# Table of Contents

3 **General Information**  
3 Heritage  
3 Enrollment  
3 Role and Mission  
4 Accreditation  
4 UNL Graduate Studies Calendar  
4 Nondiscrimination Policy  
5 Student Responsibility  
5 Student Honor Code  
6 Governance  
6 Admission to UNL Graduate Studies  
10 Financial Aid  
12 Graduate Student Registration  
13 Graduate Degrees Offered  
15 Requirements for Graduate Degrees  
20 Advanced Degrees in Education  
23 Requirements for Certificates  
23 Academic Credit Policies  
25 Probation and Termination  
26 Summer Sessions  
26 Division of Continuing Studies  
27 International Affairs  
28 Student Services  
31 Resources and Facilities  
34 Research and Service Activities  
41 Academic Colleges  
49 Courses of Instruction  
179 Student Rights and Responsibilities  
191 Policy Statement on Rights, Privileges and Responsibilities of Graduate Assistants and Fellowship Recipients  
193 Guidelines for Good Practice in Graduate Education  
195 Index
Acceptance of registration by the University of Nebraska and admission to any educational program of the University does not constitute a contract or warranty that the University will continue indefinitely to offer the program in which a student is enrolled. The University expressly reserves the right to change, phase out, or discontinue any program.

The listing of courses contained in any University bulletin, catalog, or schedule is by way of announcement only and shall not be regarded as an offer of contract. The University expressly reserves the right to (1) add or delete courses from its offerings, (2) change times or locations or courses or programs, (3) change academic calendars without notice, (4) cancel any course for insufficient registrations, or (5) revise or change rules, charges, fees, schedules, courses, requirements for degrees and any other policy or regulation affecting students, including, but not limited to, evaluation standards, whenever the same is considered to be in the best interests of the University.

This bulletin is in effect beginning with the 2002-2003 academic year through the 2003-2004 academic year. Students should keep this bulletin for referral throughout their academic career. A student may expect to satisfy the requirements of the bulletin in force at the time the student is admitted to, and begins course work in, a degree program; or the student may, with the consent of his/her adviser, graduate under a subsequent bulletin provided the student complies with all requirements of the later bulletin.
The University

The University of Nebraska—Lincoln—Nebraska's largest, most comprehensive university—has offered quality education for more than 130 years. Nebraska has grown into one of the great midwestern universities and a major international research center, offering 148 undergraduate majors and 115 graduate programs.

The University is a diverse, cosmopolitan community. While 90 percent of N U's 22,500 students come from Nebraska, students from every state and over 100 countries choose the University for its comprehensive programs and reputation for quality. Forty-five percent of the graduate student enrollment comes from beyond Nebraska's borders.

Nebraska's nationally and internationally recognized faculty is its most important resource. Over 1,500 teachers and scholars bring to N U's students the knowledge and experience they have gained from research at the world's finest universities. Experts in their fields, Nebraska's professors bring the most current knowledge and technology to their classrooms.

Nebraska's facilities are equally impressive. N U's Biological Collections, George W. Beadle Center for Genetics and Biomaterials Research, Center for Biotechnology, Humanities Research Facility, Midwest Center for Mass Spectrometry, Sheldon Memorial Art Gallery, Devaney Sports Center, Tractor Testing Laboratory, Buhler Observatory, and Buhler Physics Laboratory are among the nation's best. Nebraska offers modern computer facilities and the state's major research library. The University of Nebraska-Lincoln's 556-acre campus contains 75 major academic buildings.

Lincoln, Nebraska's capital and second largest city, surrounds the University. Home to nearly 210,000, this All-American city has a rejuvenated, tree-lined downtown with retail stores, restaurants, theaters, parks, and a convenient bus system. Interstate 80 passes just north of the University and Lincoln can be reached by major airlines, bus systems, and Amtrak.

Heritage

The University of Nebraska was chartered by the Legislature in 1869 as the state's public university and land-grant institution. Founded in Lincoln, the University of Nebraska was expanded in 1968 into a state educational system under the guidance of a Board of Regents and a central administration.

The University's flagship campus, the University of Nebraska-Lincoln (N U L), includes the agricultural components organized within the Institute of Agriculture and Natural Resources. Other campuses of the system include the University of Nebraska at Omaha (U N O), the University of Nebraska Medical Center (U N M C) in Omaha, and the University of Nebraska at Kearney (U N K).

Instruction is organized within individual colleges and schools on each of the four campuses. In addition to baccalaureate degrees, the University offers masters, professional, specialist, and doctoral degrees, which are granted by a system-wide Graduate College.

The University of Nebraska-Lincoln Graduate College was the first established west of the Mississippi River. Graduate instruction began as early as 1886 when the Board of Regents established the residency and thesis requirements for earning the masters degree within four years; the PhD degree was authorized. By 1896 a Graduate School was organized with a designated faculty under the leadership of a dean. Within a year, with more than 100 graduate students, the University of Nebraska was recognized as the first university to formally establish a Graduate School. An amendment to the charter of the University was passed by the Legislature in 1909 to change the designation of the school to the Graduate College.

In 1968 the University of Nebraska was merged with the University of Nebraska-Lincoln, and in 1971, at the direction of the Board of Regents, the University of Nebraska-Lincoln and the Graduate College of the University of Nebraska at Omaha were merged to form one University-wide Graduate College with one Graduate Faculty.

Most recently, Kearney State College became the fourth campus of the University of Nebraska system. In 1991, the Board of Regents approved the addition of the University of Nebraska at Kearney.

In 1978 the Legislature assigned to the University of Nebraska, through its University-wide Graduate College, sole state-wide responsibility among the public institutions for all doctoral programs and for all masters and specialist programs outside the field of teacher education.

Today, more than a century later, the University of Nebraska-Lincoln Graduate College offers graduate student resources no other college or university in the state of Nebraska or in many other states can match.

Enrollment

The total 2001-2002 first (fall) semester enrollment at the University of Nebraska-Lincoln was 22,142 students. Inclusive of the University of Nebraska College of Technical Agriculture in Curtis, O f the 4,309 graduate students, 52.5 percent were female and 47.5 percent were male. Seventy-nine percent of graduate students during Fall 2001 were U.S. citizens; 21 percent originated from other countries.

Role and Mission

The University of Nebraska-Lincoln, chartered by the Legislature in 1869, is that part of the University of Nebraska system which serves as both the land-grant and the comprehensive public University for the State of Nebraska. Those responsible for its origins recognized the value of combining the breadth of a comprehensive University with the professional and outreach orientation of the land-grant University, thus establishing a campus which has evolved to become the flagship campus of the University of Nebraska. Nebraska works cooperatively with the other three campuses and Central Administration to provide for its student body and all Nebraskans the widest array of disciplines, areas of expertise, and specialized facilities of any institution within the state.

Through its three primary missions of teaching, research, and service, Nebraska is the state's primary intellectual center providing leadership throughout the state through quality education and the generation of new knowledge. UN L's graduates and its faculty and staff are major contributors to the economic and cultural development of the state. Nebraska attracts a high percentage of the most academically talented Nebraskans and the graduates of the University form a significant portion of the business, cultural, and professional resources of the state.

The quality of primary, secondary, and other post-secondary educational programs in the state depends in part on the resources of the University for curricular development, teacher training, professional advancement, and enrichment activities involving the University's faculty, museums, galleries, libraries, and other facilities. Nebraska provides for the people of Nebraska unique opportunities to fulfill their highest ambitions and aspirations, thereby helping the state retain its most talented youth, attract talented young people from elsewhere, and address the educational needs of the non-traditional learner.

The University of Nebraska-Lincoln has been recognized by the Legislature as the primary research and doctoral degree granting institution in the state for fields outside the health professions. Nebraska is one of a select group of research universities which hold membership in the American Association of Universities (AAU). Through its service and outreach efforts the University extends its educational responsibilities directly to the people of Nebraska on a state-wide basis. Many of Nebraska's teaching, research and service activities have an international dimension in order to provide its students and the state a significant global perspective.
The Missions of the University of Nebraska-Lincoln

The role of the University of Nebraska-Lincoln as the primary intellectual and cultural resource for the state is fulfilled through the missions of the University: teaching, research, and service. UNL pursues its missions through the Colleges of Architecture, Arts and Sciences, Business Administration, Engineering and Technology, Fine and Performing Arts, Human Resources and Family Sciences, Journalism and Mass Communications, Law, Teachers, the University-wide Graduate College, and the Institute of Agriculture and Natural Resources, which includes the College of Agricultural Sciences and Natural Resources, the Agriculture Research Division, the Cooperative Extension Division, the Cooperative Extension Division, International Programs Division, and the Conservation and Survey Division. Special units with distinct missions include the University Libraries, the Division of Continuing Studies, International Affairs, the Lied Center for Performing Arts, the Bureau of Business Research, the Nebraska Educational Television System, the Sheldon Memorial Art Gallery, the University of Nebraska State Museum, the University Press, the Water Center, the Nebraska Forest Service, the Nebraska State-wide Arboretum, and Intercollegiate Athletics.

To capitalize on the breadth of programs and the multidisciplinary resources available at UNL, a number of centers exist to marshalling faculty from a variety of disciplines to focus teaching and research on specific societal issues and to provide technical assistance for business and industry in order to enhance their ability to compete in world markets. Additionally, interdisciplinary programs promote integration of new perspectives and insights into the instructional research and service activities.

The University of Nebraska-Lincoln promotes respect for and understanding of cultural diversity in all aspects of society. It strives for a culturally diverse student body, faculty, and staff reflecting the multicultural nature of Nebraska and the nation. UNL brings international and multicultural dimensions to its programs through the involvement of its faculty in international activities, a student body that includes students from throughout the world, exchange agreements with other universities abroad involving both students and faculty, and the incorporation of international components in a variety of courses and curricula.

Teaching, research, and service take on a distinctive character at the University of Nebraska-Lincoln because of its status as a comprehensive land-grant university. These traits provide opportunities for the integration of multiple disciplines permitting students more complete and sophisticated programs of study. Its land-grant tradition ensures a commitment to the special character of the state and its people.

The faculty is responsible for the curricular content of the various programs and pursues new knowledge and truths within a structure that assures academic freedom in its intellectual endeavors. The curricula are designed to foster critical thinking, the re-examination of accepted truths, respect for different perspectives, including an appreciation of the multiracial character of the nation, and a curiosity that leads to lifelong learning. Additionally, an environment exists whereby students can develop aesthetic values and human relationships, including tolerance for differing viewpoints.

Teaching

The people of Nebraska created UNL to provide its citizens with the highest quality of post-secondary education. Therefore, a fundamental mission of the University of Nebraska-Lincoln is teaching. The distinctiveness of the teaching mission of the University of Nebraska-Lincoln lies in its range of undergraduate majors, the character and quality of the faculty, and the extracurricular environment. The University provides students with a wide choice of courses and career options, which often expands the scope of their dreams and ambitions. The size and diversity of the University permits students to mature and to develop their own sense of self-confidence and individual responsibility. The course work is enriched by a faculty that is engaged in active research and creative activity and whose frame of reference is the national and international community of scholars.

Having created the first graduate college west of the Mississippi River, the University of Nebraska-Lincoln has historically recognized graduate education to be a central and unique component of its mission. Thus, UNL has primary responsibility for the State for graduate education, especially at the doctoral and professional levels. UNL is unique in possessing the scope of programs necessary for multidisciplinary instruction at the graduate level, a faculty involved in research necessary to support graduate education, and the libraries, laboratories, computer facilities, museums, galleries, and other ancillary resources required for graduate instruction.

Research

Basic and applied research and creative activity represent a major component of UNL’s mission, a component that is recognized in Nebraska legislative statutes, and in its status as both a land-grant and an AAU research university. The quest for new knowledge is an essential part of a research university; it helps define and attract the type of faculty necessary to provide a university education; it distinguishes the quality of the undergraduate students’ classroom experience; and it is the necessary component of graduate instruction.

As part of its research mission, UNL is dedicated to the pursuit of an active research agenda producing both direct and indirect benefits to the state. The special importance of agriculture, environment, and natural resources is addressed in its research priorities. In addition, UNL conducts a high level of research and creative activities that address in specific ways the issues and problems that confront Nebraska. Through their research and creative activities, faculty at UNL interact with colleagues around the world and are part of the network of knowledge and information that influences our society. As a consequence, the University serves as the gateway through which Nebraska participates in and shares the gains from technological and cultural developments.

Service

The land-grant tradition creates for the University of Nebraska-Lincoln a special statewide responsibility to serve the needs of Nebraska and its citizens. In addition, many of its service aspects extend to regional, national, and international clienteles. Special units such as the Division of Continuing Studies and the Cooperative Extension Division have specific responsibilities to bring the teaching and research resources of the University to a wider clientele. Through Cooperative Extension’s partnership with federal, state, and county agencies, UNL has an outreach program in each county in the state. Moreover, all units of the University have a service and outreach mission.

To help accomplish this mission, UNL delivers educational services through diverse ways, including telecommunications methods and as a participant in the development of regional educational centers, especially in those areas where it has statewide responsibilities. The University recognizes its obligation to extend the resources of the University beyond the campus and throughout the state. Serving the needs of Nebraska requires more than responding to the felt needs of the time. UNL must be visionary in its planning and must help the citizens of the state prepare for the future, as well as deal with the present.

Accreditation

The University of Nebraska-Lincoln has been accredited by the North Central Association of Colleges and Secondary Schools since the association first began accrediting colleges and universities in 1913. The University has been a member of the Association of American Universities since 1909. In addition, various colleges, schools, and departments are accredited by their respective professional accrediting agencies.

UNL Graduate Studies Calendar

The University of Nebraska-Lincoln operates on a semester system. The first (fall) semester begins in August and ends in December; the second (spring) semester begins in January and ends in May. UNL also conducts four summer sessions from May through August. Please refer to the current schedule of classes for the UNL academic calendar.

Nondiscrimination Policy

It is the policy of the University of Nebraska that students on each campus shall be admitted, and enjoy the programs and privileges of the University without regard to individual characteristics other than qualifications for admission, academic performance, and conduct in accordance with University policies and rules and laws applicable to student conduct.
In addition, employees on each campus of the University of Nebraska shall be employed and equitably treated in regard to the terms and conditions of their employment without regard to individual characteristics other than qualifications for employment, quality or performance of duties and conduct in regard to their employment in accordance with University policies and rules and applicable state and federal laws.

The University of Nebraska-Lincoln reaffirms its desire to create an environment for all students and employees that is fair and responsible—an environment where distinctions are made on the basis of ability and performance. To that end, it is the policy of UNL to administer all of its educational and employment programs and related supporting services in a manner which does not discriminate because of an individual’s race, color, gender (including sexual harassment), religion, national origin, age (40 and over, for employees only), disability, marital status, sexual orientation, or political affiliation.

Sexual Harassment Policy

The University of Nebraska-Lincoln reaffirms that all women and men—administrators, faculty, staff and students—are to be treated fairly and equally with dignity and respect. Any form of sexual harassment is prohibited.

Sexual harassment is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of sexual nature when:

1. submission to such conduct is made either explicitly or implicitly a condition of an individual's employment or academic standing;
2. submission to, or rejection of, such conduct by an individual is used as the basis for employment decisions or academic decisions affecting such individual;
3. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working/academic environment.

Sexual harassment will not be condoned during the work or school day, nor will acts of sexual harassment be permitted outside the work or school environment if such acts affect the normal work environment or student/teacher relationship. UNL provides grievance procedures for violations of this policy. For further information, contact:

Equity, Access, and Diversity Programs
128 Canfield Administration Building
PO Box 889437
Lincoln, NE 68555-0437
(402) 472-3417

Appropriate corrective action will be taken in those instances where the foregoing policies have been violated. Any student or employee who is found to have violated any of the aforementioned policies will be subject to disciplinary action.

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

UNL complies with all applicable laws promoting equal educational and employment opportunity prohibiting unlawful discrimination, including 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, as amended, and Sections 503 and 504 of the Rehabilitation Act of 1973.

Information concerning violations of the policy and inquiries regarding UNL compliance with equal opportunity mandates affirmative action, and other inclusions should be directed to:

Equity, Access, and Diversity Programs
University of Nebraska-Lincoln
128 Canfield Administration Building
PO Box 880437
Lincoln, NE 68588-0437
(402) 472-3417

A formal discrimination grievance procedure is available at UNL for those seeking redress. Copies of the EEO Grievances Procedure are available from the Affirmative Action and Diversity Programs Office and in most departments. Those wishing to file formal complaints outside UNL may contact the Affirmative Action and Diversity Programs Office for appropriate names and addresses of external agencies to which such communications may be directed. Students who believe that discrimination occurred within the educational setting may also contact:

Director, Office for Civil Rights
Department of Education
Washington, DC 20202

Student Responsibility

It is the responsibility of the student to be familiar with the information presented in this bulletin, to know and observe all regulations and procedures relating to the program he/she is pursing. In no case will a regulation be waived or an exception granted because a student pleads ignorance of, or contends that he/she was not informed of, the regulations or procedures. A student planning to graduate should be familiar with the dates relating to application for graduation and other pertinent deadlines.

A student may expect to satisfy the requirements of the bulletin in force at the time the student is admitted to, and begins course work in, a degree program; or the student may, with the consent of his/her advisor, graduate under a subsequent bulletin provided the student complies with all requirements of the later bulletin.

The University of Nebraska-Lincoln expressly reserves the right to: 1) add or delete courses from its offerings and to change times or locations; 2) change academic calendars without notice; 3) cancel any course for insufficient registrations; 4) modify, consolidate, or delete any program; 5) revise or change rules, charges, fees, schedules, courses requirements for degrees, and any other regulation affecting students including, but not limited to, evaluation standards, whenever considered necessary or desirable.

Responsibility for following all policies and meeting all requirements and deadlines for graduate programs rests with the student.

Student Honor Code

The University of Nebraska is a unified community, and we are proud of our heritage. As we look with optimism towards the future, we strive to adhere to the following code:

I will be respectful towards all others, their thoughts and aspirations, and will look upon them with equality and fairness.

I will be compassionate always mindful of those less fortunate than I.

I will be honest with whom I interact, practicing integrity in my daily decisions.

I will be mindful of the investments others have made in the University, realizing my own responsibilities in life.

And I will always be dignified in who I am, striving for excellence in all I do.

Ratified by the A S U N Senate on April 2, 1997.
Governance

The Board of Regents

An eight-member board serves as the governing board for the University of Nebraska-Lincoln, the University of Nebraska Medical Center, the University of Nebraska at Omaha, and the University of Nebraska at Kearney. The board directs the institutions that comprise the University of Nebraska system. Members of the board are elected to serve six-year terms. The four campus student body presidents serve as nonvoting members of the board for one-year terms.

Elected members

Term expires January 2007

John A. Benson, M. Arch., Director of Institutional Research and Planning
Linda R. Crump, J.D., Assistant to the Chancellor for Equity, Access and Diversity Programs
Herbert E. Howe, Jr., Ph.D., Associate to the Chancellor
Meg Lauer, Ph.D., Director of University Communications
Michelle Walth, B.S., Assistant to the Chancellor for Community Relations

Elbert C. Dickey, Ph.D., Dean and Director of the Cooperative Extension Division
R. Wayne Drummond, F.A.I.A., Dean of the College of Architecture
Joan R. Gieseker, D.P.A., Dean of University Libraries
Richard J. Hoffmann, Ph.D., Dean of the College of Arts and Sciences
Marjorie J. Kostelnik, Ph.D., Dean of the College of Human and Natural Resources and Family Sciences
Cynthia H. Milligan, J.D., Dean of the College of Business Administration
Darrell W. Nelson, Ph.D., Dean and Director of the Agricultural Research Division
Will Norton, Jr., Ph.D., Dean of the College of Journalism and Mass Communications
James P. O’Hanlon, Ed.D., Dean of the School of Medicine
Giacomo M. Oliva, Ed.D., Dean of the College of Fine and Performing Arts

Student members

Term expires January 2007

L. Dennis Smith, Ph.D., President
Lee B. Jones, Ph.D., Executive Vice President and Provost, University of Nebraska-Lincoln
David E. Lechner, B.S.B.A., Vice President for Business and Finance
Kim M. Robak, J.D., Vice President for External Affairs and Corporation Secretary
Richard R. Wood, J.D., Vice President and General Counsel

The University of Nebraska-Lincoln Graduate Studies

Graduate Studies Governance

Graduate studies at UNL are organized and conducted according to the rules and bylaws of the Graduate College of the University of Nebraska. The Dean of Graduate Studies is responsible for coordinating and administering graduate-level programs and policies at the University of Nebraska-Lincoln. The UNL Dean of Graduate Studies also maintains close liaison with the Executive Dean of the Graduate College of the University of Nebraska. The governance of graduate programs that are principally lodged at UNL is by and through the graduate program committees and the UNL Graduate Council, in accordance with the policies and regulations of the University of Nebraska-Wide Graduate College. The UNL Graduate Council serves as an advisory body to the Dean of Graduate Studies. The Council is composed of eight Graduate Faculty Fellows and two graduate students from the University of Nebraska-Lincoln.

Each administrative unit authorized to offer graduate programs has a Graduate Committee consisting of not fewer than three Graduate Faculty Members or Fellows, one of whom is designated as the chair of the Graduate Committee. In the case of an administrative unit offering a doctoral degree, however, the majority of the Graduate Committee and its chair must be Graduate Faculty Fellows. Staff eligible to serve on Graduate Committees must be either Graduate Faculty Members or Fellows.

Membership of the Graduate Committee is recommended by the administrative unit through its departmental chair, chair of the interdepartmental area, director, or academic dean, as appropriate, for appointment by the Dean of Graduate Studies, University of Nebraska-Lincoln.

Each new graduate student should consult the chair of the Graduate Committee of his/her major department for assignment to an advisor. General supervision over graduate studies in each department is vested in the Graduate Committee.

Emeriti Graduate Faculty Rights and Privileges

Graduate Faculty members or fellows who have been appointed to emeritus status may retain the rights and privileges associated with their level of membership on the Graduate Faculty. These rights and privileges include permission to teach graduate courses, to serve as members of graduate programs, or to co-chair the supervisory committees of doctoral students with a resident Graduate Faculty member.

Admission to UNL Graduate Studies

The University of Nebraska-Lincoln is committed to discovering, refining, and sharing knowledge with all people. The quest for knowledge is universal, and we at the University of Nebraska-Lincoln are part of a global community. Life in the contemporary world requires us to be aware of cultural factors, our own and others, that influence ideas, perceptions, attitudes and actions. Personal interaction between staff and students from all parts of the world in resident instruction and research activities is an effective means of exchanging ideas and knowledge. Therefore, UNL is sincerely dedicated and committed to educational programs that encourage the enrollment of students from throughout the world.

The Graduate College (UNL Graduate Studies) is open to graduates of all colleges of this University and to graduates of other universities and colleges of recognized standing whose requirements for graduation are substantially the same as those in the corresponding colleges of this University. Students are selected on the basis of academic preparation, ability, and the availability of space in the desired academic program, and without regard to race, color, sex, religion, national origin, marital status, sexual orientation, disability, or age.
Acceptance for admission to a program leading to a masters degree, a doctoral degree, an educational specialist degree or certificate is determined by the Graduate Committee within the academic unit and the Dean of Graduate Studies. This decision is based upon the applicant's record, experience, personal qualifications, and proposed area of study. Departmental or area Graduate Committees make recommendations on all degree applications, but the final admission decision is the responsibility of the Dean of Graduate Studies.

The University of Nebraska-Lincoln reserves the right to change the regulations included in this bulletin with respect to admission to Graduate Studies, the continuance of graduate study, and the granting of a degree.

Admission Policies

1. Most applicants will apply formally and be admitted to only one graduate degree program at a time. If an applicant plans to move to one program upon completion of another, it is advisable to apply for admission to the new program early in the semester in which one plans to graduate. There are dual degree programs available in cooperation with the College of Law and certain participating programs in UNL Graduate Studies. It is possible to apply to two degrees simultaneously. In order to do so, one must treat each application as a completely separate entity, supplying for each one an application, an application fee, a set of transcripts, and any departmental materials. If accepted by both programs, the applicant must select only one program to enter since admission is limited to one program at a time (unless admission is to an existing dual-degree program).

2. Pursuing one degree program at a time includes degree programs administered by UNL and also by the other campuses within the University of Nebraska system. Students may apply to UNL at any time, but if a student is completing a program at another campus, the admission to the UNL program would be delayed until the original program is completed or until the student informs the Office of Graduate Studies that the original program is to be terminated or postponed while in the UNL-based program.

3. All materials submitted become the permanent property of the Office of Graduate Studies and will not be photocopied for individual use, returned, or forwarded to other agencies.

4. Notification of acceptance by a department Graduate Committee or faculty member is advisory only. Admission is granted solely by the Office of Graduate Studies and is confirmed by the issuance of a Certificate of Admission. Academic departments will notify applicants concerning awards of financial assistance.

Admission of International Students

The University of Nebraska-Lincoln welcomes students from all countries as part of the student body and the Office of Graduate Studies encourages applications from qualified students throughout the world. It is recognized that educational systems in other countries differ from that of the United States. Comparability of international coursework and degrees will be determined solely by Graduate Studies. Generally, a 4-year, first university degree from an academic institution outside the U.S. will be accepted as comparable to the U.S. bachelors degree if the institution granting the degree is recognized as university-level by the country’s Ministry of Education.

Application materials from international students must include two official or certified copies of all college- or university-level transcripts or mark sheets (records of courses and marks earned), with certificates, diplomas, and degrees plus certified English translations. Photocopies of certified records cannot be used. Students enrolled in other U.S. institutions may have certified copies of all foreign records sent directly to the Office of Graduate Studies by their current schools.

A Graduate Studies Bulletin can be mailed overseas upon receipt of a request and $5 in U.S. currency. The bulletin is on file at the U.S. government overseas educational advising centers affiliated with the Department of State, and various sponsoring agencies such as offices of the International Institute of Education, Amideast, etc.

Non-native speakers applying for admission must complete the Test of English as a Foreign Language (TOEFL) score of at least 500 (173 on the TOEFL computer-based test) or a Michigan English Language Assessment Battery (MELAB) score of at least 75. Any departments requiring higher scores for admission, contact the departments for specific information or refer to the Graduate Admissions Guide.

English Proficiency Requirement

Applicants to the Graduate College whose native language is not English are required to submit a Test of English as a Foreign Language (TOEFL) score of at least 500 (173 on the TOEFL computer-based test) or a Michigan English Language Assessment Battery (MELAB) score of at least 75. Any departments requiring higher scores for admission, contact the departments for specific information or refer to the Graduate Admissions Guide.

Non-native speakers accepting offers of UNL teaching assistantships should refer to page 13 for information about the International Teaching Assistant Institute.

Prior to enrolling for academic credit, newly admitted students subject to the TOEFL requirement must complete on-campus English
Admission Categories

Graduate students may be admitted into one of the following categories:

Non-Degree, Post-Baccalaureate

Graduate Studies is designed to meet the needs of all post-baccalaureate students unless they are seeking a second bachelors degree. Sometimes a student may wish to take classes at either the undergraduate or graduate level for personal development, for preparation to move into a new major area, or in order to take classes while applying to a degree program. In these cases, admission to the Graduate College is done centrally in the Graduate Studies Office as a non-degree, post-baccalaureate admission. Applicants are reviewed for minimum standards upon receipt of an application, application fee and one official baccalaureate degree transcript. Those seeking another undergraduate degree should contact Undergraduate Admissions at (402) 472-2023 for advising and assistance. (Students seeking a non-degree admission for an initial teacher certification, renewal or a teacher certification, or additional teaching endorsements should contact the Teachers College Student Services Center at (402) 472-8623.)

There are some limitations to a non-degree, post-baccalaureate admission: 1) It is not a guarantee of future admission to a degree program. Students must apply formally through Graduate Studies for acceptance into a degree program; 2) Students will not qualify for assistantships or fellowships in this category and financial aid in the form of student loans is limited to those taking only undergraduate hours as prerequisites to a specific graduate or professional program later. The Office of Scholarships and Financial Aid can supply further information about the availability of these loans; 3) Though admission is not available to international students on F-1 visas who have never studied in Nebraska.

To register for classes prior to gaining final acceptance in the college, contact Graduate Studies for authorization. A temporary clearance to register may be available while you are completing your admission requirements, providing an official copy of the baccalaureate transcript is received by an agreed-upon deadline. The transcript should indicate the degree conferral date and specify a grade point average of 2.5 or higher on a 4.0 scale. Students who fail to submit the required materials are subject to cancellation of their registrations and will not be permitted to enroll again until the necessary requirements are met. No graduate credit is awarded in a graduate-level course unless the admission is completed within the term of initial enrollment.

Eight hundred and ninety-level classes taken by non-degree graduates may be eligible for inclusion in a graduate program upon admission to that program and approval by the cognizant graduate committee. It is imperative to check with your potential department to find what limits there are on the number of hours they will accept that are taken prior to admission to their program.

Non-Degree, Visiting Graduate

Enrollment is limited to two terms (semesters and/or full summer enrollment) and is available to applicants who are actively pursuing graduate studies at U.S. institutions other than the University of Nebraska campuses (UNO, UNL, UNMC, and UNK). Graduate students will use an Application for Inter-Campus Registration Form to register for courses at UNL and will retain their admission at their degree objective campus. To apply for this admission category, one must send in an application, application fee, and a letter on official stationery from the current graduate adviser or graduate dean which confirms good good graduate standing.

Degree Objective

Prospective students apply to both Graduate Studies and a graduate committee within an academic unit. Students applying to a degree program must send an application, application fee, two official transcripts from all post-secondary schools attended, and fulfill any additional requirements the department specifies, such as statement of goals, test scores, portfolio, etc. The Graduate Admissions Guide lists specific requirements for each department and may be obtained at the Office of Graduate Studies or in individual departments.

Any non-degree student who seeks admission to a degree program must apply to the Office of Graduate Studies and be recommended for admission by the departmental or area graduate committee. There is no guarantee of ultimate admission to a degree program from non-degree status, nor is there any guarantee that credits earned as a non-degree student will be applied toward a graduate degree. Admission to a degree program must be gained prior to the accumulation of half of the hours required under each of the degree options. Some graduate-level hours completed by non-degree post-baccalaureate students prior to degree program enrollment may be included in a program of studies at the discretion of the major and/or minor department and with the approval of the Dean of Graduate Studies.

Admission of Faculty Members

A member of the faculty in an instructional department who holds the rank or equivalent rank of assistant professor or above, or who holds an appointment for a specific term, or a member of the administrative staff holding the rank of assistant professor or above, may pursue an advanced degree in the Graduate College only after receiving special permission from the cognizant academic dean or administrative supervisor and from the campus Graduate Council responsible for the program which the faculty member wishes to pursue. The advanced degree cannot be in the faculty member's own department or in a closely-related department or area. Whether a second department or area is too closely related to the person's own department shall be determined by the Dean of Graduate Studies of the campus involved in consultation with the Graduate Committees of the two departments or areas. Permission may be granted to pursue an advanced degree in the equivalent department on another campus of the University of Nebraska.

Persons who are Members or Fellows of the Graduate Faculty will have their status suspended upon receiving permission to pursue an advanced degree in the Graduate College. However, such persons shall be eligible, with permission of the appropriate campus Dean of Graduate Studies and the appropriate Graduate Committee, to continue to teach graduate courses, supervise graduate students at a level commensurate with their former rank in the
Admission of UNL Seniors

Refer to "Academic Credit Policies" on page 23.

Admission to a Double Major

The professional/scholastic goals of some masters students may be enhanced substantially by acquiring more knowledge of a second field than is currently provided by the option of earning a minor, yet they may not need a dual degree (i.e., two masters degrees in separate majors, typically 60+ credit hours).

The UNL Graduate Council has approved the concept of providing masters degree students with the option of attaining a double major within the same degree (e.g., master of arts in two different majors).

Applicants choosing the double major will submit one application and fee and clearly specify that they are seeking a double major. In addition, the applicant must specify which department/area to consider the application first and whether or not they are applying for support from one or both departments.

The graduate committee of the first department/area will pass the application to the second graduate committee with the results of its decisions (recommendation for acceptance with support, recommendation for acceptance without support, denial of admission). The prospective student should be aware that a decision to recommend admission by one of the graduate committees does not affect the decision of the other. The criteria for acceptance may differ between programs; admission to one or both of the department's programs does not guarantee acceptance for a double major masters degree.

Final approval of all applications rests with the Dean of Graduate Studies.

If a student is already pursuing a major in a degree program, then decides he or she would like to obtain a second major, a new application and admission fee is required. The new application must be approved by the original graduate committee prior to review by the second graduate committee. However, once the master's degree is conferred, a second major cannot be attained. Students then would be required to apply for admission to a second masters degree program, and upon acceptance, complete all requirements of a full independent program.

Readmission to UNL Graduate Studies

Entry into UNL Graduate Studies is valid for the semester indicated on the Certificate of Admission. However, a student may delay enrollment by one or two terms if he or she meets certain Graduate College requirements and if the department in which graduate study would be pursued consents to the delay. (There is no guarantee of an offer of an assistantship if there is a request for postponement of enrollment.) Students who are accepted but do not subsequently enroll must request readmission from the Office of Graduate Studies. This entails supplying current demographic information on the Graduate Application form and any additional transcripts of work completed after the initial admission. The Office of Graduate Studies retains the right to revoke the earlier admission on the basis of new information or limited resources. International students may be required to provide current financial information in order to receive a valid I-20 or IAP-66 immigration form if they wish to delay their initial enrollment.

A graduate student, formerly or currently enrolled, who wishes to pursue a degree objective other than the one originally sought, must initiate a formal application for the new program by filing a new graduate application form, supplementing existing records, and fulfilling any departmental requirements prior to review by the departmental Graduate Committee and the College. An application fee will be assessed only if a student is changing major areas of study or if a new file must be constructed for someone who has not registered through the Office of Graduate Studies for the past four years.

Although an applicant may apply to two degree programs simultaneously, a student cannot be in two graduate programs at the same time. Filing an application for a new degree program to take effect before completion of the existing program automatically preempts the original program. The student is automatically withdrawn from the original program upon an admission recommendation by the new Graduate Committee. Continuation in the original program must be approved by the Graduate Committee and the Office of Graduate Studies.

Application Procedure

1. Prospective students are encouraged to apply online at <www.unl.edu/gradstudies/ > . Application materials can also be obtained from:
   Office of Graduate Studies
   1100 Seaton Hall
   PO Box 880434
   Lincoln, NE 68588-0619
   Students interested in specific academic programs, research areas, or support possibilities should contact the Graduate Committee Chair of the appropriate major department.

2. Applicants for degree programs need to have completed all admission requirements two months before the beginning of the semester or one month prior to any departmental deadline, whichever comes first. The completed application, application fee, and all official transcripts should be sent to the Office of Graduate Studies before these deadlines. Because some departments have earlier closing dates as well as supplemental application requirements, applicants need to contact the Graduate Committee Chair as well as review the program information in the Graduate Admissions Guide.

3. A non-refundable graduate application fee of $35 is required of all new applicants to UNL Graduate Studies, including undergraduates within the University of Nebraska system and anyone who has been admitted to UNO, UNK, or UNMC graduate programs but now wishes to enter graduate studies at UNL. This fee is also assessed when a current UNL graduate student applies for a different program, or when four years have elapsed since he or she has registered as a UNL graduate student.

4. A degree-seeking applicant must request that each college or university attended send to the Office of Graduate Studies two official transcripts of grades and credits earned. (One copy will be made available to the departmental graduate committee.) An applicant for non-degree, post-baccalaureate admission must provide one official baccalaureate transcript.

Admission is for a specific term only. Students who wish to change their entry dates after receiving admission must notify the Office of Graduate Studies as well as their major departments. Refer to "Readmission to UNL Graduate Studies" on page 9.

Veterans

All men and women planning to attend the University under Chapters 30, 31, 32, 34, 35, and 106 of the educational assistance and vocational rehabilitation laws administered by the Veterans Administration should inquire at the Office of Registration and Records, 107 Carnell Administration Building, before they register to make sure that all necessary steps have been taken.

Admission of Applicants from Schools without Regional Accreditation

Any applicant from an institution which is not regionally accredited is required to take the Graduate Record Examination (GRE) prior to consideration for admission. The Subject section of the test may be required of applicants seeking admission to advanced degree programs. Non-degree applicants, or applicants entering programs not covered by a relevant subject test, need to submit scores from the General Test of the GRE. All other application requirements are standard.
Admission Tests

Graduate Management Admission Test (GMAT). This test is used by many graduate schools of business and management as a criterion in considering applications for admission. Visit the GMAT Web site for more information: <www.gmat.org>.

Graduate Record Examinations (GRE). Tests offered include the General Test, which measures developed verbal, quantitative, and analytical abilities, and the Subject Tests, which measure achievement in 16 different fields of study. Visit the GRE Web site for more information: <www.gre.org>.

Law School Admission Test (LSAT). Provides a standard measure of acquired reading and verbal reasoning skills that law schools can use as one of several factors in assessing applicants. Visit the LSAT Web site for more information: <www.lsac.org>.

Miller Analogies Test (MAT). A standardized test of verbal analogies used to assist graduate departments and schools in their admissions process. Test may be scheduled through Concordia College in Seward, NE. Call (402) 643-7464 for details.

Test of English as a Foreign Language (TOEFL). If your native language is not English and you are planning to study in a North American college or university, you may be required to take the Test of English as a Foreign Language. TOEFL is administered at selected locations in 180 countries around the world. Visit the TOEFL Web site for more information: <www.toefl.org>.

Funding Information

The following information about fellowships, traineeships, and loans is furnished to aid students in making appropriate applications for financial support. To be eligible a student must be admitted to a department or area with a specific graduate degree objective and must be enrolled in academic course work. A student holding a fellowship or a traineeship must be a full-time student during the period of appointment. Students enrolled in certificate-only programs with no degree objective are ineligible for fellowships. Employees of the University of Nebraska, other than graduate assistants, are not eligible to receive a fellowship.

Fellowships for New UNL Students

Graduate students making initial application and those newly admitted to the University of Nebraska–Lincoln are eligible for a number of fellowships. All of the fellowships are awarded by or through the academic departments. Applications for admission received in the departments by February 15 will be eligible for consideration for nomination. Many departments begin reviewing applications by January 15. There are no separate fellowship forms for new students to complete.

Other Graduate Fellowships are awarded to students newly admitted to a doctoral or other terminal degree program, based on departmental recommendations. Students are eligible for nomination when they have been accepted into a graduate program with a full assistantship. The student’s application file must show evidence of a last degree GPA of at least 3.5 or provide other evidence of outstanding creative accomplishment, and excellent letters of recommendation. Nominees new to the University of Nebraska system will be given priority during the selection process.

Chancellor’s Doctoral Fellowships are awarded to new doctoral graduate students based on departmental recommendations. Students are eligible for nomination when they have been accepted into a graduate program with a full assistantship. The student’s application file must show evidence of a last degree GPA of at least 3.5 or greater and excellent letters of recommendation. Nominees new to the University of Nebraska system will be given priority during the selection process.

Richard H. Larson Minority Graduate Fellowships are open to U.S. citizens who are members of racial/ethnic minority groups traditionally underrepresented in higher education. Minority students entering either doctoral or masters programs are eligible for awards that are intended to supplement a teaching or research assistantship. Departments make the determination for award nominations.

Graduate Nonresident Fellowships are awarded to first-time students based on departmental recommendations. The fellowship pays the difference between nonresident and resident tuition, i.e., it allows the recipient to pay tuition at resident rates for up to 12 hours per semester during the academic year. Students must have 1) at least a 3.0 GPA from previous colleges, or 2) show promise as a scholar from an American minority population that is underrepresented at UNL, or 3) possess special talents that would contribute significantly to a university program.

Regents-Tuition Fellowships are awarded by academic departments to students new to the graduate program. The fellowship pays resident tuition up to 12 hours per semester during the new student’s first academic year at UNL. There are no separate fellowship forms.

Fellowships for Currently Enrolled UNL Students

New students must be nominated by their departments for all awards. Current or previously enrolled students with fewer than 9 graduate credit hours in residence at UNL are eligible to apply for only the Regents-Tuition Fellowships.

Endowed fellowships are available only to students who have completed at least 9 hours of graduate credit in residence at UNL. Submission of a completed application for Graduate Fellowships form is required for consideration for endowed fellowships.
An application for graduate fellowships form can be obtained from departmental offices from the Office of Graduate Studies, or downloaded from the Graduate Studies Web site, www.unl.edu/gradstudies. (Instructions for completing the application are on the form.)

The completed fellowship application, three letters of support, an abbreviated curriculum vitae, and a personal letter of intent must be received by February 15. Materials should be submitted to:

Office of Graduate Studies
University of Nebraska-Lincoln
1100 Seaton Hall
PO Box 880619
Lincoln, NE 68588-0619

The Graduate Fellowship Committee will rank the applicants based on information on the application. Awards will be made by the committee to the top-ranked students. Not all of these fellowships are offered every year and stipends may vary depending on income earned by each fund. Application deadline is February 15.

Presidential Fellowship. Awards of at least $16,500 plus remission of tuition are granted to doctoral candidates who expect to complete all requirements and receive their degree at the end of the academic year that the fellowship is in effect.

Mildred Francis Thompson Fellowship. Awards up to $7,500 for the academic year are granted to women students admitted to a graduate program in a social science department in the College of Arts and Sciences.

Maude Hammond Fling Fellowship. Fellowships are awarded for the academic year, and each provides a stipend of up to $7,000 plus remission of tuition and University Program and Facility Fees.

J. J. and Eleanor Ogle Fellowship. A fellowship of up to $7,000 for the academic year is awarded to a student admitted to a graduate program in one of the following disciplines: agriculture, business administration, engineering, or sociology.

Franklin E. and Orinda M. Johnson Fellowship. Recipients must have their supervisory committees established and have on file an approved program of studies for their doctoral degree.

Gerald L. Phillippe Memorial Awards. Stipends of up to $6,000 are awarded for the academic year to exceptional students admitted to a graduate program in business administration specializing in one or two of the following areas of study: accounting, economics, finance, marketing, and/or management.

There are other smaller fellowships that are awarded on the basis of need and/or scholarship.

Warren F. and Edith R. Day Student Aid Fund provides support for dissertation travel. Students may apply for support for travel in the U.S. necessary to complete a doctoral dissertation. The awards vary in number and amount. They are limited to doctoral students with candidacy status. Students should request information on application procedures from the Office of Graduate Studies or from their adviser. Competitions are held twice a year and deadlines are in September and February.

### Unrestricted Fellowships

Regents Tuition Fellowships are available for newly admitted, current or previously enrolled graduate students. These fellowships pay tuition for full or partial cost of graduate courses, but the student is responsible for the University Program and Facilities Fees. A student is eligible to apply for the academic year and/or one summer session. An application for Graduate Fellowships form must be completed. Application deadline is February 15.

### Graduate Fellowship Committee

The Graduate Fellowship Committee is composed of nine members appointed for staggered terms of three years by the Dean of Graduate Studies in consultation with the Graduate Council. This committee approves applications for fellowships and makes recommendations on fellowship policy to the Council. Dr. Keith Parker, Associate Dean of Graduate Studies, chairs the committee.

### Special External Fellowships

A number of fellowship programs are available through governmental agencies and public and private foundations for support to graduate and postbaccalaureate education. Final selection is made by the outside agency, sometimes following an initial screening of applications by the University. The process can start by searching the reference section of your local or university library for more information on special fellowships.

### Teaching and Research Assistantships

Approximately 1,600 teaching and research assistantships are available to qualified graduate students during the regular academic year in various departments within the University. The assistantships typically require 13 to 20 hours of service per week.

Individual departments make assistantship appointments. Students interested in being considered for assistantships should check the appropriate line on the application for admission. Further inquiries should be directed to the graduate chair or the chair of the student's prospective department.

To hold a graduate assistantship a student must be admitted to a department or area with a specific graduate degree objective and must be enrolled for credit during the tenure of the assistantship.

All international graduate students who wish to be employed as teaching assistants at UNL must attend the International Teaching Assistant Institute after passing the SPEAK test. This Institute is held two times each year. The Institute is held two times each year. The Institute, a concentrated 90-hour program, is held the last week of July and the first two weeks of August. During the fall semester, participants receive 12 hours of instruction per week in a 15-week program. For more information on the availability of assistantships and the International Teaching Assistant Institute, contact the graduate committee of the appropriate department.

Tuition remission of up to 12 hours per semester is provided as a benefit of eligible assistantship employment with the presumption that the benefit will remit tuition on courses which will prepare the student for successful completion of the degree program. Upon review, use of the benefit for frivolous or ancillary courses which don't meet this guideline could result in loss of the tuition benefit for such courses. Another benefit to students holding eligible assistantships is providing basic individual student health insurance coverage at no cost to the student for the premiums.

Eligibility for assistantship employment must meet all of the following criteria: the appointment is continuous and for four full months within the semester dates, the stipend is equal to at least 9 hours of nonresident tuition and fees per semester, and the assistantship or combination of assistantships in one or more departments totals at least 13.33 hours per week employment.

If a graduate assistant resigns or terminates the assistantship during the semester before four full months of service, all tuition benefits will be lost. The student then is responsible for the total tuition payment and health insurance premiums.

If a graduate assistant, while on an appointment during both semesters of the preceding academic year, was paid a stipend of at least $10,412 the student is not charged tuition for the first 6 hours during the summer sessions. If such a stipend was at least $12,918 the student is not charged tuition for the first 12 hours during the summer sessions (Dollar amounts are subject to change).

A student on an ineligible appointment as a graduate teaching assistant or research assistant is allowed to pay tuition at resident rates if the stipend received is equal to, or greater than, the total of the amount necessary for nonresident tuition and fees for 9 credit hours during the academic semester (2 credit hours during a pre-sees the department committee of the appropriate department.

To hold a graduate assistantship a student must be admitted to a department or area with a specific graduate degree objective and must be enrolled for credit during the tenure of the assistantship.

All international graduate students who wish to be employed as teaching assistants at UNL must attend the International Teaching Assistant Institute after passing the SPEAK test. This Institute is held two times each year. The Institute is held two times each year. The Institute, a concentrated 90-hour program, is held the last week of July and the first two weeks of August. During the fall semester, participants receive 12 hours of instruction per week in a 15-week program. For more information on the availability of assistantships and the International Teaching Assistant Institute, contact the graduate committee of the appropriate department.

Tuition remission of up to 12 hours per semester is provided as a benefit of eligible assistantship employment with the presumption that the benefit will remit tuition on courses which will prepare the student for successful completion of the degree program. Upon review, use of the benefit for frivolous or ancillary courses which don't meet this guideline could result in loss of the tuition benefit for such courses. Another benefit to students holding eligible assistantships is providing basic individual student health insurance coverage at no cost to the student for the premiums.

Eligibility for assistantship employment must meet all of the following criteria: the appointment is continuous and for four full months within the semester dates, the stipend is equal to at least 9 hours of nonresident tuition and fees per semester, and the assistantship or combination of assistantships in one or more departments totals at least 13.33 hours per week employment.

If a graduate assistant resigns or terminates the assistantship during the semester before four full months of service, all tuition benefits will be lost. The student then is responsible for the total tuition payment and health insurance premiums.

If a graduate assistant, while on an appointment during both semesters of the preceding academic year, was paid a stipend of at least $10,412 the student is not charged tuition for the first 6 hours during the summer sessions. If such a stipend was at least $12,918 the student is not charged tuition for the first 12 hours during the summer sessions (Dollar amounts are subject to change).

A student on an ineligible appointment as a graduate teaching assistant or research assistant is allowed to pay tuition at resident rates if the stipend received is equal to, or greater than, the total of the amount necessary for nonresident tuition and fees for 9 credit hours during the academic semester (2 credit hours during a pre-

### Loans and Need-Based Application Process

The Office of Scholarships and Financial Aid (OSFA) does not participate in the granting of fellowships or assistantships but does maintain current information on other forms of financial support available to students. To apply for Federal Work-Study, Federal Perkins Loans, Federal Stafford Loans, Unsubsidized Federal Stafford Loans, submit a Free Application for Federal Student Aid (FAFSA) to the processing center as soon as possible after January 1.
Perkins Loans and Federal Work-Study are awarded on a first-come, first-served basis to students with a completed financial aid file as long as funds are available. (International students are ineligible to apply for federal loans.) To have a completed file, a student must:

• Submit a FAFSA to the processing center.
• Be admitted to a degree program (contact O SFA for exceptions).
• If you are transferring to UNL or if you attended another postsecondary school as an undergraduate, submit a financial aid transcript to O SFA from all schools attended. A financial aid transcript is required even if you did not receive financial aid.
• Submit all documentation requested by O SFA as required for verification.

