped; (2) strategies for involving parents in planning, implementing, and evaluating handicapped child education plans; (3) curriculum/instruction/therapy modification for family use; and (4) professionals dealing with families of the handicapped. Prereq: Acceptance in Special Education Graduate Degree Program.

**872U Basic Practicum in Special Education** (3) This course provides participation in various clinical or classroom situations in the field of special education. The course is open to all students in all areas of special education. Assignments will be made according to the area of interest of the student. (F,S) Prereq: Master's degree and acceptance in the ed spec program.

**872V Basic Observation and Student Teaching in Special Education** (3 or 5) Classroom experience with exceptional children for graduate students who have had other professional experiences. Students will participate in observation, participation, teaching, and a weekly seminar. (F,S,Su)

**873U Advanced Practicum in Special Education** (3) A second semester of participation in various clinical or classroom situations in the field of special education. The course is open to all students in all areas of special education. Assignments will be made according to the area of interest of the student. (S) Prereq: 872u.

**873V Advanced Observation and Student Teaching in Special Education** (3 or 5) A second semester of classroom experience with exceptional children for graduate students who have had other professional experiences. Students will participate in observation, participation, teach-

ing, and a weekly seminar. (F,S,Su) Prereq: 872v.

**886V Methods and Materials for Teaching The Physically Handicapped** (3) Consideration of the physically handicapped child as his unique exceptionalities require the development of specialized methods and materials designed to meet his learning needs; an investigation of practices and problems involved in methodology and materials; application of methods; development and evaluation of materials; practices in design and implementation of methods and materials; selected observation of programs. (S) Prereq: 806v and intro. to the education of the physically handicapped.

**887V Diagnostic and Remediation Techniques in Early Childhood Education for The Disabled** (3) This course deals with the different disciplines used at the Medical Center presenting some of their techniques for assessing the developmentally disabled child and also presenting methods that can be utilized in intervention with the developmentally disabled child. (S) Prereq: 806v.

**890U Administration and Supervision of Special Education** (3) Problems of organization, administration, and supervision of special education programs; finance, federal involvement, legislation, litigation, due process, intermediate educational units, accountability and physical facilities will also be presented. Prereq: Graduate Standing.

**895V Basic Diagnosis of Learning Deficits** (3) The purpose of this course is to provide the student with theoretical and observational experiences concerning informal and formal approaches to diagnosing children with learning and/or behavioral deficits. Significant aspects of the design of the course is the opportunity to develop skills of observing, recording, and evaluating children's learning performance and behavior in the classroom; to attain a knowledge of theory, standardizations, functions, and processes of normative references evaluative measures; to attain a knowledge of the purpose, designs, and required functions and processes of criteria referenced evaluative measures; to develop techniques for informally assisting a child's learning performance through diagnostic teaching approaches; and to develop skills of informal test construction based upon various theories of learning and child development. Prereq: SPED 840. Permission.

**896V Advanced Diagnosis of Learning Deficits** (4) The purpose of this course is to provide the student with indepth practicum experiences in the administration and interpretation of normative referenced evaluative measures, (non-psychological), criteria referenced tests, and informal diagnostic teaching probes. Graduate students who have successfully completed SPED 895 (Basic Diagnosis) and SPED 897 (Clinical Teaching) will be eligible to enter SPED 896. (F,S) Prereq: SPED 895 and SPED 897

**897V Clinical Teaching in Learning Disabilities** (3) Theoretical and limited practical knowledge of a particular kind of teaching; which is to tailor learning experiences to the unique needs of

children who have specific learning disabilities. The student learns of the flexibilities and continuous probing needed for individualized instruction. (F,S,Su) Prereq: SpEd 895.

**899 Thesis** (3-6) Required of all students taking master of arts degree, see major adviser for information. (F,S,Su)

**911 Problems of Teaching Reading--Elementary** (3) This is a beginning graduate course for both elementary and secondary teachers and is open to any student who has graduate standing. Major emphasis will be given to the administration, organization, evaluation, and methods and materials for teaching reading from Kindergarten through the sixth grades. There are no prerequisites except graduate standing.

**912 Problems of Teaching Reading--Secondary** (3) An advanced course in reading for elementary or secondary teachers. Major emphasis will be given to the administration, organization, evaluation, and methods and materials for the teaching of reading in each of the content subjects at the junior and senior high levels.