For additional information, contact:
Office of Scholarships and Financial Aid
University of Nebraska-Lincoln
16 Canfield Administration Building
PO Box 880411
Lincoln, NE 68588-0411
(402) 472-2030

Graduate Student Registration

Registration

All students must register for classes prior to the first day of the semester. Newy admitted graduate students are encouraged to arrive early, so they can be on campus to meet with their advisers prior to registration. Currently enrolled graduate students are urged to process early registrations to improve their chances of getting needed classes. Former graduate students are also eligible to register early after updating their status with the Graduate Studies Office.

Registration for the first (fall) semester and for the summer sessions begins in mid-March; registration for the second (spring) semester begins in mid-October.

The Schedule of Classes contains information about procedures and dates pertaining to registration. Additional questions concerning graduate registration procedures should be referred to the Office of Graduate Studies, 1100 Seaton Hall, (402) 472-2035.

Students admitted to UNL Graduate Studies are not required to obtain the signature of the Graduate Dean during registration periods or for drops and adds (see "Drop and Add" on page 25 for additional information), but they are required to consult with an adviser. Non-degree students must obtain the permission of the instructor of the class and may not enroll in masters thesis credits, doctoral dissertation credits, or doctoral seminars without permission of the Dean of Graduate Studies.

Graduate students who have not been continuously enrolled in UNL Graduate Studies should complete a Graduate College Re-enrollment Form (available in the Office of Graduate Studies or online). The Re-enrollment Form is used to update a student's history in the computerized student information system thus making the student eligible to register. Graduate students who previously registered through the Division of Continuing Studies will also need to complete a Re-enroll Form when taking regularly scheduled day classes.

Undergraduate students are not permitted to register at the 800 or 900 level except with the permission of the Dean of Graduate Studies. If the course is to be used for graduate credit, a Hold for Graduate Credit slip must be completed in the Office of Graduate Studies.

Auditing a Course

Auditing gives a currently enrolled (or currently admitted) student the privilege of attending class, but not of taking part in the class activities. A student who is auditing does not take examinations. Courses involving extensive laboratory work are generally not open to auditors. Persons with a previous bachelor's degree must be admitted to Graduate Studies to audit an undergraduate or graduate level course. Do not register for courses you wish to audit.

Instead, pick up a Permit to Audit Card, which contains complete instructions, at the Records Office, 107 Canfield Administration Building, or on or after the first day of class for a semester. The last day to sign up for an audit corresponds to the last day to add a course for the term. The fee for auditing a course is currently one-half the resident tuition for the course.

To have an audit recorded on your permanent record, request that your instructor submit a Change of Student Record Form to the Records Office, 107 Canfield Administration Building, indicating the course was an audit and that you did attend. This option is not available unless the student is also registered for courses for credit in the same semester as the audit.

Tuition and Fees

Tuition and fee rates are subject to change at the direction of the Board of Regents. Prospective students should always inquire at the Student Accounts Office, 124 C. , about current fees. Undergraduate students must pay regular in-state requirements of the University of Nebraska with respect to admission requirements, tuition and fees, scholarships, fellowships, and assistantships, and other benefits normally available to Nebraska residents. For more information regarding the Nebraska-Missouri Reciprocal Agreement for the Exchange of Students, contact the Office of Graduate Studies.

University Staff Exemption

Members of the academic-administrative, managerial-professional, and office-service staffs employed full time may be permitted to register for 15 credit hours each academic year (August through July). Participants are required to be fully admitted and to pay $1 per credit hour plus technology fees.

Part-time staff members and those employed only for the summer session must pay regular fees.

Employment and Registration

Graduate students holding any fellowship or traineeship are required to be enrolled in a full program of studies and are not to engage in other remunerative employment without permission of the Dean of Graduate Studies. Students who hold graduate assistantships may not work more than half time, or 20 hours per week, nor jobs considered, including the assistantship(s).

Graduate students who are not employed, or graduate research assistants who are performing duties that are 100 percent thesis related, may register for a maximum of 15 credit hours during an academic year, 6 credit hours during one five-week summer session, 9 credit hours during one eight-week summer session, or 3 credit hours during the pre-session.
Graduate students who are employed are advised not to exceed the following registration guidelines established by the Graduate Council.

<table>
<thead>
<tr>
<th>Hours Employed per wk</th>
<th>Maximum Registration Guidelines (credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic Year</td>
</tr>
<tr>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>8-16</td>
<td>12</td>
</tr>
<tr>
<td>17-20</td>
<td>10</td>
</tr>
<tr>
<td>Full-time</td>
<td>6</td>
</tr>
</tbody>
</table>

*One course permitted for a maximum of 3 credit hours.

These guidelines reflect the fact that graduate level course work serves mainly as a guide for independent, scholarly study. Graduate students are expected to master subjects and to devote substantial time in independent library and laboratory investigation beyond minimum credit hour requirements.

For courses offered within a summer session, a general guideline is a maximum registration of 1 credit hour per week of instruction.

**Full-time Status**

Graduate students requiring certification as full-time students must be enrolled for at least 9 credit hours during an academic semester or at least 6 credit hours during summer sessions, whether or not the student holds a graduate assistantship. With approval of the Dean of Graduate Studies, students in the final semester of a masters degree program (Option I only), or candidates for doctoral degrees, registered for fewer than the minimum hours required for a full program may be granted full-time status provided they are not employed more than 20 hours per week (half time).

**Certification for Benefits**

<table>
<thead>
<tr>
<th>Registration Requirements for Full/Part-time Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Year</strong></td>
</tr>
<tr>
<td>Full-time (F)</td>
</tr>
<tr>
<td>3/4-time (T)</td>
</tr>
<tr>
<td>1/2-time (H)</td>
</tr>
<tr>
<td>Less than 1/2-time (L)</td>
</tr>
<tr>
<td><strong>Summer</strong></td>
</tr>
<tr>
<td>Full-time (F)</td>
</tr>
<tr>
<td>3/4-time (T)</td>
</tr>
<tr>
<td>1/2-time (H)</td>
</tr>
<tr>
<td>Less than 1/2-time (L)</td>
</tr>
</tbody>
</table>

**NOTE:** Minimum registration required for financial aid during the summer is 4 credit hours of enrollment. These credits can be taken in different summer sessions; however, financial aid is disbursed during the session the student reaches half-time enrollment.

**Graduate Degrees Offered**

**Doctoral Programs**

The University of Nebraska-Lincoln offers thirty-eight programs leading to the degrees of doctor of philosophy (PhD), doctor of education (EdD), and doctor of musical arts (DMA).

**Educational Specialist Degree**

The educational specialist degree (EdS) is designed for persons who wish to achieve by planned program of graduate study proficiency beyond the level of the masters degree but who do not necessarily plan to complete the doctor of philosophy or doctor of education degrees. This advanced degree can be earned in three departments or topical areas within education.

**Masters Programs**

Graduate programs leading to the masters degree are offered by most departments and schools at UNL. Presently, seventy-nine masters programs exist under sixteen separate degree titles. Following is a list of masters degrees granted at UNL:

- Master of Agriculture (M Ag)
- Master of Architecture (M Arch)
- Master of Arts (M A)
- Master of Arts for Teachers (M AT)
- Master of Business Administration (M BA)
- Master of Community & Regional Planning (M CRP)
- Master of Education (M Ed)
- Master of Engineering (M Eng)
- Master of Fine Arts (M FA)
- Master of Legal Studies (M LS)
- Master of Music (M M)
- Master of Physical Education (M PE)
- Master of Professional Accountancy (M PA)
- Master of Science (M S)
- Master of Science for Teachers (M ScT)
- Master of Secondary Teaching (M ST)

**Graduate Majors**

A major in UNL Graduate Studies is the area of academic or professional concentration, approved by the Board of Regents in which the student chooses to qualify for the award of a graduate degree.

At the University of Nebraska-Lincoln, the following majors lead to the graduate degrees indicated. Specializations for the majors are in parenthesis. The specialization is for all majors within the degree unless otherwise noted.

- Accountancy—M PA
- Actuarial Science—M S
- Agricultural Economics—M S, PhD
  (Agribusiness—M S, Environment Studies—M S, Water Resources Planning and Management—M S)
- Agriculture—M Ag
- Agronomy—M S, PhD
  (Agricultural Meteorology—M S, Crop Physiology and Production—M S, PhD, Environmental Studies—M S, Plant Breeding and Genetics—M S, PhD; Range and Forage Science—M S, PhD; Soil and Water Sciences—M S, PhD; Weed Science—M S, PhD; Water Resources Planning and Management—M S)
- Animal Science—M S, PhD
  (Animal Science—M S, Soil Science—M S, Crop Physiology and Production—M S, PhD, Environmental Studies—M S, Plant Breeding and Genetics—M S, PhD; Range and Forage Science—M S, PhD; Soil and Water Sciences—M S, PhD; Weed Science—M S, PhD; Water Resources Planning and Management—M S)
- Anthropology—M A
  (Environmental Studies—M S, PhD; International Human Rights and Diversity)
- Architecture—M Arch, M S
  (Environmental Studies—M S, PhD; Interior Design)
- Art—M FA
- Biochemistry—M S, PhD
- Biological Sciences—M S, PhD
  (Laboratory Sciences—M S, PhD; Plant Pathology—M S, PhD; Water Resources Planning and Management—M S)
- Biometry—M S
- Business—M A, MBA, PhD
  (Accountancy—M A, Marketing—M A; Agribusiness—M BA; Finance—M A, PhD; Information and Software Systems—M BA; Management—M A, PhD; Management Information Systems—M A; Management Science—M A, Marketing—M A, PhD; Marketing—M A, PhD; Marketing Survey Research—M A, PhD; Organization and Management—M A; Organizational Behavior—M A; Personnel/Human Resource Management—M A; Production and Operations Management—M A; Strategic Management and Business Policy—M A)
- Chemistry—M S, PhD
  (Environmental Studies—M S, PhD)
- Classics—M A
  (Latin, Greek)
- Communication Studies—M A, PhD
  (Great Plains Studies—M A, Marketing, Communication and Advertising—M A)
- Community and Regional Planning—M CRP
  (Environmental Studies—Great Plains Studies, Water Resources Planning and Management—M S)
Computer Science—M S, PhD
  (Computer Engineering—M S)
Economics—M A, PhD
  (Environmental Studies—M A; Great Plains Studies—M A; Water Resources Planning and Management—M A)
Education (Doctoral)
  Administration, Curriculum, and Instruction—EdD, PhD
  (Architectural Education; Teaching; Curriculum and Learning; Educational Leadership and Higher Education; Physical Education; Teacher Education; Instructional Technology)
  Community and Human Resources—EdD, PhD
  Educational Administration (UNL—UNO)—EdD
  Psychological and Cultural Studies—EdD, PhD
  (Cognition Learning and Development; Counseling Psychology; School Psychology; Quantitative and Qualitative Methods in Education; Exercise Physiology; Health Education; Special Education; Communication Disorders; Survey Research Methodology)
  Education (masters and specialists)
  Curriculum and Instruction—MA, M Ed, M S, EdS
  (Great Plains Studies—MA)
  Educational Administration—MA, M Ed
  (Student Affairs)
  Educational Psychology—MA, EdS
  (Cognition Learning and Development; Survey Research and Analysis—MA)
  Health and Human Performance—M Ed, M PE
  (Exercise Physiology; Health Education; Physical Education and Sports Studies)
  Special Education and Communication Disorders—EdD
  Special Education—MA, M Ed
  Speech-Language Pathology and Audiology—MS
  Engineering—PhD
  (Agricultural and Biological Systems Engineering; Chemical and Materials Engineering; Civil Engineering; Computer Engineering; Electrical Engineering; Engineering Mechanics; Industrial Management Systems and Manufacturing Engineering; Mechanical Engineering)
  Engineering—MS
  (Environmental Studies; Water Resources Planning and Management)
  Chemical Engineering—M S
  (Environmental Engineering; Environmental Studies; Geotechnical Engineering; Structural Engineering; Transportation Engineering; Water Resources Planning and Management)
  Computer Science—MS, PhD
  Electrical Engineering—M S
  Engineering Mechanics—M S
  Environmental Engineering—M S
  Industrial and Management Systems Engineering—M S
  (Environmental Studies; Water Resources Planning and Management)
  Manufacturing Systems Engineering—M S
  Mechanical Engineering—M S
  (Materials Science Engineering; Metalurgy)
  English—M A, PhD
  (International Human Rights and Diversity—M A, PhD; Nineteenth Century Studies—M A, PhD)
  Entomology—M S, PhD
  (Environmental Studies—M S)
  Family and Consumer Sciences—M S
  (Marriage and Family Therapy; Family Financial Planning)
  Food Science and Technology—M S, PhD
  Geography—M A, PhD
  (Climatology—M A, PhD; Environmental Geology—M A, PhD; Environmental Studies—M A; GIS/Geography; Remote Sensing—M A, PhD; International Human Rights and Diversity—M A, PhD; Water Resources Planning and Management—M A)
  Geosciences—M S, PhD
  (Environmental Studies—M S; Geology—M S, PhD; Great Plains Studies; Hydrogeology—M S, PhD; Meteorology—Climatology—M S, PhD; Water Resources Planning and Management—M S)
  History—M A, PhD
  (Great Plains Studies—M A, PhD; International Human Rights and Diversity—M A, PhD; Nineteenth Century Studies—M A, PhD)
  Horticulture—M S
  (Environmental Studies; Public Horticulture Administration; Water Resources Planning and Management)
  Horticulture Industry—PhD
  (Public Horticulture Administration)
  Human Resources and Family Sciences—M S, PhD
  (Family and Consumer Sciences—PhD; Nutritional Science and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD; Nutrition and Dietetics—PhD)
  Legal Studies—M S
  (Environmental Studies)
  Mathematics and Statistics—M A, M S, M AT, M ScT, PhD
  (Environmental Studies; Public Horticulture Administration; Water Resources Planning and Management—M A, M S, M AT, M ScT; Survey Sampling—PhD)
  Mechanical Systems Management—M S
  (Water Resources Planning and Management)
  Modern Languages and Literatures—M A, PhD
  (French—M A, PhD; German—M A, PhD; Spanish—M A, PhD; International Human Rights and Diversity—M A, PhD; Nineteenth Century Studies—M A, PhD)
  Museum Studies—M A, M S
  (Management and Cultural Collections; Great Plains Studies; Art History)
  Music—M M, DMA
  (Music Education—M M)
  Natural Resource Sciences—M S
  (Agricultural and Biological Systems Engineering; Environmental Studies; Public Horticulture Administration; Water Resources Planning and Management)
  Nutrition—M S, PhD
  (Nutritional Science and Dietetics—M S)
  Philosophy—M A, PhD
  (International Human Rights and Diversity—M A, PhD; Philosophy—M A, PhD)
  Physics and Astronomy—M S, PhD
  (Environmental Studies—PhD)
  Political Science—M A, PhD
  (Environmental Studies—M A; International Human Rights and Diversity—M A, PhD; Water Resources Planning and Management—M A)
  Survey Research and Analysis—M A, PhD
  (Environmental Studies—M A; Survey Research and Analysis—M A, PhD; Water Resources Planning and Management—M A)
  Telecommunications Engineering—M S
  Textiles, Clothing, and Design—M A, M S
  (Great Plains Studies)
  Theatre Arts and Dance—MFA
  Toxicology (UNL/UNMC)—M S, PhD
  Veterinary Science—M S

Degrees at the masters and specialist level are offered at the University of Nebraska at Omaha at the University of Nebraska at Kearney and at the University of Nebraska Medical Center. These degrees are described in separate bulletins.

**Graduate Area of Specialization**

Areas of specialization are indicated in the graduate statements of some departments. An area of specialization is a subdivision of a major in which strong graduate-level curriculum is available. Once they are approved by the Graduate Council, these areas of specialization are shown parenthetically after the major on official records and transcripts.

**Masters Degree with Double Major**

Students accepted into a double major must meet, at least, the minimum requirements for each of the majors. This includes graduate work of no less than 18 to 24 credit hours in each of the two disciplines, but never fewer than 18 credits excluding cross-listed courses in the second major. The precise number of credits may vary depending on the total required hours for a particular major. For each of the two majors, students must take at least 8 credits in courses open only to graduate students (900 level or *800 level), excluding these hours.

The student is required to successfully satisfy the comprehensive examination schedule (written and/or oral examination(s)) administered for each major. The examination committee for students electing for the double major shall consist of two graduate faculty members from each of the major departments/areas. The committee shall be co-chaired by a faculty member from each of the major departments. All professors on the examination committee must either be on the graduate faculty or be non-graduate faculty approved to perform specified graduate faculty duties. At least one of the two members from each department must be a graduate faculty fellow.

For admission criteria, see “Admission to a Double Major” on page 9.
Second Masters Degree

Normally, no graduate student may be a degree-seeking student in more than one graduate program at the University of Nebraska, unless enrolled in an approved dual-degree program (see Dual Degree Programs below). Any exceptions must have prior approval of every Graduate Program Committee and every campus Dean for Graduate Studies through which the programs are administratively assigned. When a student has received an approved simultaneous matriculation for two masters programs, the same course credit will not be accepted for more than one degree without prior approval of every Graduate Program Committee and every campus Dean for Graduate Studies through which the programs are administratively assigned.

Students who have earned a previous graduate degree such as a masters degree at any institution including the University of Nebraska may seek a second masters degree provided the degree is in a different discipline. However, no graduate credits will be accepted as transfer credit toward a second masters program if the course work has been applied toward a previous degree at any accredited institution, including UNL. Graduate course work not previously applied toward a degree may be considered for transfer to a second masters if the graduate credits were earned within 10 years of completing the masters degree at UNL. Any approved memorandum of courses cannot duplicate graduate course work from any institution, discipline, or country.

Dual Degree Programs

The professional program leading to the juris doctor degree is provided through the University of Nebraska College of Law. A number of dual degree programs are offered in cooperation with the College of Law and the Office of Graduate Studies. Presently, joint law/graduate degree programs exist with the departmental areas of accountancy; business administration; administration, curriculum and instruction; community and regional planning; economics; political science; and psychology. Students must be accepted separately by the College of Law and by the Graduate College of the University.

In addition, a dual-degree program is offered by the departments of architecture (MArch) and community and regional planning (MCRP); architecture (MArch) and business (MBA), and civil engineering (MArch) and community and regional planning (MCRP). Students must be accepted separately by each degree program, with the knowledge and approval of the Graduate Dean. For more information, refer to the dual program descriptions in this bulletin under the appropriate departmental entry. In some instances, with approval of the Dean of Graduate Studies, individualized joint programs may be created as special circumstances arise.

Requirements for Graduate Degrees

Requirements for the Masters Degree

Options for the Masters Degree

The Graduate College, except in a few departments where such a choice is not feasible, offers the degrees of master of arts and master of science under three options. Limitations concerning options for the masters degree in the individual majors are shown in the beginning portion of each department's requirements in the Courses of Instruction section of this bulletin. In choosing an option a student should be guided by the type of training desired. A student may not change options for the masters degree after having been admitted to candidacy.

The major for the masters degree under any option may be met with approved courses selected from those offered in any department which has been approved to offer a program leading to the masters degree, see "Masters Programs" on page 13.

A minor for the masters degree under any option must consist of at least 9 semester hours and may be taken in any one department or interdepartmental area which has been approved to offer a major leading to a masters degree. In addition, the minor may, in certain departments, be completed in a subdivision of the administrative department. Approved fields of study, which may be selected within each administrative department, must be approved by the Graduate Council for use as a minor and are indicated in this bulletin in the sections of the program for the respective departments.

Approved fields of specialization are listed under those sections of this bulletin which pertain to the departments concerned.

Option I. The masters degree under Option I should be chosen by those who are preparing for careers in research and scholarly work or in college or university teaching. Under this option a student must earn a minimum of 30 semester hours of credit, consisting of 20 to 24 semester hours of regular course work, and present a thesis equivalent to 6 to 10 semester hours. At least one-half of the required work, including the thesis, must be taken in one major subject (at least 18 hours for the master of education degree). The remaining work may be in supporting courses or in a minor consisting of at least 9 semester hours. Eight hours credit, in addition to the thesis, must be earned in courses open exclusively to graduate students (900 level or 800 level without 400 or lower counterparts).

The subject of the thesis should be chosen from the candidate's field of major interest and must be approved by the departmental Graduate Committee. The thesis should reveal a capacity to carry on independent study or research and should demonstrate the student's ability to use the techniques employed in their field of investigation. Research activities involving human subjects or live vertebrate animals may not be conducted at the University of Nebraska-Lincoln (UNL) unless the research activities have been reviewed and
approved by the appropriate board or committee. The Institutional Review Board (IRB) reviews projects involving human subject research and the Institutional Animal Care and Use Committee (IACUC) reviews the use of animals in research. These reviews are in accordance with Federal regulations and UNL assurance documents to the Office of Protection from Research Risks (OPRR). Note that the IRB and IACUC will not review projects already in progress; approval must be secured prior to the initiation of the research. The Research Compliance Assurance Form can be obtained from the Office of Research and Graduate Studies. The completed form must be submitted at the time the final version of the thesis or dissertation is filed. The thesis must conform in style and form to specimens which may be examined in Love Memorial Library. A copy of the thesis and abstract must be deposited with the Dean of University Libraries. A copy of the thesis and abstract must be approved by the major adviser. When the thesis has been accepted, one copy must be supplied to the departmental office of the major and two copies must be deposited with the Dean of University Libraries.

Option I. The masters degree under Option I is offered in certain departments upon the advice and the approval of the major adviser, the Departmental Committee, and the Dean of Graduate Studies. This option encourages a wider range of courses than is permissible under Option II. Students who have taken the masters degree under Option II and later elect to continue in graduate work for the degree of doctor of philosophy must give evidence of ability to carry on independent research. Under this option a student must earn a minimum of 36 semester hours of credit in courses representing a major and either one or two minors. A thesis is not required. A program consisting of a major and one minor must include not fewer than 18 hours in the major and 9 hours in the minor. If two minors are elected, the majors must total at least 15 hours and the minors at least 9 hours each. Although most departments stipulate that all course work toward the minor must be taken within the department or interdepartmental area, at the discretion of the minor department up to one-third of the courses required for a minor may be transferred from other institutions. In either case, at least 12 of the 36 hours must be earned in courses open exclusively to graduate students (900 or 800 level without 400 or lower counterparts).

In work for the master of education degree, at least 6 semester hours selected from education courses outside the major must be included and supporting work may be substituted for the minor(s).

Option III. The masters degree under Option III is designed especially for the student who plans to continue scholarly work in a chosen field past the masters level. It permits the substitution of more intensive work in advanced courses for the thesis or minor. Under this option, the student must earn a minimum of 36 semester hours of credit, at least 18 of which must be earned in courses open exclusively to graduate students (900 or 800 level without 400 or lower counterparts). The program must include not fewer than 18 hours in each of the major and ordinarily one copy is furnished to the major adviser, while one copy should be prepared for depositing in 318 Love Library. M aster's theses are available for interlibrary loan through the University Libraries.

Examinations

Within 24 months prior to the date of graduation, a comprehensive (written and/or oral) examination is (are) required to cover the student's approved program of study, as prescribed by the appropriate departments. The comprehensive examination in the minor field(s) (written and/or oral) may be waived subject to the approval of the major department(s) provided all grades in the minor department are at least a B or higher.

If an oral examination is required, the examining committee, approved by the Office of Graduate Studies on recommendation of the major department, will consist of at least three members representing the major department and the minor department. If applicable, the degree being earned under Option I without a final oral examination, the thesis must be approved in writing by a Graduate Faculty Fellow in addition to the major adviser. All professors on the examining committee must either be on the Graduate Faculty, or be non-Graduate Faculty approved to perform specified Graduate Faculty duties, and at least one must be a Graduate Faculty Fellow. If a member of the examining committee other than the chair leaves the employ of the University, or retires, a replacement should be appointed. In certain circumstances where a special and needed continuing expertise is involved and the faculty member is willing to continue serving, the departing faculty member may continue as a member or co-chair of the committee, with approval of the department, Graduate Committee and the Dean of Graduate Studies.

If a student fails to pass the oral or written examination for an advanced degree, their committee must file a report on the failure in the Office of Graduate Studies and indicate what the student must do before taking another
examination. Another examination may not be held during the same semester or the same summer session in which the student failed.

Procedure Summary for the Masters Degree

This outline of procedure should be studied carefully in connection with the deadlines published in the UNL Graduate Studies calendar.

1. Admission to UNL Graduate Studies by the evaluation of official transcripts of undergraduate work, presented in person or by mail prior to registration.
2. Registration by consultation with the chair of the Graduate Committee and the major adviser and with the approval of the Dean of Graduate Studies.
4. Memorandum of Courses, required for candidacy, must be filed before grades (letter grades, no reports or incompletes) have been received in more than one-half of the program and on recommendation of the major and minor departments and approval of the Dean of Graduate Studies.
5. Application for advanced degree at the Graduation Services Office, 109 Canfield Administration Building, at the outset of the semester or session in which graduation is planned.
6. The Final Examination Report for the masters degree must be received in the Office of Graduate Studies at least four weeks (three weeks in summer) before the final examination, if required, but in no case later than four weeks before the final date for oral examinations. The report will be accepted after all course work on the program of studies has been completed, or in progress, and any outstanding incomplete has been removed.
7. The presentation of a preliminary copy of the thesis and abstract to the Graduate Studies Office, two weeks (one week in summer) prior to the oral examination, if required. If the oral examination is waived, the preliminary copy of the thesis and abstract must be presented to the Office of Graduate Studies no later than two weeks before the final date for oral examinations for any given session.
8. Passing of written examinations, if required, in major and minor fields at least one week prior to the time the oral examination is to be taken.
9. Passing of an oral examination, if required, administered by the examining committee.
10. Deposition of two complete copies of the thesis and abstract in proper form, along with the Final Examination Report Form signed by the examining committee to the Office of Graduate Studies to be stamped. They are then delivered to the Dean of University Libraries and the binding fee is paid to the Bursar's Office. Upon receiving the signatures of the Library and the cashier on the Final Examination Report Form, it is returned to the Office of Graduate Studies.

Requirements for the Degree of Doctor of Musical Arts

The residency and time requirements and the regulations pertaining to appointment of supervisory committees and submission of programs of studies for the doctor of musical arts are the same as those for the doctor of philosophy degree, see "R requirements for the Degree of Doctor of Musical Arts" on page 17. Establishing the supervisory committee will depend upon the student's demonstrated ability in the fundamental subject matter of his or her field and on professional promise.

A doctor of musical arts degree is contingent on a high level of attainment in the candidate's major area. In composition this will include performances of compositions composed after acceptance into the doctoral program. Work submitted for approval must include one work for chamber ensemble and one work for orchestra or its equivalent. In performance this will include three full recitals and one lecture recital. The literature performed at these recitals must be representative of all major schools and styles within the performer's chosen discipline. In addition, proficiency in music scholarship must be demonstrated by the completion of a doctoral document or, as determined by the composition faculty, other options for composition students. Proficiency in the reading of at least one foreign language must be acquired as well as completion of academic studies in music. When a substantial amount of course work and the language requirement have been completed, the student may petition for comprehensive examinations, which will be both written and oral. When these are completed with distinction, the student is admitted to candidacy for the degree. For further information, see "Comprehensive Examination and Admittance to Candidacy" on page 18. The presentation of the final recital or composition will take place after admittance to candidacy.

The completion of the abstract and the doctoral document and its defense will complete requirements for the degree.

Procedure Summary for the Doctor of Musical Arts Degree

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

1. Admission to the UNL Graduate Studies by the evaluation of official transcripts presented in person or by mail before registration.
2. Registration after consultation with advisors in major and minor departments.
3. Appointment by the Office of Graduate Studies of a supervisory committee on the recommendation of the departmental or area Graduate Committee.
4. Submission to the Office of Graduate Studies of a program approved by the supervisory committee setting forth the complete plan of study for the degree with a minimum of 45 hours exclusive of language and/or research tools remaining to be taken.
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 Office of Graduate Studies of a report from the supervisory committee on the specific research for the dissertation and progress to date.
7. Admission to Candidacy for the DMA degree by filing a report in the Office of Graduate Studies 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). See "Comprehensive Examination and Admission to Candidacy" on page 18.
8. Filing of an application for the degree at the Office of R egistration and Records, 107 Canfield Administration Building. 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 a later term.
9. Presentation of the doctoral document 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 before the final examination.

Requirements for the Degree of Doctor of Philosophy

Residency and Time Requirements

The Office of Graduate Studies has established a residency requirement for the purpose of ensuring that the doctoral program should be reasonably compact, continuous, and coherent; and that a substantial portion be in fact done at and under close supervision by the University. The residency requirement is part of the student's approved program.

For a student beginning a doctoral program in the University of Nebraska system with a bachelor's degree, the residency requirement for the PhD is 27 hours of graduate work within a consecutive 18-month period or less, with the further provision that 15 of these 27 hours must be taken after receiving the masters degree or its equivalent.

For a student who transfers to the University of Nebraska system with a masters degree from another institution, or who takes a break in their graduate work, the residency requirement for the PhD is 27 hours of graduate coursework (excluding dissertation hours unless approved by the Graduate Dean) within a consecutive 18-month period or less.

For 1) a member of the University staff who is engaged at least half time in instruction or research in their major area, or 2) a person employed in their major field, the residency requirement is 24 credit hours of graduate work within a consecutive two-year period with the further provision that they take at least 12 of these after receiving the masters degree or its equivalent. For important restrictions, see "University Staff Exemption" on page 12.
Committee

1. General Information

Not more than one-third of the work for residency or 9 hours total credits may be taken during the summer sessions.

In exceptional circumstances, where it is clear that the purpose of residency will be fulfilled although the above formal conditions are not met, the student's supervisory committee may, with the approval of the Dean of Graduate Studies, designate an alternative procedure for satisfying the residency requirements.

A minimum of three full years of graduate study is normally required to complete a program for the degree of doctor of philosophy. Neither the courses taken nor the time spent in study determines the granting of the degree. It is given primarily for high attainment in some special field of scholarship and for demonstrated power of independent research in a subdivision of this field.

The time limit on granting the doctoral degree is eight years from the time of filing the student's program of studies in the Office of Graduate Studies. The supervisory committee will determine what course work taken prior to filing of a program of studies, including hours earned toward the master's degree(s), will be accepted as part of the 90-hour program. The committee is not obligated to reduce the doctoral program of studies by applying all course work taken toward a previously earned masters degree(s). Prior course work should be assessed in relation to its contribution to framing a research foundation for the doctorate. Each course accepted must be determined to be current and relevant in relation to the desired degree.

Appointment of Supervisory Committee

Upon recommendation of the departmental or area Graduate Committee, and before the student has fewer than 45 hours exclusive of language and/or research tools on their program of studies remaining to be taken, the Dean of Graduate Studies appoints, for each student, a supervisory committee of at least four Graduate Faculty Fellows. The chair of the supervisory committee must be a Graduate Faculty Fellow, or in the event there are co-chairs, at least one of them must be a Fellow. Graduate Faculty Members or Fellows who have been appointed to Emeritus status may co-chair the supervisory committees of doctoral students with a resident Graduate Faculty member. (All professors on the examining committee must either be on the Graduate Faculty or be non-Graduate Faculty approved to perform specified Graduate Faculty duties.) At least one Graduate Faculty Fellow external to the academic department or area in which the doctorate is to be granted must be included on the committee responsible for supervising the student's doctoral program of studies. Graduate Faculty Members or Fellows who have been appointed to Emeritus status may co-chair the supervisory committees of doctoral students with a resident Graduate Faculty member. When the representative of the minor department on the committee is a Graduate Faculty Fellow, they may serve as the outside representative. The supervisory committee is appointed on the recommendation of the Graduate Committee in the student's major.

The establishing of a supervisory committee is based upon the student's:

1. Demonstrated ability in the fundamental subject matter of his/her major field, and
2. Professional promise. The minor or related fields, if applicable, will be represented on the committee.

If the chair of a PhD supervisory committee leaves the employ of the University or retires, the office of Graduate Studies must be notified immediately and a change in the supervisory committee made as follows:

a. If the student has already achieved candidacy, the former chair who has left the employ of the University may be permitted to continue as co-chair of the supervisory committee, with the concurrence of the departmental Graduate Committee and the UNL Dean of Graduate Studies. A second co-chair must be appointed who is a resident Graduate Faculty Fellow.

b. If the student has not yet achieved candidacy, a new chair of the supervisory committee who is a resident Graduate Faculty Fellow must be appointed immediately, with the concurrence of the departmental Graduate Committee and the UNL Dean of Graduate Studies.

If a member of the supervisory committee other than the chair leaves the employ of the University, or retires, a replacement should normally be appointed who is a resident Graduate Faculty Member or Fellow. In certain circumstances where a special and needed continuing expertise is involved and the staff member is willing to continue serving, they may serve as a member of the supervisory committee, with the approval of the departmental Graduate Committee and the UNL Dean of Graduate Studies.

Occasionally a doctoral student's supervisory committee may believe that the participation of a graduate faculty member from another university would enhance the quality and direction of the dissertation. Faculty from other universities with special expertise may be enlisted, with the approval of the Graduate Dean, to serve in a courtesy association on the supervisory committee of a doctoral candidate. Such individuals would serve without official vote but would be empowered to sign the dissertation approval document and be duly acknowledged by the student in the dissertation.

Program of Studies

Within three weeks of its appointment, the committee will meet to designate and subsequently to file in the Office of Graduate Studies a complete program of studies, including any language or research tool requirements and the general area of research for the dissertation. (A tentative program will ordinarily be presented by the student's advisor.) The student's program of study must conform with one of the following plans:

1. The student chooses a major from the list of doctoral programs, see "Graduate Degrees Offering" on page 15. At least half of the graduate work, including the dissertation, will be done in this field. The remaining work, subject to the approval of the supervisory committee, may include either:
   a. supporting courses in the same or in related departments, or
   b. a minor field of study outside of the major department. The minor must include at least 18 semester hours with no courses in courses open exclusively to graduate students (900 level or 800 level without 400 level or lower counterparts). It may be taken in any department which has been approved to offer a major leading to a masters degree. In addition, the minor for the PhD may, in certain departments be completed in a subdivision of the administrative department. Approved fields of study, which may be selected within each administrative department, must be approved by the Graduate Council for use as a minor and are indicated in this bulletin in the sections of the programs for the respective departments.

2. The student may select a field of study which integrates material offered in two or more departments without meeting the specific major requirement as outlined under 1. Such a program of study must be in an approved interdepartmental area for which a special area Graduate Committee representing the departments concerned has been appointed by the Dean of Graduate Studies.

The committee is not obligated to accept credits beyond the masters degree which were completed prior to its appointment. At least half of the total program of courses and dissertation research must be completed following submission of the program to the Office of Graduate Studies. Any subsequent change in the program or in the dissertation topic is approved by the supervisory committee and the action reported to the Office of Graduate Studies.

The minimum amount of graduate credit is 90 semester hours, including a dissertation. Not fewer than 45 semester hours must be completed at the University of Nebraska after the filing of the program of studies. The PhD program will normally include a minimum of 12 hours and a maximum of 55 hours of dissertation research. The time limit on granting the doctoral degree is eight years from the time of filing the student's program of studies in the Office of Graduate Studies.

Language and Research Tool Requirement

There is no uniform requirement for UNL Graduate Studies; however, certain departments have specific research tool requirements and/or language requirements, which are explained in the sections of this bulletin describing the program in the department or interdepartmental area.

Prior to admission to Candidacy and at least seven months before the final oral examination the student must have satisfied the language and research tool requirements for their department as noted in the bulletin.

Comprehensive Examination and Admission to Candidacy

When a student has substantially completed studies in the doctoral program (PhD, EdD, DMA), he/she must pass a written comprehensive examination, in major and minor or related fields. The written comprehensive examination
is not a repetition of course examinations but is an investigation of the student's breadth of understanding of the field of knowledge of which their special subject is a part.

At the discretion of the supervisory committee, the student may also be required to pass an oral comprehensive examination. The oral examination may include the minor or related fields in addition to the major field of study. The supervisory committee arranges for written or oral examinations.

As soon as possible after the supervisory committee has graded the comprehensive examination, it shall convene to prepare a report to the Office of Graduate Studies on the results of the examination. Within the supervisory committee, the oral comprehensive examination and satisfied language and research tool requirements of their approved program, the committee will recommend to the Office of Graduate Studies the doctoral student's admission to Candidacy by filing the Application for Admission to Candidacy for the doctoral degree, noting the dates of completing the comprehensive examination and language and research tool requirements. The application must be filed at least seven months prior to the final oral examination (dissertation defense).

Following admission to Candidacy, the student must register for at least one credit hour during each academic-year semester until he/she receives the doctoral degree, even if the student has already met the total dissertation hours on their approved program of study. Failure to register during each academic-year semester will result in termination of the Candidacy.

NOTE: Should the Supervisory Committee determine the student has failed the comprehensive examination, a letter must be submitted by the chair of the supervisory committee to the Dean of Graduate Studies stating the conditions under which the student may attempt another examination, or part thereof, not earlier than the following academic term. Typically, but upon the discretion of the supervisory committee, only two attempts to pass the comprehensive examination will be permitted.

Final Examination

The final examination for the doctoral degree is oral and open to members of both the University community and the public. During the dissertation presentation and general questioning, all persons may be present. However, at the end of the defense hearing, there will be a closed questioning portion of the examination where all persons except the Candidate, doctoral supervisory committee, and invited faculty must be excused. It is given by the supervisory committee after the Candidate's studies have been completed and the dissertation accepted.

The committee determines its character and length. The examination may be devoted to the special field of the dissertation or to the Candidate's general knowledge, or it may be designed to test judgment and critical powers.

The final examination for the PhD will not be scheduled unless the chair of the supervisory committee and at least two other members of the committee are available for the examination. Exceptions may be made only by permission of the Dean of Graduate Studies. In any event, the supervisor of the dissertation must have seen and approved the completed dissertation before the examination will be scheduled.

The final oral examination over the dissertation may be waived only with the unanimous consent of the supervisory committee. The oral examination or the reason for its waiver to the Office of Graduate Studies.

In the event that members of an oral examination committee are not unanimous regarding passing a candidate, the student is to be approved for the degree if they report final oral examination and indicate what the student must do before taking another examination. Another examination may not be held during the same semester or the same summer session in which the student failed.

Dissertation

The dissertation is of no fixed length. It should treat a subject from the Candidate's special field, approved by the supervisory committee. It should show the technical mastery of their field and advance or modify former knowledge, i.e., it should treat new material, or find new results, or draw new conclusions, or it should interpret old material in a new light. Each candidate for the degree shall submit with the dissertation an abstract of the same, not exceeding 350 words in length including the title. A guidebook for dissertation preparation is available in the Office of Graduate Studies.

Research activities involving human subjects or live vertebrate animals may not be conducted at the University of Nebraska-Lincoln (UNL) unless the research activities have been reviewed and approved by the appropriate board or committee. The Institutional Review Board (IRB) reviews projects involving human subject research and the Institutional Animal Care and Use Committee (IACUC) reviews the use of animals in research. These reviews are in accordance with Federal regulations and UNL assurances to the Office for Protection from Research Risks (OPRR). Note that the IRB and IACUC will not review projects already in progress; approval must be secured prior to the initiation of the research. The Research Compliance Assurance Form can be obtained from the Office of Graduate Studies; the completed form must be submitted at the time the final version of the thesis or dissertation is filed.

The dissertation and abstract must be typed and double-spaced. An acceptable type includes a dark print from a letter quality printer or black ink from a typewriter. The margins should be at least one-and-one-half inches (1.5") at the left and one-inch (1") on each of the three other sides. If plates or folded tables are included, they should have exactly the same margins as the text, or should be folded to come within them.

Following the successful completion of the oral examination, the student should submit two final unbound copies of the dissertation (including abstract), two additional copies of the abstract, and two extra title pages to the doctoral degree assistant in the Office of Graduate Studies, 1100 Seaton Hall. The doctoral degree assistant will also check for completed and signed final forms.

Only abstracts/dissertations that meet all published requirements can be approved and stamped for depositing in 318 Love Library. The student must also present to the Dean of University Libraries a signed agreement for the publication of the abstract and microfilming of the dissertation.

Before the degree is granted, each Candidate pays a $25 binding fee and a $60 fee to cover the cost of microfilming the entire dissertation or field investigation and of publication of the abstract in Dissertation Abstracts International.

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 UNL Graduate Studies by the evaluation of official transcripts presented in person or by mail before registration.

2. Registration after consultation with advisers in major and minor departments.

3. Appointment by the Office of Graduate Studies of a supervisory committee on the recommendation of the departmental or area Graduate Committee.

4. Submission to the Office of Graduate Studies of a program approved by the supervisory committee setting forth the complete plan of study for the degree with a minimum of 45 hours exclusive of language and/or research tools remaining to be taken.

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 Office of Graduate Studies of a report from the supervisory committee on the specific research for the dissertation and progress to date.

7. Admission to Candidacy for the PhD degree by filing a report in the Office of Graduate Studies of the passing of the comprehensive examinations and the completion of language and research tool requirements (at least seven months before the final oral
Advanced Degrees in Education

The purpose of the advanced degree programs in education is to prepare people for positions of leadership in professional education. The programs emphasize development of breadth of understanding and the acquisition of knowledge of at least one field of specialization within a major. The programs are sufficiently flexible to meet a broad range of professional needs.

Work leading to the master of education degree is offered in curriculum and instruction; educational administration; health and human performance; and special education.

The master of arts degree is also offered in all the above except for health, physical education and recreation; speech-language pathology and audiology; and vocational education. Adult and continuing education offers only the master of arts degree. Health and human performance offers the master of physical education degree, the Center for Curriculum and Instruction offers the masters of secondary teaching degree, and the Department of Speech-Language Pathology and Audiology offers the master of science degree.

The M ST allows students who have earned a baccalaureate degree to take graduate-level course work to concurrently work toward initial teaching certification and a masters degree. Three options are available.

Prior to beginning work on the M ST, candidates must have their transcripts reviewed in order to determine which courses they will need for an initial Nebraska teaching certificate. These courses if they are at the graduate level, will constitute the candidate's M ST program.

In addition, the following graduate guidelines apply:

Option I

1. Course work must total 20-24 graduate hours (more may be required for certification.)
2. At least 8 of the 24 hours must be taken in courses open exclusively to graduate students.
3. 18 hours must be taken in Curriculum and Instruction (or 15 hours if two minors are declared).
4. 6-10 thesis hours are required.
5. No more than 6 hours of practicum or student teaching may apply toward the degree.

Option II

1. Course work must total 36 graduate hours (more may be required for certification.)
2. 18 hours must be taken in Curriculum and Instruction (or 15 hours if two minors are declared).
3. At least one minor of 9 hours in a department which offers a major must be declared.
4. At least 12 of the 36 hours must be taken in courses open exclusively to graduate students.
5. No more than 6 hours of practicum or student teaching may apply toward the degree.

Option III

1. Course work must total 36 graduate hours (more may be required for certification.)
2. 18 hours must be taken in Curriculum and Instruction.
3. At least 18 of the 36 hours must be taken in courses open exclusively to graduate students.
4. No more than 6 hours of practicum or student teaching may apply toward the degree.

For general requirements for the masters degrees, see "Requirements for Graduate Degrees" on page 15.

Work leading to the educational specialist degree is offered in curriculum and instruction; educational psychology; and special education and communication disorders. Information about the program for the educational specialist degree may be obtained from the respective Graduate Committeechair.

Work leading to the doctor of education degree and the doctor of philosophy degree is offered in the following majors administration, curriculum and instruction; psychology and cultural studies; and community and human resources.

Within these majors, students choose areas of specialization as described in the Courses of Instruction.

Requirements for Educational Specialist Degree

The EdS degree prepares educational practitioners for specialized positions in public and private schools. It is especially appropriate for those individuals who wish preparation beyond the masters degree level, but who are not interested in doctoral work with its emphasis on research. The EdS degree is a terminal degree and should not be viewed as a substitute for the doctorate nor as work completed toward it.

Hours of Credit

A minimum of 66 semester hours beyond the baccalaureate degree is required for the EdS degree. While specific requirements are determined by departmental units in general 40 to 50 hours will be in core courses within the unit or closely related units, 3 hours or more will be research, 6 hours or more will be practicum and 6 or more hours will be electives.

Qualifying Procedure

Applicants for the EdS program should:
1) have a bachelors degree from a regionally accredited institution, and
2) take qualifying examinations as required by the field of specialization. Applications will be reviewed by faculty in the field of specialization and admission decisions made by the departmental graduate committee on the basis of academic and professional promise.

Supervisory Committee

Students admitted into a specialist program should contact the head of the Graduate Committee of the department to make arrangements for appointment of members of the supervisory committee, including the chair. Supervisory committees for the EdS consist of three faculty members at least one of whom is a graduate faculty fellow. Committees may be chaired by either a graduate faculty fellow or member.

Program of Studies

The program of studies for the EdS consists of core courses, research, practica, and electives. Appointment of the supervisory committee and approval of the program of studies by the Dean of Graduate Studies establishes the program of studies. The student must complete at least 24 hours subsequent to approval of the program of studies.

Comprehensive Examinations

A written comprehensive examination, developed by the supervisory committee, will be administered when the program is substantially complete. The committee determines the nature and duration of the examinations and will report the results to the Office of Graduate Studies.
Requirements for Doctoral Degrees in Education

The EdD and PhD degrees represent alternative but comparable doctoral programs in education. A person pursuing either degree program should possess competence in teaching. There are, however, the following distinctions.

Doctor of Education

The emphasis here is upon the application of theory to the improvement of educational practice. The test of knowledge is the ability to demonstrate applicability to a variety of educational situations. Emphasis is upon the development of decision-oriented inquiry skills in which the educator applies theory and knowledge to the solution of educational problems. The person holding the doctor of education degree is a practitioner of education, but one whose practice is drawn from a highly developed, scholarly study of educational theory coupled with skills of analysis which permit direct application of that theory.

Doctor of Philosophy

The emphasis here is upon the generation of new knowledge or the reformulation of existing knowledge as a basis for the development of educational theory. The test of knowledge for a person working toward this degree is not conditioned upon ability to improve educational practice but rather upon possible contribution to the development of educational theory. Persons educated in this way may assist in the improvement of practice, but their interests in the results are conditioned primarily by the extent to which they assist in reformulation of their own theoretical base. The person working toward this degree has a highly developed set of research competencies.

The decision between the two options must be made by the student in terms of stated goals. The test is whether the person wants to become a highly skilled practitioner or a highly skilled theoretician in the field of education.

Residency and Time Requirements

See “Requirements for the Degree of Doctor of Philosophy” on page 17 for the residency and time requirements for the PhD. The residency requirements for the EdD differ only in that individual supervisory committees may determine how many of the required residency hours may be taken during the summer sessions.

Hours of Credit

The minimum amount of graduate credit for the PhD in education is 90 semester hours including a dissertation, but not including language or research tools. The minimum amount for the EdD is 96 hours including both dissertation or field investigation and language or research tools, which will normally be at least 6 hours of credit.

Any graduate credit beyond the masters degree earned at an institution having NCATE accreditation for either the educational specialist or doctoral degree may be accepted to apply on a student’s doctoral program. Not fewer than 45 semester hours must be completed at the University of Nebraska after filing of the program of studies.

Qualifying Procedure

The student who expects to become an applicant for a doctoral degree in education must: 1) have a bachelors degree from a regionally accredited institution with the same general requirements as those indicated for masters degree candidates; 2) show evidence of the scholastic ability necessary for the successful pursuit of advanced work; 3) for the EdD give evidence of at least two years of successful professional experience or of a program of professional experience approved by the advisor; 4) have a desirable personality and the ideals expected of members of the teaching profession; and 5) take qualifying examinations required for the desired field of specialization within the major.

Qualifying Examinations

Qualifying examinations are given on dates announced by the Office of Graduate Studies. These examinations are administered to provide information which will be helpful in making an intelligent decision as to whether or not the student is likely to become an effective professional educator. They are not primarily measures of academic achievement and cannot be waived on the basis of demonstrated success in course work. Students must take qualifying examinations and otherwise meet the requirements established for their field of specialization before a program of studies can be approved. Graduate Record Examination aptitude scores are required of all applicants in psychological and cultural studies; applicants in administration, curriculum and instruction, or community and human resources may submit either Graduate Record Examination aptitude scores or Miller Analogies Test scores.