**917 Seminar in Organization and Administration of Reading Programs** (3) Participation in the seminar is limited to individuals who have completed at least one graduate reading course (or equivalent) and who are professional workers who are charged with the total or partial responsibility for organizing and administering reading programs. Familiarity with the philosophy, organization, and major research related to different reading programs will be emphasized. Local and area reading authorities will conduct panels and lectures on topics chosen by the students. Prereq: One graduate reading course or permission of instructor.

**918 Seminar in Research in Reading** (3) A course for graduate and post-graduate students relating to in-depth studies of significant, recent research in reading with appropriate application for instructional procedures which may be undertaken. Each student will conduct self-initiated research and report the results of the activity to other class members for comment and evaluation. Prereq: One graduate reading course (or equivalent), FED 801 (or equivalent), and permission.

**919 Topical Seminar in Reading** (3) Participation is limited to individuals who have completed the Master's Degree in Education and have completed at least nine semester graduate hours in reading, and who are professional workers in the field of reading education. The major intent of the course will be that of orienting and apprising students of the latest techniques and curriculum changes in reading. Specifics will be described when the course is offered. The general topic selected will be announced each time the course is offered. The course may be repeated each time a different topic is covered, up to a maximum total of six credit hours. Prereq: Master's Degree in Education and have completed at least nine semester graduate hours in Reading.

## Urban Studies

**882M Urbanization in Developing Areas** (3) Comparative urban studies: Emphasis will be upon contrasting the cities of the developed and developing areas of the world. (Also listed under geography.)

**801V The Metropolis As A Public Economy** (3) The integration of politics and economics in the metropolitan system as they affect metropolitan problems such as poverty, transportation, housing, crime, education, and the environment will be analyzed.

**802V Race, Ethnicity, and American Urban Culture** (3) This course explores two central themes, race and ethnicity, which have played a dominant role in the shaping of American society and American culture.

**883V-884V Interdisciplinary Seminar On The Urban Community** (3-6) An interdisciplinary course on the metropolitan community in which urban problems are put in a broad interrelated focus. (Also listed under economics, geography, political science, and sociology).

## Technical Institute

### Industrial Technology

**421/821M Contemporary Trends in Industrial Education for The World of Construction** (3) Introduction to a new program development in industrial education, with major emphasis placed on the world of construction curriculum. Analysis of basic construction operations and management practices utilized in industry and adapts them as learning units for the junior high industrial laboratory. Prereq: For 421, junior. For 821m, graduate standing.

**422/822M Contemporary Trends in Industrial Education for The World of Manufacturing** (3) Introduction to a new program development in industrial education, with major emphasis placed upon the world of manufacturing curriculum. Analysis of basic manufacturing operations and management practices utilized in industry and adapts them as learning units for the junior high industrial laboratory. Prereq: For 422, junior.