Appointment of Supervisory Committee

A student who has been accepted into a major should contact the chair of the graduate committee to make arrangements for recommendations for the supervisory committee, including the chair. The supervisory committee consists of at least four Graduate Faculty Fellows, one of whom must be from outside the student’s major as well as the student’s department. The chair of the Supervisory Committee must be a Graduate Faculty Fellow, or in the event there are co-chairs, at least one of them must be a Fellow. When the representative of the minor department on the committee is a Graduate Faculty Fellow, he/she may serve as the outside representative.

Occasionally a doctoral student’s supervisory committee may believe that the participation of a graduate faculty member from another university would enhance the quality and direction of the dissertation. Faculty from other universities with special expertise may be enlisted, with the approval of the Graduate Dean, to serve in a courtesy association on the supervisory committee of a doctoral candidate. Such individuals would serve without official vote but would be empowered to sign the dissertation approval document and be duly acknowledged by the student in the dissertation.

Within three weeks of its appointment, the supervisory committee will meet to approve the student’s program of studies and will forward a copy to the Office of Graduate Studies. Either then or later there will be a discussion of a dissertation topic or a topic for a field investigation. Any subsequent change in the program or in the dissertation or field investigation topic must be approved by the supervisory committee and the action reported to the Office of Graduate Studies.

Program of Studies

The program of studies for either the PhD or EdD will include seven major components: 1) doctoral seminar, 2) area of emphasis, 3) common studies, 4) multicultural/global perspectives, 5) teaching requirement, 6) research requirement, and 7) service requirement. The program for each of these components will vary according to the individual student’s needs, expectations, and goals.

A student’s program of study is prepared in consultation with their advisor and the supervisory committee. The program of studies must be approved by the supervisory committee, the Office of Graduate Studies, and the dean of the college in which the student’s major program is located.

A “major program” is the specific field of specialization in which the student’s study is concentrated. The major program is selected by the student in consultation with the student’s supervisory committee and the college’s director of graduate studies. The major program must be approved by the college’s director of graduate studies and the department’s supervisory committee. The major program must include a doctoral seminar, an area of emphasis, common studies, multicultural/global perspectives, teaching requirement, research requirement, and service requirement.

The doctoral seminar is a required course that provides an overview of the field of specialization and introduces key issues and debates in the field. The area of emphasis is a concentration of study within the major program and is determined by the student in consultation with the student’s supervisory committee. The area of emphasis must include a minimum of 12 course hours.

Common studies provide a solid foundation in the field of specialization and are determined by the student in consultation with the student’s supervisory committee. The common studies must include a minimum of 12 course hours.

Multicultural/global perspectives provide an understanding of the diversity of the field of specialization and are determined by the student in consultation with the student’s supervisory committee. The multicultural/global perspectives must include a minimum of 12 course hours.

Teaching requirement includes coursework in the area of teaching and is determined by the student in consultation with the student’s supervisory committee. The teaching requirement must include a minimum of 12 course hours.

Research requirement includes coursework in the area of research and is determined by the student in consultation with the student’s supervisory committee. The research requirement must include a minimum of 12 course hours.

Service requirement includes coursework in the area of service and is determined by the student in consultation with the student’s supervisory committee. The service requirement must include a minimum of 12 course hours.

A student’s dissertation is the culmination of their doctoral study and is a scholarly contribution to the field of specialization. The dissertation must be approved by the student’s supervisory committee and the college’s director of graduate studies. The dissertation must be submitted to the university for review and approval.

The dissertation topic is determined by the student in consultation with the student’s supervisory committee. The dissertation topic must be approved by the student’s supervisory committee and the college’s director of graduate studies. The dissertation topic must be approved by the college’s director of graduate studies and the university’s provost.

A student’s dissertation is the culmination of their doctoral study and is a scholarly contribution to the field of specialization. The dissertation must be approved by the student’s supervisory committee and the college’s director of graduate studies. The dissertation must be submitted to the university for review and approval.

The dissertation topic is determined by the student in consultation with the student’s supervisory committee. The dissertation topic must be approved by the student’s supervisory committee and the college’s director of graduate studies. The dissertation topic must be approved by the college’s director of graduate studies and the university’s provost.

A student’s dissertation is the culmination of their doctoral study and is a scholarly contribution to the field of specialization. The dissertation must be approved by the student’s supervisory committee and the college’s director of graduate studies. The dissertation must be submitted to the university for review and approval.

The dissertation topic is determined by the student in consultation with the student’s supervisory committee. The dissertation topic must be approved by the student’s supervisory committee and the college’s director of graduate studies. The dissertation topic must be approved by the college’s director of graduate studies and the university’s provost.
Education Majors

Three majors are identified in the Teachers College doctoral program for students planning careers in education. Each encompasses a number of areas of specialization. The available majors and their respective areas of specialization are:

1. Administration, Curriculum and Instruction. This major focuses on the study of administration, curriculum, or instruction in formal, early childhood-through-college institutions. Areas of specialization within this field include: 1) Teaching, Curriculum, and Learning; 2) Educational Leadership and Higher Education; 3) Physical Education Teacher Education; 4) Instructional Technology; 5) Architecture Education; and 6) Internet-based Education. A special program in law and education leading to a joint PhD/JD is also possible under this field in cooperation with the College of Law.

2. Psychological and Cultural Studies. This major provides areas of specialization in: 1) Cognition, Learning and Development; 2) Counseling Psychology; 3) Qualitative Methods in Education; 4) School Psychology; 5) Exercise Physiology; 6) Health Education; 7) Special Education; and 8) Communication Disorders. The major provides specialization in the area of specialization and related subjects will be administered. These examinations will thoroughly test for an understanding of the area of specialization designated by the student. The comprehensive examination, another attempt to pass such examination may not be made in the same academic term.

3. Community and Human Resources. This major provides specialization in the area of Career Education. Such fields as education for non-traditional learners, open education, performance contracting, general and professional extension work, community education, correctional education, and education in volunteer and service agencies offer a myriad of opportunities for the person who obtains a degree in this field.

Practicum

Each program of studies will provide for practicum experiences, which will enable students to relate educational theory to practice within their areas of specialization. The practicum will vary depending upon the needs of individual students, the area of specialization, and the type of doctoral program. While previous experience may in some instances be appropriately recognized, it will not automatically fulfill the practicum requirement.

Research

Each program of studies will provide for research opportunities beyond the common core requirements and the requirements of the area of specialization. Students are expected to plan their learning experience so that they have sufficient depth in at least one research approach to produce scholarly works. Their knowledge of other research approaches should be broad enough and sufficiently extensive so that they can be intelligent critics and consumers of the works of researchers using these methodologies.

Proficiency in Research Methods

After consulting with their advisor concerning the proposed doctoral dissertation or field investigation and the research methods to be used, the applicant must present the proposed study in written form to the supervisory committee for approval and defend it, demonstrating to the committee adequate skill in the use of the research tools required. The tools of research must be designated by the supervisory committee no later than the time at which the proposed dissertation or field investigation is approved by the supervisory committee. While general research competencies may be considered a part of a student's doctoral program, the specific research tools to be used in the dissertation may be included in the minimum requirement of 90 semester hours of course work and dissertation in the case of the PhD. Research tools may be included in the 96 hours required for the EdD.

Comprehensive Examination and Admission to Candidacy

When the applicant's program of courses is substantially completed, written comprehensive examinations covering the appropriate area of specialization and related subjects will be administered. These examinations will thoroughly test for an understanding of the area of specialization designated by the student. An applicant fails the comprehensive examination, another attempt to pass such examination may not be made in the same academic term.

The applicant formally becomes a Candidate for the EdD or PhD degree when a report attesting to the passing of the comprehensive examinations and the completion of research tool requirements has been filed in the Office of Graduate Studies. Such a report must be filed at least seven months prior to the final oral examination. Following admission to candidacy the student must register during each academic year semester until they receive the doctorate. Failure to register during each academic year semester will result in termination of candidacy.

Dissertation or Field Investigation

There is no fixed length for the dissertation or field investigation. Doctoral dissertations should demonstrate technical mastery of the student's field and advance or modify knowledge, i.e., they should treat new material or find new results, or draw new conclusions, or they should interpret old material in a new light. Doctoral education dissertations should demonstrate the candidate's competency in applying sound research strategies to the theoretical or applied problems anticipated in their future career, or to originate new knowledge.

Research activities involving human subjects or live vertebrate animals may not be conducted at the University of Nebraska-Lincoln (UNL) unless the research activities have been reviewed and approved by the appropriate board or committee. The Institutional Review Board (IRB) reviews projects involving human subject research, and the Institutional Animal Care and Use Committee (IACUC) reviews the use of animals in research. These reviews are in accordance with Federal regulations and UNL assurance documents. The Office for Protections from Research Risks (OPRR) note that the IRB and IACUC will not review projects already in progress; approval must be secured prior to the initiation of the research. The Research Compliance Assurance Form can be obtained from the Office of Graduate Studies; the completed form must be submitted at the time the final version of the thesis or dissertation is filed.

The dissertation and abstract are passed upon by a reading committee of two members (regardless of Graduate Faculty rank) from the supervisory committee, excluding the chair/co-chair. The manuscripts must be presented to members of the reading committee in time to permit review and approval, which must be indicated at least three weeks in advance of the final oral examination. The application for the final oral examination and a copy of the approved dissertation and abstract must be presented to the doctoral specialist for preliminary review at least three weeks before the final oral examination. A copy of the dissertation or report of the field investigation must be given to each member of the supervisory committee, other than the members of the reading committee, at least three weeks before the oral examination.

Following the successful completion of the oral examination, two copies of the dissertation or field investigation and three copies of the abstract are presented to the University Libraries after final approval from the doctoral specialist in Graduate Studies. The student must also present to the Dean of University Libraries a signed agreement for the publication of the abstract and microfilming of the dissertation.

Before the degree is granted, each candidate pays an $25 binding fee and a $60 fee to cover the cost of microfilming the entire dissertation or field investigation and of publication of the abstract in Dissertation Abstracts International, which is issued bimonthly by University Microfilms Inc., of Ann Arbor, Michigan.

Final Examination

The final examination for the doctoral degree is oral and open to members of both the University community and the public. During the dissertation presentation and general questioning all persons may be present. However, at the end of the public hearing there will be a closed questioning portion of the examination where all persons except the candidate, doctoral supervisory committee, and invited faculty must be excused. It is conducted by the supervisory committee after the candidate's studies have been completed and the dissertation or field investigation approved by the reading committee. The committee determines the character and duration of the examination. The examination may be devoted to the dissertation or field investigation, to the candidate's general professional knowledge, or to a test of their judgment and critical powers or to any of these. Only in extremely unusual circumstances and with the unanimous consent of the supervisory committee may the final oral examination be waived.

The committee reports the results of the final oral examination or the reason for its waiver to the Office of Graduate Studies.

Summary of Procedure for Doctoral Degrees in Education

See “Summary of Procedure for the Doctor of Philosophy Degree” on page 19 for the procedure to be followed for all doctoral degrees in education. It should be carefully studied in connection with the UNL Graduate Studies Calendar. For more detailed information regard-
ing the preparation of the dissertation or field investigation, see “Summary of Procedure for the Doctor of Philosophy Degree” on page 19.

Requirements for Certificates

Initial Teaching Certificates and Renewal

Graduate students seeking initial teaching certificates, renewal of a teaching certificate, or advancement to another level of certification based on university course work must have the program and course work approved in advance by the Teachers College Student Services Center, 104 Henzlik Hall. The necessary certification forms may be obtained from that office and must be signed by the certification officer.

A person with a college degree who wishes to become certified must first make application to the Graduate College as a non-degree student seeking certification. Once admitted to the Graduate College, the student should contact an advisor in the Teachers College Student Services Center for an evaluation of all previous college courses. Admission to some endorsement programs is competitive. Applications to those programs are processed through the Student Services Center. Before an official program of study is written, applicants must meet all selection criteria for entrance into a teacher education endorsement program, including a minimum 2.5 undergraduate grade point average, and passing scores on the Pre-Professional Skills Test.

Certificate of Specialization in Educational Administration and Supervision

The Department of Educational Administration offers a graduate-level administrator preparation program leading to a certificate of specialization in educational administration and supervision. The minimum requirement is 66 semester credit hours, in a program of studies specified by the Department. The most common course of study is designed to meet the requirements for a Nebraska Professional Administrative and Supervisory Certificate, with the certificate endorsement of superintendent. To satisfy requirements for any other administrative endorsements that the student may want to obtain, such as secondary principal, middle-level principal, elementary principal, or curriculum supervisor, additional courses may be required.

All students seeking the certificate or specialization must be admitted to an appropriate program in the Department of Educational Administration. Information concerning application procedures and admission requirements may be obtained from either the chair of the Department's Graduate Committee or the Teachers College Graduate Student Services Center.

If the person is seeking a recommendation from the Department of Educational Administration for state administrator certification and/or endorsement, then at least one-half of the minimum number of semester credit hours in educational administration courses required in the program leading to that certification and/or endorsement must be earned through the Department of Educational Administration at the University of Nebraska-Lincoln.

For the certificate of specialization, a minimum of 30 semester credit hours of approved graduate credit must be earned after the completion of a masters degree program or equivalent requirements of these 30 hours must be completed within six consecutive calendar years from the time of the student’s acceptance into the program by the Department. At the time of completion, none of the semester credit hours approved may be more than ten years old, except that for credit hours earned in a previous degree program there is no limit.

In addition to the course work, there are three other requirements: 1) completion of residency, to be met after admission to the program by maintaining full-time student status during one academic-year semester or one five-week summer session; 2) completion of a formal research paper, which may be met by a masters degree thesis or Option II paper and other comparable research papers that may be approved; and 3) successful completion of a comprehensive written examination, which must be taken within the ten calendar months prior to graduation.

Certificate of Specialization in Public Policy Analysis

An interdisciplinary program that provides students with the knowledge and skills to be participants in the public policy process and/or researchers capable of analyzing public policy problems and programs. Both degree and non-degree students are eligible. The certificate requires 15 hours of course work plus a three-credit-hour internship or policy analysis project for a total of 18 credit hours. Training is divided into the following four levels:

First level courses cover theories, processes, models, and methods of policy analysis (6 hours). The following courses satisfy this requirement: POLS 831 Core Seminar in Public Policy and Process and POLS 836 Public Policy Analysis Methods and Models.

Second level courses examine the institutional context within which policy making occurs, e.g., intracommunicational, interorganizational, intergovernmental relations, or international contexts (3 hours). Any one of the following satisfy this requirement: POLS 820 Core Seminar in American Government, POLS 821* American State Government, POLS 825* Congress and Public Policy, POLS 827* Comparative Institutions, or POLS 860 Organizing World Order, PPA 8300 Public Policy Design and Implementation (offered at UNO), and PPA 8566* Intergovernmental Management (offered at UNO).

NOTE: UNL political science graduate students are limited to asterisked (*) courses.

Third level courses apply models, methods, and the understanding of the institutional context and policy process. Students consult with policy certificate coordinator to create a specialized plan of study for this level (6 hours).

Fourth level: Internship or field research project (3 hours capstone experience). Students will be placed in a governmental or nonprofit agency relating to their issue area of expertise. The internship of field research project occurs after completing or during the last semester of course work for the certificate. The student must receive written approval from the certificate coordinator prior to the internship or research project experience.

All students will be required to work with a public agency in an actual analytical or evaluation project. Students already working in government will be expected to develop some supervised experience comparable to an internship.

Academic Credit Policies

Courses with Graduate Credit

Courses numbered in the 800 and 900 series offer graduate credit. Courses in the 900 series and those in the 800 series without counterpart 400 or lower series numbers are open exclusively to graduate students except by permission of the Dean of Graduate Studies. These 800-series courses are identified in this bulletin with an asterisk (*).

Courses numbered in the 500s, 600s and 700s are professional (law, dentistry, and architecture) level and carry graduate credit only if the letter “G” follows the course number.

Courses numbered 400 or lower are undergraduate level and cannot be applied toward a graduate degree.

The general prerequisite for courses in the 800 series is at least 12 hours of work in the same department or in approved courses in allied departments. The general prerequisite for courses in the 900 series is at least 18 hours in the same department which may include approved courses in allied departments.

A student who enrolls in a course must have completed the general prerequisite, including any specific prerequisite indicated for the course. According to policies governing graduate-level courses, there is a required differentiation of faculty expectation regarding student performance and therefore grading criteria.

Graduate Credit for Seniors

Seniors at UNL may receive up to 12 hours of credit for graduate courses taken in addition to the courses necessary for their undergraduate degree, provided that these credits are earned the calendar year prior to receipt of the baccalaureate. Before registering for graduate courses, seniors must obtain approval from the Dean of Graduate Studies on the Hold for Credit Form, available in 1100 Seaton Hall. Holding graduate credit keeps a senior registered as a member of an undergraduate college and allows one to continue any undergraduate scholarship or
Transfer of Credit

No graduate credits will be accepted as transfer credit toward a masters program at UNL if the course work is 10 years or older or if the course work has been applied toward a previous masters degree at UNL or any other accredited institution. All graduate credits to be counted toward the satisfaction of postbaccalaureate degree requirements, including all transfer credits, must be recommended by the cognizant graduate committee of the student’s major department or area. Not less than 50 percent of the course work has been applied toward a previous degree. Official transcripts should be sent to: Department of Graduate Studies, University of Nebraska-Lincoln, PO Box 880619, Lincoln, NE 68588-0619. Approval of the Office of Graduate Studies is required for the transfer of graduate work taken elsewhere to a graduate degree program at the University of Nebraska-Lincoln. It is the responsibility of the student to ensure that official transcripts of graduate work taken elsewhere are sent by the institution where the work was completed and received by the Office of Graduate Studies well before the student plans to complete all other requirements for the graduate degree. Official transcripts should be sent to:

Dean of Graduate Studies
University of Nebraska - Lincoln
1100 Seaton Hall
PO Box 880619
Lincoln, NE 68588-0619

Course Delivery Policy

Through prior agreement and approval from the department, campus Dean for Graduate Studies and campus Graduate Council, the content of a course may be delivered by computers, television, audio or video cassettes, amplified telephone conference, and correspondence provided that coordinated and interactive communication devoted to the course content be maintained between students and instructor.

Credit by Examination

Credit by examination cannot be earned in graduate level courses or applied to graduate degree programs.

Grading System

The University uses an A through F grading system. The letter grades with point value (in parentheses) are A+ (4.0), A (4.0), A- (3.67), B+ (3.33), B (3.0), B- (2.67), C+ (2.33), C (2.0), C- (1.67), D+ (1.33), D (1.0), D- (0.67), and F (0). Grades of W (dropped with draw), I (incomplete), P (pass/C or better), and N (no pass) may also be given. W, I, P, and N are not assigned grade points.

Scholastic Grade Requirements

Credit in graduate-level courses is attained as follows:

1. A minimum grade of B is required for graduate credit in 800-level courses with 400 or lower counterparts within the student’s major department or area. A grade of B- is not acceptable.
2. A minimum grade of C or P (pass) is required for graduate credit in 800-level courses in minor, collateral, or supporting areas of work. A grade of C- is not acceptable.
3. A minimum grade of C or P (pass) is required for graduate credit in 900-level courses or 800-level courses without 400 or lower counterparts.

When applied toward an advanced degree program, only courses at the 900 level or 800 level without 400 or lower counterparts, in the major department or interdepartmental area may be taken on a pass/no pass (P/N) basis. In the minor, collateral, or supporting areas of work 800-level courses with 400 or lower counterparts can be taken on a P/N basis. A student failing to receive a minimum acceptable grade for graduate-level credit may not continue his/her program of studies without permission of the supervisory group or the departmental graduate committee concerned, which may require a special examination to determine the student’s qualifications for further work.

Incompletes

Students taking graduate courses should check with their instructor on what their responsibilities are to remove an incomplete. Normally there is no time limit for graduate students to remove an incomplete. However, the instructor does have the option of determining the requirements for completing the course and requisite date for removal of incompletes. It is helpful to have these requirements in writing to ensure there is no miscommunication between
the instructor and student. Typically, thesis and dissertation credit hours are graded following the defense of these projects.

**Auditing a Course**

Auditing gives a student the privilege of attending class but not taking part in class activities. A student who is auditing does not take examinations. Courses involving extensive laboratory work are generally not open to auditors. Persons with a previous bachelors degree must be admitted to Graduate Studies to audit an undergraduate or graduate level course. Do not register for courses you wish to audit.

Instead, pick up a Permit to Audit Card, which contains complete instructions at the Records Office, 107 Canfield Administration Building, on or after the first day of class for a semester.

The last day to sign up for an audit corresponds to the last day to add a course for the term. The fee for auditing a course is currently one-half the resident tuition rate for the course.

To have an audit recorded on the permanent record, request that your instructor submit a Change of Student Record Form to the Records Office, 107 Canfield Administration Building, indicating the course was an audit and that you did attend. This option is not available unless the student is also registered for courses for credit during the same semester as the audit.

**Drop and Add**

Students may drop or add classes from the beginning of priority registration through the last day on which classes may be added for a term. Dates are published each semester in the Schedule of Classes or the Summer Sessions Bulletin. Students who do not initially register for classes until after the beginning of the term will be charged a late registration fee. No course may be added to a student's record after the end of the add period (as published in the Summer Sessions Bulletin). Students may withdraw from classes at any time through the 3/4-point of the term.

A course drop becomes effective for tuition and grade purposes on the date the transaction is processed by the student. Tuition liability for a course begins after the add period for a term.

A graduate student may drop a course without the instructor’s permission 3/4 through the course. Any graduate student wishing to drop one or more classes after the 3/4 point of the term can do so only with the permission of the Oﬃce of Graduate Studies. All courses dropped after the second week of the term are noted on the student’s academic record (transcript) with a “W” (withdrawn) grade designation.

Withdrawals which occur after the second week (or 2/16th) of the term but before the 3/4 point of the term will be noted by automatic entry of a “W” grade for all uncompleted courses.

Any withdraw from classes after the 3/4 point of the term must be for extraordinary circumstances and will be granted only by petition through the Oﬃce of Graduate Studies. The result of a successful petition will be posting of a grade of “W” on the transcript for the respective course(s). If the petition is denied the grade submitted by the instructor will be posted to the transcript.

If after the census date or the last day to add classes in each term the student decides to drop a course or courses and/or withdraw from the University, it is highly recommended that the student contact the Oﬃce of Scholarships and Financial Aid to discuss the implication the action may have on future eligibility to receive financial assistance.

For complete procedures, dates and regulations refer to the current semester’s Schedule of Classes or the Summer Sessions Bulletin.

**Probation and Termination**

**Grounds for Probation and Termination of UNL Graduate Students**

Graduate students at the University of Nebraska–Lincoln are expected to maintain a high level of achievement in their graduate studies. Accordingly, students who do not maintain satisfactory progress may be subject to being placed on probation, being terminated from a degree program, or being denied permission to continue graduate studies in the University.

Upon dismissal from an academic program, students may not apply for admission to another degree objective or program. Only with the approval of the Dean of Graduate Studies may a student continue to register for course work on a non-degree seeking basis. Students on probation may receive a graduate degree.

For all graduate students at U NL, probation or termination recommendations may be made under the following conditions: a) violations of the “Student Code of Conduct” on page 182 of this bulletin, b) failure to satisfy “Scholastic Grade Requirements” on page 24 of this bulletin, c) failure in qualifying examinations or preliminary examinations, comprehensive examinations or final degree examinations, d) failure to master the methodology and content of one’s field in a manner that is sufficient to complete a successful thesis or dissertation, or e) in fields leading to licensure or certification, unethical misconduct or lack of professional promise in the professional field. Termination recommendations may also be made if a student fails to satisfy conditions required for removal of probationary status. Graduate Committees wishing to adopt additional conditions for probation or termination must specify these conditions in writing and inform all students affected by these conditions.

**General Appeal Procedures for Academic Matters Concerning Graduate Students**

(A approved by the Executive Graduate Council, December 11, 1980.)

**Appeal of General Academic Matters Related to Student Programs**

A. Graduate students holding admission with unclassified status in the Graduate College, admission with a masters 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 advisor.
2. If denied, the appeal may be submitted to the department 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 advisor.
2. If denied, the appeal may be submitted to the student’s supervisory committee.
3. If denied, the appeal may be submitted to the department 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 registration 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 of 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 of Graduate Studies on the campuses involved.
D. In all cases, appeals should be made in writing to the appropriate advisor, committee, or council. In those cases where the appeal concerns graduate-level qualifying examinations, comprehensive examinations, or final examinations, the following deadlines must be observed. It is the responsibility of the student to make reasonable efforts to ascertain the results of the examinations within 30 days after the completion. The initiation of the appeal, in writing, by the student must be filed within 30 days following the student’s receipt of notification of the evaluation. In those cases involving an appeal of termination of program, initiation of the appeal, in writing, by the student must be filed within 30 days following the student’s receipt of the official written notification by the Office of Graduate Studies.

E. 1. There is no absolute right of appeal to the Executive Graduate Council. The Executive Graduate Council will accept appeals only in those cases where in the exercise of its sole discretion it shall first find that one or more of the following grounds for accepting the appeal exist:
   a. That the campus Graduate Council has violated some element of fair procedure (i.e., has failed to allow the parties concerned to present their cases fully to their campus Graduate Council);
   b. That the campus Graduate Council has failed to examine or give adequate weight to important evidence relevant to one party’s position;
   c. That the campus Graduate Council has given undue weight to evidence not pertinent to the case; or
   d. That some gross miscarriage of justice would be perpetrated if the decision of the campus Graduate Council is allowed to stand.

A decision by the Executive Graduate Council not to accept jurisdiction of an appeal shall be final and is not subject to further appeal.

2. Appeals to 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 Graduate Council is received (working days shall not include those days the University is not in session).

3. 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 Executive Graduate Council 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 the Executive Graduate Council either to decide whether the case should be heard or to decide the merits of the case. However, the Dean for Graduate Studies may replace members of the Executive Graduate Council not eligible for participation in the decision to hear the appeal or in the appeal itself.

Appeal of Grades in Graduate-level Courses

(A approved by U N L G raduate Council, M arch 9, 1993.)

Appeal of grades in graduate-level courses shall be made through the graduate student grade appeal procedures for the campus through which the grade was awarded.

Students who believe their evaluation in a course has been prejudiced or capricious must first attempt to resolve the matter with the course instructor.

If unsuccessful, the student may then file a written appeal to the Graduate Chair for consideration by the Graduate Committee responsible for the administration of the course. This appeal must be filed within sixty days of the posting of the grade report by the U N L R ecords O ffice. If the department does not have a graduate program, the standing grade appeal committee of the department would consider the appeal. A written determination of the appeal shall be presented to the student and instructor. If the matter is unduly delayed or not resolved, the student may present the original appeal documentation to the U N L D ean of Graduate Studies who shall request a review by a subcommittee of the Graduate Council. A last appeal may be made to the full Graduate Council, if it agrees to hear the case.

Since awarding grades in courses occurs at the individual campus level, the decision of the U N L Graduate Council shall be final and is not subject to further appeal beyond the campus.

During the appeal process, if the instructor’s grade is overturned, the instructor of record has the right of appeal, in writing, at successive levels of review.

Summer Sessions

The University’s Summer Sessions program, one of the nation’s largest, offers over 1,400 courses through 70 departments during a three-week pre-session, an eight-week session, and two five-week sessions each summer. Varying session lengths and flexible class times allow for jobs and summer activities.

Students find summer a good time to meet entrance requirements or make up course deficiencies. They find it is also a good time to take a course that did not fit into their academic year schedules.

For more information about course offerings or enrolling during Summer Sessions, contact:

Summer Sessions Office
University of Nebraska–Lincoln
420 University Terrace, Suite 205
PO Box 880683
Lincoln, Nebraska 68588-0683
(402) 472-3567
(800) 562-1035
www.unl.edu/summer

Division of Continuing Studies

Through traditional classroom settings, self-paced courses, online and other distance-delivered courses and programs, the Division of Continuing Studies extends University resources to people on campus, throughout Nebraska, all 50 states, and more than 135 countries. The various programs coordinated by Continuing Studies offer flexibility in format and scheduling. This flexibility helps graduate and undergraduate students meet their educational goals at times and places that fit their needs.

Distance Courses and Degree Programs.

Each year, hundreds of students from across Nebraska and the nation enroll in the distance delivered advanced degree programs and courses coordinated by the Division of Continuing Studies. Masters and doctoral degrees can be pursued through satellite, email, Internet, video conferencing and other technologies, which allow students to participate with instructors and fellow classmates. Students may also take courses via satellite at participating Learning Centers, Cooperative Extension centers, state and community colleges, and other educational institutions and corporate sites.

The following graduate degree programs are currently available, either partially or entirely, via distance delivery. Please consult the appropriate academic department for more detailed information regarding their distance programs.

Masters of Agriculture (M Ag)
Masters of Arts (MA)
- Educational Administration
- Journalism and Mass Communications
- Specialization in News Editorial
Masters of Business Administration (MBA)
Masters of Education (MEd)
- Curriculum and Instruction
- Educational Administration
Masters of Engineering (MEng)
(Engineering Management concentration)
International Affairs

UNL and International Affairs are committed to fostering respect for different perspectives and international competence. Our mission is to promote excellence in the international aspects of academic, research, service, and outreach programs for UNL and all Nebraska citizens. International Affairs initiates, coordinates, and provides support for international educational programs, faculty development, research and scholarship, service, and extension for the University. International Affairs offers numerous opportunities for UNL students and nonstudents from other countries. The University also has a strong presence overseas with partnerships in over 40 countries. International Affairs is responsible for student exchange programs sponsored by UNL and serves as an advocate for international education in curricular affairs.

Professional Development: A variety of continuing education courses and noncredit professional development conferences, seminars, workshops, and courses are available on a wide range of topics. For details, visit the Continuing Education website or contact the Division of Continuing Studies at (402) 472-1901.

Hotel and Conference Center: The Division of Continuing Studies coordinates the College Independent Study program, which offers more than 200 courses in 27 subject areas. These courses are self-paced and allow the student to take up to a year to complete. College Independent Study courses are available in print and online formats. For more information, visit the Continuing Studies website or contact (402) 472-1901.

International Affairs also handles the faculty Fulbright and Fulbright programs providing overseas scholarships for graduate students. It is responsible for faculty exchange programs sponsored by UNL and serves as an advocate for international education in curricular affairs.

International Affairs also sponsors a number of conferences with international themes, bringing distinguished foreign speakers to the campus and serving as host for many visiting foreign guests. In addition, it supports major and/or minor programs in Slavic and East European, Asian, Latin American, Western European, and African Studies, and International Affairs. It also co-ordinates the prestigious E.N. Thompson-UNL Forum on World Affairs.

For additional information, contact:
International Affairs
University of Nebraska-Lincoln
420 University Terrace
PO Box 880682
Lincoln, NE 68588-0682
(402) 472-5358
(402) 472-5383 Fax
iaffairs@unl.edu
www.iaffairs.unl.edu

International Student and Scholar Services

International Affairs coordinates services and programs for more than 1,700 scholars, trainees, and students at the University and also offers travel-related services to students and faculty going abroad. The staff in the office counsellor international students and visiting scholars about their new educational and cultural environment, advises them about immigration regulations and provides activities to enhance their academic experiences at the University. An extensive orientation program is provided to all international students and trainees new to UNL, each semester.

The International Affairs Library and Resource Center offers UNL faculty, staff, and students information about working, traveling, or performing voluntary service in another country. International Affairs also coordinates short-term study abroad programs through which UNL professors offer credit and noncredit short courses in foreign countries during winter break and over the summer.

The international student and scholar services are located with International Affairs at the above address.

Study Abroad and Exchange Programs

International Affairs offers a wide variety of overseas study opportunities to UNL undergraduate and graduate students for a semester, academic year, winter break, or summer period. Most programs can be arranged so as not to delay graduation. In all cases, students register at UNL, which means that most existing scholarships and financial aid remain in effect. However, there are additional costs such as travel, but the overall cost of many programs is not too much greater than if the student remained in Lincoln.

The benefits are substantial in terms of 1) expanding one's understanding of the world environment within which U.S. business and government must operate; 2) the ability to acquire genuine competence in a foreign language; and 3) strengthening one's professional potential and international competence in an age of globalization.

Foreign language training is not necessary for those going to English-speaking nations. UNL students also have access to many study abroad programs taught in English in other countries such as Belgium, Denmark, Finland, Hungary, Japan, Korea, Netherlands, Sweden, and Taiwan (sometimes requiring beginning courses in the local language).

For additional information, contact the Director of Study Abroad Programs at the address listed above.

Midwest Association of Universities-International (MAUI) Consortium. Especially notable, UNL students have access to many overseas academic programs coordinated by partner universities in this region of the country, available at the same (in-state) cost as that paid by resident students at the institution managing the programs. Study abroad opportunities are offered on every continent. In addition, MAUI has operated a study abroad exchange program with a European consortium of more than 20 universities, further expanding the choices for UNL students.

ISEP Consortium. As a member of the International Student Exchange Program, UNL is able to place its students in over 90 universities around the world. Countries represented in ISEP include Argentina, Australia, Austria, Canada, China, Colombia, Costa Rica, Estonia, Fiji, Finland, France, Germany, Ghana, Hungary, Iceland, Italy, Japan, Kenya, Korea, etc.
Australia. University of Wollongong, Monash University, Clayton, Victoria, and Southern Cross University, Lismore. Other opportunities are also available.

Belgium. Program in survey research at the Katholieke Universiteit of Brussels.

Brazil. Federal University of Piaui.

China. Peking University, Beijing.


Czech Republic. University of West Bohemia (Pizen), summer program in languages Spring semester program at Palacky University, Olomouc.

Denmark. Denmark International Study Program, Copenhagen. Programs in English in general studies, engineering, international business, and architecture.

England and Scotland. Universities of Bath, Lancaster, and Salford (England); University of Aberdeen and Queen Margaret College (Scotland). Programs also at the Centre for Medieval and Renaissance Studies, Oxford University (England).

France. All programs in French. Minimum two years college French required. Programs at Bordeaux and Haute Bretagne (Rennes) and the School of Architecture at Clermont-Ferrand. Intensive French is available at the University of Franche-Comté through a program co-sponsored by Arts and Sciences and Teachers' College.

Germany. All programs in German. Minimum two years college German required. Programs at the Universities of Bayreuth, Hannover, and Heidelberg. Intensive German is available in Berlin through a program co-sponsored by the College of Arts and Sciences and Teachers' College.

Ireland. Program in architecture at Dublin Institute of Technology.

Japan. All programs in English but requiring intensive Japanese. Nanzan University (Napoli), Sapporo University; Senshu University (Tokyo) first (fall) semester.

Korea. Korean studies is available at Keimyung University, Taegu, and is taught in English.

Mexico. Monterrey Institute of Technology and Advanced Studies (Monterrey) Two years college Spanish required for academic-year programs. Summer intensive language programs available at all levels in the campus in Queretaro.

Nepal. Sann International College, Kathmandu.

Netherlands. European studies in English, are available at the prestigious University of Amsterdam.

Norway. Agricultural University of Norway [NLH] (Os).

Russia. Summer, semester and year programs at several institutions, including the Herzen Pedagogical University, through the American Council of Teachers of Russian.

Spain. University of Alicante, for those with less than four semesters Spanish; University of Seville for those with four or more semesters Spanish, A spring semester program at the Fundación Ortega y Gasset in Toledo is sponsored by the College of Arts and Sciences.

Catalogs on most of these universities and information on many more are available through:

International Affairs
University of Nebraska-Lincoln
420 University Terrace
PO Box 880682
Lincoln, NE 68588-0622
www.intlaffairs.unl.edu

Information on traveling and living abroad is also available in International Affairs' Library and Resource Center, (402) 472-5358.

Student Services

University Housing

The University's housing options reflect UNL's diversity. New freshmen and transfer students can choose to live in residence halls, fraternities and sororities, or cooperatives. Single freshmen under 19 on the first day of class must live on campus or apply for a waiver of this requirement.

Residence Halls

Graduate and nontraditional students have the option of living year-round in Selleck, Feude or Husker Hall. All University residence halls offer full-service dining with meal options of 10 meals a-week, 14 meals a-week, or 19 meals a-week. All halls also offer areas for recreation, laundry, lounges, a student government, and a resident assistant on every floor. Most rooms are doubles; some single rooms are available. Students can choose among meal plans reserved for men, for women, or for coeducational life.

Residence halls furnish students with a single bed and pillow, desk, chair, shelf area, closet and dresser space, and all rooms are cable television ready. A room includes mirrors, drapes, wastebaskets, and bulletin boards. For a modest fee, a student can rent a refrigerator, microwave, and/or a loft bed. An ethernet connection with unlimited access is provided in every traditional residence hall for no additional charge.

The University's residence halls also offer several special programs that enrich living and academic experiences at UNL. These opportunities include a hall for upperclass students and special housing for graduate and nontraditional students. Other special floors focus on academic majors, interests, and scholarship honors students. A student can apply for these and other optional living arrangements by indicating these preferences on the housing contract they receive in April.

Family Housing

The University operates 150 unfurnished one-, two-, and three-bedroom apartments for married people and single parents registered as full-time students. Since there may be a waiting period, students may apply for this housing alternative prior to their marriages.

Off-campus Housing

In addition to the numerous living arrangements offered by University Housing, students may also consider living off campus. Lincoln offers an abundance of apartments suitable for students—many are close to campus and in an affordable price range. It is best to make arrangements for an apartment before arriving in Lincoln for the start of the semester.

To live off campus, single students must be 19 years of age prior to the first day of Fall Semester classes or obtain a waiver for this requirement.

University Police Services

Campus safety and security are coordinated by University Police Services, which has an authorized strength of 27 officers with full police and arrest powers. University Police Services officers enforce University regulations and laws of the State of Nebraska on the University of Nebraska-Lincoln campus. These men and women complete courses of certification at the Nebraska Law Enforcement Training Center and are commissioned by the State of Nebraska as Special Deputy Sheriffs. University Police Services officers conduct foot and vehic-
programs and their target groups are as follows:

Consists of six unique programs. These six supplemental services and resources for qualified UNL undergraduate students. Tutors are employed to provide tutorial services. Graduate Assistantships (up to three) availability is dependent upon grant funding.

Ronald E. McNair Project. The Ronald E. McNair Post-Baccalaureate Achievement Project is designed to assist qualified undergraduate students to enter and complete doctoral-level degree programs. The Project offers opportunities for low-income, first-generation, and underrepresented students of color to receive assistance as they prepare to pursue a post-baccalaureate degree. The McNair Project provides support activities to enable students to excel in their current academic studies and to engage in creative scholarly experiences and feel the challenges associated with being a professional.

Upward Bound Project (UB) and Upward Bound Math/Science Project (UBMS). The UPward Bound Project provides opportunities for low-income, first generation, high school students to succeed in pre-college performance, and ultimately, higher education pursuits. The goal of the program is to help students recognize and develop their potential to enroll and graduate from institutions of post-secondary education. Tutors and mentors are employed to provide positive reinforcement and academic assistance.

Upward Bound Math/Science participants are selected to succeed in a variety of matematics, science and engineering career endeavors. Graduates and undergraduates are employed to help.

National Youth Sports Program (NYSP). The NYSP Program is designed to provide youth 10-16 years of age with academic and sports skills instruction and sports competition to improve physical fitness and health habits and to become acquainted with career and educational opportunities at a college or university campus. Services are available for six weeks during the summer. Positions are available for camp aides.

National Youth Sports Program Girls Sports Clinics (NYSP GSC). To provide opportunities for sports participation for girls, particularly ethnic minorities, during the school year, to encourage participation in non-traditional sports for girls and introduce collegiate coaches and student-athletes as role models to girls. Also to provide specific educational programming directed at girls, particularly regarding issues of self esteem and athletics participation. Along with encouraging sports participation for girls in the community.

Services are available during the academic year. Positions are available.

Educational Talent Search (ETS). The ETS program serves qualified youth, ages 11 through 27 years, in the Lincoln Community by providing a comprehensive series of educational activities. Tutors are employed to provide tutoring.

For more information regarding any or all of these programs contact: Office of MCA Cultural Affairs, 220 Canfield Administration Building, (402) 472-2027.

Student Opportunities and Services (SOS). The SOS program provides variety of supplemental services and resources for qualified UNL undergraduate students. Tutors are employed to provide tutoring services. Graduate Assistantships (up to three) availability is dependent upon grant funding.

Student Opportunities and Services (SOS). The SOS program provides variety of supplemental services and resources for qualified UNL undergraduate students. Tutors are employed to provide tutoring services. Graduate Assistantships (up to three) availability is dependent upon grant funding.

Student Opportunities and Services (SOS). The SOS program provides variety of supplemental services and resources for qualified UNL undergraduate students. Tutors are employed to provide tutoring services. Graduate Assistantships (up to three) availability is dependent upon grant funding.
Student Involvement

Student Involvement, 200 Nbraska Union and 300 Nbraska East Union, serves as headquarters for student activities at UNL. Student Involvement coordinates services for the University’s student organizations, maintains an activities calendar, maintains a resource library including sources on topics of special interest to student leaders and sponsors several UNL programs. The University Program Council, the Culture Center, student organizations and the Women’s Center are programs offered through Student Involvement.

Involvement Resources. Student Involvement provides many resources to help students become involved in campus life. The Student Involvement Team makes presentations and publications describing involvement opportunities that are available. The publication Involvement Guide provides students with a variety of involvement opportunities on campus in the City of Lincoln and surrounding areas.

Co-Curricular Involvement. Students can meet the Comprehensive Education Program co-curricular component expectations by using the resource Essential Experiences Guide to Co-Curricular Learning. Students are involved in planning and documenting their involvement through eight categories. A core of faculty staff and students serve as co-curricular resource “guides” to assist students in rounding out their academic experience with out-of-classroom activity and involvement. Recognition for achievements by students is held each spring.

Leadership Development. Student Involvement presents workshops for students and student organizations. The office coordinates annual student leadership conferences, an emerging-leader class for new students, leadership institutes for upperclass students, and provides checklists and assessments to identify leadership skills.

Student Organizations. Students at the University continually develop informal groups for various purposes. Currently, there are over 300 officially recognized student organizations in which students can participate. The Student Involvement publication Involvement Guide lists all current organizations and a contact person for each. An on-line database of recognized student organizations is available at <www.unl.edu involved/studentorg>. Student Involvement also provides the Event Planning and Registration Consultation service for student organizations.

Women’s Center. Located at 340 Nebra Union, the Women’s Center offers a large resource library and educational programming concerned with the changing roles of women and men in today’s society. The Center provides volunteer opportunities, individual counseling, ongoing discussions, and support groups organized to meet the needs of diverse groups of students.

University Program Council. The University Program Council (UPC) is a volunteer student organization designed to address the co-curricular, social recreational, cultural, and educational needs of the entire campus. Whether it is an educational speaker, stand-up comedian, or world-renowned musician, the UPC is dedicated to bringing a wide range of events to the university. Along with the privilege of programming with student fees comes the responsibility of bringing in events that meet the diverse needs of the student body.

Volunteer Services and Service Learning. Opportunities for students to engage in tremendously challenging, important and rewarding volunteer service and service-learning are available through Student Involvement. The Community Challenge program offers one-time service learning activities for students who subscribe to an email listserv. Community Challenge service hours are logged and students may receive an official, signed record of their hours. Students can also easily search through a Web-based database to find service opportunities to meet their interests and talents. Staff members assist students to organize volunteer projects for their student organizations, residence halls or Greek houses. Various recognition awards for service efforts are available, including the McDonald’s Volunteer of the Month and Spirit of Service awards.

Career Services Center

Career Services operates year round to help students clarify and achieve career goals. Career counselors offer individual assistance through appointments and walk-in sessions. The Career Resource Library in 225 Nebra Union offers a variety of printed and computerized resources. Students seeking part-time employment can access job listings online at <www.unl.edu/careers> or on the job boards on the second floor of the Nebra Union. Students seeking internships or full-time employment can upload their resumes into Husker Hire Link, an Web-based system that brings together University students and employers for on-campus interviews and resume referrals. Graduates seeking employment in higher education may wish to establish a set of credentials. Career Services maintains these files at the student’s request. Several career-related programs and events are offered throughout the year. Visit the Career Services Web site at <www.unl.edu careers>. For additional information, contact:

Career Services
University of Nebraska-Lincoln
230 Nebra Union
PO Box 880451
Lincoln, NE 68588-0451
(402) 472-3145
(402) 472-3552 Fax

University Child Care

University Child Care is offers full-time developmental child care for children ages six weeks to six years in facilities located near campus at 1342 North Street. UNL students and staff receive priority for this service, but space is also available to non-university parents. Students should place their names on the waiting list before they need the service.

The child care center is state licensed and maintains a competitive fee structure. Volunteers and work study students interested in developing their skills in working with young children assist professional staff members in the center.

Services for Students with Disabilities

The University offers opportunities for all students to take full advantage of its programs and facilities. Services for Students with Disabilities provides services that help disabled students become integrated into the mainstream academic life. The SSD staff is dedicated to providing students with disabilities the opportunity to pursue their college goals through the use of technological and academic services.

Through the SSD office, students with disabilities may be provided with class scheduling assistance, notetaker special test accommodations, interpret taped textbooks, and other services necessary to provide full access to the educational opportunities at UNL. Students are encouraged to contact the director of SSD as early as possible to identify individual needs and make arrangements to secure needed services. Students may call (402) 472-3787 or TDD (402) 472-0053.

Student Ombudsperson

The Office of the Student Ombudsperson serves students by confidentially hearing and investigating complaints ranging from personal problems to matters of policy and procedure. The ombudsperson will work toward equitable solutions to specific problems and, on occasion, may recommend policy changes to address a systemic problem. The Office of the Student Ombudsperson is located in 106 Canfield Administration Building, (402) 472-3755.

University Bookstores

The University Bookstores are owned by the University and operated by Follett Higher Education Group for your convenience and are located in the lower level of the Nebraska Union on City campus and the lobby level of the Nebraska East Union on East campus. Both bookstores carry textbooks and school supplies,
gift items, sundries, University memorabilia, and Club Red clothing. Both bookstores can save you money through the used textbook program, which sells and buys back used books for University courses. The University Bookstore also provides you free textbook reservation-a program which reserves all your textbooks when you approve our access to your class registration.

**Campus Recreation**

Campus Recreation provides students, faculty and staff with a variety of multi-faceted recreational facilities and programs. Inside the Campus Recreation Center, patrons are able to use weight training and conditioning equipment, fitness/aerobics room, multipurpose sports courts, swimming pool, indoor climbing wall, running track, and outdoor turf field. Combative arts room, racquetball/squash/handball/wallyball courts, super circuit weight training room, injury prevention center and massage therapy center. Lockers, saunas, showers, towel service, and child care service are available for members also. At the East Campus Activities Building, weight training and cardiovascular equipment, a fitness room, and multipurpose court are available to patrons. Lockers, showers, towel service and an injury prevention center are additional benefits of the facility. Outdoor recreational venues are located throughout campus, including tennis courts, sand volleyball, softball and multi-sport fields.

In addition to these facilities, patrons have the opportunity to participate in a plethora of activities, services and events in the areas of:

- Fitness and Wellness
- Intramural Sports
- Outdoor Recreation
- Informal Recreation
- Instructional Programs
- Injury Prevention and Care
- Massage Therapy
- Sport Clubs
- Youth Programs

Students enrolled at the University are automatically members of Campus Recreation and membership options are available for faculty, staff, spouses, and dependents. For more information, call the Campus Recreation Center at (402) 472-3467, East Campus Activities Building, or visit online at [www.unl.edu/crec](http://www.unl.edu/crec).

**ASUN Student Government**

By virtue of enrolling in the University, students are members of UNL’s student government organization, the Association of Students of the University of Nebraska (ASUN). Elections for major officers and ASUN senators are held each spring. The elected president serves as a non-voting member of the University of Nebraska Board of Regents.

The Association functions as the primary representative body for UNL students by taking student concerns to faculty committees, college and University administration, the Board of Regents, state legislative groups, and the people of Nebraska.

**Daily Nebraskan**

The Daily Nebraskan, a prominent student voice in campus life, is staffed by students in advertising, editing, and reporting positions. The governance of this award-winning daily newspaper is delegated by the Board of Regents to the Publications Board, a board consisting of students, faculty members, and professional journalists.

Any student is eligible to apply for openings on the Daily Nebraskan staff, the makeup of which changes each semester. Editors, reporters, and advertising sales representatives are compensated for their work in the form of salary and experience.

**Resources and Facilities**

**Athletic Department**

As a member of the Big 12 Conference, the University of Nebraska–Lincoln fields and hosts many of the nation’s finest NCAA teams. The University’s Athletic Department fields men’s teams in baseball, basketball, cross-country, football, golf, gymnastics, tennis, track and field, and wrestling.

The Athletic Department fields women’s teams in basketball, bowling, cross-country, golf, gymnastics, rifle, soccer, softball, swimming and diving, tennis, track and field, and volleyball.

The Athletic Department maintains excellent sports facilities, among the best in the nation. UNL’s football stadium, Memorial Stadium, seats more than 74,000 spectators; nine sports teams compete in the Bob Devaney Sports Center. The Devaney Center, a five-acre complex, contains a 13,500-seat basketball arena, an indoor track with seating for 5,000; a 10-lane swimming pool with separate diving well; and gymnastics and wrestling facilities. The University has the largest and most modern strength and conditioning facility in the country, a 5,000-seat outdoor track stadium, and new
baseball and softball stadiums located in Haymarket Park. The Athletic Department also has the Hewit and Boekel Center which houses the Hewit Center Performance Buffet and study areas.

In addition, the Cook Pavilion and George B. Cook Field, containing approximately 78,000 square feet, provide a sheltered practice space for Nebraska football and other intercollegiate sports. The far plies also serve campus recreational needs by making available indoor space for recreational field sports, jogging, and fitness programs.

**Centers for the Performing Arts**

**Lied Center for Performing Arts.** Located on the UNL campus, this magnificent performing arts center serves students and residents of the region by bringing the world’s finest performing arts and entertainment to its stage.

In addition to the initial $10 million challenge grant from the Lied Trust, established in 1984, the Lied Center was built from the visions and dreams of many. Not only did the State Legislature appropriate funds to the project, but thousands of individuals and organizations also chose to invest in enhancing the quality of life through performing arts.

The Lied Center has presented such internationally renowned artists as Yo-Yo Ma, M arvin Hamlisch; Joan Baez; H arry Belafonte; Peter, Paul and M ary; Philadelphia Orchestra; National Symphony Orchestra; St. Petersburg Philharmonic; and Broadway’s Rent, Ragtime, Footloose, Riverdance, A nnie Get Your G un, and Disney’s Beauty and the B east.

The 2,278-seat hall was designed to permit the staging of major musical, theatrical, and dance events, and meet the needs of regional, national, and international touring companies. The Johnny Carson Theater, located on the west side of the Lied Center, is an intimate black box theater. It is used not only for music, dance, and theater rehearsals, but also for staging small-scale productions.

**Kimball Recital Hall.** Adjoining the north-west side of the Lied Center is 849-seat Kimball Recital Hall. It was designed as an educational performance space for students and faculty. Kimball is a warm, acoustically-round hall that is ideal for small to large performance groups.

Kimball schedules a Faculty Recital Series, regular performances by faculty and students, and student instrumental and chorale ensembles.

**Temple Building.** Home of theatre at UNL since 1907, Temple houses all theatre classes as well as the administrative offices and performance spaces of the Department of Theatre Arts. University Theatre produces six major events each year in the facility’s two theatres, Howard and Studio. Theatre, a season of experimental works produced by students; stages five-six plays each academic year.

Nebraska Repertory Theatre, a professional company of actors, directors, and designers, and technicians, has been an asset to UNL since 1966. Nebraska Repertory Theatre, which became an Equity Company in 1988, produces four plays each spring and summer. The 1999 Nebraska Repertory Theatre produced 38 performances of three plays (a mystery and two comedies) and a play especially designed for family audiences.

**Devaney Sports Center.** With its 13,500-seat arena, the Bob Devaney Sports Center is a multi-sport complex for the Nebraska Cornhusker men’s and women’s basketball, gymnastics, wrestling, swimming and diving, and track and field teams. The Devaney Sports Center also serves as a venue for Nebraska’s State Fair.

Located on the east side of the University of Nebraska–Lincoln, the Clifford Hardin Nebraska Center for Continuing Education is an educational, residential and conference center. One of only eleven Kellogg Centers for Continuing Education worldwide, the Nebraska Center is an integral part of the Division of Continuing Studies. The center is an ideal location for educational and executive conferences, including teleconferences. Both uplink and downlink teleconferences are available. General use of the facility is also welcomed for meetings, workshops, banquets, receptions and hotel bed and breakfast accommodations.

**Theatricals.** The Nebraska Center is an integral part of the Nebraska Center for Continuing Education, a comprehensive, residential education and conference center. The center is an ideal location for educational and executive conferences, including teleconferences. Both uplink and downlink teleconferences are available. General use of the facility is also welcomed for meetings, workshops, banquets, receptions and hotel bed and breakfast accommodations.

The facilities include 94 guest rooms, a 600-seat tiered auditorium, a large banquet/exhibit hall, dining rooms and 13 meeting rooms of various sizes.

Each of the 94 guest rooms includes twin, queen or California king size beds, cable television, data port access and in-room coffee service. Guests enjoy a complimentary deluxe breakfast in the morning and often frequent The Lincoln Center, which includes a large banquet/exhibit hall, dining rooms and 13 meeting rooms of various sizes.

**Kimball Recital Hall.** A adjoining the north-west side of the Lied Center is 849-seat Kimball Recital Hall. It was designed as an educational performance space for students and faculty.

Kimball is a warm, acoustically-round hall that is ideal for small to large performance groups.

Kimball schedules a Faculty Recital Series, regular performances by faculty and students, and student instrumental and chorale ensembles.

**Temple Building.** Home of theatre at UNL since 1907, Temple houses all theatre classes as well as the administrative offices and performance spaces of the Department of Theatre Arts.

University Theatre produces six major events each year in the facility’s two theatres, Howard and Studio. Theatre, a season of experimental works produced by students; stages five-six plays each academic year.

Nebraska Repertory Theatre, a professional company of actors, directors, and designers, and technicians, has been an asset to UNL since 1966. Nebraska Repertory Theatre, which became an Equity Company in 1988, produces four plays each spring and summer. The 1999 Nebraska Repertory Theatre produced 38 performances of three plays (a mystery and two comedies) and a play especially designed for family audiences.

**Devaney Sports Center.** With its 13,500-seat arena, the Bob Devaney Sports Center is a multi-sport complex for the Nebraska Cornhusker men’s and women’s basketball, gymnastics, wrestling, swimming and diving, and track and field teams. The Devaney Sports Center also serves as a venue for Nebraska’s State Fair.
nationally renowned sculptors including di Suvero, Lachaise, David Smith, H. eizer, Serra, and O. Idenburg. Sheldon's educational and outreach programs include a docent and tour program and visiting artists and scholars who present public lectures and symposia, many that take place in the 300-seat auditorium. Other educational activities relate to exhibitions or the permanent collection. Sheldon's auditorium is also utilized for musical performances and lectures. The Sheldon Memorial Art Gallery and Sculpture Garden is open year-round. Donations are encouraged.

**Eisentrager-Howard Gallery.** Located in Richards Hall, the Eisentrager-Howard Gallery provides the Arts Department, university community and general public with opportunities to view contemporary artwork by local, national, and international artists. Regularly scheduled exhibitions include traditional thematic shows that complement the art curriculum as well as installations and site-specific works that introduce viewers to new genres. The gallery maintains a commitment to exhibiting artists who reside in the state of Nebraska, focusing on those in the Lincoln and Omaha area. A major function of the department gallery is to exhibit the work of faculty and students, including MFA thesis exhibitions, a biennial faculty exhibition, and an annual competitive undergraduate exhibition.

**Great Plains Art Collection.** The Great Plains Art Collection is located in the Christlieb Gallery at 1155 Q Street in Hewit Place, where it is administered by the Center for Great Plains Studies within the University of Nebraska. In 1980, Dr. John Christlieb and M. R. Elizabeth Christlieb donated their collection of western art and library of western American art to the Center and provided an endowment for the care and maintenance of the collection. Since 1980, the Great Plains Art Collection has increased its holdings through major donations such as the Patricia J. and Stanley H. Broder Collection of Native American art, The Richardson Collection of Native American Art, and the Regina Collection of Canadian Plains literature. This regional art collection and research library presently contain more than 1,400 bronze sculptures, paintings, drawings, prints, and photographs from prominent artists such as Albert Bierstadt, Carl Kauba, Frederic S. R. emington, Charles M. R ussell, Keith Jacobshagen, H. arold L. olson, M. illand Lomakema, Debbidge H. onanie, and Tonita Peña. The gallery exhibits from its permanent collection, hosts traveling exhibitions, and offers programs and tours pertaining to its exhibitions through a newly-developed public program of ambassadors. The Great Plains Art Collection also hosts students and the public to its Web pages at www.unl.edu/plains/gallery/gallery.html.

**University of Nebraska State Museum.** The University of Nebraska State Museum contains over 14 million specimens and house exhibits on Nebraska paleontology, cultural diversity and biological diversity in Morrill Hall. World famous for its 13 mounted skeletons and their close fossil relatives in Elephant Hall, the museum also houses the Ralph M. Weiler Planetarium, the Encounter Center, a hands-on natural science discovery room, the Hall of Nebraska Wildlife, the Toren Gallery of Ancient Life, the Nomad Gallery, and a new gallery of interactive and multimedia exhibits on the age of dinosaurs. Special exhibits are presented on a regular basis in the Coper Gallery.

**Robert Hillestad Textiles Gallery.** The Robert Hillestad Textiles Gallery was designed for exhibition of textiles—from art to apparel, from the Occident to the Orient, from past to the present, and from emerging artists to the acclaimed. Student juried and solo exhibitions are installed in the gallery throughout the academic year.

The gallery is dedicated to Dr. R. obert Hillestad, an internationally renown fiber artist and Professor Emeritus of Textiles, Clothing and Design. Exhibits and programs increase awareness of the fiber arts through display of faculty, student and invited artists’ works, 2) to interpret costume and textile history through exhibition of department and invited collections and 3) to serve as an educational outreach vehicle to the citizens of the state as well as visitors to Nebraska.

Additional information regarding the Robert Hillestad Textiles Gallery may be accessed through their Web site www.ianr.unl.edu/tcd/gallery.

**Lentz Center for Asian Culture.** Located in the lower level of the Hewit Place building at 1155 Q Street across from the Lied Center for Performing Arts, the Lentz Center for Asian Culture is dedicated to the enrichment of knowledge and understanding of Asia through exhibitions, lectures, and musical events. It is the only institution in Nebraska devoted solely to Asian art.

The center has a permanent collection of Asian art including ceramics, jade, ivory, and Buddhist art of Tibet. Many of these objects are on regular exhibition. The center also has three to four temporary exhibitions a year.

**Nebraska State Historical Society.** The Nebraska State Historical Society’s headquarters is located at 1500 R Street. The headquarters facility includes the library, archives, and the Regina Collection of Canadian plains literature. The regional art collection and research library presently contain more than 1,400 bronze sculptures, paintings, drawings, prints, and photographs from prominent artists. The museum illustrates Nebraska’s history through interactive exhibits, offices at the museum of Nebraska history include: collections, exhibits, archiology, and the museum office.

**University of Nebraska-Lincoln Television.** University of Nebraska-Lincoln Television, station KUON-TV, operates from one of the nation’s finest telecommunications facilities—the Terry M. C. Carpenter Nebraska Educational Telecommunications Center located on the East Campus of the University of Nebraska-Lincoln (UNL). University of Nebraska Television is recognized nationally for its quality programs, produced for Nebraska audiences and for regional and national distribution, and for its development of innovative program services involving new telecommunications technologies.

University of Nebraska Television is the principal production agency for the statewide Nebraska Educational Telecommunications Commission and UNL Television, the Nebraska Educational Telecommunications Network provides instructional and public television broadcast service to virtually every classroom in the state.

Through a closed-circuit television system (CCTV), the Telecommunications Center is currently linked to more than 300 classrooms and meeting rooms on UNL’s East Campus. An intercampus closed-circuit system also links the four campuses of the University of Nebraska and makes it possible for instructors to teach classes on two campuses simultaneously, with a full range of audio and video interaction between the instructors and the students.

In cooperation with businesses statewide, the University of Nebraska-Lincoln provides Nebraska Corporation for Public Education with a corporate training network for on-site delivery of educational services. The Corporation for Public Education also delivers college courses and continuing education programs to employees at their workplace.

NETCHE (Nebraska Educational Television Council for Higher Education), Inc., a consortium of Nebraska colleges and universities devoted to the improvement of teaching and learning, is also housed at the Center. NETCHE develops and produces television and multimedia lessons to supplement postsecondary classroom instruction.

Broadcast journalism classes for students in the UNL College of Journalism and Mass Communications also are held at the Center. The television production facilities provide hands-on experience for aspiring broadcast journalists. Some of these classes are taught by UNL Television staff members.

GNP, a national instructional television marketing agency begun in 1962 as a federally-supported experimental videotape exchange project, is now one of the nation’s largest distributors of recorded visual instruction. Also headquartered at the Center is the National American Public Broadcasting Consortium, a nonprofit organization dedicated to the production and distribution of programs expressing Native American heritage.

Several other television-related services emanate from the Center as well. The Center is a leader in satellite-delivered distance learning programs to audiences throughout Nebraska and the nation. Its Interactive Media Group develops and produces for a wide range of multimedia technologies including Web, CD-ROM, and DVD-based educational materials. The NETV2 Cable Network service is an alternative means for distributing informational and instructional television programming. In addition, the Center houses public radio station KUCV-FM, the flagship station for the Nebraska Public Radio Network. Many of the services of UNL Television are potentialized by NEB*SAT, Nebraska’s multiple channel satellite and optical fiber educational telecommunications network, which provides a 24-hour per day, year-round multi-purpose service for education, public broadcasting and state-government communications.

**University of Nebraska Press.** The University of Nebraska Press is a nonprofit book publisher and the state’s chief publisher of scholarly and serious regional books. All new books published by the Press are referred by scholars in appropriate fields and approved by the Press Advisory Board. Publishing 155 new books a year, the Press is the third-
largest public university press in the nation. In the past three years, it has won more than 30 awards for book content and design. Its books are sold and read throughout the world.

The University of Nebraska Press serves two constituencies. One is the world of scholarship at large, where the Press represents the best aspirations of the University by publishing important products of research by scholars, wherever they may be, in fields in which the Press has become well known nationally and internationally. Some of these fields are Native American studies, literary studies including translations, history and military history, Jewish studies, sports, agriculture, and environmental studies. The other constituency is serious readers of the American West. To them the Press tries to bring understanding of both the past and the present, ranging from prehistoric settlement on the Great Plains to Nebraska politics and government to the history, literature, and culture of America west of the Mississippi River.

The Press publishes works by such notable Nebraska writers as Willa Cather, Mari Sandoz, Loren Eiseley, and John N. Ehrhardt, as well as luminaries such as Tolstoy, Zola, and Henry James. Many of the books published by the University of Nebraska Press are available in quality trade paperback format under the Bison Books imprint. The Bison Books line is recognized widely as one of the first paperback publishing programs established by a university press.

Research and Service Activities

Research plays an integral role in the mission of the University of Nebraska-Lincoln. By encouraging the discovery of new knowledge and supporting scholarly initiative in all fields of study, the University constantly brings innovative ideas, techniques, and perspectives into UNL classrooms. In addition, research done by University scientists and scholars directly supports UNL's extensive public service programs.

Major research and service activities at the University include those described below.

Agricultural Research Division

The Agricultural Research Division is the research component of the Institute of Agriculture and Natural Resources. Most of the research faculty are on joint appointments in the College of Agricultural Sciences and Natural Resources, the School of Agricultural Sciences, the Cooperative Extension Division, or the College of Human Sciences and Family Studies. The Nebraska Agricultural Research and Development Center is located on the East Campus, serves the applied research needs of the University of Nebraska-Lincoln Remote Agricultural Research and Development Center.

East Campus. Most of the scientists in the Agricultural Research Division are located on the East Campus of the University of Nebraska-Lincoln where a broad range of research programs are conducted through 15 academic departments. In addition to laboratories, greenhouses, and other research facilities, about 100 acres on the campus and 600 acres near Lincoln are used for crop and livestock investigations. Principal research areas include agricultural economics, biological systems engineering, agricultural education and communication, agronomy, animal science, biochemistry, entomology, food science, forestry, home economics, veterinary science, and wildlife science. Part of the research work is in cooperation with the USDA Agricultural Research Service and Forest Service.

Agricultural Research and Development Center. This research facility comprises approximately 9,500 acres of what was formerly the Nebraska Ordnance Plant near Mead, Nebraska. This land was acquired by the University of Nebraska in 1962 and has been developed into a comprehensive research facility for the Lincoln-based staff of the Institute of Agriculture and Natural Resources as well as other University departments and cooperators agencies of the United States government.

District Research and Extension Centers. The Agricultural Research Division has scientific staff and programs at district research and extension centers at Norfolk, Clay Center, North Platte, and Scottsbluff. These centers, backstopped by the more basic research activities in the subject matter departments on the East Campus, serve the applied research needs of the major areas of the state.

An off-campus research facility is also conducted at the U.S. Meat Animal Research Center at Clay Center and at research field laboratories located near Plattsmouth, Sidney, Virginia, and Waltham.

Atomic, Molecular, and Optical Physics Laboratory

The Department of Physics and Astronomy in the College of Arts and Sciences has a variety of particle accelerators and lasers in Behlen Laboratory. They are used for the study of basic processes in atomic and molecular collisions as well as the interactions between electrons and photons. These extensive laboratory facilities are supported by a modern machine shop and electronics shop. Many undergraduate research assistants work on various experiments in the laboratory.

Behlen Observatory

The Department of Physics and Astronomy in the College of Arts and Sciences operates Behlen Observatory, located 30 miles north of Lincoln. It is a modern astronomical research facility with a computer-controlled 0.76 meter telescope equipped with a solid state electronic camera. It is used for astronomical research by University faculty and students.

Bureaus of Business Research

The Bureau of Business Research (BBR) develops and furnishes information on business conditions, economic problems, and research results for use by business firms and organizations, government agencies, news media, civic groups, and other interested individuals. The Bureau publishes a monthly newsletter Business in Nebraska, and other contract research publications.

Bureau of Sociological Research

The Bureau of Sociological Research in the Department of Sociology in the College of Arts and Sciences works with students and faculty, state government agencies, state legislators, voluntary groups and other organizations to provide quality research service for the advancement of knowledge. It has conducted studies on the local and regional, as well as the state and national levels, including a telephone survey of University students about health needs and problems, a mail survey to assess the effectiveness of an energy conservation awareness program, and personal interviews with low-income households to chart patterns of spending. Among the services the Bureau offers are advice on research project start-up; evaluation of work already done; and data entry, coding, and analyses.

Buroes Center for Testing

The Buroes Center for Testing is an integral part of the Department of Educational Psychology within the University of Nebraska State Teachers College. The Center is composed of both the Buroes Institute of Mental Measurements, publisher of the Mental Measurements Yearbook, Tests in Print, and Test Reviews Online, and the Buroes Institute for Assessment, Consultation, and Outreach. The Buroes Center for Testing provides assessment, consultation, and training resources that are designed to promote the development of improved testing practices in both the public and private sector.

Cedar Point Biological Station

Cedar Point Biological Station (CPBS) is a field station operated by the School of Biological Sciences in the College of Arts and Sciences on Keystone Lake in western Nebraska. Located two miles from Lake McCowna, the state's largest body of water, the station is situated in close proximity to a variety of aquatic and terrestrial habitats, including riparian forests, wet meadows, and prairies. CPBS is situated at the juncture of four major grassland types including the Sandhills (one of the largest areas of relatively undisturbed prairie vegetation in the United States), Arapaho Prairie and Cresent Lake. Wildlife refuge is nearby and available for University teaching and research use. Also, the Nebraskaland, Ft. Niobrara National Wildlife Refuge is 100 miles north of the Station. CPBS offers students the opportunity to enroll in summer courses emphasizing field biology or to work as research assistants on various research projects.

Center for Advanced Land Management Information Technologies (CALMIT)

The Center for Advanced Land Management Information Technologies (CALMIT) was established in 1986 by the Board of Regents of the University of Nebraska. CALMIT was founded to significantly enhance and expand research and instructional activities in remote sensing, geographic information systems (GIS), automated cartography and image processing that had, since 1972, been conducted through the University of Nebraska-Lincoln Remote Agricultural Research and Development Center.
Sensing Center. Through formal linkages among universities, public agencies, and private enterprise, CALMIT is developing new research, teaching, and service opportunities in these advanced land management information technologies at UNL, in the state, and the region.

As a center of excellence, CALMIT serves to focus the significant interdisciplinary expertise in advanced land management information technologies that exist on campus and in the region. CALMIT has particularly strong ties with NU’s School of Natural Resources (SNR), the Conservation and Survey Division (CSD), the Department of Geography, the Department of Electrical Engineering, the Department of Computer Science and Engineering, and the Department of Agronomy. CALMIT also has close working relationships with a number of partners including the University of Kansas, Kansas State University, the University of Nebraska-Lincoln, and Creighton University.

These partnerships include the U.S. Geological Survey, EROS Data Center, NASA, Stennis Space Center, NASA/Goddard Space Flight Center, NASA Ames Research Center, NASA/Jet Propulsion Laboratory, the USDA/ARS Conservation Service, the National Oceanic and Atmospheric Administration/National Severe Storms Laboratory, the U.S. Forest Service, the National Park Service, and the U.S. Environmental Protection Agency. Space Imaging, Inc., and several other firms.

Center for Applied Rural Innovation (CARI)

Economic and social issues are important to Nebraska. Markets for our products, taxes on individuals, and costs affect all Nebraska residents. These issues are particularly important to rural Nebraska, where a depressed rural economy, declining population and other related issues are well documented.

Effective July 1, 2000 the University of Nebraska Board of R agents created the Center for Applied Rural Innovation (CARI) to address these issues. CARI combines the efforts of the former Center for Rural Community Revitalization and Development, the Center for Leadership Development, and the Center for Sustainable Agriculture Systems. Current efforts include Nebraska’s Rural Poll; Nebraska EDGE; Connecting Nebraska, a Sustainable Agriculture Projects; N. E. B. A; Cooperative Development Center; and the North Central Initiative for Small Farm Profitability.

CARI is the focal point within the University of Nebraska-Lincoln for communities and individuals to obtain information and program support they need to enhance their economic and social well-being. Collaboration is the key to CARI’s success. Collaborative efforts in which CARI has taken the lead are the Rural Policy Research Institute (RUPRI) and the Partnership for R.ural Nebraska (PRN); and CARI Fellows.

Center for Biological Chemistry

The Center for Biological Chemistry, established in 1987, develops and administers graduate and undergraduate programs in biochemistry. It offers parallel curricula with a common core of science courses leading to an undergraduate biochemistry degree in both the University of Nebraska College of Agricultural Sciences and Natural Resources and the College of Arts and Sciences, and encourages collaborative research among the members of the faculty. Through the Center, UNL provides a unified biochemistry program that enables the University to make optimal use of its resources in biological chemistry due to the active involvement of UNL faculty from several academic units.

Center for Biotechnology

The Center for Biotechnology coordinates UNL’s resources to build upon recent advances in biotechnology spurred by the explosion of knowledge in the area of recombinant DNA technology, genetic engineering, and analytic technology. Its purpose is to apply these advances to the solution of biological problems having to do with agriculture, health, food, fiber, and the environment.

The Center provides a research environment comprising the combined activities of certain faculty of the College of Arts and Sciences and the College of Agricultural and Natural Resources. The primary focus of Center-associated faculty is on cell and molecular biology, genetics, and plant cell systems. The current main research areas of the Center are plant molecular biology, animal molecular biology.

Center for Communication and Information Science

The Center for Communication and Information Science is researching computers and communication systems. Among the many Center projects, researchers are developing the ability to access, transmit, and share information while protecting the information from unauthorized use. Network theory, coding theory, data compression, cryptology, and pattern recognition are the Center’s specialties. The Center is one of seven multidisciplinary Engineering Research Centers within the College of Engineering and Technology and is funded by the Nebraska R.earch Initiative.

Center for Economic Education

The Center, a cooperative activity between the College of Business Administration and the Teachers College, coordinates the work of the University in the field of economic education. Its functions include the provision of courses for pre-service and in-service training of teachers, development of curriculum materials, and research and publication in this area. A specialized library of books, films, and other teaching materials is maintained in the Center offices. The work is carried out in conjunction with the Nebraska Council on Economic Education, which is affiliated nationally with the National Council on Economic Education.

The University of Nebraska-Lincoln Center has been designated by the National Council as the National Center for Research in Economic Education.

Center for Electro-Optics

The Center for Electro-Optics, one of the Engineering Research Centers under the Nebraska R.earch Initiative, is researching small particle technology as well as the linear and nonlinear interactions between matter and electromagnetic radiation (lasers) at optical and microwave frequencies. Center researchers are also studying electromagnetic radiation interactions with rough surfaces, irregularly layered media, and applying the research to the use of lasers for remote measurements, particle sizing, optical interferometry, nozzle design, computer graphics, and computer vision.

Center for Grassland Studies

Grasslands cover more than half of Nebraska’s land surface area. They serve as the basis of a strong and large livestock industry, a vital wildlifef, a natural resource for maintaining and improving environmental quality (water, soil, and air), a growing sports and leisure industry, and a positive influence on quality of life. University of Nebraska faculty have and continue to provide nationally recognized leadership in the breeding and management of forage, range, and turf grasses, grassland ecology, and physiology, grassland cattle production, grassland pests, and wildlife management. The Center for Grassland Studies was established in 1989 within the Institute of Agriculture and Natural Resources. The faculty and staff of the Center bring together expertise in biological science, agricultural science, and social science, and continue to provide nationally recognized leadership in the breeding and management of forage, range, and turf grasses, grassland ecology, and physiology, grassland cattle production, grassland pests, and wildlife management.

The Center for Grassland Studies is an interdisciplinary program that brings together faculty and students from the College of Agricultural Sciences, the College of Arts and Sciences, and the College of Business Administration. The Center’s research focuses on the production and use of grasslands, with an emphasis on sustainability and the protection of natural resources. The Center also refers students and the public to the Nebraska Grassland Information System, which provides useful information for farmers and other land managers.

Center for Infrastructure Research and Education

The Center for Infrastructure Research and Education (CIRE) is a multidisciplinary research center that focuses on the development and implementation of innovative technologies and methods for the design, construction, and maintenance of infrastructure systems. The Center conducts research and provides technical assistance to a wide range of stakeholders, including governmental agencies, private industry, and academic institutions. Its research areas include materials science, structural engineering, transportation, and environmental science.

The Center is home to the Nebraska Institute of Infrastructure Technology (NIIT), which is a collaborative effort among UNL faculty from several colleges and departments, as well as partners from the private sector and local governments. NIIT conducts research and provides technical assistance to a wide range of stakeholders, including governmental agencies, private industry, and academic institutions. Its research areas include materials science, structural engineering, transportation, and environmental science.

In addition to its research activities, the Center also provides training and educational programs for students and professionals in the field of infrastructure. These programs include summer workshops, short courses, and seminars that are offered on a variety of topics, such as pavement design, pedestrian safety, and bridge assessment. The Center also offers a Master of Science in Infrastructure Systems, which is the only graduate program of its kind in the state of Nebraska.

The Center for Infrastructure Research and Education is committed to advancing the field of infrastructure research and education through its cutting-edge research, innovative training programs, and strong partnerships with stakeholders. Its work is focused on addressing the challenges of a rapidly changing infrastructure landscape, including increased demand for transportation infrastructure, climate change, and aging infrastructure assets. The Center is dedicated to developing and disseminating knowledge that will improve the sustainability, safety, and efficiency of infrastructure systems.
Center for International Trade Policy

The Center for International Trade Policy and Research in Agribusiness, Economics and Law is a multidisciplinary effort designed to address priority and emerging agriculturally-related issues from a global perspective through a wide spectrum of research and educational activities using the application of modern business principles and practices. The center, which draws upon the resources of the Institute of Agriculture and Natural Resouces, the College of Business Administration, and the College of Law at UNL, concentrates on the impact of international markets on Nebraska agriculture and agribusiness.

Center for Laser-Analytical Studies of Trace Gas Dynamics

The Center for Laser-Analytical Studies of Trace Gas Dynamics, one of the seven Engineering Research Centers, funded by the Nebraska Research Initiative, is dedicated to the advancement of research in the area of trace gas analysis. The Center is focusing on the development and application of laser spectroscopy techniques for the detection and quantification of trace gases in various environments, including atmospheric and industrial settings. The Center's research includes the development of novel laser-based sensors, as well as the optimization of existing technology for improved sensitivity and selectivity.

Center for Leadership Development

The mission of the Center for Leadership Development is to work in unison with educational institutions, governmental agencies, business organizations, and private citizens for the attainment of personal development and leadership skills needed by the people of Nebraska. Just as the Land Grant mission of the University of Nebraska is to serve the people of Nebraska through teaching, research, and extension activities, the Center for Leadership Development conducts programs that lead to excellence in these areas.

The research and development function within the Center strives to discover new information about the nature and application of leadership principles, as well as develop new technology for the business sector. The Center strives to provide effective leadership education to all clientele groups who may need it. It also offers a wide range of services to the business community, including leadership development programs for executives, training programs for new managers, and conferences and workshops on leadership topics.

Center for Materials Research and Analysis

The Center for Materials Research and Analysis (CMRA) was founded in 1988 by action of the Board of Regents. The major goal of CMRA is to be a center of excellence in the fields of materials science, engineering, and related disciplines. The Center has state-of-the-art facilities for research and development in the areas of materials science, including materials physics, materials chemistry, and materials engineering. The Center's research thrusts include nanoscale electronic, magnetic, and optical materials and devices, mechanics and processing of materials, materials chemistry, and biomolecular materials. The Center provides an excellent materials research infrastructure through the operation of Central Facilities such as Electron Microscopy, Materials Preparation, Crystallography, etc., operation of a weekly seminar series, and assistance with group proposals. Service is provided to Nebraska and national industry through collaborative research, materials analysis, and technology transfer. Further information can be found at <www.unl.edu/cmra/>.

Center for Microelectronic and Optical Materials Research

The Center for Microelectronic and Optical Materials Research is part of the Engineering Research Initiative at the University of Nebraska. It is an interdisciplinary research center that focuses on the development of new materials and technologies for electronic and optical applications. The Center's research areas include materials for microelectronics, optics, and optoelectronics, as well as the development of new fabrication processes and characterization techniques.

Center for Nontraditional Manufacturing Research

Researchers with the Center for Nontraditional Manufacturing Research are developing state-of-the-art machining processes for new materials such as ceramics, superalloys, and composites. The processes studied by Center researchers include abrasive water jet machining, electrodischarge machining, and electro-chemical arc machining. These scientists are also researching adaptive control and expert systems for improving processes and increasing productivity. The Center is one of the Engineering Research Centers, funded by the Nebraska Research Initiative.

Center for Water Sciences

The Center for Water Sciences, funded by the Nebraska Research Initiative, is a statewide priority program focusing on research on water quality and water quantity related to agrichemical nonpoint contaminant and pathogen management practices designed to lessen this chemical impact on groundwater. The Center provides resources and promotes coordination of research by faculty in more than 11 departments in the Colleges of Arts and Sciences, Engineering and Technology, and the Institute of Agriculture and Natural Resources.

Center on Children, Families, and the Law

As an interdisciplinary organization, the Center on Children, Families, and the Law works to stimulate interdepartmental and intercollegiate scholarship on children, families, and the law. Based primarily in the Law Psychology Program, it draws faculty from not only the College of Law and the Department of Psychology (College of Arts and Sciences) but also from the Departments of Sociology, Educational Psychology, and Family and Consumer Sciences. The UNL Center serves as the coordinating unit for a consortium of similar centers located at SUNY-Buffalo and the University of Nevada, Reno.

Conservation and Survey Division

The Conservation and Survey Division is a research and service division of the Institute of Agriculture and Natural Resources (IANR) and is affiliated with the School of Natural Resources. Some faculty teach in the school as well as in other academic departments and many faculty supervise graduate students. The Division maintains many natural resources databases. Major research and service programs include geology, water resources, soils, and geographic information systems. Studies are conducted cooperatively with local, state, and federal agencies and are published as maps and reports.

Cooperative Extension

The Smith-Lever Act of Congress passed in 1914 established Cooperative Extension as an arm of the land-grant college system to provide educational programs for persons not enrolled in the land-grant college. Extension is found throughout the state in 83 county offices that serve all 93 counties at five research and extension centers at Scottsbluff, North Platte, Celaya Center, Norfolk, and on the flagship Lincoln campus. Since its beginning, extension has delivered research-based knowledge to people through direct teaching and publications. It still does. But today extension also uses exciting new technology such as satellite conferencing and Internet video streaming to link people with information of value to them. The complexities of contemporary living and working are reflected in constantly evolving program priority areas in which extension works to build agricultural profitability and sustainability; children, youth, and families; community and leadership development; food safety, health and wellness; and natural resources and environment.

Counseling and School Psychology Clinic

The Counseling and School Psychology Clinic, located in 49 Teachers College Hall, offers counseling and assessment services to UNL students, youth, and their families, and the Lincoln community under the supervision of licensed psychologists. Graduate students in Counseling Psychology or School Psychology conduct all counseling and assessment, which gives them first-hand experience in working with clients. The Clinic's services include counseling in personal concerns, relationship prob-
Engineering Research Centers

Eight multidisciplinary research centers were formed within the College of Engineering and Technology, under the umbrella of the Engineering Research Center (ER C). Collectively, the goal of these Centers is to develop an outstanding, market-driven research program and create a partnership between industry and the University. The Engineering Research Center coordinates and provides support services such as editing and budget assistance for the eight centers. The centers are directed and staffed by faculty members and research assistants from a variety of academic departments and are an important component of the College's graduate program. These centers actively seek government and industrial support in the form of grants and contracts for their research activities. The Engineering Research Center also sponsors a number of conferences yearly, to generate interest and stimulate contact with industry and to share information with University faculty and colleagues. Associated with ER C are research facilities emphasizing rail and automobile safety, nanotechnology, biological processing, robotics, bridge construction, telecommunications, and several other growing research areas.

Engineering Extension

Engineering Extension is a service organization of the College of Engineering and Technology. Engineering Extension is also designated as a U.S. Department of Commerce Economic Development Administration University Center Program.

The mission of Engineering Extension is to enhance the engineering and technical capabilities of manufacturers and other businesses in the state with the expressed purpose of stimulating and maintaining industrial competitiveness. The mission is accomplished through a programmatic systems approach guided by the following Service Model:

Engineering Extension Services

- Internet (Web Server) Resources
- Information Searches
- Links to NASA and Federal Labs

University Faculty and Facilities

- Advice from Faculty
- Linkage to University Research
- Access to University Facilities
- Educational Program Information

Technology Transfer Center

- Public Infrastructure
- Services to Counties & Municipalities
- Technology for Street, Bridge & Highway Maintenance
- Continuing Education

Services may be accessed by calling the Engineering Extension Office, 402/472-5600, or accessing our program on the Web Server: http://www.engext.unl.edu.

Family Resource Center

Therapy for individual, couple and family problems is offered to students, staff, faculty and residents of Lincoln and surrounding areas. Treatment is confidential, affordable, and meets the highest standards of quality in the field. Services are provided by advanced graduate students in the Marriage and Family Therapy program who are closely supervised by clinical faculty members. Each of whom is licensed in the State of Nebraska and has met the qualifications of being an Approved Supervisor. Assessment and treatment focuses on client strengths and existing resources. The student rate for counseling is $10 per 50-minute session. The center is located on the UNL East Campus. An appointment can be scheduled by calling 472-5035.

Great Plains Veterinary Educational Center (GPVEC)

Through education, research, service, and extension, the Great Plains Veterinary Educational Center (GPVEC) is working to meet the needs of students and veterinarians serving the livestock industry. Formed as part of the Cooperative Agreement for Veterinary Medical Education between Kansas and Nebraska, the GPVEC provides instruction in the areas of food animal (livestock) practice. Under the direction of the GPVEC faculty, veterinary students participate in the veterinary medical care of the University of Nebraska Animal Research Center (MARC) livestock. This includes surgery, treatment, diagnostics, and herd health. The GPVEC faculty also conduct research primarily in herd health management and work with practicing veterinarians in this area.

The GPVEC programs also serve the continuing education needs of food animal veterinarians nationwide. These programs involve the cooperation of the faculty at the University of Nebraska-Lincoln Department of Veterinary and Biomedical Sciences, Kansas State University College of Veterinary Medicine, and other universities as well as extension specialists and animal and veterinary scientists at MARC.

Hitchcock Center for Graduate Study and Professional Journalism Development

The Hitchcock Center, with a $250,000 endowed fund from the Gilbert M. and Martha H. Hitchcock Foundation, helps finance the graduate program in the College of Journalism and Mass Communications and further develops the skills of Nebraska’s professional journalists. It accomplishes the latter goal by giving direct support to the state’s professional journalists through research projects and statewide workshops aimed at improving skills in newswriting, advertising, and broadcasting. The Center also funds a $5,000 graduate fellowship and a distinguished faculty chair. Gilbert M. Hitchcock was a United States senator from Nebraska and founder of the Omaha World-Herald.

Industrial Agricultural Products Center

The Industrial Agricultural Products Center was established by the University of Nebraska at Lincoln to broaden markets for agricultural commodities produced in Nebraska by developing value-added products such as biofuels, biochemicals, biopolymers and biopower. The objectives of the Center are:

1. To broaden Nebraska’s and the nation’s industrial and commercial base through new applications of agricultural commodities.
2. To identify which products derived from agricultural commodities have the greatest chance for commercial success.
3. To solve technical problems in production and raw material conversion.
4. To provide technical, marketing, and business assistance to farmers, entrepreneurs, and people in commerce and industry.

The Center is a partnership involving Nebraska agriculture, business, government, and education. Faculty within the Institute of Agriculture and Natural Resources, the College of
Institute of Agriculture and Natural Resources (IANR)

The University of Nebraska Institute of Agriculture and Natural Resources (IANR) was established in 1973 to serve the people of Nebraska in the four-fold mission of teaching, research, extension, and service. Commonly referred to as “IANR,” the Institute is administered by the University Chancellor for Agriculture and Natural Resources, who also serves as Vice President in the University of Nebraska system. IANR has faculty and staff located throughout the State. Institute faculty and staff have appointments in the following divisions: Agriculture Research Division, College of Agricultural Sciences and Natural Resources, College of Human Resources and Family Sciences (Research and Extension), Conservation and Survey Division, Cooperative Extension Division, and the International Programs Division; and the School of Natural Resources. Each division is administered by a dean or director. The Institute is comprised of 15 academic departments, five regional research and extension centers, 12 interdisciplinary centers and five program units, and administers the Nebraska Center for Technical Agriculture at Curtis and the Nebraska Statewide Arboretum.

IANR International Programs Division

The IANR International Programs Division enhances the global perspective of Nebraska citizens, students and faculty, and contributes to international development and trade. Nebraska is part of the global economy, and the need for international involvement in agriculture and natural resources has grown in importance. In Nebraska, the production of one of every three crop acres is for export. This foreign trade, modern communications and increased international travel make it vital to know more about other nations’ resources, culture, and economics.

International Quilt Study Center

Approved by the University of Nebraska’s Board of Regents on June 23, 1997, the International Quilt Study Center encourages interdisciplinary study of all aspects of quilt making traditions and fosters preservation of this tradition through collection, conservation, and exhibition of quilts and related materials. The Center arose from significant interest and resources available at the University of Nebraska for the study and exhibition of textiles. This unique combination of resources, and the welcoming attitude toward textile study, helped convince Robert and Ardis James that Nebraska was the right institution to serve as home of their collection of antique and contemporary quilts.

Individuals who arrive to study will find available to them the world’s largest publicly-owned quilt collection. The Center’s Ardis and Robert James Collection contains examples representing the history of quilt making in the United States, Europe, and Japan. For additional information, visit the Center’s Web site at <quiltstudy.unl.edu>.

Mathematical Association of America Mathematics Competitions (AMC)

This office is the national and international headquarters for the MAA American Mathematics Competitions, serving as the administrative office for the five contests associated with the Competitions: the American Mathematics Competitions 8 (AMC 8), the American Mathematics Contest 10 (AMC 10), the American Mathematics Contest 12 (AMC 12), the American Invitational Mathematics Examination (AIME), and the USA Mathematical Olympiad (USAMO).

As administrator for this organization, the AMC office produces all of the exams and supplies associated with the five contests and handles their distribution. Once the contests have been given, the AMC also assists in the scoring and the evaluation process. The results are then published, providing the schools involved with a valuable resource for assessing their mathematics programs. Each year, over 750,000 students from the U.S., Canada, and U.S. schools abroad participate in the MAA American Mathematics Competitions.

Mid-America Transportation Center

The Center conducts research and educational activities aimed at improving the design and operation of transportation facilities to maximize safety, mobility, and efficiency and minimize the negative environmental effects of transportation in the Midwest. Its research agenda focuses on traffic operations and control, highway safety, intelligent transportation systems, and work zone traffic control and safety.

Midwest Roadside Safety Facility

The Midwest Roadside Safety Facility conducts research in all aspects of highway design and safety. Researchers use high-speed data acquisition equipment and photography for testing and product development of guardrail and median barriers, timber, open concrete and steel bridge railings, impact attenuators, light poles, and curbs. The facility, one of only a few in the United States, serves as a research and development facility for state highway departments, the Federal Highway Administration, the USDAP’s Department of Agriculture Forestry Service, and private industry.

Nebraska Center for Entrepreneurship and Productivity

The Nebraska Center for Entrepreneurship and Productivity was established in 1984 to serve as a focal umbrella structure to better coordinate research and outreach programs within the College of Business Administration. The Center’s primary objectives for conducting research to strengthen the competitiveness of American industries include developing training programs for productivity improvement and entrepreneurship, and interfacing with a number of international research centers around the world. The Center, located at 203 Center Building, includes the Nebraska Center for Entrepreneurship, International Center for Franchise Studies, Small Business Center, Pan-Pacific Business Research Center, Leadership Studies Program, and Organizational Stress Research Program.

Nebraska Food Processing Center

The Nebraska Food Processing Center at the University of Nebraska-Lincoln provides assistance on every aspect of value-added food processing including product and process development, evaluation, competitive analysis, equipment, packaging, marketing and business development for individuals and companies requesting its services. The Center assists both Nebraska entrepreneurs and the existing food processing industry through technology transfer and research relative to value-added food products and food ingredients.

The Center, located in the Food Industry building on UNL’s East Campus, is the result of a partnership involving the Institute of Agriculture and Natural Resources, state agencies, and private business and industry.

Nebraska Tractor Test Laboratory

The Department of Biological Systems Engineering is responsible for testing tractors to be sold in Nebraska. The Tractor Test Laboratory tests the performance of new farm tractors in accordance with Nebraska state law and in conformance with the standard testing procedures of the Society of Automotive Engineers and the Organization for Economic Cooperation and Development. Since 1920, nearly 1,700 new models of farm tractors have been tested. The laboratory also tests engines, alternative fuels, and off-road vehicles to determine power production and fuel efficiency.

Prairie Schooner

A literary quarterly in its 76th year of continuous publication, Prairie Schooner publishes fiction, poetry, essays, interviews, articles, and book reviews by established and beginning writers. It has won national awards throughout its history and has been represented in The Pushcart Prize, Best American Short Fiction, Best American Short Stories, and other anthologies. It is an important poetry and fiction market for writers whose work will then reach a national and international audience. The office is located at 201 Andrews Hall on the University of Nebraska-Lincoln campus.

Psychological Consultation Center

The Psychological Consultation Center is a community-oriented mental health clinic operated by the Department of Psychology in the College of Arts and Sciences. All therapists are doctoral students supervised by PhD clinical psychologists. Services provided include assessments and therapy for psychological problems incurred by individuals, couples, families, or children. Because the Center is a training clinic,
Research and Service Activities

General Information

All sessions are audiotaped or videotaped. These tapes, however, are kept completely confidential and are erased after each session. The clinic is open to anyone in the Lancaster County area. Fees are based on a sliding fee scale determined by client income and number of people supported by that income.

Ruth Staples Laboratory Program

The Ruth Staples Child Development Laboratory provides developmental programs for young children which involve students in family and consumer sciences as well as other departments of the University of Nebraska. Serving both teacher training and research functions at undergraduate and graduate levels, the Laboratory offers students and researchers opportunities for observation and study of children through its nursery school program and its day-care center.

School of Natural Resource Sciences

The School of Natural Resource Sciences (SNRS) has strong scientific programs to provide understanding of complex relationships and interactions within and among natural and managed ecosystems. The School provides leadership in developing outstanding academic programs in natural resources and environmental sciences, and in integrating strategies to affect the sustainable use of natural resources within the framework of related environmental, social and economic processes. Thus, the School serves the academic and scientific community, government agencies, resource managers, landowners, and the general public, with timely and relevant information on the use and conservation of renewable and nonrenewable natural resources and on resource management opportunities and environmental challenges, particularly those in the Great Plains. Promotion of collaboration within and among disciplines is a goal of the School's programs.

Speech-Language and Hearing Clinic

The Speech-Language and Hearing Clinic provides assessment and treatment services for all types of speech and hearing disorders. Clients range in age from infants to geriatrics and display a variety of disorders in areas such as phonology, language, voice, stuttering, hearing, aphasia, cleft palate, and motor speech disorders. The Clinic also dispenses hearing aids and other assistive listening devices. A collaborative early childhood special education program with Lincoln Public Schools provides treatment for preschool children in a developmental preschool classroom. Interdisciplinary assessments are available for most suspected developmental and academic learning problems for individuals of all ages. The Speech-Language and Hearing Clinic provides practicum experiences for undergraduate and graduate students enrolled in speech-language pathology and audiology programs, and serves as a practicum site for students in fields such as education of the hearing impaired, human development, special education, and educational psychology.

Textile Testing Service

The Textile Testing Service is housed within the Textiles, Clothing and Design Department. It evaluates textile products for industry, businesses and consumers involved in product development, seeking to meet performance specifications or interested in care and conservation of textiles. Specialized textile testing equipment includes video, stereo and polarized light microscopes, a HunterLab spectrophotometer, Atlas Weather-O meter, Launder-O meter, UV-visible spectrophotometer, Instron tensile strength tester, and a variety of flammability testers.

Additional information regarding the Textile Testing Service can be found on the World Wide Web at <www.ianr.unl.edu/textiletesting/>.
Academic Colleges

College of Agricultural Sciences and Natural Resources

Since the establishment of the University of Nebraska in 1869 and its commitment to the terms of the land-grant college act, instruction in agriculture and natural resources has provided opportunities for undergraduate and graduate students to develop intellectually and meet the challenges of their era. In 1887, research programs were established and in 1914, the cooperative extension service was created. In 1974, the Institute of Agriculture and Natural Resources was formed, bringing under one roof the varied agricultural and natural resources programs—College of Agricultural Sciences and Natural Resources, Agricultural Research Division, Cooperative Extension, Conservation and Survey Division, International Programs, and numerous departments and centers.

The College of Agricultural Sciences and Natural Resources, with recent renewed direction, offers academic programs challenging undergraduate and graduate students to explore and discover through new technologies, ways to conquer the complex changes in agriculture, natural resources, the environment, the economy, society, and geopolitical structures and to bring about solutions to the demands and issues of tomorrow’s exciting world. The School of Natural Resources was formed in August 1997 and coordinates the college’s programs in natural resources.

Through the College’s aura of scholarly excellence, in conjunction with the versatility of undergraduate and graduate study programs, students are able to pursue educational studies that will prepare them for competitive careers. The College promotes undergraduate and graduate programs that bring students and faculty members together in inquiry, discovery, integration of learning, application, and problem-solving across the disciplines of the College and the University. Highly qualified faculty members dedicated to learning and recognized for their scholarly activity in teaching, research, and extension, provide instruction to undergraduate and graduate students and place high priority on advising.

The Agricultural Research Division is the research component of the Institute of Agriculture and Natural Resources. Most of the research faculty are on joint appointments with the teaching faculty in the College. Research scientists are located on the East Campus of the University of Nebraska-Lincoln as well as at research and extension centers throughout the State. A broad range of modern research laboratories, greenhouses, and land is used for investigation. World-class facilities add to other facilities in food science and technology, a Food Science Processing Center and an Animal Science Complex. Opportunities are available for assistantships and fellowships for qualified graduate students.

Graduate programs leading to the masters of science degree and/or doctor of philosophy degree are offered through the Departments of Agricultural Economics, Agricultural Leadership, Education, and Communication; Agronomy and Horticulture; Animal Science; Biochemistry; Biometry; Biological Systems Engineering; Entomology; Food Science and Technology; Plant Pathology; Veterinary and Biomedical Sciences; the School of Natural Resources; and in numerous programs and areas of specialization.