# Faculty and Administration

## GRADUATE FACULTY

- ROBERT L. ACKERMAN ..... *Elementary and Early Childhood Education*  
Ed.D., University of Nebraska-Lincoln, 1966; Professor
- PAUL B. ACKERSON ..... *Secondary/Post-Secondary Education*  
Ed.D., Oklahoma State University, 1965; Professor
- JAMES C. AKERS ..... *Special Education*  
Ed.D., Oklahoma State University, 1969; Associate Professor
- LARRY ALBERTSON ..... *Health, Physical Education & Recreation*  
Ed.D., University of Georgia, 1973; Associate Professor
- DAVID M. AMBROSE ..... *Marketing*  
D.B.A., George Washington University, 1971; Professor
- CLIFFORD ANDERBERG ..... *Philosophy and Religion*  
Ph.D., University of Wisconsin-Madison, 1953; Professor
- SUNNY ANDREWS ..... *Social Work*  
Ph.D., Johns Hopkins University, 1973; Associate Professor
- AARON ARMPFIELD ..... *Special Education*  
Ed.D., University of Northern Colorado, 1964; Professor
- WALTER M. BACON, JR. .... *Political Science*  
Ph.D., University of Denver, 1974; Assistant Professor
- BRUCE P. BAKER II ..... *English*  
Ph.D., Texas Christian University, 1968; Professor
- GEORGE W. BARGER ..... *Sociology*  
Ph.D., University of Missouri-Columbia, 1964; Professor
- NICHOLAS BARISS... *Geography and Geology*  
Ph.D., Clark University, 1967; Professor
- CLYDE BASSETT ..... *Dramatic Arts*  
Ph.D., University of Wisconsin, 1965; Professor
- GORDON M. BECKER (GF) ..... *Psychology*  
Ph.D., University of Pittsburgh, 1955; Professor
- JOSEPH V. BENAK ..... *Civil Engineering*  
Ph.D., University of Illinois-Urbana, 1967; Professor
- ROBERT W. BENECKE .. *Banking and Finance*  
D.B.A., University of Colorado-Boulder, 1966; Professor
- KRIS E. BERG ..... *Health, Physical Education and Recreation*  
Ed.D., University of Missouri-Columbia, 1973; Associate Professor
- ROGER M. BERG ..... *Elementary and Early Childhood Education*  
Ph.D., Northwestern University, 1972; Associate Professor
- JOSEPH BERTINETTI ..... *Counseling and Guidance*  
Ph.D., University of New Mexico, 1972; Associate Professor
- JOHN V. BLACKWELL ..... *Art*  
Ph.D., University of Iowa, 1957; Professor
- RICHARD H. BLAKE ..... *Counseling and Guidance*  
Ed.D., University of Missouri-Columbia, 1966; Professor
- DANIEL BLANKE . *Health, Physical Education and Recreation*  
Ph.D., University of Oregon, 1975; Assistant Professor
- WILLIAM BLIZEK (GF) ..... *Philosophy and Religion*  
Ph.D., University of Missouri-Columbia, 1970; Associate Professor
- CHRISTOPHER BOLTON (GF) ... *Gerontology*  
Ph.D., University of Oklahoma, 1974; Assistant Professor
- JUDITH E. BOSS ..... *English*  
Ph.D., Texas Christian University, 1971; Assistant Professor
- LAWRENCE J. BRADSHAW ..... *Art*  
M.F.A., Ohio University, 1973; Associate Professor
- THOMAS BRAGG ..... *Biology*  
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- M. JEAN BRESSLER ..... *English-Secondary/Post-Secondary Education*  
Ph.D., University of Nebraska-Lincoln, 1965; Associate Professor
- JOHN L. BRICKELL . *Educational Foundations*  
Ph.D., University of Oregon, 1973; Assistant Professor
- JOHN K. BRILHART (GF) ..... *Communication*  
Ph.D., Pennsylvania State University, 1962; Professor
- EVAN L. BROWN (GF) ..... *Psychology*  
Ph.D., University of Washington, 1969; Associate Professor
- WILLIAM M. BROWN ..... *Marketing*  
Ph.D., University of Pittsburgh, 1957; Professor
- BARBARA E. BUCHALTER ..... *Mathematics and Computer Science*  
Ph.D., University of Arizona, 1968; Professor
- H. EDSEL BUCHANAN ..... *Health, Physical Education and Recreation*  
Ed.D., University of Houston, 1975; Associate Professor
- SIDNEY BUCHANAN ..... *Art*  
M.A., New Mexico Highlands University, 1963; Professor
- DAVID M. BUEHLMANN ..... *Accounting*  
Ph.D., University of Illinois, Urbana, 1975; Associate Professor
- DALE M. BUNSEN ..... *Secondary/Post-Secondary Education*  
Ed.D., University of Nebraska-Lincoln, 1968; Professor
- HOBART BURCH ..... *Social Work*  
Ph.D., Pennsylvania State University, 1965; Professor