College of Architecture

About the College

The year 1994 marks the centennial of architectural education at the University of Nebraska-Lincoln. The College of Architecture is the visible manifestation of an architectural tradition that has served Nebraska for a hundred years. From the first identified architectural program in 1894 to the establishment of the Department of Architecture in 1930, to the creation of the School of Architecture in 1964, to the founding of the School of Environmental Development in 1970, to the formation of the College of Architecture in 1974, and to the establishment of the Professional Program in Architecture in 1994, the College’s programs in architecture, interior design, and community planning have a proud tradition of excellence in education, research, and service to the State of Nebraska.

Architecture Hall, the symbolic and sentimental home of architecture at the University of Nebraska-Lincoln, stands as a monument not only to an historic style of architecture, but also to the progress of University and the thousands of students who ascended the famous wooden staircase to design studios. A student of 1894 would feel at home today in Architecture Hall, its exterior facade and basic layout little changed from its earliest days as a proud new library building. Only the nature of the architectural programs has changed with time. There has been a long, steady progression towards excellence in architectural education and development of programs appropriate to the needs of society.

Today, the College of Architecture is a busy and exciting place. Some 500 students are enrolled in classes, learning with a faculty of 32 to explore the past, present, and future of our communities. From gallery displays and provocative seminars to the quiet of the Architecture Library, the bustle of the design studio, and the excitement of a community town hall meeting, the College of Architecture is at work. It is the epitome of our land-grant university commitment to education, research, and service in the State of Nebraska and the Great Plains region.

Nebraska has only one College of Architecture. Its services are unique to this state and to several other states in this region that lack adequate courses of study and services. Lewis Mumford once noted that the quality of a society is marked by the nature of its cities. Nebraska is proud of its “good life” and a great measure of that goodness is reflected in its architecture. A quick look at the documents and pamphlets used to describe this state, and at the photographs visitors take away, reveal content richly endowed in pleasing architecture, efficient community design, and attractive park systems.

The College of Architecture, through its programs in architecture and planning, offers a broad educational research base for the study of the directions of a changing world. Even though the architecture and related programs address the classical heritage of our culture, they must also deal with the problem of tomorrow as it begins to emerge. Students and faculty of the College of Architecture seek the best of the past to carry through today into the uncertainty of tomorrow. This is the challenge for education.

Architects and planners are professionals with responsibilities to help communities anticipate and deal with change, thus ensuring that desirable change is achieved. Students today strive to identify and design preferred futures rather than react to probable events. Education at the College of Architecture is characterized by a quest for the means of improving the quality of life for all people on the “spaceship earth” but especially for the residents of the Great Plains of the United States.

Students pursue studies on an interdisciplinary basis through the professional staff within the College and also through organized, coordinated study programs involving professional, scientific, and academic staff from many departments within the University.

Interdisciplinary research and community service are important in the College of Architecture. The Council for Community Planning and Design is a faculty-based coordinating body that helps involve students and faculty in ongoing research and community service activities and oversees the community design initiatives of the College. Emphasis is placed on the generation of new knowledge and the application of concepts and quantitative methods from the behavioral and social sciences to the current practical problems of communities and the environment. Funded projects sponsored by local, state, and federal governments, as well as segments of the design and construction industries, provide students especially in the advanced professional programs, with opportunities for practical laboratory experiences. The same community design planning and research projects provide faculty members with opportunities for continuing professional development.
The College is co-participant in the administration of the nationally recognized Nebraska Community Improvement Program (N C I P). The N C I P is a community recognition and improvement program involving some 200 Nebraska communities and neighborhoods a year. The College provides educational programs, technical assistance, and assists communities in identifying their needs, developing strategies, and carrying out community economic development. Through this program, University faculty have had opportunities to work with hundreds of Nebraska communities in assisting them in solving problems.

The College of Architecture is a member of the Architectural Research Centers Consortium. The Consortium seeks to strengthen the contributions of architecture to the solution of critical national problems by undertaking large-scale research projects. Established by the American Institute of Architects Research Corporation and leading university-based research centers, the Architectural Research Centers Consortium provides a significant research dimension to the College of Architecture.

The College of Architecture is also a participant in the Associated Design Professions, working with the American Institute of Architects, American Planning Association, American Institute of Certified Planners, American Society of Interior Designers, and American Society of Landscape Architects to bring continuing professional education programs to the Midwest region.

The College of Architecture’s interdependent programs of education, research, and public service are intensive, relevant, dynamic, and rewarding. The College is dedicated to the continued development and improvement of programs that enhance the ability of the architect and the planner to create a better world environment.

Facilities

The College is headquartered in Architecture Hall. All facilities of this unique and historic complex are located within the southwestern "fine arts" quadrant of the campus with convenient access to the Lincoln central business district for both pedestrian and vehicular traffic. College lecture classrooms, design and planning studios, computer, media, and shop facilities; the professional library; exhibit spaces; and other ancillary facilities are arranged and equipped for student convenience.

The facilities of the College of Architecture recently underwent a $4.4 million renovation and remodeling project. This 91,000-square-foot facility provides staff and faculty with one of the finest facilities in the nation for the study of architecture and planning.

Architecture Library. Located in Architecture Hall and operated as a branch facility of the University Libraries, the Architecture Library maintains collections pertinent to the fields of architecture, planning, urban design, interior design, landscape architecture, community development, and building technology. In addition to a collection of approximately 45,000 volumes, the library receives 310 national and international magazines and journals in its subject areas. Available construction documents, indexes, and other materials provide technical reference resources to both the student and the practicing professional.

Computer Facility. The computer facility in the College of Architecture is used by students and faculty for educational, research, and public service activities. Through this facility, the College provides educational programs, technical assistance, and assists communities in identifying their needs, developing strategies, and carrying out community economic development. Through this program, University faculty have had opportunities to work with hundreds of Nebraska communities in assisting them in solving problems.

The College of Architecture offers a number of courses in computer applications for design and planning.

Architecture Gallery. A vital part of architecture is communication to the public. An architectural educational institution is in an excellent position to provide the public a facility that exhibits and shows the purpose and services of the environmental design professions. To this end seminars and displays of general interest to the public are featured in the gallery area of Architecture Hall. The gallery also provides a space for formal and informal student, faculty, and public programs.

Hyde Program of Visiting Professionals. This program was established in 1979 in grateful recognition of Mr. A. G. Hyde, AIA, 1902-1976. He graduated from the University of Nebraska in architecture engineering in 1925 and Columbia University in 1928. From 1960 to 1972 he was president and chairman of the board of Midwestern Life Insurance Company. Mr. Hyde served as a charter member of the College's professional advisory council. This annual program brings architecture and planning students into direct contact with nationally and internationally known professionals who are acknowledged to be at the leading edge of their fields. Visitors and guest critics coming to campus are involved in public presentations and work with the students and faculty of the College in the classroom and studio. The program also provides advanced students with the opportunity to engage in intensive off-campus design charrettes with the offices of leading professional firms.

Hyde Chair of Excellence. Established in 1986, the Hyde Chair of Excellence allows the College of Architecture to attract visiting faculty of national and international distinction. Through this endowment, renowned scholars and practitioners will be invited to spend a semester or more in residence at the College, working with and teaching architecture and planning students in studios, seminars, and in an informal mentor role as well.

The Hyde Chair of Excellence was made possible by the generosity of Mrs. Flora Hyde in honor of the memory of her late husband, A. G. Hyde. Recipients have included: Joseph Esherick, Peter Cook, Christine Hayner, Wolf Prix, Ralph Rapson, Tobias Faber, David Lewis, Tsukasa Yamashita, Ken DeMays, Larry Young, Tom Wang, Charles R. Edmon, Terry R. Fink, David Goding, M. Ichael Sorkin, Philip Thiel, and Anthony Ames.

Jocelyn Castle Institute for Sustainable Communities. The College of Architecture houses the Joelyn Castle Institute for Sustainable Communities, created in 1996, the Institute focuses on the built environment to promote sustainable development. Through the Institute, through its education, research, and outreach programs, seeks to improve the capacity of communities to address issues of environmental concern in harmony with economic development.

College of Arts and Sciences

The College of Arts and Sciences offers graduate degrees in nature and physical sciences, social sciences, and the arts and humanities. Every department has a Chair of the Graduate Committee who will assist students interested in pursuing graduate study in that department. Students should consult the individual department’s listing in the Graduate Studies Bulletin for the name of the Chair and other information. Students should check specific departmental guidelines concerning options offered for each degree. Criteria for admission (i.e., Graduate Record Examination) are variable and are described in the specific departmental sections of this Bulletin.

Natural and Physical Sciences

The School of Biological Sciences offers the MS and PhD degrees through two major divisions: I. The Section of Ecology and Organismal Biology; and II. The Section of Genetics, Cellular and Molecular Biology. Affiliated faculty from the departments of Agronomy, Biochemistry, Chemistry, Plant Pathology, and Psychology; the School of Natural Resources; and the State Museum are actively involved in the graduate program. Students have opportunities to develop course work and diverse research interactions through graduate research emphasis groups.

The Department of Chemistry offers the MS and PhD degrees in all of the traditional areas of chemistry (analytical, bio-, inorganic, organic, and physical) as well as in a number of more specialized and interdisciplinary areas, including: molecular recognition, surface science, materials, polymers, solid state, organometallics, mechanism-based enzyme inhibition, natural products synthesis, biophysical, bioanalytical, environmental science, clinical chemistry, mass spectrometry, molecular biology, and photochemistry. An high priority is placed on treating each student as an individual while providing an environment for maximum professional development.

The Department of Computer Science and Engineering offers the MS and PhD degrees. Computer engineering is available as a specialization under the MS program and as a doctor of philosophy program under the Unified Engineering PhD Program. A concentration in software engineering is available under
the master of engineering (M Eng) degree. A cooperative PhD program is also offered with the Department of Mathematics and Statistics.

The Department of Geosciences offers the MS and PhD degrees in most sub-disciplines of geosciences. But with particular emphasis on hydrogeology/environmental geology, micropaleontology/vertebrate paleontology, structural geology/petrology, meteorology/climatology, sedimentary geology, geomorphology, quaternary geology and excellent facilities for analytical geochemistry, and electron/optical microscopy and cooperative work with State Geological Survey and State Museum, and University Research Centers in Water and Materials Science.

The Department of Mathematics and Statistics offers the MA, MS, MAT, and PhD, and has nationally recognized faculty in algebra, analysis, coding theory, discrete mathematics, differential equations, applied mathematics, and statistics. The Department prides itself in teaching, mentoring, and training its graduate students and placing them in the positions they desire. In this regard, the department has been especially successful with women students, receiving the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring in recognition of its accomplishments.

The Department of Physics and Astronomy offers the MS and PhD degrees in physics or astronomy with strong theoretical and experimental research programs in atomic, molecular, and optical physics, condensed matter and materials physics, astronomy and astrophysics, high energy physics, and physics education.

Social Sciences

The Department of Anthropology and Geography offers the MA in anthropology, and MA and PhD degrees in geography. The MA in Anthropology offers a science-based course of study, emphasizing preparation for a career in anthropology or for entrance into a doctoral program. Anthropology programs feature Plains archaeology and ethnology, historic and cultural resource management, archaeology, applied and developmental anthropology, and behavioral, ecological and evolutionary approaches to human behavior. Geography degrees emphasize environmental geography, geographic information analysis (GIS, remote sensing, cartography), historical-cultural geography, regional geography, and person-environment behavior and relations. Community and regional planning is offered as a PhD specialization in geography, and an anthropology PhD specialization in geography is planned. The Department sponsors internships, and offers teaching and research assistantships.

The Department of History prepares students for careers in research, teaching, and advancement through its MA and PhD degrees. Every effort is made to provide the creative environment to sustain a community of scholars carefully structured and individualized graduate programs afford maximum personal contact and consultation between graduate students and professors in seminars, directed individual readings, lecture courses, and supervised thesis research and writing.

The Department of Political Science offers the MA and PhD in the following areas of concentration: American politics, comparative politics, international relations, methodology, political theory, public administration, and public policy. The Department also offers a graduate certificate program in public policy analysis and a joint M/A/JD program in cooperation with the College of Law.

The Department of Psychology offers PhD work in clinical (with subspecialties in alcohol-substance abuse, child and family, psychopathology, family violence, mental health policy, treatment policy and outcome, forensic, and individually designed concentrations), law, psychology, biopsychology, cognitive psychology, developmental psychology, and social/personality psychology. Well-qualified students, whose goal is the PhD, are recruited; students desiring only an MA are not accepted.

The Department of Sociology offers the MA and PhD. The Department provides training in pure and applied research. At the MA level, students study methods and theory and pursue a broad course of study before writing a thesis. Doctoral candidates develop two specialties, choosing from approximately twenty substantive areas. The Department offers especially strong programs in family, criminology/deviance, health, social psychology, and social inequality (race, class, and sex).

The Department of Communication Studies offers the MA and PhD to develop students' knowledge about the patterns, forms, effects, and history of human communication. The program is built around five areas: communication and culture, instructional communication, interpersonal communication, organizational communication, and rhetorical and communication theory. Students have the opportunity to do original research, design with consultation their program of study to fit their individual needs, and acquire an education in the diverse perspectives in the discipline. The Department also offers an MA specializing in marketing, communication studies and advertising.

Humanities

The Department of Classics and Religious Studies offers the MA degree with concentration in either Greek or Latin. An undergraduate major in Greek or Latin is normally required.

The Department of English offers the MA and PhD in the major areas of British and American literatures, especially medieval and Renaissance; 19th century; Great Plains multicultural and women's literature, and creative writing, composition, and rhetoric.

The Department of Modern Languages and Literatures offers the MA and PhD degrees in French, German, and Spanish. Programs continue advanced work in the student's primary language, courses in literature, criticism and linguistics, interdisciplinary work in other fields or languages, and independent study and research.

The Department of Philosophy offers the MA and PhD degrees with a primarily analytic orientation, providing the opportunity to pursue advanced research in all the major areas of philosophy, including the history of philosophy.

About the College

- The College of Business Administration was a charter member of the American Assembly of Collegiate Schools of Business in 1916.
- With 2,600 undergraduate students and nine majors, the College of Business Administration is the second largest of the eight colleges at the University of Nebraska-Lincoln.
- The graduate student population includes 75 PhD students, 185 M BA students, 40 M PA students, and 35 M A students.
- The Coe Computer Center and the Writing Center are for students in the College of Business Administration.
- Masters programs fully accredited by the American Assembly of Collegiate Schools of Business (AACSB) are: master of arts, master of business administration, master of business administration/juris doctorate, and master of business administration/master of architecture.
- Course work may be taken in the Agribusiness Program, School of Accountancy, International Business Program, and Departments of Economics, Finance, Management, and Marketing.
- Students benefit from College-affiliated research and teaching programs, including the Bureau of Business Research, Center for Productivity and Entrepreneurship, Center for Economic Education, Center for Research in Economic Education, Cornhusker Funds, the Center for Financial Services, and the Nebraska Council on Economic Education.
- CBA's School of Accountancy was established in 1982 and is a member of the Federation of Schools of Accountancy. It has separately accredited undergraduate and master of professional accountancy (M PA) programs. In 1988, the College established a master of professional accountancy/juris doctorate (M PA/JD).
- In 1988-89, the master of business administration/master of architecture program was established.
- In 1998-99, the master of business administration with a specialization in information and software systems was established as part of the J.D. Edwards program.
- The College has full-time faculty members with a total faculty and staff of 150. All full-time permanent faculty members are recipients of, or candidates for, doctor of philosophy degrees from leading universities in the United States and abroad.
- The College publishes the Quarterly Journal of Business and Economics, a nationally recognized business research journal, as well as Business in Nebraska, Benefits Quarterly, Regional Science Perspectives, and The Journal of Economic Issues.
- A new addition to the College of Business Administration building provides the most modern teaching and research facilities on campus.
History of the College

Students have been taking business courses at the University of Nebraska-Lincoln for almost 90 years. A School of Commerce was created in 1913, followed by a College of Business Administration in 1919. In 1916, before the College received official status from the Legislature, it had been admitted as a charter member of the American Assembly of Collegiate Schools of Business—the same year Harvard, Northwestern, and the University of Texas joined the assembly.

Enrollment in the College of Business Administration has grown significantly in recent years due to its commitment to excellence, as exemplified by internationally known faculty. Its excellent Coe Computer Center and Writing Center, the Study Abrid Programs, Visiting Scholars and Executive Programs, student organizations, and a variety of in-house research resources.

Degree Programs and Objectives

The mission of the College of Business Administration is to foster intellectual curiosity and business insight by providing high quality instruction, research and service to our students, the citizens of Nebraska, and to the national and international communities we serve. The overall objective of graduate programs is to prepare students as researchers, teachers and professional managers to make contributions in their field of study.

The undergraduate program in the College of Business Administration provides students with a broad academic background in mathematics, written and oral communication, computer science, humanities, social sciences, and natural sciences. Students learn about the functions of business organization and management, develop an understanding of important business institutions and their economic environments. In addition, students are encouraged to learn foreign languages and to participate in a semester of study abroad to better prepare them to function in a global economy.

Masters students within the College are preparing for professional careers in accounting, economics, finance, management, marketing, or a combination of these. Local, state, and national organizations recruit graduates with expertise in these areas from the College.

Doctoral students prepare for academic teaching and research positions as well as specialized careers in profit, regulatory, and nonprofit businesses. In addition to receiving teaching and research training, doctoral students can expect the opportunity to teach undergraduate classes.

To fulfill the College's research objective, faculty members are expected to do research and publish in professional journals. During the five-year period reviewed during the College's last accreditation, the College of Business Administration faculty researched, wrote, and published 450 refereed journal articles, 210 contributions to books, and over 400 papers presented at professional meetings.

The College fulfills its public service objective through its faculty and its Bureau for Business Research, Center for Productivity and Entrepreneurship, Center for Economic Education, International Center for Franchise Studies, Nebraska Business Development Center, and the Nebraska Council on Economic Education.

Accreditation

Baccalaureate, masters, and doctoral degree programs in business are fully accredited by the American Assembly of Collegiate Schools of Business (AACSB), the national accrediting agency for schools and colleges of business administration. The School of Accountancy's degree programs have accounting accreditation by AACSB.

College of Engineering and Technology

Teaching, research, and service are vital parts of graduate studies in the College of Engineering and Technology. Applied and basic research projects fulfill educational roles in teaching students and showing them how to perform independent studies. They also encourage faculty and students to pursue scholarly achievements in searching for new knowledge and in solving engineering problems.

The College of Engineering and Technology faculty have degrees from a wide variety of locations, including nearly every major research university in the U.S. and Canada. Nearly 100 percent of engineering faculty have Ph.D.'s and are engaged in active research and graduate instruction.

Programs of Study

The College of Engineering and Technology administers programs on both the Lincoln and Omaha campuses. The College offers undergraduate and graduate programs in engineering and undergraduate programs in construction management and engineering technology. Approximately 1,500 undergraduates study engineering or construction management on the Lincoln campus and another 860 students study engineering and technology on the Omaha campus. The College's programs provide students with solid foundations necessary for challenging and rewarding careers in a society experiencing dramatic technological change.

Approximately 550 graduate students are pursuing M.S. or Ph.D. degrees in engineering. The majority of these students study on the Lincoln campus. The teaching and research assistantships available for these students range from $8,500 to $15,000 per year depending on the field and duties. Tuition remission is available in many of these cases. Graduate students in engineering have also been notably successful in obtaining fellowships available at the University, corporate, and national levels. Among these are NSF, DOE, and U.S. Army fellowships.

M.Eng., M.S. and Ph.D. degrees in engineering are granted by the Graduate College. The Master of Engineering degree program offers a choice of three areas of concentration: engineering management, software engineering, or telecommunications engineering. Masters of science programs are available in engineering mechanics, industrial and biological systems, chemical, civil, computer, electrical, industrial and management systems, manufacturing, and mechanical engineering. Eight doctoral fields are available: agricultural engineering; chemical and materials engineering; civil engineering; electrical engineering; engineering mechanics; industrial, management systems, and manufacturing engineering; mechanical engineering; and electrical and systems (computer) engineering. Masters and doctoral programs are arranged through faculty in the various departments and research centers.

Facilities

The College of Engineering and Technology maintains spacious, modern laboratories for research and teaching in all the fields and academic disciplines listed above. Technicians-staffed machine shops, including foundry and carpentry facilities, and a technician-staffed electronics shop repair, maintain, and develop the necessary instrumentation for the research and teaching activities of the College. In addition to the College's shops and laboratories, the Department of Biological Systems Engineering operates extensive laboratory and field research facilities across the state.

Extensive computational facilities include a wide variety of networked microcomputers, minicomputers, and superminicomputers with access to central mainframes and MIDnet, which ties to NSFnet, a supercomputer network. Graduate students have access to many workshops and academic courses in computational methods through the Academic Computing Resource Center and the academic departments.

The Engineering Library is a Government Printing Office and Patent Depository. Its holdings include over 380,000 books, 1,000 journals, and 370,000 microfiche items. It contains the major archival journals, references, and texts of the various fields. The Engineering and other University libraries also provide computer literature searching and participate in an interlibrary loan system for rapid access to references not available locally.

The Walter Scott Engineering Complex houses modern research and teaching laboratories for civil, electrical, industrial, and mechanical engineering, along with those of engineering mechanics. The Walter Scott complex is the principal site of the annual Engineering and Technology Week Open House in which student and faculty projects are displayed to the public. In addition, the College has laboratory and classroom facilities in Avery Hall, L.W. Chase Hall, Bancroft Hall, and Nebraska Hall.

Other Center Involvement

College of Engineering and Technology faculty and graduate students are also intimately involved in research activities of several University-wide centers. These include the Water Center, the Center for Biotechnology, the Industrial Agricultural Products Center, and the Food Processing Center. These are described in other parts of this Bulletin. These centers and the Engineering Research Centers, in conjunction with the interdisciplinary approach to graduate studies, offers students at UNL unique opportunities to develop exceptionally strong graduate programs geared toward societies increasingly complex social and technical problems.
Hixon-Lied College of Fine and Performing Arts

The Hixon-Lied College of Fine and Performing Arts was established in 1993 to provide a greater focus on the arts at UNL. The College is comprised of the Department of Art and Art History, the School of Music, the Department of Theatre Arts, and the Mary Riepma Ross Film Theater. In addition, the Great Plains Art Collection, the Lentz Center for Asian Culture, the Lied Center for Performing Arts, and the Sheldon Memorial Art Gallery and Sculpture Gardens are affiliated with the College.

The College is committed to facilitating the interaction between the many arts entities on campus to providing students with a high quality education and many opportunities to participate in cultural activities, and to nurturing scholarly research and creative productivity in the arts.

The Hixon-Lied College of Fine and Performing Arts offers graduate degrees in each of the three departments.

The Department of Art and Art History is accredited institutional member of the National Association of Schools of Art and Design and offers a 60 credit hour MFA program in ceramics, drawing, painting, photography, printmaking, sculpture, textile arts, graphic design, or a combination of these. Individual studio spaces are provided.

The School of Music is an accredited institutional member of the National Association of Schools of Music and offers the MM and DMA degrees. Three options at the masters level include: composition/music theory/music history, music education, and performance. The music education and performance options are 36-hour programs consisting of music theory/music history, music education, and performance. The doctoral degree is offered in performance, conducting or composition. An audition is required for admission.

The Department of Theatre Arts is an accredited member of the National Association of Schools of Theatre and offers the MFA degree, a 3-year program in acting, directing, and design/technology.

Additional information about each degree, including criteria for admission and specific departmental guidelines concerning degree options, is provided in the individual departmental sections of this Bulletin. Students should also consult the Chair of the Graduate Committee in the individual department or school who can provide more detailed and specific information regarding particular degree requirements.

College of Human Resources and Family Sciences

About the College

• Among the largest family and consumer sciences programs in the nation.

Degree Programs and Objectives

The mission of the College of Human Resources and Family Sciences is to develop the critical thinking and problem-solving skills of professionals who will, in turn, help individuals, families, and communities to live more fulfilling lives. The College provides a greater focus on the arts at UNL by offering the following degree programs:

• Bachelor of Science in Family and Consumer Sciences
• Bachelor of Science in Nutrition and Dietetics
• Bachelor of Science in Textiles
• Bachelor of Science in Clothing and Design

The College includes three departments responsible for instruction, development, and coordination of home economics extension activities for the State of Nebraska, and research in the areas of economic, physical, and psychosocial well-being of individuals and families. The departments are Family and Consumer Science, Nutrition Science, and Textiles, Clothing and Design.

History of the College

The first courses in home economics at the University of Nebraska were offered in 1894. In 1898 a School of Domestic Science became part of the Industrial School. In 1909, the Department of Home Economics was established at the University. In 1912, the Department of Home Economics was renamed the College of Home Economics. In 1962, it became the College of Human and Family Sciences. In 1970, the College of Human and Family Sciences became a College of the University.

Facilities

Facilities for the College of Human Resources and Family Sciences are located on the University of Nebraska-Lincoln East Campus. They include the Home Economics Building, Ruth Leverton Hall, Ruth Staples Child Development Laboratory, Design Studios, and the Robert Hillestad Textiles Gallery. Additionally, there are facilities for College of Human Resources and Family Sciences programs in the Arts and Sciences Hall on the University of Nebraska at Omaha campus.

Organization

The College includes three departments responsible for instruction, development, and coordination of home economics extension activities for the State of Nebraska, and research in the areas of economic, physical, and psychosocial well-being of individuals and families. The departments are Family and Consumer Science, Nutrition Science, and Textiles, Clothing and Design.
The College offers programs leading to a master of science in the interdepartmental human resources and family sciences area, in family and consumer sciences, in nutrition science, and dietetics, as well as master of arts or master of science in textiles, clothing and design. All departments in the College offer programs leading to a doctor of philosophy in the interdepartmental human resources and family sciences.

For students interested primarily in a career in mass communications, the Interdepartmental Area of N umerical Applications leads to a degree in the mass media industry, and the degree of master of science in the field of the mass media will continue to escalate in the mass media industry, and the degree of master of science in the field of the mass media will continue to escalate in the mass media industry. The prediction is that a shortage of qualified journalists will continue and the student goals. The program provides a supporting minor.

The master of arts in journalism program was first nationally accredited in 1979 when it became the second such program in the country to receive this recognition. That following year it received recommendation from the National Academy of Accrediting Council visiting team for the UNL campus.

The College of Law

The University of Nebraska-Lincoln College of Law offers a program of legal education designed to prepare its students to meet the diverse and complex challenges they will confront during their professional careers. In the relatively intimate environment of a small law school, students prepare themselves for the practice of law or other professional careers. The experiences of College of Law alumni illustrate the range of opportunities available and the strength of the educational programs of the College.

The College of Law was formed in 1888 and became a part of the University of Nebraska in 1893. It was among the first schools fully accredited by the American Bar Association and was a charter member of the Association of American Law Schools. One of its early deans, native Nebraskan R. Osceola Pound, subsequently served as Dean of the Harvard Law School and earned a reputation as one of the foremost legal scholars and educators in legal education.

From Dean Pound's tenure to the present, the College of Law has been the professional home of an energetic and nationally recognized faculty. The current professors are strongly committed to both good teaching and active scholarship. Not only do students have the opportunity to take classes from experts who are shaping the law, but in the informal atmosphere of the College, students have easy access to faculty members outside of the classroom.

The College is committed to an educational program designed to permit students to pursue their individual interests within the context of a sound foundation in law and legal process. Most graduates of the College engage in some aspect of the legal profession. This requires not only a grounding in substantive and procedural law, but also the capacity for intellectual rigor and analysis and a background in human affairs upon which to draw in making professional judgments. The curriculum at the College is designed to provide the student with an opportunity to acquire professional knowledge and skills.

A number of graduates from major law schools, including Nebraska, do not ultimately enter the private practice of law, but engage in careers for which their legal education provides a significant advantage, such as business administration, journalism, and government service. The College offers a flexible curriculum in order to accommodate the widely differing goals of its student body. Few courses are required after the first-year program. Students are permitted to take some graduate-level courses in other disciplines within the University for law school credit. In addition to a number of joint degree programs with other colleges at the University, the College of Law is willing to structure joint degree programs on an individual basis for students interested in pursuing interdisciplinary work.

Located on the University's East Campus, the College of Law offers the best in modern facilities, including an academic courtroom, offices for student activities, an extensive library, and student lounges.

The Sherman S. Welpton Jr. Courtroom addition contains a fully equipped trial courtroom complete with a jury room, conference room, judge's chambers, and a law office classroom, as well as the College's clinical education program. Equipped with closed-circuit television and video technology, this facility enables the College of Law to continue its tradition of offering the finest in practical skills training.

The student body, composed of approximately 400 students, includes graduates of over 100 colleges and universities. Our students are ambitious, diligent, and able individuals with diverse interests and talents. Women now constitute approximately 46 percent of the total student body and minority students about 9 percent.

The success of any program of legal education is measured in the accomplishments of its alumni. Throughout the history of the College, its graduates have made their mark in many different fields throughout the United States. More than 60 percent of the lawyers and judges practicing in Nebraska are alumni of the College. Outside of the Omaha metropolitan area, the figure is 80 percent. Nebraska alumni can be found in sophisticated major law firms and smaller, more specialized firms in almost every large metropolitan area in the country. From Wall Street to Los Angeles and from Minneapolis to Dallas, Illustratively, Nebraska alumni have served as Chief Justice of the Nebraska Supreme Court and Court of Appeals, as Governor of Nebraska and Wyoming, as Attorney General of Nebraska and California, as Solicitor General of the United States, as federal and state judge at the district and Courts of Appeals levels, in the Senate and House of Representatives, as chair of a federal administrative agency, and as Special Assistant to the President of the United States.

The College continues to build on this tradition of excellence and is recognized as one of the major law schools in the midwest.

Schmid Law Library

The Marvin and Virginia Schmid Law Library provides an excellent atmosphere for study and research. With its collection of over 208,000 volumes and 2.2 million volumes, the library is the largest law library in the State. Within the Library is the Great Plains Tax Library, which contains the materials necessary for in-depth tax research. The Library is also a selected depository for United States government publications. Equipment and facilities are available for using microforms, audio and video materials, CD-ROM network, the Internet, and the LEXIS and WEST LAW computerized research systems. Law students have access to personal computers and printers in the computer laboratory. The Library's Wilber S. Aten Computer Lab is equipped with a cable hook-up.
Admission to the College of Law

Because the number of applications far exceeds the number of places in each year's entering class, the College can accept only a fraction of those who apply.

In making its decisions, the Committee seeks to identify those individuals who have the ability to compete successfully in a rigorous academic environment.

The major factors that the Admissions Committee considers are the applicant's score on the Law School Admission Test (LSAT) and the applicant's undergraduate grade point average. But that is not to say that admission decisions are simply a function of the numbers.

The Committee also takes into account any upward (or downward) trend in the applicant's academic performance over time and considers the quality of the applicant's undergraduate institution, course of study, personal statement, work experiences, graduate study, extracurricular activities, letters of recommendation, and any other information supplied by the applicant.

Transcripts that have a number of pass/fail courses are often difficult to evaluate, and applicants with a large number of such courses may be at a disadvantage in the admissions process.

Although a majority of the students at the College of Law are residents of Nebraska, the College welcomes applications from students who are not residents of Nebraska. The College takes special care in evaluating applications from members of minority groups that have not been well-represented in the legal profession. The College participates in the CLEO program.

With the exception of those who are applying for admission pursuant to the Combined 3-3 Program, applicants ordinarily must have a bachelor's degree or must have completed all requirements for a bachelor's degree before they begin their first year of study at the College of Law. For further information on the application process, please contact the College of Law Admission Office.

Considerable financial support is available to graduate students in Teachers College. Most support is provided through graduate assistantships and instructorships, which also allow opportunity for developing professional skills and knowledge. Awards are made through the departments of the College and applications should be made accordingly.

The faculty of Teachers College offers master's, educational specialist, and doctoral degrees through the five departments of the College: curriculum and instruction, educational administration, educational psychology, health and human performance, and special education and communication disorders. Please reference the departmental programs included in this bulletin for specific information. Additional information may be obtained from the chairs and graduate committee chairs in each of the departments. The Teachers College Graduate Student Services Center can also assist with inquiries regarding TC graduate programs. (Phone 402-472-5333; email tgrad2@unl.edu; Web site tc.unl.edu/grad).

The work of the College is guided by a College Mission Statement, which includes the following commitments: 1) to conduct teaching programs that prepare scholar-practitioners who can produce and benefit from research; 2) to conduct research that adds to the knowledge base; 3) to provide leadership to the definition of educational issues and directions and the resolution of important educational problems; and 4) to hold standards of excellence in all the College's work. The Teachers College "Multicultural Enrichment Plan" dedicates the College to work recognizing the values of cultural diversity and on behalf of all learners.

Graduate programs in the College are based on the scholar-practitioner model. In this model the scholar is defined as one who understands the nature of a discipline and how new information is created and adapted. The practitioner is one who understands the context and dynamics operating in the practical world of work. The strength of the relationship between scholarship and practice enhances and supports the continuous development and growth of the professional educator.

All graduate programs in the College support the growth of the student both as a scholar and as a practitioner and are aimed at producing professionals who can produce and benefit from a strong interaction between these two roles. Programs immerse students both in the world of scholarship and research and in the world of improvement of practice. Programs in the College include attention to the development of research skills, multicultural education, common studies relevant to the processes of educating, and practicum experiences.

Graduates of master's, educational specialist, and doctoral programs in Teachers College work in a wide variety of professional positions. While many of these positions are school-based, others are in non-school settings in which educational programs are conducted. Graduates work as professors in higher education institutions, educational administrators in schools, postsecondary institutions, agencies, and businesses, counselors, speech-language pathologists, and school psychologists in schools, agencies, and private practice; instructional leaders in K-12 schools, community colleges, health care agencies, and non-traditional education organizations; and research scientists.
Courses of Instruction

NOTE Regarding Courses: Courses listed with a single asterisk (*) are open to graduate students only and do not have a counterpart undergraduate number.

NOTE Regarding Faculty: In the faculty listings, the single asterisk (*) designates the faculty member as a Graduate Faculty Member and the double asterisk (**) designates the faculty member as a Graduate Faculty Fellow. While no asterisk by the faculty member's name indicates they are a Graduate Faculty Associate. The date following each faculty name represents the year that person was appointed to the University Faculty.

Actuarial Science

(Interdepartmental Area)

Program Director: Colin M. Ramsay, Ph.D., Director
Area Committee: Professors Ramsay (chair), Logan, Rejda
Departments Cooperating: Economics, Finance, and Mathematics and Statistics

The University of Nebraska–Lincoln offers a complete program in actuarial science. The graduate program in actuarial science at UNL is open to students with undergraduate degrees in a variety of disciplines. No previous course work in actuarial science is required.

Students seeking admission to the actuarial science program:
1. Submit proof of any Society of Actuaries exams passed.
2. Must submit an official University transcript. Applicants are expected to have a cumulative grade point average (GPA) of at least 3.0 on the 4-point scale (with A = 4 points).
3. Must submit three letters of reference from persons who are familiar with their academic ability. The person who writes the letter must use the J. duarial Science Graduate Reference form. Each applicant must also complete and return the Actuarial Science Graduate Reference form.
4. Applicants whose first language is not English must submit a Test of English as a Foreign Language (TOEFL). A applicant who does not meet the TOEFL score requirement must pass ACT’s Academic Transcripts Office, 1100 Seaton Hall, before the end of the second semester has been completed. Students should check with the Graduate Studies Office for further clarification.

The following courses cannot be included as a part of your memorandum of courses:

ECO N 815, 816, 819, 837 and 854
MATH 800, 813, 814, 820, 821, and 822
STAT 880, 881
CSC 840

Masters Degree Program: The masters degree program must be completed without a thesis (Option II) and must complete the 400 level major courses without 400 or lower level coursework. A total of 36 hours is required.

In place of the usual major and minor requirements, the masters program must include: MATH 840, 870, 871, and FINA 812, and at least 6 additional hours from actuarial science. The program must include at least 12 hours earned in courses open exclusively to graduate students (900-level courses or 800-level courses without 400 or lower level coursework). Minor in actuarial science, economics (non-insurance), or finance. These minors are subject to the approval of the Actuarial Science Graduate Committee. Students must complete at least 9 hours in the minor area in addition to the major requirements cited above.

Grades: It should be noted that within the actuarial science program the normal graduate school scholarship requirement, "B" or better, applies to all 800-level and minor courses. The normal graduate school scholarship requirement, "C" or better, for 900-level courses remains the same for the actuarial degree program. However, a student who receives a "C" grade or lower in his/her minor area may be required to take a Comprehensive Exam in the minor area.

Memorandum of Courses: The Memorandum of Courses, which contains the proposed list of courses for the student's graduate program, must be filed with the Graduate Studies Office, 1100 Seaton Hall, before the end of the second semester has been completed. Students should check with the Graduate Studies Office for further clarification.

The following courses cannot be included as a part of your memorandum of courses:

ECO N 815, 816, 819, 837 and 854
MATH 800, 813, 814, 820, 821, and 822
STAT 880, 881
CSC 840

Comprehensive Examinations: Masters degree students will be expected to pass a written comprehensive examination on actuarial science. The Actuarial Science Comprehensive Exam for students graduating in May or August is held on the first Tuesday of April and for students graduating in December on the Tuesday before Thanksgiving (November). Students may be expected to pass another written comprehensive examination on their minor area. Check with your minor department. In addition, an oral examination may be required.

Actuarial Science as a Minor: Students enrolled in other departments may choose to use actuarial science as their minor area under Option II. A minor in actuarial science must include MATH 840, 870, 871, and 873. Students wishing to take this minor should contact the chair or adviser of their major area and the Director of the Actuarial Science Program.

Faculty

**Logan, David - 1981; Professor; BS 1966, MS 1968, PhD 1970 Ohio State
**Mashayekhi, Mostafa - 1991; Assistant Professor; BS 1975, MSc 1976 London, PhD 1990 Michigan State
**Ramsay, Colin M. - 1986; E.J. Faulkner Professor and Director; BS 1979, M Mat at 1980, PhD 1984 Waterloo
**Rejda, George E. - 1963; V.T. Skutt Professor; BS 1957, MA 1958 Creighton; PhD 1961 Pennsylvania

Courses (ACT S)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>810. Introduction to Credibility Theory and Simulation</td>
<td>3 cr</td>
<td>Lec</td>
<td>Prereq: STAT 883 or permission. Basic simulation methods, outcomes under a stochastic model, limited fluctuation credibility, Bayesian analysis, and the Bühlmann-Straub credibility model.</td>
</tr>
<tr>
<td>825. Survival Models</td>
<td>3 cr</td>
<td>Lec</td>
<td>Prereq: STAT 883 with grade of C or better. Parametric and tabular survival models. Estimation based on observations which may not be complete. Concomitant variables. Use of population data. Applications to groups of impaired lives.</td>
</tr>
<tr>
<td>830. Actuarial Forecasting Techniques</td>
<td>3 cr</td>
<td>Lec</td>
<td>Prereq: STAT 883 or permission. Prepares students for Exam 120 of the Society of Actuaries. Introduction to model building and forecasting in actuarial science. Simple and multiple regression, instrumental variables, and time series methods. Application of these methods in forecasting actuarial variables such as interest rates, inflation rates, and claim frequencies.</td>
</tr>
<tr>
<td>840. Theory of Interest</td>
<td>3 cr</td>
<td>Lec</td>
<td>Prereq: or parallel: MATH 208 with a grade of C or better. Basic measures of interest; annuities certain; amortization schedules, sinking funds, bonds and installment loans.</td>
</tr>
<tr>
<td>842. Principles of Pension Valuation</td>
<td>3 cr</td>
<td>Lec</td>
<td>Prereq: ACT S 871 with a grade of C or better. Actuarial cost methods. Determination of normal costs and accrued liabilities. Effect of valuation results due to changes in experience, assumptions, and plan provisions. Valuation of ancillary benefits. Determination of actuarially equivalent benefits at early or postponed retirement and optional forms of payment.</td>
</tr>
</tbody>
</table>
Admission decisions for the M S and PhD programs are based on the applicant's likelihood of success in graduate work as evidenced by previous academic performance, letters of recommendation and GRE scores. No one consideration is determining, although applicants generally must have earned an overall GPA of 3.25 with a 3.5 the last two years of academic work. Performance in agricultural economics, economics, mathematics, statistics, and related courses is given special consideration.

All applicants must submit GRE (General) scores; there is no predetermined minimum score. International students are required to submit TOEFL scores unless they have received a degree in which English was the medium of instruction. The minimum acceptable score is 550.

Applicants for the master of science in agricultural economics must have completed intermediate macro- and microeconomics, introductory statistics, and one semester of analytical geometry/calculus.

The master of science degree requirements include orientation to research, micro- and macroeconomics and econometrics.

The M BA with specialization in agribusiness is a 48 credit hour degree program. The 18 credit hour core includes management accounting, management finance, managerial economics, marketing management, organizational behavior, and operations and information systems. In addition, all students must complete 12 credit hours of cross functional courses, 9 credit hours of breadth courses, and 9 credit hours of agricultural economics electives.

Applicants for the doctor of philosophy normally will have a master of science degree in agricultural economics or a related field. They must have completed math equivalent to the three-semester analytical geometry/calculus sequence taught at the University of Nebraska-Lincoln.

Doctor of philosophy candidates must include in their program of study one year of each of the following advanced econometrics, advanced microeconomics, and advanced macroeconomics. In addition, they must complete three AECN 901 courses and two AECN 902 courses.

The department participates in two interdisciplinary programs. Students may participate in either the M S or PhD program. Masters students can also participate in the Water Resources Planning and Management program.

Minors

Master of Science Degree Minor. Successful completion of at least 9 credit hours of courses selected in consultation with the department of agricultural economics and the student's adviser. No more than a total of 3 credit hours may be in AECN 896.

Doctor of Philosophy Degree Minor. Successful completion of at least 16 credit hours of courses selected in consultation with the department of agricultural economics and the student's supervisory committee. No more than a total of 4 credit hours in AECN 896.

816. Agricultural Price Analysis (3 cr) Lec 3, Prereq: AECN 815 or ECON 813. Economic relationships among the forces that determine the demand, supply and prices, and the factors affecting them. Empirical methods applied in analyzing demand, supply, and prices, and the factors affecting them. Multiple projects, including interpreting the results to reinforce understanding of economic behavior.

817. Microeconomic Models and Applications (ECO 873) (1-4 cr) Lec 1. Prereq: AECN 201, ECON 373, MATH 104 or 105. For course description, see ECON 815.

818. Taxation-Farm and Ranch (ACCT, POLS 818; LAW 618/618G) (1-4 cr) Lec 3. Prereq: ECON 815 or AECN 813. For course description, see LAW 618/618G.

821. Orientation to Research (1 cr) Lec 1. Prereq: Permission. Introduction to approaches to agricultural economics research. Critical evaluation of agricultural economics literature. Identify an area of research interest and present a review of current literature in the area.

827. Static and Dynamic Optimization Methods (3 cr) Lec 3. Prereq: AECN 815 or permission. Optimization methods in economics, organized into modules each of which introduces the fundamental methods used in the analysis of a particular class of economic problems. Each module is taught within the framework of consumer, firm, or social welfare optimization problems.


841. Environmental Law (LAW 641/641G) (1 cr) Lec 1. For course description, see LAW 641/641G.

852. Agricultural Finance (3 cr) Lec 3. Prereq: AECN 201, or 8 hr accounting. Principles and concepts of financial management of farm and agricultural firms developed. Various strategies for acquiring and using capital resources by the individual farmer explored. Institutions providing the sources of agricultural credit are individually studied.

855. Environmental Law (3 cr) Lec 1. Prereq: AECN 357. Administrative law; risk assessment; environmental impact review; Clean Air Act; Clean Water Act; nonpoint source pollution control; wetlands; regulations; pesticide and toxic substance regulation; solid and hazardous waste regulation; drinking water protection; land use regulation; energy policy; international environmental law.


865. Resource and Environmental Economics II (3 cr) Lec 3. Prereq: AECN 900B or ECON 905. This course is identical to AECN 865. For course description, see AECN 865.

868. Advanced Resource and Environmental Economics (3 cr) Lec 3. Prereq: AECN 901B or ECON 905. Application of conceptual and empirical methods for analyzing resource programs. Both public and private dimensions of resource management are considered with emphasis on public policy. Economics of environmental quality, management of renewable and non-renewable resources, valuation of non-market goods and key elements of environmental policy analysis.

873. Microeconomic Models and Applications (ECO 873) (3 cr) Lec 3. Prereq: ECON 211, 212, and 215. This course is intended for M.A. option II students and others who do not plan to proceed to Ph.D. studies. For course description, see ECON 873.

876. Water Law, Planning and Policy (LAW 776/776G) (1-4 cr) For course description, see LAW 776/776G.

893. Law and Economics (LAW 693/693G) (1-4 cr) For course description, see LAW 693/693G.

899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser. For course description, see LAW 699/699G.

901. Directed Study of Advanced Topics in Agricultural Economics (3 cr ea, max 15) Lec 3. Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

921. Seminar in International Trade and Finance (ENT 921) (3 cr) Prereq: AECN 900C. For course description, see ENTO 921.

929. Becoming a Professional Scientist (ENT 929) (2 cr) Lec 2. For course description, see ENT 929.

Agriculture

810. Research Strategies in Agriculture (1 cr) Practical topics related to the planning, organization, administration, financing, and reporting of research in agriculture.

815. Comparative Public Administration: Development Administration and Politics in the Third World (POLIS 815) (3 cr) For course description, see POLIS 815.

Agronomy

Department Head: Kenneth G. Cassman, Ph.D. Graduate Committee: Associate Professor Drijber (chair); Professors Mason, Staswick, Weiss; Associate Professor Schacht; Assistant Professor Lindquist

Graduate programs in agronomy may be developed in plant breeding and genetics, soil science, crop physiology and production, range and forage management, and weed science. Applicants must meet the admission requirements for graduate study. An applicant must meet the departmental requirements described in the Graduate Programs. Foreign applicants must demonstrate English language proficiency. Applicants are required to send a letter of the chair of the Graduate Committee describing their background (vita preferred), experience, and personal and academic goals in pursuing graduate study. A Graduation Examination is not required. Previous academic training must indicate that the student has the scholastic potential to pursue graduate study. Although a background in the area of emphasis is desirable, promising students with degrees in other fields can usually complete basic prerequisites within one semester. A student admitted with deficiencies, as determined by the Graduate Committee, will be enrolled in a provisional status until the deficiencies are removed.

Each student pursuing the PhD degree in agronomy must complete a doctoral program approved by a supervisory committee. In addition to work required in the major field and a supporting courses in the general requirements of the Graduate College, see “Requirements for Graduate Degrees” on page 15, the student, with the approval of the supervisory committee, must fulfill one of the following requirements: a study in one collateral field (9 hours minimum), or b) a special research technique. The supervisory committee will determine the courses which must be completed in the collateral field, or the topic for the research technique.
Specializations

Specializations available at the masters level: Agricultural Meteorology; Crop Physiology and Production; Environmental Studies; Great Plains Studies, Plant Breeding and Genetics; Range and Forage Science; Soil and Water Sciences; Weed Science; Water Resources Planning and Management.

Faculty

**Eskridge, Kent M.** - 1987; PhD 1990 Leipzig (Germany)

**Eastin, Jerry D.** - 1978; MS 1982 Southern Illinois; PhD 1987 Nebraska

**Mudd; PhD 1967 California Tech.**

**Blumenthal, Jurg M.** - 1991; Swiss Federal Institute of Technology (Zurich); PhD 1996 Minnesota

**Arkebauer, Timothy J.** - 1979 Michigan State; MS 1981 Florida; PhD 1987 Nebraska

**Anderson, Bruce E.** - 1979; Professor; BS 1974 Maryland; MS 1970 Virginia Polytechnic Institute; PhD 1976 Maryland

**Moser, Lowell E.** - 1970; Professor; BS 1966 Nebraska

**Ferguson, Richard B.** - 1985; Professor; BS 1976 Friends; MS 1981, PhD 1985 Kansas State

**Foster, John E.** - 1991; Professor; BS 1964 Central Methodist; MS 1966 M Eizauri; PhD 1971 Purdue

**Francis, Charles A.** - 1977; Professor; BS 1961 California (Berkeley); MS 1967, PhD 1970 Cornell

**Gausorph, Roch E.** - 1991; Associate Professor; BS 1980, MS 1982 Southern Illinois; PhD 1988 Michigan State

**Wienhold, Brian J.** - 1998; Assistant Professor; BS 1974 North Dakota State; MS 1975, PhD 1979 Colorado State

**Graybosch, Robert A.** - 1987; Adjunct Professor; BS 1970; MS 1970 Colorado State; PhD 1975 Cornell

**Hertig, Gary W.** - 1979; Professor; BS 1967, MS 1970 Colorado State; PhD 1975 Cornell

**Hibbert, Ronald D.** - 1994; Adjunct Professor; BS 1971; MS 1976 Southwest State (Oklahoma); MS 1975, PhD 1977 Kansas State

**Hubbard, Kenneth G.** - 1981; Professor; BS 1971 Chadron; MS 1973 South Dakota School of Mines; PhD 1981 Utah State

**Jackson, David S.** - 1989; Associate Professor; BS 1984 Colorado State; MS 1986, PhD 1988 Texas A&M

**Knezevic, Stevan Z.** - 1998; Associate Professor; BS 1986 Belgrade, MS 1985 Joseph, PhD 1997 Kansas State

**Lee, Donold J.** - 1989; Associate Professor; BS 1981 Augustana; MS 1985 South Dakota State; PhD 1988 Montana State

**Lindqvist, John L.** - 1997; Assistant Professor; BS 1988 Montana State; MS 1994 Michigan; PhD 1997 Nebraska (Lincoln)

**Louda, Sata.** - 1984; Professor; BS 1965 Pomona; MS 1972 California (Santa Barbara); PhD 1974 California (Berkeley)

**Lyon, Drew J.** - 1993; Associate Professor; BS 1980 North Dakota; MS 1983, PhD 1988 Nebraska (Lincoln)

**MacKenzie, Sally P.** - 2000; Professor; BS 1981 California (Davis); MS 1984, PhD 1986 Florida

**Mamo, Martha** - 2000; Professor; BS 1989, MS 1992 Alabama A&M; MS 1997 Montana State

**Maravalle, Jerry W.** - 1967; Professor; BS 1962, MS 1964 Colorado State; MS 1967 Kansas State

**Markwell, John P.** - 1982; Professor; BS 1970 North Dakota State; PhD 1974 Kansas State

**Martin, Alexander R.** - 1972; Professor; BS 1964, MS 1966, PhD 1971 Ohio State

**Mason, Stephen C.** - 1974; Professor; BS 1971 Missouri State; MS 1976, PhD 1983 Purdue

**Masengile, Martin A.** - 1976; Professor; BS 1952 Western Kentucky; MS 1954, PhD 1956 N Carolina

**McCallister, Dennis L.** - 1980; Associate Professor; BS 1977 North Dakota State; MS 1977 Ohio State; PhD 1981 Texas A&M

**Merchant, James W.** - 1989; Professor; BS 1969 Towson State; MS 1973, PhD 1974 Kansas State

**Nelson, Darrell W.** - 1984; Professor and Dean, Agricultural & Natural Resources Division; BS 1961, MS 1963 Illinois; PhD 1967 Iowa State

**Nelson, Lenis A.** - 1970; Professor; BS 1962 South Dakota State; MS 1968, PhD 1970 North Dakota State

**Pedersen, Jeffrey F.** - 1999; Associate Professor; BS 1976 North Dakota State; MS 1978, PhD 1981 Agricultural & Natural Resources Division

**Powers, William L.** - 1980; Professor; BS 1958 Colorado State; MS 1962, PhD 1966 Iowa State

**Reece, Patrick E.** - 1978; Professor; BS 1965, MS 1968, PhD 1970 Purdue

**Roth, Fred W.** - 1975; Professor; BS 1964 Ohio State; MS 1967, PhD 1970 Nebraska (Lincoln)

**Rundquist, Donald C.** - 1992; Professor; BS 1967 Wisconsin; MS 1971 Nebraska (Lincoln); PhD 1977 Nebraska (Lincoln)

**Russell, W Ken** - 1999; Assistant Professor; BS 1976, MS 1977 Iowa State; PhD 1981 North Carolina State

**Schacht, Walter H.** - 1994; Associate Professor; BS 1975 Dana M; MS 1981 Nebraska (Lincoln); PhD 1986 Utah State

**Sheepers, James S.** - 1975; Adjunct Professor; BS 1968, MS 1970 Nebraska (Lincoln); PhD 1973 Illinois

**Shapiro, Charles A.** - 1976; Associate Professor; BS 1974 Cornell; MS 1978, PhD 1982 Nebraska (Lincoln)

**Shea, Patrick A.** - 1981; Professor; BS 1975 Fordham; MS 1979 Connecticut; PhD 1981 North Carolina State

**Skopp, Joseph M.** - 1980; Associate Professor; BS 1971 California (Davis); MS 1975 Arizona; PhD 1980 Wisconsin

**Spalding, Roy E.** - 1989; Professor; BS 1966 Kenyon; MS 1969 North Carolina; PhD 1972 Texas A&M

**Specht, James E.** - 1974; Professor; BS 1967 Nebraska (Lincoln); MS 1971 Illinois; PhD 1979 Nebraska (Lincoln)

**Staaswick, Paul A.** - 1985; Professor; BS 1978 Washington State; PhD 1992 Purdue

**Stubbendieck, James L.** - 1974; Professor; BS 1966, MS 1968 Nebraska (Lincoln); PhD 1974 Texas A&M

**Swartendruber, Dale.** - 1977; Emeritus Professor; BS 1950, MS 1952, PhD 1954 Iowa

**Varvel, Gary E.** - 1984; Associate and Assistant Professor; BS 1971 Chadron State; PhD 1977 Nebraska (Lincoln)

**Verma, Shashi.** - 1974; Professor; BS 1965 Ranchi (India); MS 1967 Colorado; PhD 1971 Colorado State

**Vogel, Kenneth P.** - 1974; Adjunct Professor; BS 1965, MS 1967 Colorado State; PhD 1974 Nebraska (Lincoln)

**Voilesky, Jerry D.** - 1995; Associate Professor; BS 1980 Dickinson State; MS 1982 North Dakota State; MS 1986 South Dakota State

**Waldren, Richard P.** - 1974; Professor; BS 1969, MS 1973 Kansas State; PhD 1977 Nebraska (Lincoln)

**Waller, Steven S.** - 1978; Professor; BS 1967 Virginia Tech; MS 1970 Purdue; PhD 1975 Texas A&M

**Walter-Shea, Elizabeth A.** - 1989; Associate Professor; BS 1978 Central Arkansas; MS 1981 Texas A&M; PhD 1987 Nebraska (Lincoln)

**Walters, Daniel T.** - 1984; Professor; BS 1973 Illinois; MS 1975 Illinois; PhD 1984 Minnesota

**Watkins, John E.** - 1982; Professor; BS 1968, MS 1970 Wyoming; PhD 1975 North Dakota State

**Watts, Darrell G.** - 1971; Professor; BS 1960 Oklahoma State; MS 1962 California; PhD 1975 Utah State

**Wicks, Gail A.** - 1958; Professor; BS 1954, M S 1959 South Dakota State

**Wienhold, Brian J.** - 1989; Adjunct Assistant Professor; BS 1982 M Eizauri (Morone); MS 1985 North Dakota State; PhD 1989 Arizona

**Wilhelm, Wallace W.** - 1976; Adjunct Professor; BS 1971 Wisconsin; MS 1973 Arizona; PhD 1976 Mississippi

**Willow, Donald A.** - 1977; Professor; BS 1967 Central Missouri State; MA 1969 Arizona State; PhD 1975 Nebraska (Lincoln)

**Wilson, Robert G., Jr.** - 1975; Professor; BS 1970, MS 1971 Nebraska (Lincoln); PhD 1975 Washington State

**Wortmann, Charles S.** - 2001; Assistant Professor; BS 1972, MS 1978, PhD 1987 Nebraska (Lincoln)
Courses (AGRO)

In addition to the courses listed below, BIOIMS 801 and 802 may be used as part of the course work constituting a major in agronomy.


804. Field Crop Physiology (2 cr) Lec 4. Prereq: AGRO 803 AGRO 803 (first eight weeks) and AGRO 804 (second eight weeks). This course is designed to study the relative importance of environmental versus physiological factors for plant phenomena.

805. Principles of Crop Physiology (2 cr) Lec 3, Lab 6. Prereq: BIO IMS 325 or equivalent course or permission. Techniques commonly used in agronomic or related crop research which primarily emphasizes whole-plant physiology.

807. Plant-Water Relations (NRES *807; BIO *817) (3 cr) Lec 3. Prereq: BIO IMS 325 or equivalent. MAT 106 recommended or permission. Quantitative study of water relations in the soil-plant-atmosphere system. Basic physical processes which describe the movement of water in the soil and the atmosphere, and the physiological processes which describe water movement inside the plant, studied in detail. Stomatal physiology and the effects of internal water deficits on photosynthesis, respiration, nitrogen metabolism, cell division and cell enlargement. Results from integrative models used to study the relative importance of environmental versus physiological factors for plant phenomena.

808. Microclimate: The Biological Environment (GEOG, HORT, METR, NRES, WATS 808) (3 cr) Lec 3. Prereq: BIOIMS 106 or equivalent. 3 hrs physics or permission. For course description, see NRES 808.

810. Plant Molecular Biology (BIOC, BIOS, HORT) *810 (3 cr) Lec 3. Prereq: AGRO 315 or BIOS 361, BIO MS 831 or permission. Molecular genetic basis of biological function in higher plants. Homeovers of gene expression, recombinant DNA, and genetic engineering principles. Material taken primarily from current literature.

811. Crop Genetic Engineering (1 cr) Prereq: AGRO 315 or BIOS 361, BIO MS 831 or permission. For course description, see NRES 808.

812. Crop and Weed Genetics (1 cr) A curation of classical and molecular genetic principles to the explanation of variation observed in plant families and population interpretations, information gathered from whole-plant phenotypic variation. An understanding of the basis of weed and crop species is the basis of the course.

814. Experiments in Genetics (1-3 cr) 1, II, II, III, Lab arr. Prereq: AGRO 315 or BIOS 361, BIOMS 201 or 801 and consent of cooperating faculty member. Opportunity to work on a research project conducting experiments in basic or applied plant genetics. Students work with the instructor in design and execution of the experiment, and are responsible for analysis and interpretation and reporting of the research results.

815. Plant Breeding: Principles and Practices (3 cr) Lec 3. Prereq: AGRO 315. Introduction to plant breeding methods and theory. Topics include identification of breeding objectives, acquisition of useful genetic variation, the power of selection and elite line detection, and how cultivars are released. Explanation of how genetic principles are used in the application and success of plant breeding methods. Critical role of allied sciences (e.g., cereal, chemistry, entomology, and statistics) highlighted.

816. Seed Physiology (HORT 816) (2 cr) Lec 2. Prereq: BIO MS 325 or equivalent course or permission. Morphological, physiological and biochemical processes that are basic to seeds.

818. Agricultural Biochemistry (BIOC *818) (2 cr) Prereq: Undergraduate major in life sciences or related area, and a course in biochemistry. A lab-based course. For course description, see BIOC 818.

819. Applications of Remote Sensing in Agriculture and Natural Resources (GEOG, GEOL 819, NRES 820) (4 cr) Lec 3, Lab 2. Prereq: GEOG/NRES 818 or permission. For course description, see GEOG 819.

820. Herbicide Technology (3 cr) Lec 3. Prereq: AGRO 131, 133, 220, CHEM 109, 251 or BIOC 221, BIO MS 325 recommended. Technical aspects of herbicide use, including chemistry of active ingredients and formulations, application techniques, introduction to mode of action and environmental fate, and survey of research techniques.


824. Plant Nutrition and Nutrient Management (HORT 824) (2 or 3 cr) Lec 1, Lab 12. Prereq: AGRO 825 or a basic course in plant physiology or permission. A course in organic chemistry or biochemistry helpful. Offered spring semesters of odd-numbered calendar years.

825. Turfgrass Science and Culture (HORT 825) (3 cr) Lec 3, Lab 12, Rec 2. Prereq: 9 hrs agricultural plant sciences and 3 hrs soil science. Offered odd-numbered calendar years. For course description, see HORT 825.

830. Phytopathology Principles (1 cr, max 8) Prereq: Permission. For course description, see GEOG 830.

831. J. Sorghum Diseases (1 cr) Prereq: AGRO 830 or an introductory plant pathology course. For course description, see NRES 831.

835. Agroecology (NRES 835) (3 cr II) Lec 3. Prereq: 12 hrs agriculture, biology, or environmental science. For course description, see NRES 835.

841. Forage and Range Physiology (HORT 841, R NGE 441) (2 cr) Lec 2, Lab 6. Prereq: AGRO 803. For course description, see R NGE 841.

842. Range Plants (R NGE 442) (3 cr) Lec 2, Lab 3. Prereq: 12 hrs agronomy or biological sciences. Comprehensive study of range plants important to range management and production, distribution, utilization, classification, identification (including classification by vegetative parts), and recognition of grasses, legumes, poisonous plants, and troublesome range weeds with major emphasis on grasses.

845. Livestock Management on Range and Pasture (ASC1 851, R NGE 445) (3 cr) Lec 2. Prereq: AGRO/ R NGE 240 or 340; ASC1 250. AE CM 201 recommended. For course description, see ASC1 851.

850. Climate and Society (GEOG, M ETR, NRES) *850 (3 cr) Lec 2. Prereq: M ETR 800 or 351 or equivalent permission. Offered spring semester of even-numbered calendar years. For course description, see R NGE 850.

861. Soil Physics (AGRO 455) (3 cr) Lec 2. Prereq: AGRO/ SOIL 153, CHEM 116 or 221 or equivalent. For course description, see SOIL 455.

864. Rangeland Analysis (R NGE 444) (3 cr) Lec 2, Lab 3. Prereq: 12 hrs biological sciences and AGRO 340, or permission. For course description, see R NGE 444.

883. Water Resources Seminar (GEOG, NRES 815; GEOG 883) (2 cr) Seminar on current water resources research and issues in Nebraska and the region.
889. Urbanization of Rural Landscapes (CR PL, HORT 889) (3 cr I) Lec 2, Lab 2. Prereq: N RES 808 or equivalent; experience in landscape planning and design. T he impacts of urbanization processes on the surrounding rural areas and the potential for sustainable land use planning. Offered odd-numbered calendar years.

890. Independent Study (N RES, NRES 890) (1-6 cr I-I, II) Lec 2, Lab 2. Prereq: N RES 808 or equivalent; experience in landscape planning and design. T he impacts of urbanization processes on the surrounding rural areas and the potential for sustainable land use planning. Offered odd-numbered calendar years.

891. Masters' Thesis (6-10 cr) Lec Prereq: Documentation of master's degree program and permission of major advisor. P/N only.

904. The Physiology of Grain Yield (2 cr I) Lec 2, Prereq: AGRO 804 or equivalent. Offered spring semester. Offered even-numbered calendar years.

909. Crop Responses to Environment (HORT, N RES 909) (3 cr II) Lec 3. Prereq: MATH 208, N RES 808 or equivalent. T he impact of environmental factors on crop production. Offered odd-numbered calendar years.

913. Advanced Plant Breeding (HORT 913) (3 cr II) Lec 3. Prereq: AGRO 315 and 815, or equivalents. Offered偶numbered calendar years. Offered odd-numbered calendar years.

921. Plant Cytogenetics (HORT 921) (3 cr I) Lec 3. Prereq: AGRO 315 or equivalent. BIOS 876 and AGRO 815 or equivalents recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

928. Crop Improvement (HORT 928) (3 cr I) Lec 3. Prereq: AGRO 315 or equivalent. BIOS 876 and AGRO 815 or equivalents recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

930. Population Genetics (ASC I, HORT 930) (3 cr II) Lec 3. Prereq: AGRO 315 and BIOM 801. Structure of populations, forces affecting gene frequency and diversity, and diseases in plant populations. Offered odd-numbered calendar years. Offered even-numbered calendar years.

935. Biometrical Genetics and Plant Breeding (BIO M 935) (3 cr I) Lec 3. Prereq: AGRO 931 and BIOM 802 recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

940. Forage Evaluation (ASC I, 940) (3 cr II) Lec 3. Prereq: MATH 208, AGRO 861 or equivalents recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

945. Soluble Material in Soils (GITI, HORT 945) (3 cr II) Lec 3. Prereq: MATH 208, AGRO 861 or equivalents recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

954. Theoretical Aspects of Physical Chemistry of Soils (HORT, N RES 954) (3 cr II) Lec 3. Prereq: MATH 208, AGRO 861 or equivalents recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

963. Genetics of Host-Parasite Interaction (BIOS, HORT 963) (3 cr II) Lec 2 (90 min each per wk). Prereq: BIOS 241 or 820, and BIOS 812 or 805. BIOS 864A and 864B recommended. Offered even-numbered calendar years. Offered odd-numbered calendar years.

The Department of Animal Science offers programs leading to the doctor of philosophy degree in the areas of animal breeding and genetics, meats and poultry products, nonruminant nutrition, physiology, and ruminant nutrition. Students may pursue the master of science degree in any of the above areas. Offered only by special permission of the Graduate Committee obtained at the time of entry into the program.

In addition to complying with the general requirements of the Graduate College, applicants for advanced degree programs must submit a letter of intent regarding educational and career goals. Scores from the quantitative and verbal portions of the Graduate Record Examination are preferred. For international students, the TOEFL is the only test of English proficiency accepted by the department.

All students must enroll in ASC I 806 during their first year of graduate study at UNL.

Specializations
Specializations available at the masters level: M eat Science and Muscle Biology; Physiology; Water Resources Planning and Management

Specializations available at the doctoral level: M eat Science and Muscle Biology; Physiology

Faculty

**Adams, Don C.** - 1990; Professor; BS 1976, M S 1978 Utah State; PhD 1980 New Mexico State

**Anderson, Kathleen P.** - 1995; Associate Professor; BS 1981 Nebraska (Lincoln); MS 1987 Texas A&M; PhD 1991 Kansas State

**Beck, Mary M.** - 1980; Professor; BA 1968 Virginia (Richmond); MS 1976, PhD 1980 Maryland

**Beermann, Donald H.** - 1999; Head and Professor; BS 1971 Iowa State; MS 1974, PhD 1976 Wisconsin (Madison)

**Beckett, Gary L.** - 1986; Adjunct Professor; BS 1973 Iowa State; MS 1973, PhD 1977 Ohio State

**Brink, Dennis R.** - 1978; Professor; BS 1971 Iowa State; MS 1975, PhD 1979 Kansas State

**Brumm, Michael C.** - 1979; Professor; BS 1971 Iowa State; MS 1976, PhD 1978 Purdue

**Burgos, Dennis E.** - 1984; Professor; BS 1977 Nebraska (Lincoln); MS 1979, PhD 1983 Kansas State

**Calkins, Chris R.** - 1983; Professor; BS 1978 Iowa State; MS 1983, PhD 1987 Texas A&M

**Calkins, Richard A.** - 1983; Professor; BS 1981 Minnesota; MS 1983, PhD 1987 Iowa State

**Christensen, Ronald K.** - 1997; Adjunct Professor; BS 1962, MS 1965 Nebraska (Lincoln); PhD 1970 Mie University

**Cundiff, Larry V.** - 1967; Adjunct Professor; BS 1961 Kansas State; MS 1964, PhD 1966 Oklahoma State

**Cupp, Andrea S.** - 2000; Assistant Professor; BS 1988 Virginia Tech; MS 1991, PhD 1994 Nebraska (Lincoln)

**Decker, John H.** - 1978; Professor Emeritus; BS 1964 Kansas State; MS 1970, PhD 1972 Oklahoma State

**Ellington, Earl R.** - 1968; Professor; BS 1956, MS 1957 Kentucky; PhD 1962 California

**Erickson, Galen E.** - 2001; Assistant Professor; BS 1995 Iowa State; MS 1997, PhD 2001 Nebraska (Lincoln)

**Ferrell, Calvin F.** - 1981; Adjunct Professor; BS 1971 Oklahoma State; PhD 1975 California (Davis)

**Ford, John J.** - 1974; Adjunct Professor; BS 1966, PhD 1972 Iowa State

**Professors:**

- **Brumm, Michael C.** - 1979; Professor; BS 1971 Iowa State; MS 1976, PhD 1978 Purdue
- **Burgos, Dennis E.** - 1984; Professor; BS 1977 Nebraska (Lincoln); MS 1979, PhD 1983 Kansas State
- **Calkins, Chris R.** - 1983; Professor; BS 1978 Iowa State; MS 1983, PhD 1987 Texas A&M
- **Calkins, Richard A.** - 1983; Professor; BS 1981 Minnesota; MS 1983, PhD 1987 Iowa State
- **Christensen, Ronald K.** - 1997; Adjunct Professor; BS 1962, MS 1965 Nebraska (Lincoln); PhD 1970 Mie University
- **Cundiff, Larry V.** - 1967; Adjunct Professor; BS 1961 Kansas State; MS 1964, PhD 1966 Oklahoma State
- **Cupp, Andrea S.** - 2000; Assistant Professor; BS 1988 Virginia Tech; MS 1991, PhD 1994 Nebraska (Lincoln)
- **Decker, John H.** - 1978; Professor Emeritus; BS 1964 Kansas State; MS 1970, PhD 1972 Oklahoma State
- **Ellington, Earl R.** - 1968; Professor; BS 1956, MS 1957 Kentucky; PhD 1962 California
- **Erickson, Galen E.** - 2001; Assistant Professor; BS 1995 Iowa State; MS 1997, PhD 2001 Nebraska (Lincoln)
- **Ferrell, Calvin F.** - 1981; Adjunct Professor; BS 1971 Oklahoma State; PhD 1975 California (Davis)
- **Ford, John J.** - 1974; Adjunct Professor; BS 1966, PhD 1972 Iowa State
Courses (ASCI)

**806. Animal Science Graduate Seminar** (1 cr per sem, max 2 cr) Lec/disc. Prereq: Permission. Orientation in the animal science graduate program involving introduction to departmental research programs, philosophy, and policies. Discussion of elements of an effective seminar, experience and critique in oral presentation of research data.

**816. Veterinary Entomology/ Ectoparasitology** (ENTO; N RES, VBM S 816) (1-2 cr I, II) Lec. 2 cr. Prereq: 10 hrs entomology or biological science or related fields or permission. For course description, see ENTO 816.

**818. Veterinary Entomology/ Ectoparasitology** Lab (ENTO; N RES, VBM S 816L) (1 cr I) Lec. Prereq: EN TO; N RES, VBM S 816; or parallel. For course description, see ENTO 818L.

**817. Meat Technology** (4 cr I, II) Lec 2, lab 1 cr. Prereq: ASCI 821 or NUTR 455 or 950; or permission. Molec proteins and fabrication technology. Practical application of terization, restructuring, freezing, dehydration, flavor modification, composition control and quality control technology to manufactured and processed meat products.

**818. Eggs and Egg Products** (FDST 818) (3 cr I) Lec 2, lab 1 cr. Prereq: FDST 920 or permission. 0 flled odd-numbered calendar yrs. For course description, see FDST 818.

**819. Meat Investigations** (FDST 819) (1-3 cr I, II, III) Lec 2 cr. Prereq: ASCI 210 or permission. Conduct independent research and study meat industry problems in processing, production, storage, and preparation of meat and meat products.


**821. Advanced Animal Nutrition** (3 cr I I) Lec 3, Prereq: ASCI 320. An advanced course dealing with the nutrition of animals in-depth coverage of nutrients, nutrient metabolism and nutrient requirements Biochemical and physiological functions of nutrients in life processes.


**841. Endocrinology (BIO S, VBM S 842) (3 cr I I) Lec 2 cr. Prereq: A course in vertebrate physiology and/or biochemistry. Mammalian endocrine glands from the standpoint of their structure, their physiological function in relation to the organism, the chemical nature and mechanisms of action of their secretory products, and the nature of anomalies manifested with their dysfunction.

**451. Physiology I** (BIO S *813, VBM S *845) (4 cr I I) Lec 3 cr. Prereq: CHEM 251, BIO S 112 or ASCI 240. Primarily mammalian physiology with discussion of cellular mechanisms designed for students in animal and biological sciences. Topics include physiology of the cell, body fluids, nervous system, muscle and the cardiovascular system.

**846. Physiology II** (BIO S *814, VBM S *846) (4 cr I I, I, II, III) Lec 3 cr. Prereq: ASCI 165 or permission. Primarily mammalian physiology with discussion of cellular mechanisms designed for students in animal and biological sciences. Topics include physiology of the respiratory, renal, gastrointestinal and endocrine systems.
929. Vitamin Nutrition (NUTR 929) (3 cr) Prereq: BIOC 831, ASCI 923 or NUTR 455 or 950. 0 filed odd-numbered calendar years. For course description, see NUTR 929.

931. Population Genetics (AGRO, HORT 931) (3 cr) II Lec 2. Prereq: AGRO 315 and BIOM 801. For course description, see AGRO 931.

932. Quantitative Animal Genetics I (3 cr) Lec 2, Lab 2. Prereq: ASCI 931 or equivalent. 0 filed odd-numbered calendar years. Use of biometrical and population genetics and related physiology, nutrition, pathology, and economics to develop intrapopulation breeding methods capable of increasing the net bio-economic efficiency of animal production.


934. Applications of Biotechnology in Animal Science (4 cr) Lec 1, Lab 1, Prereq: Permission. 0 filed only during 6-week summer session. Strategies and applications of DNA/RNA based methodologies in animal production systems and animal research programs. Practical and experimental approaches. Background, theory, and statistical methods underlying applications emphasized.

935. Advanced Avian Physiology (NRES 943) (3 cr) I Lec 3. Prereq: One semester of physiology or ornithology, or permission. Anatomical and physiological aspects of the major body systems of birds, and other species and their adaptations. Comparison with mammalian systems is included. Emphasis is placed on adaptation of avian anatomy and physiology, and relevant influences on health and environmental features. Selected techniques (anesthesia, some surgical procedures, artificial insemination, embryo manipulation) are incorporated in laboratory sessions as needed.

940. Biochemistry of Nutrition (BIOC, BIOS, NUTR 949) (3 cr) Lec 2, Prereq: BIOC 632 or 839, or permission. 0 filed odd-numbered calendar years. For course description, see BIOC 949.

955. Current Topics in Nutrition (NUTR 995) (1-2 cr) per sem, max 4) Prereq: NUTR 350 or 950 or ASCI 821. For course description, see NUTR 995.


999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Anthropology

Department of Anthropology and Geography
Chair: Patricia Draper, Ph.D.
Anthropology Graduate Committee Chair: Professor Hames
Graduate Committee: Professors Bleed, Hitchcock

The department offers graduate courses leading to the degree of master of arts. The requirements for admission, for candidacy, and for courses and theses are those established and maintained by the Graduate College. Applicants should accompany their application for admission with a statement of educational goals and their scores from the general Graduate Record Examination.

All graduate students will be required to take four core courses in the Department of Anthropology: ANTH 812, 832, and 842. If a student has taken any of these courses at the 400 level (412, 432, and 442), and they were taken within five years prior to the student’s admission to the Graduate College, they need not be repeated at the graduate level.

Upon admission to this program, all graduate students are required to have a course in statistics. If a statistics course has not been taken prior to admission, this will be regarded as a deficiency, which will have to be remedied. Any class taken to remediate a deficiency will not count as part of the credits required for the major of arts in anthropology.

Program Assessment. In order to assist the department in evaluating the effectiveness of its program, majors will be required at the end of their graduate program:

1. to complete an oral examination which focuses on the breadth of the field as well as on the student’s field of specialization;
2. to complete a written exit survey, submitted anonymously.

The graduate advisor will inform students of the scheduling and format of assessment activities.

These assessment activities will have no way affect a student’s GPA or graduation.

Specializations available:
- Environmental Studies
- Great Plains Studies
- International Human Rights and Diversity

Faculty

Anthropologists, Effie F. 1997; Assistant Professor; BA, Athens (Greece), 1979; PhD, Pennsylvania, 1993

**Bleed, Peter A.** 1972; Professor; BA 1965, MA 1968, Minnesota; PhD, Wisconsin, 1973

**Draper, Patricia.** 1998; Professor and Chair; BA, Vassar, 1964; MA 1965, PhD 1972; New York

**Glazier, Stephen.** 1988; Adjunct Professor; MA 1976, California (Santa Barbara)

**Hames, Raymond.** 1980; Professor; BA 1971, PhD 1978 California (Santa Barbara)

**Hitchcock, Robert.** 1990; Professor; BA 1971 California (Santa Barbara); M S 1977, PhD 1982 New Mexico

**Lynn, Mark.** 1977; Adjunct Professor, National Park Service; PhD 1977 Southern Methodist University

**McCollough, Martha.** 1996; Assistant Professor; MA 1990 Appalachian, PhD 1996 Oklahoma

**Myers, Thomas.** 1975; Professor and Curator of Anthropology; PhD 1970 Illinois

**O’Brien, Alan J.** 1979; Adjunct Professor; BA 1970 MA 1973, PhD 1977 New Mexico

**Reinhart, Karl J.** 1989; Associate Professor; BA 1977 Arizona; M S 1984 Northern Arizona; PhD 1988 Texas A&M

**Scott, Douglas D.** 1983; Adjunct Professor, National Park Service; PhD 1977 Colorado

**Stephens, Ronald J.** 1997; Assistant Professor; MA 1991 Wayne State; MA 1992, PhD 1996 Temple

**Wandstrader, LuAnn.** 1991; Associate Professor; BS 1979 Wisconsin (Madison); MS 1981, PhD 1989 New Mexico

**Willis, Mary.** 1997; Assistant Professor; MS 1990, PhD 1995 Washington

Courses (ANTH)

810. Women and Men: An Anthropological Perspective (3 cr)
Cross-cultural exploration of the meaning and impact of gender definition, with special emphasis on women. Gender is viewed as a correlate of biology, language, economic systems, social and political structures, and belief systems.

812. Social Structure (3 cr) Analysis of social structure emphasizing kin and local groups.

813. Culture and Personality (3 cr) Prereq: ANTH 212 or permission.
Advanced study of selected topics in cultural anthropology.

816. Topics in Cultural Anthropology (3 cr) Prereq: ANTH 212.
Advanced study of selected topics in cultural anthropology.

817. History of Anthropological Theory (3 cr) Prereq: 12 hours of anthropology.
In-depth study of the origins and development of anthropological theory, method, and thought; the historical growth of the discipline focusing on schools of thought from the Enlightenment through the contemporary period.

818. Ethnology and Museums (3 cr) Prereq: ANTH 110 or permission.
An approach to the museum as it relates to the growth of anthropology in general and ethnological studies in particular. Special emphasis on non-Western technology and its role in the modern museum.

819. Art and Anthropology of Native North America (MUSS 870) (3 cr)
For course description, see MUSS 870.

820. Ethnographic and Historical Conflict (3 cr) Concept of ethnicity and ethnic conflict. Racial and ethnic conflicts among Native North American groups since the 1800s. Special emphasis on the dynamics of each of these situations, the role of ethnicity in the making of the American nation, and the perspectives of both sides of these conflicts, as seen in historical and ethnographic accounts.

821. School Culture of Minorities: Investigations in Educational Anthropology (3 cr)
Principles of anthropology to school settings and educational processes. Major emphasis is on American minorities, the culture of schools, and education as a process in the range of societies studied by anthropologists. Introduction to anthropologic methods.

822. Medical Anthropology (3 cr)
Exploration of culture as it affects health care, disease transmission and prevention and health education.

823. Archaeological Method and Theory (3 cr)
Using a reading, lecture, and seminar format, examine the concepts and methodology archaeologists use to obtain information and draw conclusions from the archaeological record. Recent and current theoretical issues emphasized.

An area survey of North American archaeology including methodology, history, and current trends of research. North American prehistory reviewed from earliest occupations to the present day.

824. Introduction to Plains Archaeology (3 cr) Prereq: 12 hours of anthropology.
Introduction to the history of excavation, the development of these cultures, and the evaluation of taxonomic concepts within the Plains area of North America.

825. Introduction to Conservation Archaeology (3 cr) Prereq: ANTH 212 or permission.
Introduction to the nature and purpose of historic preservation as it pertains to resource management and archaeological research; course風格, CHICANA/CHICANO and Chicano/a studies, and current trends of research. North American prehistory reviewed from earliest occupations to the present day.

826. Topics in Old World Prehistory (CLAS 838) (3 cr)
Prereq: 12 hours of anthropology. Advanced archaeology students in-depth exposure to selected topics drawn from the wide breadth of Old World prehistory. Through lectures, seminar discussions, and student presentations, the class reviews archaeological data relevant to selected theoretical or topical problems.
Prereq: 12 hours of anthropology.

840. The Black Family (3 cr) Prereq: ETHN 200. Social, political, and cultural rights of black families; political, economic, and intellectual impact; historical continuity and organization.

841. Biology of Human Variation (3 cr) Prereq: ANTH 110 or permission. Introduction to the scope and meaning of human biological variation with emphasis on present day populations.

842. Advanced Physical Anthropology (3 cr) Prereq: ANTH 200. An advanced comparative study of contemporary populations and their political, cultural, and intellectual impact; historical continuity and organization.

844. Applied and Development Anthropology (3 cr) Prereq: 12 hours of anthropology. Analysis of the many recent attempts by anthropologists and other trained specialists to influence the process of development and socioeconomic change in the modern world. Special emphasis on programs directed specifically at ethnic minorities in urban as well as rural settings throughout the world.

845. Primitive Technology (3 cr) Prereq: 12 hours of anthropology. Survey of the major technologies and industrial complexes of the prehistoric and primitive worlds; through lectures, experiments, and examination of ethnographic collections, gain familiarity with the ways in which preindustrial man has manipulated his environment. Skills necessary to analyze technology within its cultural setting.

846. Human Rights, Environment, and Development (3 cr) Prereq: 12 hours of anthropology. Human rights from an anthropological perspective. A reassessment of the significance of international human rights, development, and the environment; paying specific attention to concerns such as Western and non-Western perspectives on human rights, individual rights and collective (group) rights; social, economic, and cultural rights; women's rights; indigenous peoples and minority groups; rights to political, social, economic, and cultural participation; and the role of women and children in the development process.

847. Hunters-Gatherers (3 cr) Prereq: 12 hours of anthropology. Survey of hunter-gatherer societies with emphasis on ecological and social adaptations. Introduces student with the literature on hunters-gatherers and their important role in human history and evolution.

848. Pro-seminar in Latin American Studies (3 cr) Prereq: Permission. Interdisciplinary analysis of the mechanics and consequences of cultural continuity and social change in Latin America.

849. Pro-seminar in International Relations (3 cr) Prereq: Permission. For course description, see POLS 866.

850. Advanced Fieldwork (1-6 cr per sem) Prereq: ANTH 280; no credit toward major if ANTH 280 is counted. Advanced readings in special areas of anthropology.

851. Seminar in Prehistory (3 cr) Prereq: Permission. An intensive study of theory and method in prehistory, with special attention to current research literature.

852. Seminar in Physical Anthropology (3 cr) Prereq: Permission. Seminar on current issues and problems in physical anthropology, with special attention to current research literature.

853. Seminar in Anthropology and Geography (3 cr) Prereq: Permission. Advanced seminar in physical anthropology with special attention to current research literature.

854. Seminar in Anthropology and Geography (3 cr) Prereq: Permission. Seminar in archaeological and ethnographic topics chosen in keeping with the needs of the instructor and students.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.

910. Seminar in Ethnology (3 cr) Prereq: 12 hours of anthropology. Intensive study of theory and method in ethnology, with special attention to current research literature.

915. Seminar in Prehistory (3 cr) Prereq: 12 hours of anthropology. Intensive study of theory and method in prehistory, with special attention to current research literature.
work of the professional program. Applicants with deficiencies exceeding 50 credit hours will not be admitted.

Curriculum. With the adviser's approval, elective courses may be selected from other University departments at either the 800- or 900- level. Half of the required hours must be earned at the University of Nebraska-Lincoln. Students are placed with prominent national and international firms. The internship program is available to students who have completed one semester in the professional program and will have one semester of study remaining after interning.

International Studies Program. Professional program students are eligible to participate in international programs offered in London, England; Hannover, Germany; Dublin, Ireland; Clermont-Ferrand, France; and Montreal, Canada.

Admission Requirements for Master of Architecture. Applicants for the master of architecture degree should submit to the Department of Architecture Student Affairs Committee the following items:

- A portfolio of recent work.
- A statement of educational goals.
- Official transcripts.
- Three letters of professional or academic recommendation.
- TOEFL for international students whose primary language is not English.

The Graduate Record Examination is not required for the professional program degree. Candidates considered for admission should have completed their undergraduate training with an overall grade average of "B" (3.0) and an architectural design studio average of "B". Students who wish to be considered for fellowships and assistantships should apply by the February 1 deadline. Applications for admission received after the deadline for submission may not be considered until the following academic year.

The Student Affairs Committee makes its first recommendations for admission in March for the following fall semester.

Master of Architecture Joint Degree Options

The department offers two joint degree options for students pursuing a master of architecture.

One option is to pursue a curriculum of study that leads to a master of business administration and a master of architecture. This curriculum is a 68 credit-hour program of study.

The second option is to pursue a curriculum of study that leads to a master of community and regional planning and a master of architecture. This curriculum is a 68 credit-hour program of study.

Admission requirements for Joint Degree Options. Students applying for a joint degree must make an application to both the Graduate School and the Department of Architecture. A master of architecture professional program. The Graduate School application requires GRE scores to be submitted as part of the application. Students interested in pursuing one of these options must include a letter of interest with their application materials.

Master of Science in Architecture

The master of science in architecture degree is a graduate program with a scholarly research-based curriculum. The program is available to students who hold an undergraduate degree in architecture or a related discipline.

Curriculum. Each student, with the guidance of their advisor, prepares a detailed course of study. This course of study must include courses in theory, research methods or analytical techniques, field research, and campus-wide electives. The 36-credit-hour program of study terminates with a written thesis on a topic developed by the student in consultation with their faculty advisor and committee. The master of science in architecture degree must maintain a 3.0 GPA, pass a comprehensive exam, pass an oral examination covering the area of preparation, and complete the requirements for the thesis.

Specializations available for the master of science degree:

- Environmental Studies
- Great Plains Studies
- Interior Design

Admission Requirements for Master of Science. Minimum entrance requirements are:

- Acceptance to the UNL Graduate Program.
- An undergraduate degree in architecture or a related discipline.
- A B average or better in past academic programs.
- A TOEFL score of 550 or higher for international students whose first language is not English.

Applicants for the master of science degree should submit the following items:

- Official transcripts.
- Three letters of professional or academic recommendation.
- Research plans.
- A statement of research intentions or interests.
- Scores from the Graduate Record Examination.
- TOEFL score.

Doctorate in Administration, Curriculum and Instruction with a Specialization in Architecture Education

The program provides academic preparation and professional development for those individuals who will serve as a) faculty members in programs of architecture in public and private post-secondary educational institutions and as b) administrative leaders of architecture programs in higher education. The program offers students a choice of either the PhD or the EdD. The specialization in architecture education is jointly sponsored by the College of Architecture and Teachers College.

Curriculum. The program of study has broad objectives and specific experiences of each student. The common core of studies provides a choice of a multicultural perspective, direct teaching experience, and active research program as well as opportunities for working with community and professional leaders to explore contemporary architecture education problems. The program culminates with a dissertation (PhD) or field study (EdD).

- Higher Education/Education Administration
- Advanced Architectural Concepts
- Practicum/Internship
- Social Science Research Methods
- Doctoral Seminars
- Dissertation

Admission Requirements. To be accepted into this specialized program of study, a student must have completed a graduate research-related degree. The credit hours (up to 36) accumulated during the master of science program may be accepted for advanced standing in the doctoral program.

A joint admissions committee composed of representatives of the respective departments (Architecture and Educational Administration) will collectively administer the admissions process. The application shall include the following:

- Graduate Record Examination (GRE) scores.
- All undergraduate and graduate transcripts.
- Three letters of recommendation.
- A statement of goals regarding educational objectives.
- Evidence of scholarly writing and research ability.
- Portfolio evidence of a satisfactory background in architecture.
- Evidence of an undergraduate degree in architecture or a related discipline.
- Evidence of research-related graduate experience.
- An English proficiency exam (e.g., TOEFL score) is required of all international student applicants. A degree from an accredited university in the U.S., Canada or England replaces the English proficiency requirement.

Each applicant will need to gain the agreement of a Graduate Faculty Fellow to act as chair of his or her supervisory committee and as a mentor. The Admissions Committee and its chair will facilitate the matching of student and mentor where that is desired.

Faculty

*Ankerson, Katherine - 1996; Assistant Professor; BS 1978, MS 1994 Washington State

*Benson, John A. - 1962; Associate Professor and Registered Architect (AIA); BArch 1960, MArch 1961 Illinois

**Borner, William L. - 1972; Professor and Registered Architect; BArch 1967 Western Reserve; MArch 1968 Michigan

**Case, F. Duncan - 1991; Associate Professor; AB 1968, PhD 1975 Princeton
Courses

Architecture (ARCH)


525 / 825. Computer-Aided Drawing/Design (CADD) in Architecture (3 cr) Lec 1, studio 2. Prereq: Permission. Application of advanced CADD systems, technology and techniques to the solution of problems in architecture. The use of sophisticated software and hardware in drawing management with emphasis on its application to design, graphics, and professional drawings. Upon completion of this course, the student should understand the potentials and limitations of CADD systems in the professional practice of architecture.


531 / 831. Architectural Structures I (3 cr) Prereq: ARCH 415. Analysis and design of structural systems, including mass, vector systems, rectangular and curvilinear frames, surfaces, seismic and wind forces, and current structural developments in design and models. Individual investigations and model testing.

532A / 832A. Seismic Design for Architects (1 cr) Prereq: Permission. Introduction to basic seismic design principles, and the effects of seismic design on the overall building design.

533 / 833. Architectural Systems Design II (3 cr) Prereq: ARCH 530 / 830. Investigation of theoretical and practical aspects of the design and implementation of architectural systems and their interaction with the building systems. Design of detailed drawings and models.

535 / 835. Advanced Lighting Design (3 cr) Lec 1, lab 4. Prereq: ARCH 435 or IDES 435 or by permission. Translation of electrical and physical measurements of light into architectural-spatial relationships. Theoretical and practical aspects of lighting design and implementation.

536 / 836. Building Equipment Integration (3 cr) Lec 3. Seminar 1. Prereq: Permission. Integration of building equipment and systems. Design and implementation of building equipment and systems. The theoretical objective is to translate desired sensory response into building environment and spatial integration with reliance upon codes, computers, model building, specifications, and shop drawings.


540. Architecture History and Theory I (3 cr) Lec 3. Prereq: ARCH 530 or 830. Formal acceptance into the architectural program by faculty or permission. Selected aspects of the history and theory of fifteenth- and sixteenth-century architecture emphasizing the intellectual impact and material expression of cultural change.

542 / 842. Contemporary Architecture (3 cr) Lec 3. Prereq: For students in the professional program: formal acceptance into the architectural program by faculty or permission. Selected aspects of contemporary architectural theory and design from the mid-twentieth century to the present emphasizing the diversity of current thought and practice.

545 / 845. Architecture, Society, and Culture I (3 cr) Prereq: Admission to the fifth year, ARCH 542 or 842, or permission. Comprehensive review of the relationship between modern architectural theory, society, and culture. Readings in the literature of architecture and modern society with emphasis on evolution of architectural thought.

546 / 846. Theory and Criticism in Architecture Since 1945 (3 cr) Prereq: ARCH 542 or 842 or permission. Theory and criticism in architecture since 1945 as they relate to contemporary American society, culture, and art, as well as to the development of architectural thought.


556 / 856. Behavioral and Social Factors in Environmental Design (IDES 856) (3 cr) (U N L) Lec 3. Prereq: Permission. Survey of theories, methods, research findings and the social and behavioral sciences as they relate to architectural design, interior design, and regional and community planning. Application of principles to architectural programs, designs, and the planning process.

557 / 857. Housing Issues in Contemporary Society (2 cr) Prereq: Permission. Survey of social, psychological, political, and economic research regarding housing in today's global economy. Focus on how the research can impact the practice of design at the professional level.

558 / 858. The Changing Workplace (IDES 858) (3 cr) (U N L) Lec 3. For course description, see IDES 858.

560 / 860. Environmental Survey and Analysis (CR PL * 872) (3 cr) Lec 3. Prereq: Permission. Comparative and case studies in environmental development and planning. Survey of environmental design and analysis in the fields of landscape architecture, regional planning, conservation, and related areas, with emphasis on the interrelationships of human and natural systems.

561 / 861. Studies in Environmental Design (3 cr) Prereq: ARCH 560 / 860. Comparative and case studies in environmental development and planning. Survey of environmental design and analysis in the fields of landscape architecture, regional planning, conservation, and related areas, with emphasis on the interrelationships of human and natural systems.

562 / 862. Urban Form Typology (3 cr) Lec 3. Prereq: Permission. Introduction to the principles, processes, and practice of architectural design and the conservation of historic districts.


566 / 866. Community Design Center (1-6 cr) Prereq: Permission. Community oriented design studio. The design process and its relationship to the environmental development process emphasized.
Courses of Instruction

Art and Art History

Department Chair: Joseph M. Ruffo, M.F.A.
Graduate Committee: Professors Kendall (chair), Jacobshagen; Associate Professors Bolland, N eal

The department offers graduate instruction leading to the degree of master of fine arts in studio art. Candidates may pursue the M.F.A. in the following areas of emphasis: ceramics, drawing, painting, photography, printmaking, sculpture, textile arts, graphic design, or a combination of several of these disciplines. The department reserves the right to retain for its collection one creative work by each graduated M.F.A. student.

Undergraduate Requirements. Candidates for the degree of master of fine arts must have obtained the bachelor's degree from an institution of recognized standing and preferably have completed undergraduate preparation substantially equivalent to the requirements for the bachelor of fine arts degree at the University of Nebraska-Lincoln.

Application Procedure. An applicant must submit two separate packets of documents one to the Office of Graduate Studies (deadline January 1) and another to the Graduate Chair of the Department of Art and Art History (deadline February 1). Send the application form, application fee and two official copies of all transcripts of previous college work to Graduate Studies. Send one official copy of all transcripts of previous college work, three letters of recommendation (sent directly from the references), a statement of professional intent and evidence of creative work to the Department of Art and Art History. Students may apply in one or two studio disciplines, but in order to emphasize two areas they must be accepted in both. Creative work must be shown in the form of a documented portfolio of 35 mm slides, except for applicants in photography who may send original photographs. All materials should be mailed in a plain manila envelope. They will be transferred to a file upon receipt. (No binders, boxes, or plastic page sleeves, please.) We do not accept CD ROMs or videos. The departmental application deadline is February 1 for the following August. Applicants should contact the Department of Art and Art History for more detailed information about portfolio requirements.

Master of Fine Arts Requirements. The master of fine arts candidate must: a) complete 60 credit hours of approved course work; b) present an original body of creative work, known as a “thesis exhibition,” in a gallery space on campus; c) write a brief essay on the thesis work; d) pass an oral examination. The program requires a minimum of 26 hours of work in the area(s) of emphasis and a minimum of 9 hours in regularly scheduled art history courses. An additional 9 hours may be taken in approved academic courses. Additional studio course work brings the total to the 60 credit hour minimum.

Minor available: Art History
Faculty

*Bartels, Ron H. - 1989; Associate Professor; BFA 1970 Kansas City Art Institute; MFA 1972 California Institute of Arts

*Bolland, Andrea - 1994; Associate Professor; BA 1982 Washington; MA 1986, PhD 1992 New York

*Cal, Santiago - 2000; Assistant Professor; BFA 1995 Kutztown State (PA); MFA 1998 Virginia Commonwealth

*Dominquez, Eddie - 1998; Assistant Professor; BFA 1981 Cleveland Institute of Art; MFA 1983 Aihara

**Eiesterhammer, James - 1961; Professor Emeritus BA 1951 Augusta (South Dakota); MFA 1961 Iowa

**Fritz, Dana - 1998; Assistant Professor; BFA 1992 Kansas City Art Institute; MFA 1995 Arizona State

**Fuller, Shelley T. - 1990; Associate Professor; BA 1961 Augusta; MFA 1969 Nebraska (Lincoln)

**Hoff, Michael C. - 1989; Associate Professor; AB 1977 Missouri; MFA 1968 Kansas

**Howard, Dan - 1974; Professor Emeritus BA 1953, MFA 1958 Iowa

**Jacobshagen, N. Keith - 1968; Professor; BFA 1963 Art Institute (Kansas City); MFA 1968 Kansas

*Katz, Wendy J. - 2000; Assistant Professor; BA 1988 Occidental; MA 1993 Michigan (Ann Arbor); PhD 1997 California (Los Angeles)

**Kendall, Gal M. - 1987; Professor; BFA 1966 Michigan; MFA 1974 Eastern Michigan

**Kunc, Karen - 1993; Professor; BFA 1975 Nebraska (Lincoln); MFA 1977 Ohio State

**Mamiya, Christopher J. - 1987; Professor; BA 1977 Yale; MFA 1982, PhD 1987 California (Los Angeles)

**Neal, Maureen (Mo) - 1995; Associate Professor; BA 1988 Washington State; MFA 1991 Virginia Commonwealth

**Pinnell, Peter - 1996; Associate Professor; BFA 1980 Aihara (New York); MFA 1982 Colorado

**Read, David - 1978; Professor; BFA 1963, MFA 1965 Ohio (Athens)

**Routon, David - 1976; Professor Emeritus BFA 1959 Mexico City; MFA 1963 Iowa

**Rowan, Patrick - 1971; Professor; BFA 1969, MS 1970 Wisconsin (Milwaukee); MFA 1971 Florida (Gainesville)

**Ruffo, Joseph M. - 1998; Professor and Chair; BFA 1963 Pratt Institute; MFA 1965 Cranbrook Academy

**Stewart, Allison G. - 1989; Associate Professor; BA 1973 Syracuse; MA 1976 Queens PhD 1986 Columbia

**Williams, Sandra - 2000; Assistant Professor; BFA 1994 Cleveland Institute of Art; MFA 1999 Ohio State

Courses

Art Theory and Practice (ARTP)

800. Professional Practices for the Artist (3 cr) Prereq: Permission of the chair. Practical guide to managing a career as an artist, including soliciting exhibitions, portfolio documentation and business transactions with galleries.