- RONALD R. BURKE ..... *Philosophy and Religion*  
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- BARRY L. BURTON ..... *Educational Administration and Supervision*  
Ed.D., University of Tennessee-Knoxville, 1977; Assistant Professor
- ROBERT R. BUTLER ..... *Counseling and Guidance*  
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- WILLIAM G. CALLAHAN ..... *Special Education*  
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- H. CARL CAMP ..... *Political Science*  
Ph.D., Washington University, 1965; Professor
- JOANN CARRIGAN (GF) ..... *History*  
Ph.D., Louisiana State University, 1961; Professor
- ELTON S. CARTER (GF) ..... *Communication*  
Ph.D., Northwestern University, 1950; Professor
- JERRY B. CEDERBLUM ..... *Goodrich Program*  
Ph.D., Claremont Graduate School, 1972; Assistant Professor
- JOHN B. CHAPMAN (GF) ..... *Management and Organizational Behavior*  
Ph.D., University of Nebraska-Lincoln, 1974; Associate Professor
- JOONG-GUN CHUNG ..... *Political Science*  
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- NORMAN C. CLAMPITT ..... *Chemistry*  
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- EDWIN L. CLARK ..... *Dramatic Arts*  
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- VIRGIL A. CLIFT (GF) ..... *Educational Foundations*  
Ph.D., Ohio State University, 1944; Distinguished Visiting Professor
- LEONARD CLONINGER ..... *Special Education*  
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- WILLIAM T. CLUTE ..... *Sociology*  
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- MAURICE W. CONNER ..... *Foreign Languages and Literature*  
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- JAMES J. CONWAY ..... *Decision Sciences*  
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- HUGH P. COWDIN ..... *Communication*  
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- JAMES H. CRAIG JR. .... *Physics*  
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- HARL A. DALSTROM (GF) ..... *History*  
Ph.D., University of Nebraska-Lincoln, 1965; Professor
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- WILLIAM DEGRAW ..... *Biology*  
Ph.D., Washington State University, 1972; Associate Professor
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D.S.W., University of Denver, 1977; Assistant Professor
- BART DENNEHY ..... *Civil Engineering*  
Ph.D., Texas Agricultural and Mechanical University, 1970; Professor
- ROBERT J. DETISCH ..... *English*  
Ph.D., University of Wisconsin-Madison, 1967; Associate Professor
- JAMES DICK ..... *Secondary Education*  
Ed.D., Indiana University, 1974; Associate Professor
- E. WILLIAM DINKELACKER ..... *Economics*  
Ph.D., The Johns Hopkins University, 1969; Professor
- DENNIS L. DOSSETT ..... *Psychology*  
Ph.D., University of Washington, 1978; Assistant Professor
- CHARLES P. DOWNEY ..... *Mathematics and Computer Science*  
Ph.D., New Mexico State University, 1974; Associate Professor
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- FRANK S. FORBES (GF) ..... *Law and Society*  
J.D., University of Iowa, 1963; Professor
- WARREN T. FRANCKE ..... *Communication*  
Ph.D., University of Minnesota, 1974; Professor
- EUGENE H. FREUND ..... *Educational Foundations*  
Ed.D., Wayne State University, 1969; Professor
- DENNIS A. FUS ..... *Communication*  
Ph.D., Indiana University, 1972; Assistant Professor
- DALE GAEDDERT ..... *History*  
Ph.D., Ohio State University, 1969; Associate Professor
- ELVIRA E. GARCIA ..... *Foreign Languages*  
Ph.D., University of Nebraska-Lincoln, 1976; Assistant Professor
- BRUCE M. GARVER (GF) ..... *History*  
Ph.D., Yale University, 1971; Associate Professor
- KENNETH GELUSO ..... *Biology*  
Ph.D., University of New Mexico, 1972; Assistant Professor
- MARGARET GESSAMAN (GF) ..... *Mathematics and Computer Science*  
Ph.D., Montana State University, 1966; Professor
- RICHARD E. GIBSON ..... *Civil Engineering*  
Ph.D., University of Colorado-Boulder, 1969; Professor
- CHARLES RICHARD GILDERSLEEVE ..... *Geography-Geology*  
Ph.D., University of Nebraska, 1978; Associate Professor
- MICHAEL L. GILLESPIE ..... *Philosophy and Religion*  
Ph.D., Southern Illinois University, 1974; Assistant Professor
- KENNETH J. GILREATH ..... *Special Education*  
M.S., University of Nebraska at Omaha, 1967; Assistant Professor
- JOHN M. GLEASON (GF) ..... *Business Administration*  
DBA, Indiana University, 1973; Associate Professor
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Ed.D., University of Nebraska-Lincoln, 1964; Professor
- HAROLD F. GORDON ..... *Public Administration*  
Ph.D., University of Colorado, 1968; Associate
- WILLIAM D. GOSNOLD, JR. .... *Geography-Geology*  
Ph.D., Southern Methodist University, 1976; Assistant Professor
- DONALD J. GRANDGENETT ..... *Secondary/Post-Secondary Education*  
Ed.D., Arizona State University, 1967; Professor
- COURTENAY L. GRANGER ..... *Accounting*  
Ph.D., University of Florida, 1975; Associate Professor
- CARL I. GREENBERG (GF) ..... *Psychology*  
Ph.D., Wayne State University, 1976; Assistant Professor
- RAYMOND A. GUENTHER ..... *Physics*  
Ph.D., Illinois Institute of Technology, 1969; Associate Professor
- ERT J. GUM ..... *History*  
Ph.D., Louisiana State University, 1963; Professor
- PAUL A. HAEDER ..... *Mathematics and Computer Science*  
Ph.D., Iowa State University, 1968; Professor
- DONALD R. HAKALA (GF) ..... *Banking and Finance*  
Ph.D., Indiana University, 1966; Professor
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- GORDON D. HANSEN ..... *Psychology*  
Ph.D., University of Nebraska-Lincoln, 1972; Associate Professor
- SCOTT HARRINGTON ..... *Counseling and Guidance*  
Ph.D., University of Colorado-Boulder, 1971; Associate Professor
- GEORGE T. HARRIS ..... *Economics*  
Ph.D., University of Iowa, 1953; Professor
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- ROGER L. HAYEN (GF) ..... *Management and Organizational Behavior*  
D.B.A., University of Colorado, Boulder, 1972; Associate Professor
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- SHELTON HENDRICKS (GF) ..... *Psychology*  
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- DUILIO T. PEDRINI (GF)..... *Psychology*  
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- KERMIT C. PETERS..... *Music*  
D.M.A., 1976, University of Arizona; Professor
- THOMAS A. PETRIE (GF)..... *Educational Administration and Supervision*  
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- WILLIAM R. PETROWSKI (GF)..... *History*  
Ph.D., University of Wisconsin-Madison, 1966; Professor
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M.Ed., University of Nebraska-Lincoln, 1952; Associate Professor
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Ed.D., University of Nebraska-Lincoln, 1971; Professor
- WILLIAM T. PINK (GF)..... *Educational Foundations*  
Ph.D., University of Oregon, 1972; Professor
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Mus. D., The Florida State University, 1974; Professor
- OLIVER B. POLLAK (GF)..... *History*  
Ph.D., University of California-Los Angeles, 1973; Associate Professor
- JANET B. PORTER..... *Criminal Justice*  
Ph.D., University of Oklahoma, 1966; J.D., University of Missouri at Kansas, 1971; Assistant Professor
- WILLIAM C. PRATT (GF)..... *History*  
Ph.D., Emory University, 1969; Associate Professor
- LEONARD W. PRESTWICH..... *Marketing*  
Ph.D., Ohio State University, 1957; Professor
- WARREN F. PRINCE..... *Music*  
D.M.A., Stanford University, 1968; Associate Professor
- PAUL V. PRIOR (GF)..... *Biology*  
Ph.D., University of Iowa, 1950; Professor
- DAVID M. RAABE..... *English*  
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MA, Boston University, 1948; Professor
- HAROLD J. RETALLICK..... *Geography and Geology*  
Ph.D., Clark University, 1950; Professor
- Ph.D., University of Pennsylvania, 1954; Professor
- JANET M. RIVES..... *Economics*  
Ph.D., Duke University, 1971; Associate Professor
- WILBUR F. ROGERS..... *Civil Engineering*  
Ph.D., Pennsylvania State University, 1970; Professor
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Ph.D., Ohio State University, 1959; J.D., University of Utah, 1951; Professor
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Ph.D., University of Iowa, 1958; Professor
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- ROBERT G. RUETZ..... *Music*  
D.M., Indiana University, 1965; Professor
- DONALD C. RUNDQUIST..... *Geography*  
Ph.D., University of Nebraska-Lincoln, 1977; Assistant Professor
- EDWARD J. SADLER..... *Secondary/Post-Secondary Education*  
Ed.D., University of Nebraska-Lincoln, 1969; Professor
- STANLEY P. SADY..... *Physical Education*  
Ph.D., University of Michigan, 1979; Assistant Professor
- MARC J. SCHNIEDERJANS..... *Decision Sciences*  
Ph.D., Saint Louis University, 1978; Assistant Professor
- DAVID C. SCOTT..... *Public Administration*  
Ph.D., University of Iowa, 1948; Professor
- JOE D. SEGER..... *Philosophy and Religion/Humanities*  
Th.D., Harvard University, 1965; Professor
- JAMES W. SELEE..... *Educational Foundations*  
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- HENRY F. SERENCO..... *Art*  
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- ROGER P. SINDT..... *Real Estate and Land Use Economics*

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- MADELEINE SMITH..... *Foreign Languages*  
Agrège, Sorbonne, Paris, France; 1972; Associate Professor
- PHILLIP CHARLES SMITH..... *English*  
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