*898. Special Topics in Art (1-6 cr) Prereq: Permission. Original work in studio, under direction.

*899. Studio Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor. Original work in studio, under direction.


997. Colloquium (1-24 cr) Prereq: Permission. Problems and approaches relating to the practice of art, with special attention to media.

Art History and Criticism (AHIS)

811. Classical Architecture (3 cr) Prereq: 12 hrs in art history, or related disciplines with permission. History and development of architectural orders and styles from ancient Greece and Italy.

813. Roman Painting (3 cr) Prereq: 12 hrs in art history, or related disciplines with permission. Development of Roman painting from the Etruscan through the Age of Constantine.

818. Gothic Painting and Prints (3 cr) Prereq: 12 hrs in art history, including AHIS 218 or 219 or 12 hrs in related disciplines with permission. Style, iconography, history, and function of painting and prints from ca. 1150 to 1575 in France, Germany, and the Netherlands. Includes manuscript illumination, stained glass, panel painting, woodcuts, and engravings; stressing the development of naturalism before the "Renaissance" in Northern Europe.

821. The Italian Renaissance City (3 cr) Prereq: 12 hrs art history, or related disciplines with permission. Exploration of the art and architecture of a single Italian city in the late middle ages and Renaissance; attention to civic projects and the role of the city in defining the identity, and creating the "myths" of that city. Focus will vary among Florentine, Venice, and Rome.

826. Northern Renaissance and Reformation Art (1-6 cr) Prereq: 12 hrs art history, including AHIS 218 or 219 or 12 hrs in related disciplines with permission. Art of the Renaissance and Reformation in Germany and the Netherlands. Stresses the influence of Italian Renaissance Art and the impact of the Protestant Reformation from ca. 1475 to 1575.

831. Italian Baroque Art (3 cr) Prereq: 12 hrs in art history, or related disciplines with permission. Introduction to the painting, sculpture, and architecture in Italy from the late sixteenth to the late seventeenth century.

841. Impressionism and Post-Impressionism (3 cr) Prereq: 12 hrs in art history or in related disciplines with permission. French Impressionism and post-Impressionism with consideration of the historical context out of which they emerged. Development of avant-gardism and the changing relationship of the artist to society.

846. Art Since 1945 (3 cr) Prereq: 12 hrs in art history. Art from 1945 to the present focusing on the development of avant-gardism, its diversions, and the changing relationship of the artist to society.

851. 19th-Century European Art (3 cr) Prereq: 12 hrs in art history, including AHIS 252 or 253. Emphasis on the development of modern art and the various art world institutions.

856. Postmodernism (3 cr) Prereq: 12 hrs in art history, including AHIS 252 or 254, and 12 hrs in related disciplines with permission. Development in art since 1970, exploring the various art styles and also the relationship of the artist to his audience and to the institutions of the art world.

857. Colonial Art of Latin America (3 cr) Prereq: 12 hrs in art history, including AHIS 231 or 232. Emphasis on the development of avant-gardism and the changing relationship of the artist to society.

858. Colonial Art of Latin America (3 cr) Prereq: 12 hrs in art history, including AHIS 231 or 232. Emphasis on the development of avant-gardism and the changing relationship of the artist to society.

860. Directed Individual Reading (1-4 cr, max 4) Prereq: Permission of department chair. A H 592 is letter grade only for graduate students.

895. Internship in Art History (1-5 cr) Prereq: Permission of department chair. Open only for 895.

988. Special Topics in Art History (1-3 cr) Prereq: Permission.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

901. Methodology and Historiography (3 cr) Prereq: Permission. History of the discipline with an examination of the various historical approaches. Development and refinement of specialized research skills appropriate to the field.

910. Seminar in Classical Art and Archaeology (3 cr) Prereq: Permission.

911. Seminar in Medieval Art (3 cr) Prereq: Permission.

912. Seminar in Italian Renaissance Art (3 cr) Prereq: Permission.

913. Seminar in Italian Renaissance Art (3 cr) Prereq: Permission.

914. Seminar in Baroque Art (3 cr) Prereq: Permission.

916. Seminar in Renaissance Art (3 cr) Prereq: Permission.

917. Seminar in Baroque Art (3 cr) Prereq: Permission.

918. Seminar in Latin American Art (3 cr) Prereq: Permission.

919. Seminar in Latin American Art (1-3 cr) Prereq: Permission.

920. Seminar in Art Historical Problems (3 cr) Prereq: Permission.

983. Introduction to the Interdisciplinary Study of the Middle Ages (ENGL, HIST, MODL, MUSC 983) (3 cr) Prereq: 12 hrs in art history or in related disciplines with permission. Methods and state of research in the disciplines--art, music, literature, language, history, philosophy--dealing with the Middle Ages. Assistance in independent reading and research in subjects related to the student's own research interests. Taught jointly by faculty members in art, music, theatre, English, history, classics, modern languages, and philosophy.

984. Introduction to the Interdisciplinary Study of the Renaissance (ENGL, HIST, MODL, MUSC 984) (3 cr) Prereq: 12 hrs in art history or in related disciplines with permission. Methods and state of research in the disciplines--art, music, literature, language, history, philosophy--dealing with the Renaissance. Assistance in independent reading and research in subjects related to the student's own research interests. Taught jointly by faculty members in art, music, theatre, English, history, classics, modern languages, and philosophy.

Ceramics (CERM)

*831. Ceramics I (1-6 cr) Graduate-level various ceramic media and concepts.

*832. Ceramics II (1-6 cr) Graduate-level various ceramic media and concepts.

931. Ceramics III (1-6 cr) Prereq: CERM *831-832. Graduate-level individual work in ceramics.

932. Ceramics IV (1-6 cr) Prereq: CERM *831-832. Graduate-level individual work in ceramics.

Drawing (DRAW)

*891. Drawing I (1-6 cr, max 6) Graduate-level work in various drawing media and concepts.

*892. Drawing II (1-6 cr, max 6) Graduate-level work in various drawing media and concepts.

901. Drawing III (1-6 cr, max 6) Graduate-level work in drawing that can include the exploration of a variety of media and visual ideas.

902. Drawing IV (1-6 cr, max 6) Graduate-level work in drawing, that can include the exploration of a variety of media and visual ideas.
**Graphic Design and Illustration (GRAPH)**
*821. Graphic Design I (1-6 cr, max 6)
Graduate-level work in various graphic design media and concepts.
*822. Graphic Design II (1-6 cr, max 6)
Graduate-level work in various graphic design media and concepts.
825. Advanced Art of the Book (3 cr) Prereq: AH IS 325 or permission.
Advanced work in the design and production of handmade books in the tradition of limited edition and unique books.
921. Advanced Graphic Design I (1-6 cr, max 6) Prereq: GR PH *821-822 or permission.
Advanced graduate-level work in various graphic design media and concepts.
922. Advanced Graphic Design II (1-6 cr, max 6) Prereq: GR PH *821-822 or permission.
Advanced graduate-level work in various graphic design media and concepts.
925. Book Arts (1-6 cr, max 6) Prereq: GR PH 825 or permission.
Continued graduate work in limited edition and/or unique book arts.

**Painting (PANT)**
*851. Painting I (1-6 cr, max 6)
Graduate-level work in various painting media and concepts.
*852. Painting II (1-6 cr, max 6)
Graduate-level work in various painting media and concepts.
951. Painting III (1-6 cr, max 6) Prereq: PANT *851-852 or permission.
Graduate-level work in various painting media and concepts.
952. Painting IV (1-6 cr, max 6) Prereq: PANT *851-852 or permission.
Graduate-level work in various painting media and concepts.

**Photography (PHOT)**
*861. Photography I (1-6 cr, max 6)
Graduate-level work in various photographic media and concepts.
*862. Photography II (1-6 cr, max 6)
Graduate-level work in various photographic media and concepts.
*863. Color Photography I (1-6 cr, max 6) Prereq: Permission.
*864. Color Photography II (1-6 cr, max 6) Prereq: Permission.
*886A. Advanced Problems Color Photography I (1-6 cr, max 6) Prereq: Permission.
*886B. Advanced Problems Black and White Photography I (1-6 cr, max 6) Prereq: Permission.
961. Photography III (1-6 cr, max 6) Prereq: ART P *861-862 or permission.
Research in photography culminating in a portfolio selected from the semester's work.
962. Photography IV (1-6 cr, max 6) Prereq: ART P *861-862 or permission.
Research in photography culminating in a portfolio selected from the semester's work.
963. Color Photography III (1-6 cr, max 6) Prereq: Permission.
964. Color Photography IV (1-6 cr, max 6) Prereq: Permission.
998A. Advanced Problems Color Photography II (1-6 cr, max 6) Prereq: Permission.
998B. Advanced Problems Black and White Photography II (1-6 cr, max 6) Prereq: Permission.

**Printmaking (PRNT)**
*841. Printmaking I (1-6 cr, max 6)
Graduate-level work in various printmaking media and concepts.
*842. Printmaking II (1-6 cr, max 6)
Graduate-level work in various printmaking media and concepts.
941. Printmaking III (1-6 cr, max 6) Prereq: PR NT *841-842.
942. Printmaking IV (1-6 cr, max 6) Prereq: PR NT *841-842.

**Sculpture (SCLP)**
*811. Sculpture I (1-6 cr, max 6)
Graduate-level work in various sculpture media and concepts.
*812. Sculpture II (1-6 cr, max 6)
Graduate-level work in various sculpture media and concepts.
911. Sculpture III (1-6 cr, max 6) Prereq: SCLP *811-812 or permission.
Graduate-level work in various sculpture media and concepts.
912. Sculpture IV (1-6 cr, max 6) Prereq: SCLP *811-812 or permission.
Graduate-level work in various sculpture media and concepts.

**Watercolor (WATC)**
*857. Watercolor I (1-6 cr, max 6)
Graduate-level work in various watercolor media and concepts.
*858. Watercolor II (1-6 cr, max 6)
Graduate-level work in various watercolor media and concepts.
957. Watercolor III (1-6 cr, max 6) Prereq: WAT C *857-858.
958. Watercolor IV (1-6 cr, max 6) Prereq: WAT C *857-858.

---

**Biochemistry**

**Director for the Center for Biological Chemistry:** Robert Klucas, Ph.D.
**Graduate Committee:** Professors Ragsdale (chair), Banerjee, Lou, Wood; Associate Professors Sarah, Griepp; Assistant Professors Allison, Gladyshev

Graduate study in biochemistry is pursued through the Center for Biological Chemistry, which has responsibility for instructional programs, undergraduate degrees, and graduate degrees in biochemistry. The purpose of the program is to provide training in biochemistry that will prepare students for professional careers in agricultural, biomedical or natural sciences, with particular emphasis on carrying out and interpreting contemporary research. The program is designed to provide sufficient depth so that the student will be at the state of the art in his/her area of specialization. At the same time, the program is designed to provide sufficient breadth that the student can understand current studies in related areas of biochemistry. This balance is important because nationally, many students change areas of specialization at some point after receiving their Ph.D. degrees.

The faculty of the Center for Biological Chemistry is made up of faculty from the Department of Biochemistry and participating faculty in animal science, agronomy, chemistry, entomology, and biological sciences.

Applicants for graduate work in the Center for Biological Chemistry must have a BS or BA degree in biochemistry, biology, chemistry, or a related field. Undergraduate work should include at least one course in biochemistry, one course in genetics, one course in physical chemistry (calculus based), one year of organic chemistry and one year of physics. Deficiencies in these requirements will be made up during the first year of graduate study. The verbal, quantitative and analytical parts of the Graduate Record Exam are strongly recommended for a student to be considered for admission. The advanced Graduate Record Exam in biochemistry, biology, or chemistry is recommended. Foreign students whose native language is not English must have a minimum TOEFL score of 550.

Further information about admission and graduate programs can be obtained from the Center for Biological Chemistry, N 200 Beadle Center, City Campus. Also, visit the biochemistry Web site at <biochem.unl.edu>.

**Master of Science Degree.** All students must take at least 2 credits of biochemistry courses. Other course requirements are arranged in consultation with the Examining Committee. Students under Option I (advanced permission is required to use Option II) must earn a minimum of 30 hours of credit, consisting of 20 to 24 hours of courses (including seminar) and 6 to 10 hours of thesis credit. At least one half of the required hours (including thesis) must be taken in the Center. At least 8 hours must be taken in courses only open to graduate students (900 level or 800 level without a 400 counterpart). Students will be required to assist with teaching biochemistry courses for a minimum of one semester.
Each student must pass a written comprehensive examination formulated and administered by the Examining Committee. The purpose of the exam is to test the student's breadth of knowledge in biochemistry.

Students in the Option I program must complete an original research project, write a thesis, and present a public seminar open to faculty and students at which the work comprising the M.S. thesis is presented. Each student must pass a final oral examination administered by the Examining Committee.

**Doctor of Philosophy Degree.** The PhD in the Center for Biological Chemistry is a research degree providing in-depth education in an area of biochemistry. Other course requirements are arranged in consultation with the student's Supervisory Committee and should include credit hours in BIO C 930. There is a requirement to assist with teaching biochemistry courses for a minimum of 2 semesters.

Students must complete an original research project, write a dissertation, formally present and defend the research work in a seminar, and pass a final oral examination covering the research work and thesis administered by the Supervisory Committee. The PhD degree is principally a research degree; thus, this is the most important requirement in the program.

**Faculty**

**Allison, Lori** - 1996; Assistant Professor; PhD 1990

**Banerjee, Ruma** - 1991; Associate Professor; BS 1980 Delhi (India); PhD 1987 Rensselaer Polytechnic Institute

**Bi, Xin** - 2000; Assistant Professor; PhD 1994 John Hopkins

**Chloet, Raymond** - 1977; Professor; BA 1968 Colgate, M S 1969, PhD 1972 Illinois

**Gladyshev, Vadim N.** - 1998; Assistant Professor; PhD 1992 M Iowoo State

**Griep, Mark A.** - 1990; Assistant Professor; BS 1981, PhD 1986 M Iowoo State

**Gur, Robert V.** - 1969; Professor; BS 1962 South Dakota State; M S 1964, PhD 1967 Wisconsin

**Knoche, Herman W.** - 1962; Professor Emeritus; BS 1959, PhD 1963 Kansas State

**Lou, Marjorie** - 1994; Professor of Veterinary and Biomedical Sciences; BS 1960 Natioonal Taiwan; M S 1962 Virginia Tech; PhD 1966 Boston

**Markewell, John R.** - 1962; Professor; BA 1970 North Park (Chicago); PhD 1976 M Iowoo State

**Nickerson, Kenneth** - 1975; Professor; BS 1963 R utgers; PhD 1969 Cincinnati

**Parkhurst, L. J.** - 1969; Professor; BS 1959, M S 1960, PhD 1967 Yale

**Ragsdale, Stephen** - 1991; Professor; BS 1979, PhD 1983 Georgia

**Sarah, Gautam** - 1994; Associate Professor; BS 1974, M S 1976 Delhi (India); PhD 1984 C alifornia (Davis)

**Schwartzbach, Steven D.** - 1976; Professor; BA 1969 SUNY (Buffalo); PhD 1975 Brandeis

**Song, P i, Soon** - 1987; Professor; BS 1985, M S 1960 Seoul Natioonal (Korea); PhD 1964 California (David)

**Spreitzer, Robert J.** - 1964; Professor; BS 1974 Cleveland State; PhD 1980 C as Western R everest

**Stanley, David W.** - 1969; Professor; BA 1975 California State (Fullerton); PhD 1983 California (Berkeley)

**Staszewski, Paul E.** - 1985; Professor; BS 1978 Washington State; PhD 1983 Purdue

**Stezowski, John J.** - 1991; Professor; BS 1964 Case Institute of Technology; PhD 1969 M ichigan State

**Weeks, Donald P.** - 1989; Professor; BS 1963 Purdue; PhD 1987 Illinois

**Wood, Charles** - 1995; Lehrer John; M A 1976, M Phil 1976, PhD 1981 C olumbia

**Wood, Charles** - 1995; Professor; BS 1974, PhD 1976, MPhil 1976, PhD 1981 Columbia

**Wood, Charles** - 1995; Professor; BS 1974, PhD 1976, MPhil 1976, PhD 1981 Columbia

**Wood, Charles** - 1995; Professor; BS 1974, PhD 1976, MPhil 1976, PhD 1981 Columbia

**Wood, Charles** - 1995; Professor; BS 1974, PhD 1976, MPhil 1976, PhD 1981 Columbia

Courses (BIOC)

**810. Plant Molecular Biology (AGRO, BIOS, HORT)**
- 3 cr (II) (Lec 1) Prereq: AGRO 315 or BIOS 301. BIO C 831 or permission. For course description see AGRO *810.

**818. Agricultural Biochemistry (AGRO, HORT)**
- 2 cr (II) (Lec 1) Prereq: Undergraduate major in life sciences or related area, and a course in biochemistry. Designed to provide an introduction to the biochemical aspects of agriculture and food science. Offered every fourth semester.

**828. Radiot isotopic Methods (BIOC 828)**
- 2 cr (II) (Lec 2, lab and quiz 3) Prereq: CHEM 106 or 110, PHYS/MAT 143, and MAT 200. COM 101 recommended. Permission of the instructor is required. The course will cover the theory and practical application of radiotrace-mechodology in biochemical, biological, and agricultural research.

**828L. Radiot isotopic Methods Lab (BIOC 828L)**
- 1 cr (II) Prereq: Parallel BIOC 828.

**831. Biochemistry I (BIOC, CHEM 831)**
- 3 cr (II, III) (Lec 3) Prereq: CHEM 252 or 262. Composition of BIO C 831 following this course is recommended. The course will cover the introduction to the fundamental principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**832. Biochemistry II (BIOC, CHEM 832)**
- 3 cr (II) (Lec 3) Prereq: BIO C 831 or permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**834. Advanced Topics in Biochemistry: Photosynthesis**
- 3 cr (II) (Lec 3) Prereq: BIO C 832 or permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**835. Intermediary Metabolism**
- 3 cr (II) Prereq: BIOC 832 or permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**836. Molecular Biology Laboratory**
- 3 cr (III) (Lec 6, lab 2) Prereq: BIO C 832. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**837A. Advanced Topics in Plant Biochemistry**
- 3 cr (II) (Lec 3) Prereq: BIOC 832 or permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**839. Graduate Survey of Biochemistry**
- 3 cr (Lec 3) Prereq: Permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**848. Metals in Biochemistry**
- 3 cr (Lec 3) Prereq: Permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**869. Chemistry for Secondary School Classroom Teachers**
- 3 cr (Lec 3) Prereq: Permission. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.

**885. Advanced Topics in Biophysical Chemistry**
- 3 cr (II) Prereq: CHEM 886. The course will cover the advanced principles of biochemistry, including the structure, function, and interactions of proteins, nucleic acids, and carbohydrates. Offered every fourth semester.
938. Advanced Topics in Biochemistry (1-3 cr, arranged)  Prereq: BIOC 832 or equivalent. Special biochemistry topics when faculty interests and student needs cannot be met by other graduate level courses.

939. Biochemistry of Nutrition (ASCI, BIOC, NUTR 949) (3 cr) Prereq: BIOC 803 or BIOC 839, or permission. Biochemical effects caused by the interaction of light and living matter. Systems covered include microbes, animals, and plants.

949. Doctoral Dissertation (1-24 cr, max 55)  Prereq: Admission to doctoral program and permission of supervisory committee chair.

**Biological Sciences**

**Director of School of Biological Sciences:** T. Jack Morris, Ph.D.

**Graduate Committee Professors:** Wyman (chair), C. Cerutti, H. Roshman, M. Artin, M. Ibra, M. Morris, N. Nickol, O. Nori, O. Sorio

The School of Biological Sciences consists of faculty engaged in research affiliated in one of two major areas: 1) the section of ecology and organismal biology; and 2) the section of genetics, cellular and molecular biology. In addition, there are many affiliated faculty involved in the graduate program from other units including the Center for Biological Chemistry, School of Natural Resources Sciences, State M. u. S. University, and the Departments of Agronomy, Animal Science, Chemistry, Entomology, Food Science and Technology, Plant Pathology, and Veterinary and Biomedical Sciences. The plan of study for the master of science and doctor of philosophy degrees is defined by the faculty of the sections and by the research specialties of the faculty which may be organized into more specialized areas of graduate research emphasis. Although each graduate student is identified with one of the two sections, opportunities for interaction as members of graduate research emphasis groups offers flexibility in meeting a broad diversity of student interests. New graduate students are given a guidance interview focused on their interests, followed by admission to the School of Biological Sciences. The first semester each student will have a guidance interview as described in the masters program. A qualifying examination administered by the section is taken during the first academic year of admission. The purpose of the examination is to assess strengths and weaknesses in background and potential to complete the degree program. Degree requirements are those of the Graduate College and additional stipulations of various Graduate Research Emphasis Groups. The supervisory committee will advise the student's program of course work and determine need for additional training in supporting or deficient areas, and will determine, on an individual basis, training in one or both of the following areas: foreign language or special research techniques. Requirements for the degree differ from the general requirements of the Graduate College in that the oral comprehensive examination is the only examination that may be waived by special permission of the Graduate Committee.

**Specializations available at the masters level:** Environmental Studies, Plant Pathology, Water Resources Planning and Management

**Doctor of Philosophy Degree.** Entering doctoral students must gain admission to one of the sections of the School concurrently with admission to the School of Biological Sciences. During the first semester each student will have a guidance interview as described in the masters program. A qualifying examination administered by the section is taken during the first academic year of admission. The purpose of the examination is to assess strengths and weaknesses in background and potential to complete the degree program. Degree requirements are those of the Graduate College and additional stipulations of various Graduate Research Emphasis Groups. The supervisory committee will advise the student's program of course work and determine need for additional training in supporting or deficient areas, and will determine, on an individual basis, training in one or both of the following areas: foreign language or special research techniques. Requirements for the degree differ from the general requirements of the Graduate College in that the oral comprehensive examination is the only examination that may be waived by special permission of the Graduate Committee.

**Specializations available at the doctoral level:** Environmental Studies, Plant Pathology

**Faculty**

**Alfano, James L.** - Assistant Professor, Plant Pathology; PhD 1993 Washington State

**Allison, Lori** - Assistant Professor, Plant Pathology; PhD 1996 Washington State

**Atkin, Audrey L.** - Assistant Professor, Plant Pathology; PhD 1994 University of California

**Bachman, Gwen** - Assistant Professor, Plant Pathology; BS 1983 Washington State

**Beeziger, Stephen** - Associate Professor, Plant Pathology; BS 1974 Washington State

**Ballinger, Royce** - Assistant Professor, Plant Pathology; BS 1976 University of California

**Barletta, Raul G.** - Associate Professor, Plant Pathology; BS 1979 University of California

**Basolo, Alexandra L.** - Assistant Professor, Plant Pathology; BS 1982 California State University; PhD 1990 University of Texas

**Benson, Andrew K.** - Assistant Professor, Food Science and Technology; BS 1987 Iowa State University; PhD 1992 Texas A&M University

**Bi, Xin** - Assistant Professor, Biochemistry; PhD 1992 John Hopkins University

**Blum, Paul** - Assistant Professor, Plant Pathology; BS 1976 University of California

**Bolick, Margaret** - Associate Professor, Plant Pathology; BS 1972 University of California, Berkeley

**Bond, Alan B.** - Research Associate Professor, Plant Pathology; PhD 1990 University of California

**Cerutti, Heriberto D.** - Assistant Professor, Plant Pathology; PhD 1992 Cornell University

**Christensen, Alan C.** - Associate Professor, Plant Pathology; BS 1976, MS 1977 University of California, Berkeley

**Ciriello, Jeffrey D.** - Assistant Professor, Plant Pathology; BS 1979, MS 1982 University of Maryland

**Dixmier, Martin** - Associate Professor, Plant Pathology; BS 1979, MS 1982 University of California, Berkeley

**Donlon, Robert** - Associate Professor, Plant Pathology; BS 1978 University of California

**Ethon, Thomas E.** - Associate Professor, Plant Pathology; BS 1979, MS 1980, PhD 1983 University of California

**Estes, James R.** - Assistant Professor, Plant Pathology; BS 1977 Arizona State University; PhD 1980, MS 1983 University of California

**Feely, Dennis** - Assistant Professor, Plant Pathology; BS 1972 University of California

**Freeman, Patricia** - Associate Professor, Plant Pathology; BS 1969 University of California

**French, Roy C.** - Associate Professor, Plant Pathology; BS 1977 Colorado State University; PhD 1983 University of California

**Fritz, Sheryl C.** - Associate Professor, Plant Pathology; BS 1974 University of California

**Gardner, Scott L.** - Associate Professor, Plant Pathology; BS 1979 Kent State University; PhD 1986 University of California

**Genoways, Hugh H.** - Associate Professor, Plant Pathology; BS 1963 Hastings College; PhD 1971 University of Kansas

**Gibson, Robert** - Associate Professor, Plant Pathology; BS 1975 University of California

**Gil, Kaveri S.** - Associate Professor, Plant Pathology; BS 1973, MS 1974 University of California

**Hancock, Geoffrey** - Associate Professor, Plant Pathology; BS 1979, MS 1980 University of California

**Hatcher, David** - Associate Professor, Plant Pathology; BS 1978, MS 1980 University of California

**Hutchins, R. J.** - Associate Professor, Plant Pathology; BS 1979, MS 1980 University of California
Courses (BIOS)

801. Plant Cell Structure and Function (3 cr) Lec 3. Prereq: 12 hours biological sciences including BIOS 201; one semester organic chemistry and one semester biochemistry. An extension of BIOS 201. BIOS 801 provides a more in-depth course on the design, function, and regulation of cell biology. Students will perform experiments that significantly advance our knowledge of cell and molecular biology.

802. Evolutionary Principles (3 cr) Molec- and macroevolutionary patterns and processes including population genetics, evolutionary ecology, speciation, phylogenetic systematics, and biogeographic patterns of extant and extinct taxa.

803. Insect Ecology (EN TO 806) (3 cr) For course description, see EN TO 806.

804. Plant Cell Structure and Function (3 cr) Lec 3. Prereq: 12 hours biological sciences including BIOS 201; one semester organic chemistry and one semester biochemistry. An extension of BIOS 201. BIOS 801 provides a more in-depth course on the design, function, and regulation of cell biology. Students will perform experiments that significantly advance our knowledge of cell and molecular biology.

805. Evolutionary Principles (3 cr) Molec- and macroevolutionary patterns and processes including population genetics, evolutionary ecology, speciation, phylogenetic systematics, and biogeographic patterns of extant and extinct taxa.

806. Insect Ecology (EN TO 806) (3 cr) For course description, see EN TO 806.

807. Plant of Cells and Organelles (4 cr) Prereq: BIOS 201 and 301, or permission. Regulation of transcription and translation in the cell cycle; the genetic autonomy of mitochondria and chloroplasts.

808. Functional Histology (IVM 807) (4 cr) Lec 3, lab 2. Prereq: BIOS 201 and 301, or BIOS 212 or 201; BIOS C 221 or higher. BIOS 212 recommended. For course description, see IVM 807.

809. Neuroanatomy (3 cr) Lec 3. Prereq: Permission. For course description, see IVM 809.

810. Plant Molecular Biology (AGRO, BIOC, HORT *810) (3 cr) Lec 3. Prereq: AGRO 315 or BIOS 301, BIOS C 831 or permission. For course description, see AGRO *810.
K. Chemistry of Life Processes–Biomolecules (1 cr)
L. Structure and Properties of Matter: Condensed States and Materials Science (1 cr)
M. Interactions of Matter and Energy (1 cr)
N. Chemistry of Life Processes–DNA (1 cr)
P. Chemistry of Life Processes–Energy and Metabolism (1 cr)
Q. Chemical Reactions Equations and their Consequences (1 cr)
R. Chemical Reactions and Basic Principles (1 cr)
T. Chemistry of Inorganic Kinetics (1 cr)
U. Chemical Reactions: Oxidation, Reduction, and Electrochemistry (1 cr)
V. Equilibrium Themes (1 cr)
W. Conservation of Energy and the Increase in Disorder: Thermodynamics (1 cr)
X. Inquiry and the Nature of Science: Analysis and Instrumentation (1 cr)
Y. Structure of Atoms: Nuclear Chemistry (1 cr)

884. Physiology of Exercise (HHP 884) (3 cr) Lec, disc, 2, lab. 3. Prereq: 12 hrs biological sciences including BIO 113 (4 hrs) or equivalent. For course description, see HHP 884.

885. Aquatic Insects (ENTO, NRES 802) (3 cr) Lec 2. Prereq: 12 hrs biological sciences or permission. For course description, see EN TO 802.

886. Advanced Topics in Aquatic Insects (ENTO, NRES 802L) (3 cr) Lec 2. Prereq: 12 hrs biological sciences or equivalent. Biological course work. 0 fixed summer only at C edar Point Biological Station. Animal host–parasite relationships, epizootiology, ecology, host distribution, classification, and life cycle stages of animal parasites.

888. Natural History of the Invertebrates (4 cr) Prereq: 12 hrs biological sciences or equivalent. Biological course work. 0 fixed summer only at C edar Point Biological Station. Field course in invertebrate community relations stressing on-site observation of community components, natural history, and interactions.

890. Ichthyology (NRES 880) (3 cr) Lec 1. Prereq: 12 hrs biological sciences or equivalent. Students majoring in ichthyology may also be offered at C edar Point Biological Station. Fishes, their taxonomy, physiology, behavior, and ecology; the dynamics of fish stocks and factors regulating their production.

891. Herpetology (4 cr) Prereq: BIO S 386 and permission. BIO S 386 recommended. Major emphasis on field courses only at C edar Point Biological Station. Field course in herpetology. Major emphasis on field courses only at C edar Point Biological Station. Field course in herpetology. Major emphasis on field courses only at C edar Point Biological Station.

892. Ornithology (1 cr) Prereq: Parallel BIO S 808. For course description, see BIO S 808.

893. Special Topics in Biological Sciences (1-4 cr, max 24) Prereq: 12 hrs biological sciences and permission. Topic varies by semester.

894. Independent Research in Biological Sciences (PLPT 898) (1-8 cr) Prereq: 12 hrs biological sciences and permission. Independent study and laboratory or field investigation of a specific problem under the supervision of a staff member.

895. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.

902. Introduction to Biotechnology Core Research Facilities (1 cr) Prereq: Permission. Survey of each of the Biotechnology Core Facilities primarily for incoming graduate students. Lectures cover theory and practical aspects of how to use the resources of each facility. Vists made to each of the core facilities. A course end student should have the necessary knowledge to use each facility.

910. Developmental Genetics (3 cr) Prereq: General genetics or equivalent. Effects of various mutations on developing biological systems. Module for which the abnormal gene expresses its phenotype. Special consideration to vertebrate organisms.
966. Advanced Viral Pathogenesis (VBM 966) (3 cr) Prereq: BIO S 430 or equivalent. An introductory course in virology or experience. Advanced analysis on the mechanisms of cell and tissue damage by viruses. The spread of viruses through the body, and the host response.

968. Seminar in Plant Pathology (1 or per sem) Prereq: Permission.

989. Research Design (3 cr) Lec 3; Prereq: BION M 801 or equivalent; or permission. Basic logic of research design and methodology in ecology, evolutionary biology, and behavior. Logic of scientific investigation, how to evaluate a dependent variable, the manipulation and control of independent, secondary and confounding variables, independent and pseudo-replication, the use of repeated measures designs and quasi-experimental designs.

996. Research (3-10 cr) Prereq: Permission of instructor and departmental Graduate Committee. Research other than thesis.

998. Special Topics in the Life Sciences (1-24 cr) Prereq: Permission. Review of specialized subject areas. Subject dependent on student demand and availability of staff.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

### Biometry

**Department Head:** Walter W. Stroup, Ph.D.

**Graduate Committee:** Professor Esrick (chair)

The primary aim of the biometry master of science program is to provide students with an education sufficient to allow them to be competent practitioners of applied statistics especially applications involving agriculture, biological, or environmental sciences. Competence includes mastery of statistical theory and practice, significant exposure to disciplines with which biometricians interact, facility with statistical computing tools, and training and experience in statistical consulting.

Specific requirements are designed to allow each student flexibility in designing a program suited to individual needs. Students are expected to take a common core curriculum consisting of two semesters of mathematics statistics, two semesters of linear and statistical modeling, one semester of design of experiments, and one semester of multivariate methods. In addition, students will be required to demonstrate proficiency in a statistical computing language, gain statistical consulting experience, and become familiar with a discipline to which statistics is applied. Other course work will be taken from a variety of statistical methods courses. Students will be required to pass a comprehensive exam based on material contained in the six required courses. Masters degree candidates may choose a thesis option, a non-thesis with minor option, or a non-thesis with special problem or area of intensive study.

When appropriate, biometry faculty can direct doctoral programs. Biometry is an approved area of concentration for PhD candidates in the departments of agronomy and mathematics and statistics.

Information regarding application procedures may be obtained from:

Biometry Department
University of Nebraska-Lincoln
103 M Liller Hall
PO Box 830712
Lincoln, NE 68583-0712

### Faculty

**Blankenship, Erin** - 1999; Assistant Professor; BS 1994 Truman State; MS 1996, PhD 1999 North Carolina State

**Esrick, Kent M.** - 1983; Professor; BSBA 1976, MA 1982 Iowa St; PhD 1987 Neb (Lincoln)

**Kachman, Stephen D.** - 1990; Associate Professor; BS 1981 Michigan State; MS 1986 Illinois PhD 1988 M orneta State

**Marx, David B.** - 1989; Professor and Head; BA 1968 Wooster (Ohio); MS 1970 Iowa St; PhD 1977 Kentucky

**Parkhurst, Anne M.** - 1969; Professor; BA 1962 Virginia; MS 1965 Yale; PhD 1969 N ebraska (Lincoln)

**Stroup, Walter W.** - 1979; Professor and Head; BA 1973 Antioch; MS 1975, PhD 1979 Kentucky

**Young, Linda J.** - 1990; Professor; BS 1974, MS 1976 West Texas State; PhD 1981 Oklahoma State

### Courses (BION)

**801. Statistical Methods in Research** (4 cr I, II) Lec 3, lab 2; Prereq: STAT 180 or BION M 201 or permission. Statistical concepts and statistical methodology useful in descriptive, experimental, and analytical study of biological phenomena. Practical application of statistics in biology rather than on statistical theory.

**802. Experimental Design** (4 cr I, II) Lec 3, lab 2; Prereq: BION M 801 or equivalent. Suitability and efficiency of various designs in conducting experimental investigations in agriculture and related areas and the statistical analysis of the data.

**810. Survey of Multivariate Techniques in Biometry** (3 cr I) Lec 3; Prereq: BION M 801 or equivalent. Introduction to multivariate techniques commonly used in agricultural research with emphasis on general appreciation, relevance and interpretation. Course divided into three modules; M odule I: reduction of dimensionality and multi- variate dependences including principle components, factor analysis, and canonical correlation; Module II: classification procedures including discriminant analysis, cluster analysis and multidimensional scaling. M odule III: multivariate extensions of the analysis of variance and the general linear model.

**822. Spatial Statistics** (3 cr I) Prereq: BION M 802. 0.5 credit, odd-numbered calendar years. Statistical methods useful for modeling and analyzing correlated data, with emphasis on spatial correlation. Descriptive statistics, space series correlation, semivariogram; kriging and designing experiments in the presence of spatial correlation.

**830. Sensory Evaluation** (FDST 830) (3 cr II) Lec 2, lab 3. Prereq: STAT 180 or BION M 201, 12 hours of food science or permission. For course description, see FDST 830.

**889. Biometry Seminar** (1 cr) Prereq: Permission.

**896. Independent Study in Biometry** (1-5 cr) Prereq: 12 hours biometry mathematics or closely related area. Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member.

**896. Biometry Project** (1-5 cr) Prereq: Permission.

**899. Masters Thesis** (1-6 cr) Prereq: Admission to masters degree program and permission of major adviser.

**901. Multiple Regression Analysis** (3 cr I) Lec 3; Prereq: BION M 801 or equivalent. Linear regression and related analysis of variance and covariance methods for models with two or more independent variables. Techniques for selecting and fitting models, interpreting parameter estimates, and checking for consistency with underlying assumptions. Applications of these techniques to biological data. Partial and multiple correlation, use of dummy variables, covariance models, stepwise procedures, methods for estimating response surfaces, and evaluation of residuals.

**902. Advanced Experimental Design** (3 cr I, II) Lec 2; Prereq: BION M 802 or permission. BION M 802 recommended. Survey of the use, construction, analysis, and interpretation of incomplete block designs useful in agricultural and/or biological research. Partially and completely confounded factorial, lattice, augmented designs, and other topics.

**932. Biometrical Genetics and Plant Breeding** (AGRO 932) (3 cr I, II) Lec 3, lab 2. Prereq: Permission. Methodology and underlying principles for employing and analyzing unbalanced data on a linear statistical model. General linear model with specific models as special cases. Attention to linear models to applications to biological research.


**972. Variance Component Estimation** (3 cr I) Prereq: BION M 970. Methodology and underlying principles for employing and analyzing unbalanced data on a linear statistical model. General linear model with specific models as special cases. Attention to linear models to applications to biological research.

**973. Principles of Statistical Consulting** (2 cr I) Lec 2. Prereq: Permission. First course in statistical consulting. Designed primarily for graduate students in biometry, this course provides them with future consulting work and provides them with a more comprehensive understanding of applications of statistics than they would obtain from theory and methodology courses alone. Role and purpose of consulting, statistical issues—understanding the client's problem, choosing an appropriate procedure, etc. And interpersonal issues—client expectations, difficult clients, working effectively with people, teamwork, etc. Mix of lectures, discussion, role-playing, and videotaping and discussion of real or simulated consulting meetings.

**990. Practicum in Statistical Consulting** (4 cr I, II) Prereq: BION M 990 or permission. Participation in statistical consulting activities of the Department of Biometry under faculty supervision. May take the form of extensive consultation on a highly involved problem or regular availability for less involved problems over the course of a semester. Students expected to prepare written reports to clients summarizing consultation results and to a biometry supervisor summarizing statistical issues, findings, etc.

### Business

(Interdepartmental Area)

**Area Committee**: Associate Dean Karles (chair); Professors Chen, Luthans, Price, Zorn

**School/Department Cooperations**: Accounting, Finance, Management, and Marketing

The Business Interdepartmental Area Graduate Committee makes recommendations to the UNL Dean of Graduate Studies regarding the admission of students for study leading to the degree programs. The department offers an MBA, M BA, MBAJD, M BA/M A Architecture, M PA, and the PhD program. These programs are accredited by the American Assembly of Collegiate Schools of Business.

Applicants for the various advanced degree programs offered by the Business Interdepartmental Area must hold a baccalaureate degree, or be in the process of completing a degree, from an accredited college or university and are expected to have a satisfactory scholastic average. In addition, they must have a satisfactory score
on the Graduate Management Admission Test (GMAT) and present three letters of recommendation regarding their capacity for graduate study. Information regarding the GMAT may be obtained from the Educational Testing Service, Princeton, NJ 08540, or from Graduate Advising, 126 College of Business Administration, University of Nebraska–Lincoln. Students who wish to be considered for fellowships or assistantships during the academic year should begin the application process by December 1.

Applicants for admission to the master's programs (M.A., M.P.A., M.B.A., and the M.B.A./J.D.) are normally graduates of an accredited institution. Students who are not graduates of an American Assembly of Collegiate Schools of Business (AACSB) accredited college or school of business are usually required to complete a number of courses to satisfy the Common Body of Knowledge (CBK), which consists of a combination of undergraduate and graduate courses. Students who hold a bachelor's degree in business administration or who have previously completed undergraduate course work in these areas may be able to have some of these hours waived. In addition, students are expected to have completed a course in calculus and to have satisfied the written and oral communication requirements of the department. Transcripts will be reviewed at the time of admission to determine any entrance deficiencies.

The MBA program is designed to provide students with broad exposure to business administration and its functional areas. This program is best suited for those who have little or no previous course work in business. Typically, students from areas such as the humanities sciences, engineering, education, agriculture, and architecture choose the MBA program. Students interested in the MBA program may register as a full-time or part-time student. Courses are offered as daytime classes during the fall, spring, and summer sessions. Required core courses and electives are also offered on a part-time basis in the evening during the fall and spring sessions.

The College of Business offers several joint and cooperative MBA programs:
- An MBA program with a specialization in engineering, education, agriculture, and architecture.
- An MBA program with a specialization in agribusiness.

The MBA program is a joint program offered by the Business Interdepartmental Area and the Law College. Students interested in pursuing a career in corporate law, general law practice, government regulations, business management, or other business-related fields may pursue this program.

The M.B.A./M.A. architecture program is offered by the business interdepartmental areas and the College of Architecture. The program is based on the increased need for architects to be well versed in business practices. Students can complete this program in a suggested three-year sequence.

The MBA program is offered at Offutt Air Force Base, Scottsbluff, or other sites in Nebraska. Courses are offered via interactive television and the Internet.

For additional information on the MBA program at Offutt Air Force Base, Scottsbluff, or other sites in Nebraska, contact:
- C. J. Bachman, Director
  UNL Distance MBA Program
  55 M SS/D PE
  Offutt Air Force Base, Nebraska 68113
  (402) 595-2346
  cbachman1@unl.edu

The MBA program provides the opportunity for students to focus on one or two areas of business (or one area of business and one area outside of business) with the approval of the advisor. The possible areas of concentration are listed under specific M.A. requirements in this section. The MBA program is normally chosen by students who already have a general background in business administration and wish to build an area of specialization.

Students interested in a career in accounting should consider the Master of Professional Accountancy (M.P.A.) degree. This degree may be earned by students pursuing a bachelor's degree in business administration at the University of Nebraska or by students who have already completed an undergraduate degree. Because admission and enrollment in the M.P.A. program involves specific requirements that differ from those of other business programs, students interested in this degree should contact the M.P.A. advisor, College of Business Administration, prior to enrolling in course work.

The M.P.A./J.D. program is a joint program offered by the School of Accountancy and the College of Law. Students interested in a career in taxation or other law/accounting-related fields may pursue this program.

The Ph.D. program is designed primarily for those who expect to pursue a career in teaching and research at the university level.

In addition to Graduate College scholarship requirements, students majoring in the Business Area who fall below a 3.0 grade point average are subject to review by the Graduate Committee which may recommend to the Dean for Graduate Studies a change in status from degree-seeking to unclassified. Students in the business area must also earn a grade of B or better in 800-level course work in a minor, or allied, or supporting course work to be recommended for a graduate degree. Students should refer to the Business Interdepartmental brochure for additional information regarding scholastic requirements.

Students interested in the programs offered by the Business Interdepartmental Area may receive a detailed brochure of the admission and program requirements by contacting:
- Graduate Advising
  University of Nebraska–Lincoln
  126 CBA
  PO Box 880405
  Lincoln, NE 68588-0405
- Students in the MA, MPA, MBA, and MBA/JD program should also be aware of the requirement of submission of the Memorandum of Courses form prior to completion of half the program. For additional information, see "Requirements for Graduate Degrees" on page 15.

**NOTE:** No student on unclassified status may take graduate courses in the business area without prior specific written approval of the chair of the Graduate Committee. The prerequisite for all courses in the 800-series is 12 hours of business and economics including a complete course in the Principles of Economics.

**Master of Business Administration**

Students seeking the MBA degree will normally complete 48 hours of graduate credit. A student who has no previous course work in business administration may want to complete some of the Common Body of Knowledge (CBK) requirements, but the only undergraduate requirements are calculus, statistics, and computer proficiency. Students who hold a bachelor's degree may be allowed to waive some of the MBA core classes.

The graduate core consists of the following 18 hours of course work: GR BA *810, *811, *812, *813, *814, and *815.

The cross-functional requirements include GR BA *851, *852, *853, and *898. Graduate business administration *853 is to be taken in the student's final semester in the program.

The breadth requirements include an additional 9 hours of electives from three of the four interdepartmental business areas—accounting, finance, marketing, and management. At least 3 of the 9 hours must be graduate-only courses (*800 or 900).

An additional 9 hours of elective courses are required. These courses may be selected in the areas of the interdepartmental programs. Alternatively, these courses may be taken outside of the College of Business Administration. At least one course must be graduate-only (*800 or 900).

The M.P.A. degree is designed primarily for those who expect to pursue a career in teaching and research at the university level.

In addition to Graduate College scholarship requirements, students majoring in the Business Area who fall below a 3.0 grade point average are subject to review by the Graduate Committee which may recommend to the Dean for Graduate Studies a change in status from degree-seeking to unclassified. Students in the business area must also earn a grade of B or better in 800-level course work in a minor, or allied, or supporting course work to be recommended for a graduate degree. Students should refer to the Business Interdepartmental brochure for additional information regarding scholastic requirements.

Students interested in the programs offered by the Business Interdepartmental Area may receive a detailed brochure of the admission and program requirements by contacting:
- Graduate Advising
  University of Nebraska–Lincoln
  126 CBA
  PO Box 880405
  Lincoln, NE 68588-0405
- Students in the MA, MPA, MBA, and MBA/JD program should also be aware of the requirement of submission of the Memorandum of Courses form prior to completion of half the program. For additional information, see "Requirements for Graduate Degrees" on page 15.

**NOTE:** No student on unclassified status may take graduate courses in the business area without prior specific written approval of the chair of the Graduate Committee. The prerequisite for all courses in the 800-series is 12 hours of business and economics including a complete course in the Principles of Economics.

**Master of Business Administration**

Students seeking the MBA degree will normally complete 48 hours of graduate credit. A student who has no previous course work in business administration may want to complete some of the Common Body of Knowledge (CBK) requirements, but the only undergraduate requirements are calculus, statistics, and computer proficiency. Students who hold a bachelor's degree may be allowed to waive some of the MBA core classes.

The graduate core consists of the following 18 hours of course work: GR BA *810, *811, *812, *813, *814, and *815.

The cross-functional requirements include GR BA *851, *852, *853, and *898. Graduate business administration *853 is to be taken in the student's final semester in the program.

The breadth requirements include an additional 9 hours of electives from three of the four interdepartmental business areas—accounting, finance, marketing, and management. At least 3 of the 9 hours must be graduate-only courses (*800 or 900).

An additional 9 hours of elective courses are required. These courses may be selected in the areas of the interdepartmental programs. Alternatively, these courses may be taken outside of the College of Business Administration. At least one course must be graduate-only (*800 or 900).

The M.P.A. degree is designed primarily for those who expect to pursue a career in teaching and research at the university level.

In addition to Graduate College scholarship requirements, students majoring in the Business Area who fall below a 3.0 grade point average are subject to review by the Graduate Committee which may recommend to the Dean for Graduate Studies a change in status from degree-seeking to unclassified. Students in the business area must also earn a grade of B or better in 800-level course work in a minor, or allied, or supporting course work to be recommended for a graduate degree. Students should refer to the Business Interdepartmental brochure for additional information regarding scholastic requirements.

Students interested in the programs offered by the Business Interdepartmental Area may receive a detailed brochure of the admission and program requirements by contacting:
- Graduate Advising
  University of Nebraska–Lincoln
  126 CBA
  PO Box 880405
  Lincoln, NE 68588-0405
- Students in the MA, MPA, MBA, and MBA/JD program should also be aware of the requirement of submission of the Memorandum of Courses form prior to completion of half the program. For additional information, see "Requirements for Graduate Degrees" on page 15.

**NOTE:** No student on unclassified status may take graduate courses in the business area without prior specific written approval of the chair of the Graduate Committee. The prerequisite for all courses in the 800-series is 12 hours of business and economics including a complete course in the Principles of Economics.
following academic year. For further information on the program, please contact the Assistant Dean, College of Law, University of Nebraska-Lincoln.

**Specializations available for the MBA degree:** Agribusiness Information and Software Systems

**Master of Professional Accountancy**

The mission of the School of Accountancy is to provide quality teaching, research, and service and to maintain a leadership role in accounting education. The objective of the master of professional accountability program is to provide candidates with greater breadth and depth in accounting education, and related subjects and skills than is possible in a baccalaureate program in preparation for careers as professional accountants.

Admission and enrollment in this program have some very specific deadlines which differ from those described above. It is very important for students interested in this program to consult with the Graduate Chair of Accountancy prior to applying for admission.

Applicants for admission to the MPA program are normally either enrolled in the college degree program in business administration at UNL (provisional status) or are graduates of an accredited institution (full graduate standing).

Applicants must have a satisfactory score on the Graduate Management Admission Test (GMAT), submit three letters of recommendation for graduate study, and (if a graduate of another institution) provide two copies of official transcripts covering all collegiate work completed. At the time of admission, transcripts are reviewed to determine if any deficiencies must be satisfied to complete accreditation standards.

Students who are in the process of completing their bachelor's degree in business administration at UNL (provisional status) or are graduates of an accredited institution with a degree in business administration at an accredited institution (full graduate standing) must be examined in the Problem of Knowledge (CBK) requirements and other general requirements as set forth by the American Assembly of Collegiate Schools of Business.

The MPA program is generally pursued by those students who are in the process of completing their bachelor's degree in business administration at the University of Nebraska-Lincoln. It is recommended that students apply to this program prior to the fourth year of their bachelor's program (approximately 86 hours of credit). Students from other departments and institutions interested in this program may apply for admission during their senior year or after completion of the bachelor's degree.

In addition to satisfying the Common Body of Knowledge (CBK) requirements and other general requirements as set forth by the Business Interdepartmental Area and the Graduate College, students may also be required to complete undergraduate accounting prerequisite courses. These courses include ACC 201, 202, 308, 309, 313, and 314. Students admitted to the program while enrolled in the bachelor's degree in business administration at UNL will complete a minimum of 156 hours of semester credit with 36 of these hours taken in graduate-level courses. A minimum of 20 hours of credit must be earned in graduate-only course work (courses with no 400-level counterpart).

Fifteen hours of graduate-only course work must be completed in accounting. Students who have not previously completed an administrative policy course will be required to take GR BA 853, Strategic Management and Business Policy. During the final semester of the program, students will be required to pass an oral comprehensive examination.

A complete listing of the requirements for the MPA Program are available from the Director of the MPA Program.

In addition to the MPA application and admission requirements listed above, students interested in the MPA program must submit College of Law application materials and be admitted to the law program. Since the College of Law only admits first-year students in the fall, all application materials must be received by March 1 in order to be considered for the following academic year. For further information on the program, contact the Assistant Dean, College of Law, University of Nebraska-Lincoln.

**Master of Arts and Doctor of Philosophy**

To qualify for admission to either program, students must normally have graduated from an accredited institution with a degree in business administration. Students applying to the MA program who are not graduates of an American Assembly of Collegiate Schools of Business accredited college or school of business administration will be required to complete the Common Body of Knowledge courses.

The Common Body of Knowledge (CBK), which has been established by the College of Business Administration's accreditation council, ASCSB, consists of the following classes: BLAW 371 (Legal Environment); ACC 201 and 202 (Principles or 306); ECON 211 and 212 (Principles) or 210, 215 (Statistics); FIN 361 (Finance); MGMT 341 (Marketing); MGMT 360 (Managing Behavior in Organizations); MGMT 245 or ECON 245 (Elementary Quantitative Methods); and MGMT 331 (Operations and Resources Management). In addition, students are expected to have completed a course in calculus and show computer proficiency and oral and written communication skills. Furthermore, students who have not previously completed an administrative policy course will be required to take GR BA 853, Strategic Management and Business Policy.

The MA degree is offered under three options according to requirements of the Graduate College. A faculty adviser is responsible for and designs a student's MA program.

The student is expected to complete a program in one of two principal fields of emphasis: (a) management and business policy; or (b) marketing, marketing channels, organizational behavior, personnel and labor relations, production, strategic management, and promotion. The supporting field may be selected from the above or, in the case of Option II, an outside minor with the approval of the adviser. Under Option I and II, a minimum of 16 hours of course work must be earned in courses open exclusively to graduate students. Under Option III, a minimum of 18 hours must be earned in graduate-only courses. Graduate business administration 853 and departmental 999, directed reading, directed courses may not be used to fulfill this requirement.

Students must complete a minimum of 9 hours of acceptable course work for the research tool requirement. These hours must be completed after receipt of the bachelor's degree and may be taken as either graduate-level or undergraduate-level courses designated by the supervisory committee.

The MA student is required to take written and/or oral comprehensive examinations according to the requirements of the Graduate College. At the discretion of the adviser, this examination may include a separate section specifically covering the supporting field. Under Option I the student must be examined in the minor.

The Marketing Department also offers a specialization in marketing, communications, studies, and advertising. (See list of approved specializations below.) This is an Option III program. The program consists of a major—a minimum of 18 hours in marketing and two minors of 9 hours—one in communication studies and one in advertising. Eighteen hours of the program are specified courses which includes 6 hours from each of the following three departments: marketing, communication studies, and advertising. There is also an eight hour comprehensive exam of which five hours can be waived if the student has a GPA of 3.25 or higher in all the courses taken in the specialization.

Applicants for admission to the PhD program should be graduates of an accredited institution with a degree in business administration. Students who are graduates of an AACSB accredited college or school of business may be required to complete courses to satisfy the Common Body of Knowledge. Some programs may permit the student to substitute appropriate courses in analytical techniques or behavioral sciences to fulfill this requirement. A student's supervisory committee will make this determination at the time of admission to the program.

In addition to the general requirements of the Graduate College for the doctorate of philosophy degree, students are normally required to choose four fields of emphasis. At least half of the fields must be in the business area, including banking, finance, financial accounting, insurance, international marketing, investments, managerial accounting, management information systems, management science, organization and management theory, marketing, marketing channels, organizational behavior, human resources management, production and operations management, promotion, strategic management, and taxation. Fields in the Department of Economics may be included in the program. Each of the fields will normally be covered by a comprehensive examination. Approved minors, if used, may include the areas of mathematics, political science, psychology, economics and sociology or others specifically approved by the supervisory committee.

In addition to the regular course work and research prescribed in a PhD program, a student must complete a minimum of 9 hours of acceptable course work for the research tool requirement. These hours must be completed after receipt of the bachelor's degree and may be taken as either graduate-level or undergraduate-level courses designated by the supervisory committee. The PhD degree requires a minimum of 90 hours for the PhD degree.

**Specializations available for the MA degree:** Finance; Management Information Systems; Management Science; Marketing; Information and Soft

**Specializations available for the PhD degree:** Finance; Management Information Systems; Management Science; Marketing; Information and Soft
Specializations available at the doctoral level: Accounting; Finance; Management; Marketing

Graduate Business Administration (GRBA)

*800. Ethical and Legal Considerations in Management (3 cr)
Introduction to the Legal System; Introduction to Legislation and Impact on Business; Evolution of Concepts in Law; Social and Economic System; The Corporation-As A Legal Entity; Developing Legal Concepts; White Collar Crimes; Relationship of Business and Government; Concept of Public Interest; The Corporation: A Legal Perspective; Business and Ethics; Business and Religion; International Business Ethics; The "Professional Manager" in Business.

*801. Survey of Accounting (3 cr)
A one-semester course for graduate students without prior study in financial and managerial accounting.

*802. Finance (3 cr)
Prep: GR BA *801, *802, and *803; or equivalent or parallel.

*803. Seminar in Financial Accounting (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*810. Contemporary Managerial Accounting (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*814. Applied Organizational Behavior (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*815. Operations and Information Systems Strategy (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*853. Strategic Management and Business Policy (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*856. Managerial Decision Making (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*858. Managerial Finance (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*860. Management: Theory, Issues and Practice (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

*861. Managerial Marketing (3 cr)
Prep: Admission to the MBA program and/or permission of the MBA director.

School of Accountancy

Director: Nancy J. Stara, JD
Graduate Committee: Professors Chen (chair), Brown; Associate Professors Rouchala, Shoemaker

Students not seeking a law degree may be admitted to one or more of the cross-listed College of Law courses in the School of Accountancy with the specific approval of the faculty member teaching the course and the Dean of the College of Law.

For admission to all graduate courses, the prerequisite course must have been completed with a C or better or the student must have permission of the instructor.

Faculty

**Allen, Arthur C. - 1989; Associate Professor; BSBA 1985 M ississippi; PhD 1989 Alabama**

**Balke, Thomas E. - 1970; Professor; BS 1965 Tulane; MS 1966 Denver; PhD 1970 M issouri**

**Brown, James F., Jr. - 1980; Professor; BS 1968, M BA 1970, DBA 1980 Tennessee**

**Chen, Kung H. - 1973; Professor; BA 1964 Taiwan; M BA 1969 West Virginia; PhD 1974 Texas**

**Goebl, John W. - 1959; Professor; JD 1954 Creighton; M A 1968 Nebraska Lincoln**

**Lawrence, Janice E. - 1992; Associate Professor; BA 1969 Knox; MS 1971 Wisconsin Whitewater; PhD 1992 Colorado**

**Price, Renee - 2000; Assistant Professor; BA 1978 W hitman; MS 1987 Texas A&M; M A 1988 Chicago; PhD 1993 Texas A&M**

**Rouchala, Linda V. - 1994; Associate Professor; BS 1976 Michigan State; M GRP 1978 Harvard; PhD 1991 Indiana**

**Shoemaker, Paul A. - 1989; Associate Professor; BS 1974 Bloomsburg; M BA 1983 Marywood; PhD 1989 Pennsylvania State**

**Stara, Nancy - 1985; Director and Professor; BA 1969 Park College; JD 1967 Nebraska Lincoln; LLM 1985 Denver**

Woodland, Angela - 2001; Assistant Professor; BSBA 1989, PhD 2001 M issouri (Columbia)

Courses (ACCT)

*801. Contemporary Financial Accounting (3 cr)
Prep: ACCT 202 or 306 for 4 cr. Not open to students with credit in ACCT 314.

*802. Accounting Standards (3 cr) Prep: ACCT 810 with a grade of C or better or permission. Analysis of changes in authoritative audit and accounting pronouncements. Besides topical coverage, recent discussion of standards and interpretations of policies in the accounting profession.

*803. Seminar in Financial Accounting (1-3 cr, max 3)

*804. Advanced Accounting (3 cr)
Prep: ACCT 314 with grade of C or better or permission. Special accounting problems relating to the preparation of combined and consolidated financial statements for accounting entities with branch offices and with subsidiaries, both domestic and foreign; partnerships; consulting; governmental and not-for-profit accounting.
808. Advanced Managerial Accounting (3 cr) Prereq: ACCT 314 or grade of C or better and FINA 361, or permission.

Advanced treatment of managerial accounting topics with emphasis on generation, communication, and use of information to assist management in performance of the planning and control function. Problem, case, and library materials and computerized systems analysis are used to develop understanding of overhead variance analysis, cost systems, capital budgeting, and other quantitative techniques relevant to internal accounting.

810. Auditing (3 cr) Prereq: ACCT 314 with a grade of C or better, or permission.

Duties and responsibilities of auditors; method of conducting various kinds of audits; audit working papers; preparation of the audit report; the auditor's certificate; special problems in the audit of different kinds of enterprises.

812. Federal Tax Accounting I (3 cr) Prereq: ACCT 313, with a grade of C or better, or permission.

Federal and state income tax concepts. The theory and the historical growth of the fundamentals of the federal tax laws and regulations. Practical application of the tax laws in the preparation of the tax returns for wage earners and sole proprietors and the need for tax planning.

813. Federal Tax Accounting II (3 cr) Prereq: ACCT 812, with a grade of C or better, or permission.

A continuation of the study of federal and state income tax fundamentals with emphasis on the tax laws as they pertain to partnerships, corporations, and fiduciaries. Taxation of decedents' estates and lifetime gifts are included to bring out the need for estate planning.

814. Governmental and Not-For-Profit Accounting (1-3 cr) Prereq: ACCT 314, with a grade of C or better, or permission.

The impact of Federal income tax law on management decisions, more from the viewpoint of recognizing problems than solving them. The objectives of the course are to introduce students to governmental accounting and to develop an awareness of the special problems and opportunities in the field of government accounting.

816. Special Topics in Federal Taxation (3 cr) Prereq: ACCT 812.

Areas of Federal tax law that are especially relevant in the prevailing economic and political climate.


Development of skills in identifying problems, interpreting facts, conducting research, and communicating results in the field of Federal taxation.

818. Taxation–Farm and Ranch (AECN, POLS *818; LAW 619/618G) (1-4 cr) Prereq: ACCT 812 or LAW 637/637G.

For course description, see LAW 637/637G.

820. Accounting Policy (2-3 cr) Prereq: ACCT 810 with a grade of C or better and permission.

Extended application of accounting theory as it relates to both the public and private sector. Environmental considerations, including the international implications of accounting treatments. Course relies heavily on previous courses and builds through use of cases and exposure drafts of proposed accounting pronouncements in accounting theory. A capstone course for accountants.

830. Advanced Auditing (3 cr) Prereq: ACCT 810 with a grade of C or better, or permission.

Internal and compliance auditing; auditor's ethics and liability; EDP auditing; audit sampling; special report writing; audit standards for state and local governmental entities and government agencies review and discussion of selected audit cases international auditing.

831. Seminar in Auditing (3 cr) Prereq: ACCT 810.

837. Taxation–Individual Income (LAW 637/637G) (1-4 cr)

For course description, see LAW 637/637G.

838. Taxation–Corporate (LAW 638/638G) (1-4 cr)

Prereq: ACCT 812 or LAW 637/637G.

For course description, see LAW 638/638G.

840. Fraud Prevention and Detection (3 cr) Prereq: Permission.

Explains fraud and provides a forum for discussing how fraud differs from other crimes. Includes fraud techniques, schemes, readings, and study of actual fraud cases.

848. Business Planning (LAW 648/648G) (1-4 cr) Prereq: ACCT 813. A seminar to develop a firm's business or professional career plans.

For course description, see LAW 648/648G.

857. Controllship (3 cr) Prereq: ACCT 808 or GR BA 910 or permission.

A multidisciplinary approach to management control systems for business firms and situations. Case studies on the management aspects of budgeting, standard setting, variance analysis, cost allocation, operating control, capital budgeting, performance evaluation, and other pertinent topics relating to managerial uses of accounting data.

858. Seminar in Managerial Accounting (3 cr) Prereq: Permission.

863. Taxation–Individual Income II (LAW 663/663G) (2 cr)

For course description, see LAW 663/663G.

873. Business Law II (3 cr) Prereq: ACCT 372 with grade of C or better, or permission.

Basic legal principles to allow recognition or relevant issues and the legal implications of the principles of law to accounting and auditing. The impact of Federal income tax and Federal criminal law on business, partnerships, corporations, and fiduciaries.

899. Masters Thesis (6-10 cr) Prereq: Admission to master's degree program and permission of major advisor.

904. Seminar in Accounting Theory (1-3 cr, max 3)

906. Seminar in Comparative Accounting Systems (3 cr) (max 24) Prereq: Permission (ordinarily at least two senior-level courses in accounting or ACCT *801 and suitable supporting courses.

A research seminar on the conceptual framework underlying selected accounting systems or subsystems. The specific systems studied vary depending upon interest and background of enrolled students, but ordinarily include insurance or other regulatory systems. Both governmental or other for-profit systems, Securities and Exchange Commission regulations, foreign income tax rules, foreign regulatory systems, and contracts with traditional financial and managerial reporting systems and the reasons for the differences that exist.


For course description, see LAW 767/767G.


Investigation of empirical validations and implications of theories and findings in accounting. Development of methods to test the hypotheses on external financial reporting, information content of financial reports, and market perceptions of external accounting information.

920. History and Philosophy of Accounting Thought (3 cr) Prereq: Permission.

The development of accounting thought and the historical evolution of accounting thought and the individuals, institutions, organizations, and philosophies that shaped its past and present and will influence its future.

945. Partnership Taxation (LAW 745/745G) (1-4 cr)

Prereq: ACCT 812 or LAW 637/637G.

For course description, see LAW 745/745G.

967. Estate Planning (LAW 676/767G) (1-4 cr) Prereq: ACCT 812 or LAW 637/637G.

For course description, see LAW 767/767G.

968. Estate Planning Problems (LAW 678/768G) (1-4 cr) Prereq: ACCT 812 or LAW 637/637G.

For course description, see LAW 768/768G.

969. Tax Policy Seminar (LAW 769/769G) (1-4 cr)

For course description, see LAW 769/769G.

990. Accountancy Internship (1-3 cr per sem. max 6) Prereq: Admission to Master of Professional Accounting program, permission of MPA advisor, and acceptance into approved internship program. M A 610, M A 611.

Students present oral and written reports to faculty seminar on a semester-by-semester basis. Independent study of theories, principles, practices, techniques, and strategies utilized in the accounting field. Practical experience in professional accounting situations through a capstone internship program.

991. Seminar in Capital Market Research in Accounting (3 cr) Prereq: Admission to PhD program, completion of research tools requirement, and permission.

For course description, see LAW 769/769G.

992. Seminar in Behavioral Accounting Research (3 cr) Prereq: Permission.

For course description, see LAW 769/769G.

993. Seminar in Analytical Accounting Models (3 cr) Prereq: Admission to PhD program and permission. Measurement alternatives through modeling of choices and economic analysis of information choices.

995. Seminar in Contemporary Managerial Accounting-Selected Topics (3 cr, max 24) Prereq: ACCT 858 or equivalent. May be repeated for credit if different subject matter. Special subjects in contemporary managerial accounting.

996. Directed Reading or Research (1-3 cr each registration)

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Finance

Department Chair: Manford O. Peterson, Ph.D.

Faculty

**DeFusco, A. Richard** - 1985; Associate Professor; BS 1977, M BA 1979 R hose Island; PhD 1985 Tennessee

Dudley, Donna M. - 1999; Assistant Professor; BS 1982, MS 1991, PhD 1997 Nebraska (Lincoln)

Farrell, Kathleen A. - 1993; Assistant Professor; BBA 1986 Kent State; PhD 1994 Georgia

**Geppert, John M.** - 1994; Associate Professor; BS 1985 Nebraska; MBA 1987, PhD 1989 Purdue

Karels, Gordon W. - 1986; North Dakota; Association College Professor of Banking and Associate Dean; BA 1973 Southwest State (Minnesota); MA 1977, PhD 1979 Purdue

McCabe, George M. - 1981; Professor; AB 1965, MA 1967 Michigan State; PhD 1975 Pennsylvania

**Peterson, Manford O.** - 1976; Chair and W. C. Marshall College Professor of Banking and Associate Dean; BA 1968, PhD 1971 Michigan State

Rejda, George E. - 1963; Associate Professor; BS 1957, MA 1960 Creighton; PhD 1961 Pennsylvania

**Zorn, Thomas S.** - 1981; George B. Cook Jr. Assistant Professor of Finance; AB 1964, MA 1970, PhD 1978 California (Los Angeles)

Courses (FINA)

**Courses (FINA)**

807. Property and Liability Insurance (3 cr) Prereq: FINA 307. Open to masters level and PhD students only.

Analysis of risk theory, property and liability risks, and the economic functions of property insurance. Traditional and modern theories of risk, property and liability coverages, and functional insurance areas. The role of property and liability insurance in meeting current economic and social problems in urban core areas of major central cities.

812. Life Insurance (3 cr) Prereq: FINA 307. Open to masters level and PhD students only.

Analysis of the economic functions of life insurance. Human life insurance concept and the basic forms of life insurance and annuities used in insuring life values. Life insurance pricing, functional company operations, legal aspects, and contractual provisions. Health and other specialized forms of human-life value insurance.
820. Employee Benefit Plans (3 cr) Prereq: ECON 210, 211 and 212, FIN 307. Analysis of group life insurance, group medical expense and disability income insurance, private pension plans, profit sharing and thrift plans. Section 401(k) plans, individual retirement accounts (IRA's), Keogh plans for the self-employed, group property and liability insurance, and other employee benefits. An analysis of major public policy issues.

838. Risk Management (3 cr) Prereq: ECON 307, 407, and FIN 361 or permission. The risk management objective of an operating entity and to the interest of the owners in the analysis, this course confronts the student with the unique role of the finance function in business and the technique of financial analysis, specifically with major emphasis on the theoretical issues.

965. Advanced Theory of Finance (3 cr) Prereq: FIN 361. This course presents the critical examination of the relation of the capital markets to the external financing problems of the firm. Advanced developmental methods of finance specialization with major emphasis on the theoretical issues.

966. Seminar in Banking (3 cr) 0 pen to PhD students only.

966. Seminar in Investments (3 cr) 0 pen to PhD students only.

973. Actuarial Risk Theory (ACTS 973) (3 cr) Prereq: ACTS 870 with a grade of C or better. For course description, see ACTS 973.

994. Seminar in Selected Subjects Special Topics (3 cr) Prereq: FIN 961. 0 pen to PhD students only.

996. Directed Reading or Research (1-3 cr each registration period.)

199. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Management

Department Chair: Sang M. Lee, Ph.D.

Faculty

Avolio, Bruce J. - 2001; Donald and Shirley Clifton Professor of Leadership Management. BA 1975 New York State (O neonta); MA 1978, PhD 1981 Akron

**Digman, Lester A. - 1977; U S bank Professor; BSM E 1961, M S 1962, PhD 1970 Iowa

**Jones, M. Colleen - 1996; Assistant Professor; BBA 1972 Iowa; M BA 1973 Southern California; DBA 1992 George Washington

**Lee, Sang M. - 1976; Chair and U niversity Eminent Scholar and K agents Distinguished Professor; BA 1963 Seoul (Korea); MBA 1963 M iami (D mtz); PhD 1969 Georgia

**Lee, Zoonky - 1999; Assistant Professor; BS 1985 Seoul N ational; M S 1987 M ichigan; PhD 1998 Southern California

**Luthans, Fred - 1967; George H olmes Professor; BA 1961, M BA 1962, PhD 1965 Iowa

**May, Douglas R. - 1994; Associate Professor; BA 1981 K ansas; M A 1986 M iami; PhD 1991 Illinois

**Nah, Fiona - 1998; Assistant Professor; BS 1988, M Sc 1992 N ational (Singapore); PhD 1997 British Columbia

Olson, David L. - 2001; James H. K. Stuart Professor of M IB; BS 1966 South Dakota School of Mines; MBA 1978 Keeney State; PhD 1981 N ebraska (Lincoln)

**Schneider, Marc J. - 1981; Professor; BS 1972 M iami (St Louis); M BA 1974, PhD 1978 St Louis

**Schwendiman, Gary - 1973; Alice and M aurice H olman Professor; BS 1962 Washington; M S 1968, PhD 1971 Brigham Young

**Sborza, Terrance - 1994; Associate Professor; MA 1970 St. John's M BA; 1984 W ashington (O shkosh); PhD 1993 N orth Carolina

**Siou, Keng - 1999; Assistant Professor; BS 1989 N ational (Singapore); PhD 1996 British Columbia

**Sommer, Steven M. - 1989; Associate Professor; BA 1980 California (Berkeley); M BA 1984 San Diego State; PhD 1989 California (Irvine)

**Svenseth, Scott R. - 1987; Associate Professor; AS 1978 Northern D akota State; BS 1980 M orehead State; M BA 1981 G onzaga; PhD 1988 Texas A & M

**Thorp, Cary D., Jr. - 1970; Associate Professor; BJ 1957, M S 1961, PhD 1970 M iami

Courses (MNGT)

821. Entrepreneurship and Venture Management (EN TR 821) (3 cr) Prereq: M N GT 331, 360; M R KT 341; FIN 361; ACCT 201 and 202 or 306; EN TR 331 or permission. Aspects of starting and managing a new enterprise. Characteristics of entrepreneurs, the identification and evaluation of new venture opportunities-resource utilization; development of entrepreneurial strategies and the successful planning, implementation and launching of a new business venture.

822. Small Business Management (EN TR 822) (3 cr) Prereq: M N GT 331, 360; M R KT 341; FIN 361; ACCT 201 and 202 or 306. Small effective and owner management. Process of creating and managing one's own business, whether new or acquired. Actual involvement in small business organizations (e.g., internships, on-site visits and discussions, and consulting assignments) C ase material small business are used.

823. Small Business Growth and Development (EN TR 823) (3 cr) Prereq: M N GT 331, 360; M R KT 341; FIN 361; ACCT 201 and 202 or 306. Financial human resources, operations and marketing issues that face entrepreneurs whose businesses are confronted with significant growth potential or have matured. Franchising, initial public offerings, succession and estate planning.

828. International Management (3 cr) Prereq: M N GT 331, 360. U.S. enterprises operating in the global economy. The manner in which cultural, economic, political, and social differences affect the management of business, governmental, military, and other enterprises is considered. Problems of managing in Latin America, Europe, and Asia.

831. (336x). Enterprise Management Systems (3 cr) Prereq: M N GT 331 or equivalent. An analytical approach to the design, planning, and control of operations management systems, including both domestic and international; the role of manufacturing and service operations.

837. Computer-aided Analysis in Decision Making (3 cr) Prereq: M N GT 135 and 350. Analytical and simulation models for decision making in functional areas such as finance, accounting, marketing, personnel, operations, and inventory. Students learn how to construct decision models for practical applications Analyzing alternative and implementing solutions that result in increased productivity.

841. Topics in Management Science for Deterministic Systems (3 cr) Prereq: M N GT 150 and permission. Selected topics in operations research management science. A graphical approach analysis of deterministically well-defined systems; the techniques analytical underpinning, and the foundation and structure of the management science approach. Application of the techniques; Linear programming, nonlinear programming, dynamic programming, network analysis, and other deterministic topics.

842. Topics in Management Science for Stochastic Systems (3 cr) Prereq: M N GT 150 and permission. Topics in operations research management science. A graphical approach analysis of systems that change probabilistically or incorporate risk and uncertainty; the techniques analytical underpinning, providing insight into the foundation and structure of the management science approach. Application of the techniques; Decision analysis, game theory, Markovian decision processes, queueing theory, and other probabilistic or stochastic topics.

852. Database Organization and Management (CSC 852) (3 cr) Prereq: For College of Business Administration and College of Arts and Sciences majors M N GT / M IST 350, CSC 150 (FOR TR A N) and 252A (CO B O L L), or equivalent or M N GT 150. For College of Engineering and Technology majors CSC 150 (FOR TR A N) and 252A (CO B O L L), or equivalent. This course is not open to computer science majors who should take CSC 381 instead. Technology of the database and related human and managerial considerations. Databases studied from two perspectives the logical organization, as the manager and applications programmer see and use the organization's data, and the physical organization, as the systems software programmer and database manager view the data. Theory of organization and the practical applications of databases.

854. Information Systems Analysis and Design (M IST 854) (3 cr) Prereq: M IST 250 or equivalent and M N GT / M IST 350. Methods and methodologies used in systems analysis, design, and implementation. Decision making process, systems development life cycles, requirement analysis, logical conceptual design, and basic database concepts.
856. Business Data Communications (MIST 857) (3 cr) Prereq: MNGT/MIST 250 or equivalent; MNGT/MIST 350. Fundamentals of business data communications, networking hardware and software, communication protocols such as TCP/IP, Internet and electronic commerce.

857. Business Data Communications (MIST 857) (3 cr) Prereq: MNGT/MIST 250 or equivalent; MNGT/MIST 350. Fundamentals of business data communications, networking hardware and software, communication protocols such as TCP/IP, Internet and electronic commerce.

858. Electronic Business (MIST 858) (3 cr) Prereq: MNGT/MIST 250 or equivalent; MNGT/MIST 350. Management related topics in electronic business conceptualizing and designing information systems. Emphasis on higher management decisions involving the manufacturing, service, and public sectors. Includes facilities planning, labor, aggregate planning, strategic planning, capacity management, and trade-off analysis.


862. Labor Relations (3 cr) Prereq: MNGT 360 or ECON 381. Interdisciplinary approach to labor-management relations with emphasis on collective bargaining and grievance administration. Appreciation of collective bargaining process gained through the actual negotiating of a labor-management contract. On-going union-management relationships.

863. Compensation Administration (3 cr) Prereq: MNGT 361. Design and administration of compensation systems. Determination of general level of pay, pay structures, wage and salary surveys, job analysis, job evaluation, performance evaluation, benefits plans and financial incentive systems.

864. Human Resource Planning (3 cr) Prereq: MNGT 360 or 361 or ECON 381. Analytic exposure to human resource planning at the level of the organization and building an understanding of human resource concepts, models, and problem-solving tools. Strategic planning, human resource planning, analysis of people-related business issues, and forecasting. Policy-setting and long-range planning for such human resource functions as job analysis, recruitment, selection, human resource information systems (HRIS), training and development management of diversity and compensation administrations.

865. Organizational Theory and Behavior (3 cr) Prereq: MNGT 360 or equivalent. Behavior and design of the organization as a unit, as well as the individual processes (e.g., influence, coordination, decision making) that are affected by organization design. Organization structure, technology, size, culture, goals and environment are key variables in this analysis. Applications to real-life organizational design problems emphasized.

866. Government and Labor (ECON 885) (3 cr) Prereq: MNGT 360 or equivalent. Government regulation of employment and labor relations. Includes laws and agencies relating to employment practices, pay, hours, equal opportunity, labor relations, safety, health, pensions, and benefits. Social and economic implications of governmental regulation.

867. Leadership in Organizations (3 cr) Prereq: MNGT 360 and ECON 381. Classical and contemporary theories of leadership. Enhances the student's understanding of the nature of leadership as it is practiced and experienced in organizations. Studies student opportunities to assess their personal leadership capacity, as well as to identify the skills, attributes and competencies they possess and need to develop in order to assume and distinguish themselves in leadership positions.

875x. Business Policies and Strategies (3 cr) Prereq: ACCT 202 or 306; ECON 211 and 212; FIN A 361; MIST 350; MNGT 331 and 360; MKT 341; or equivalent.


*876. Strategic Management (3 cr) Prereq: MNGT 360 or equivalent. Analysis, design, and implementation of systems development from the object-oriented perspective. Object-oriented and object-oriented design and implementation methodologies.

877. Business Data Communications (MIST 857) (3 cr) Prereq: MNGT/MIST 250 or equivalent; MNGT/MIST 350. Fundamentals of business data communications, networking hardware and software, communication protocols such as TCP/IP, Internet and electronic commerce.


905. Research Design and Methodology (3 cr) Prereq: Permission. Research designs appropriate for basic and field research, including methodology for implementing such designs. Analysis of various statistical methods for evaluating research data. Includes prospectus and manuscript writing and submission; critical review of various research currently published.


941. Management Science (3 cr) Prereq: G raduate students who have completed all quantitative core requirements equivalent to MATH 104 and 105; ECON 215 and 216; and MNGT 331. Management concepts and techniques of modern management science for management decision analysis. Application of the tools to real-world decision-making situations.

950. Management Information Systems (3 cr) Prereq: Permission. Development of decision-making tools and techniques for use in the design of management information systems. Emphasis on the proper role of the computer, systems analysts, programmers, managers and users, data management technology, and kinds of computer hardware and software.

944. Advanced Topics in Information Systems (3 cr) Prereq: Permission. Identifies and addresses the current issues in Information Systems. Includes technical and managerial aspects, e.g., Internet, software project management, etc.

960. Organizational Behavior (3 cr) Prereq: Permission. Human behavior within organizations: research findings and the contributions of behavioral science.

969. Organization and Management Theory (3 cr) Prereq: Permission. Major historical perspectives and some of the current competing paradigms in the field of organization theory. Classical management theory, human relations theory, property theory, the technology paradigm, structure and structure-environment contingency perspectives for organizational design, strategic human resource management, organizational cultures, institutional theory, and such current topics as organizational demography and groups in organizations. C ritiquing the theoretical perspectives on both conceptual and methodological dimensions as well as developing comparisons and contrasts between the perspectives. Critical elements of theory building in the organizational sciences and the frameworks for examining organizational theory.

980. Seminar in Organization and Management Theory (3 cr) Prereq: Permission. Current paradigms in the field of organization theory. Transdisciplinary perspective. Development of systematic and decision-making, resource dependency, power, population and community ecologies, and interorganizational networks. Critical review of the theoretical perspectives on both conceptual and methodological dimensions as well as developing comparisons and contrasts between the perspectives. Ethical code of conduct and other issues involved in publishing in the organizational sciences.

989. Seminar in Organization and Management Thought (3 cr) Prereq: Permission. Current paradigms in the field of organization theory. Transdisciplinary perspective. Development of systematic and decision-making, resource dependency, power, population and community ecologies, and interorganizational networks. Critical review of the theoretical perspectives on both conceptual and methodological dimensions as well as developing comparisons and contrasts between the perspectives. Ethical code of conduct and other issues involved in publishing in the organizational sciences.

990. Seminar in History of Management Thought (3 cr) Prereq: Permission. Development of management thought from the ancient civilizations of Sumer and Egypt, through the Middle Ages, to more recent developments. Scientific Management School, the contributions of Henri Fayol, and the Hawthorne research. The evolution of management as a body of knowledge.

995. Seminar in Selective Topics (1-3 cr each registration) (3-6 cr, max 6) Prereq: Management department permission.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Marketing

Department Chair: Sanford L. Grossbart, Ph.D.

Faculty

**Arnold, Eric J.** - 1999; Professor; BA, Bard, 1969; MA 1975, PhD 1982, Arizona

**Ball, A. Dwayne** - 1987; Associate Professor; BA, R ice, 1973; PhD, Ohio State, 1982

**Gentry, James W.** - 1987; Professor; BS, Kansas State, 1969; MBA 1971, DBA 1973, Indiana

**Grossbart, Sanford L.** - 1972; Chair and Professor; BSBBA 1966, MBA 1967, PhD 1972, Florida

**Hampton, Ronald D.** - 1984; Associate Professor; BSBBA 1972, MBA 1976, M Sc in State; PhD, Arkansas, 1984

**Kennedy, Patricia A.** - 1989; Associate Professor; BBA 1979, MBA 1980, PhD 1990, Oregon

**Mittelstaedt, Robert A.** - 1973; Nathan Gold Distinguished Professor; BS, South Dakota, 1958; MA, Arizona, 1960; PhD, Minnesota, 1966

**Price, Linda L.** - 1999; Professor and Director of Agricultural Business, 1984; M BA 1976, W yoming; PhD, Texas (Austin)

**Sohi, Ravipreet S.** - 1991; Associate Professor; MA 1967, MSc 1988, PhD 1990, Wisconsin

Courses (MRKT)

**821. Applied Marketing Research** (3 cr) Prereq: GRBA 813 or equivalent; or permission. Research methods to supply marketing information pertaining to the: 1) assessment of the nature of demand, 2) assessment of the extent of demand, 3) marketing program development, and 4) the monitoring of marketing performance.

**822. Survey of Buyer Behavior** (3 cr) Prereq: GRBA 813 or equivalent; or permission. Survey of the literature of buyer behavior. Economic, socio-cultural, and psychological aspects of buying behavior are examined as the basis of marketing strategy and public policy.

**823. Franchising Management** (M NGT 823) (3 cr) Prereq: M NGT 331, 360, M K T 341; FIN A 361; and ACCT 201 or 302; BLAW 317 and 321. For course description, see M NGT 823.
Continuing development of marketing theory, utilizing a permission.

970. Development of Marketing Theory (3 cr) Prereq: Permission. Continuing development of marketing theory, utilizing a review of "classic" and current marketing literature. Historical roots of marketing as a discipline; the requirements for marketing theory, and current efforts and future directions in the development of a mid-range theory of marketing.

971. Marketing and Society (3 cr) Prereq: Permission. Role of the marketing activities and the marketing system in society.

972. Seminar: Behavioral Research in Marketing (3 cr) Prereq: M R K T 822, and permission.

980. Marketing Colloquium (3 cr) Prereq: Permission. Seminar in dissertation research topics and methods.

986. Directed Reading or Research (1-3 cr; each registration)

988. Seminar in Special Topics (A, B, D, E, J, K) (3 cr each) Prereq: Permission. New topics announced prior to each term in which course is offered. Seminar in current topics in marketing.

990. Doctoral Dissertation (1-24 cr, max. 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

The degree objective (PhD or M S) of the student will be evaluated at the end of the first semester. To be in good standing within the department and to engage in research leading to advanced degrees, satisfactory progress must be made in the areas of grade point average, cumulative examinations, research performance and teaching performance.

All candidates for advanced degrees are required to take a major portion of their program. To be admitted to candidacy for advanced degrees students must pass a requisite number of cumulative examinations which are given monthly during the academic year. The student has the option of taking each examination in any of the five divisions. Students must commence taking the examinations no later than the third semester of residence.

Masters Degree. To fulfill the requirements for the M S, candidates must:

a) Maintain a sufficiently high GPA, b) Pass the required cumulative examinations, and c) Pass an oral examination covering their area of preparation and research.

Doctor of Philosophy Degree. To fulfill the requirements for the PhD degree the candidate must:

a) Maintain a sufficiently high GPA, b) Pass the required cumulative examinations, and c) Pass oral examinations on his/her dissertation research and on an original research proposal; d) Present a dissertation which contains significant results of original research under the direction of a member of the department. Qualified students may progress directly toward the PhD degree without obtaining a masters degree.

Specific details of the advanced degree program may be obtained from the departmental Graduate Committee.

Specialization available: Environmental Studies (M S and PhD)

Chemistry

Department Chair: Patrick Dussault, PhD.
Graduate Committee: Professors Langell (chair), Hage, Parkhurst, Rača, Associate Professor Redepenning

Graduate students may be accepted to work towards the PhD or M S degree upon admission. Graduate courses and research are offered in five divisions of the department: analytical, biochemistry, inorganic, organic, and physical chemistry. Students are required to take three of the following courses during the first semester: analytical CHEM 824, BIO C 831, inorganic CHEM 845, organic CHEM 855 and physical CHEM 885.

The degree objective (PhD or M S) of the student will be evaluated at the end of the first semester. To be in good standing within the department and to engage in research leading to advanced degrees, satisfactory progress must be made in the areas of grade point average, cumulative examinations, research performance and teaching performance.

All candidates for advanced degrees are required to participate in their program. To be admitted to candidacy for advanced degrees students must pass a requisite number of cumulative examinations which are given monthly during the academic year. The student has the option of taking each examination in any of the five divisions. Students must commence taking the examinations no later than the third semester of residence.

Masters Degree. To fulfill the requirements for the M S, candidates must:

a) Maintain a sufficiently high GPA, b) Pass the required cumulative examinations, and c) Pass an oral examination covering their area of preparation and research.

Doctor of Philosophy Degree. To fulfill the requirements for the PhD degree the candidate must:

a) Maintain a sufficiently high GPA, b) Pass the required cumulative examinations, and c) Pass oral examinations on his/her dissertation research and on an original research proposal; d) Present a dissertation which contains significant results of original research under the direction of a member of the department. Qualified students may progress directly toward the PhD degree without obtaining a masters degree.

Specific details of the advanced degree program may be obtained from the departmental Graduate Committee.

Specialization available: Environmental Studies (M S and PhD)

Faculty

*Baumgarten, Henry - 1949; Foundation Professor Emeritus, BA 1943, MA 1944, PhD 1948 Rice
Belot, John - 1999; Assistant Professor; BS 1990 Wake Forest, PhD 1995 Carnegie Mellon
**Berkowitz, David B. - 1991; Associate Professor; BS 1982 Chicago, PhD 1990 Harvard
**Carr, James - 1966; Professor; BS 1960 Iowa State; PhD 1966 Purdue
**Day, Victor W. - 1972; Professor; BS 1965 Kentucky; PhD 1969 Cornell
**DiMaggio, Stephen - 1994; Associate Professor; BA 1985 Swarthmore, PhD 1991 California (Berkeley)
Duan, Liangcheng - 2001; Assistant Professor; BS 1986 Yunnan (Kunming, China); MS 1989 Chinese Academy of Science (Shanghai); PhD 1996 Royal Veterinary and Agricultural University (Denmark)
**Dussault, Patrick - 1988; Professor and Chair; BS 1982 California, PhD 1986 California College-Technical
**Eckhardt, Craig J. - 1997; Professor; BS 1982 Colorado; MS 1983, PhD 1987 Yale
**Gallup, Gordon - 1955; Professor Emeritus, AB 1960 Washington (St Louis); PhD 1953 Kansas
**George, T. A. - 1968; Vice Chair and Professor; BS 1963 M aronthenk Institute; PhD 1966 Sussex
**Griep, Mark - 1990; Associate Professor; BS 1981, PhD 1986 Minnesota
**Hage, David - 1989; Professor; BS 1983 Wisconsin (La Crosse); PhD 1987 Iowa State
**Harison, Gerard - 1992; Professor; BA 1977 Trinity (Ireland); PhD 1984 Harvard
**Kingsbury, Charles - 1967; Professor; BS 1956 Iowa State; PhD 1960 California (Los Angeles)
**Langell, Marjorie A. - 1981; Professor; BS 1976 Connecticut; MA 1976, PhD 1979 Princeton
**Parkhurst, L. J. - 1969; H ewett University Professor; BA 1959, MS 1960, PhD 1965 Yale
**Rača, Andrejz T. - 1992; Professor; BS 1982 Politechnika (Poland); PhD 1985 Kentucky
**Redepenning, Jody G. - 1990; Associate Professor; BA 1980 Concordia (Minnesota); PhD 1985 Colorado State
**Rieke, Reuben - 1977; H.W ;Isaac R agents Professor; BS 1961 Minnesota; PhD 1965 Wisconsin
**Smith, David L. - 1995; Professor; BS 1966, PhD 1969 Kansas
**Smith, Jean B. - 1995; Research Professor; BS 1965 West Virginia, PhD 1968 Kansas
**Song, Pille-Soo - 1987; Professor Emeritus BS 1958, MS 1960 Seoul National (Korea); PhD 1964 California (Davis)
**Stezowki, John - 1991; Professor; BS 1964 Case Institute of Technology; PhD 1969 Michigan State
**Sturgeon, George - 1964; Associate Professor and Chief Adviser; BS 1959 North Dakota; PhD 1964 Michigan State
Courses (CHEM)

810. Departmental Seminar in Chemistry (1-5 cr) 1 cr, 2 cr, 3 cr, 4 cr, 5 cr. Optional seminar courses for all full-time graduate students. Monthly lectures on current topics of chemical interest presented by guest speakers from other universities, government, and industry. Limited enrollment, with informal discussions with the guest lecturer available to those who wish to attend.

811. Chemistry Applications of Laboratory Computers (4 cr) Prereq or parallel: CHEM 261 and permission. Introduction to the principles and applications of the digital computer in the chemistry laboratory for on-line data acquisition and experimentation control. Programming, digital logic, and computer-experiment interfacing.

812. Analytical Chemistry (3 cr) Prereq or parallel: CHEM 262 and 264. CHEM 823 should be taken concurrently. Credit may not be earned in both CHEM 812, 821, and 827. Chemical and physical properties applied to quantitative chemical analysis. Solution equilibria, stoichiometry, and instrumental and theoretical techniques.

813. Analytical Chemistry Laboratory (2 cr) Lab 6. Prereq: Same as for CHEM 821. Laboratory to accompany CHEM 821. Application of analytical chemical principles to laboratory problems.

823. Applied Problems in Analytical Chemistry (3 cr) Prereq: CHEM 821 or permission. Selection and execution of analytical methods in the solution of typical academic and industrial chemical problems.

825A. Ionic Equilibria (1 cr) Lec 1. Prereq or parallel: CHEM 821 or *824. Survey of theory of ionic equilibrium systems of importance in chemical analysis.

825B. Electrochemical Methods (2 cr) Lec 2. Prereq: CHEM 821 or *824. Survey of principles and applications of electroanalytical chemistry.

825D. Mass Spectrometry (1-2 cr, max 2) Lec 1-2. Prereq: CHEM 821 or *824. Survey of the fundamentals (1 cr) and applications (1 cr) of mass spectrometry.

825E. Data Handling (1 cr) Lec 1. Prereq or parallel: CHEM 821 or *824. Application of statistical, graphical and numerical methods for the treatment of analytical chemical data.

825G. Chromatographic Separations (2 cr) Lec 2. Prereq: CHEM 821 or *824. Survey of principles and applications of modern chromatographic analysis.

825J. Optical Methods of Analysis (2 cr) Lec 2. Prereq: CHEM 821 or *824. Survey of principles and applications of modern optical spectrometric methods.

827. Applied Analytical Instrumentation (4 cr) Lec 2, Lab 8. Prereq: CHEM 116 or 221 and 251 or equivalent. Credit may not be earned in both CHEM 821 and 827. Chemical graduate students may take 827 for credit. Primarily for non-majors who wish to use analytical chemistry in their professional careers. Introduction to modern instrumentation techniques of chemical analysis in fields related to chemistry. Analysis of organic systems.

831. Biochemistry I (BIOC, BIOS 831) (3 cr I, II, III) Lec 3. Prereq: CHEM 252 or 262. For course description, see BIOC 831.

832. Biochemistry II (BIOC, BIOS 832) (3 cr II, III) Lec 3. Prereq: BIOC 831. For course description, see BIOC 832.

833. Biochemistry Laboratory (BIOC, BIOS 833) (2 cr I, 1 cr II) Lab 7. Prereq: BIOC 831 or concurrent enrollment. For course description, see BIOC 833.

834. Plant Biochemistry (AGRO, BIOC, BIOS 834) (3 cr I, II) Lec 3. Prereq: BIOC 831 or permission. For course description, see BIOC 834.

836. Biophysical Chemistry (BIOC, BIOS 836) (3 cr II, III) Lec 3. Prereq: One semester of physical chemistry or permission. For course description, see BIOC 836.

838. Graduate Survey of Biochemistry (BIOC, BIOS 838) (3 cr I) Lec 3. Prereq: Permission. For course description, see BIOC 838.

840. Inorganic Chemistry (3 cr) Prereq: CHEM 252, or 254, or 262, or 264. Parallel: CHEM 843, or permission. CHEM 841 and the accompanying laboratory course, CHEM 843, constitute a basic course in inorganic chemistry. CHEM 841 deals with the structure, bonding, properties, and reactions of inorganic compounds with emphasis on the relationships and trends that are embodied in the periodic table of the elements.

843. Inorganic Chemistry Laboratory (2 cr) Prereq: CHEM 841 or permission. CHEM 843 is to be taken concurrently with CHEM 841. Introduction to typical inorganic chemistry laboratory techniques through the preparation and characterization of inorganic compounds.

845. Modern Inorganic Chemistry (3 cr) Prereq: CHEM 841, 843, and 882 or permission. Topics in inorganic chemistry such as bioinorganic, catalysis, organometallic, materials, and solid-state chemistry. Theoretical principles and practical applications, and on correlating the physical and chemical properties of the chemical elements and inorganic chemical compounds.

846. Metals in Biochemistry (BIOC *846) (3 cr) Prereq: 3 hrs biochemistry and 3 hrs inorganic chemistry. R ole of metals in biochemical reactions such as protein-enzyme, metal binding, nitrogen fixation, and carbon metabolism, with particular emphasis on recent developments in these areas. The structure-function relationship of metals, either attached to proteins or as part of a prosthetic group, in oxidation-reduction (electron transfer) and acid-base reactions. Physical methods employed in the study of metals in biology such as UV, visible, infrared, vibrational and x-ray absorption spectroscopy, and EPR, NMR, Mosebauer spectroscopy, X-ray crystallography, and kinetics.

855. Advanced Organic Chemistry (3 cr) Prereq: CHEM 252, or 254, or 262, or 264, or equivalent or permission. Survey of modern concepts of structure, bonding, acidity, basicity, stereochemistry, and reaction mechanisms. Introduction to the fundamental tools used to investigate reaction mechanisms (transition state theory, elementary Hückel theory, linear free energy relationships, rate laws and kinetic isotope effects). Mechanistic examples emphasize the major classes of organic reactions, particularly concerted, carbanionic and carbocationic. Development of reasoning skills.

861. Advanced Organic Spectroscopy (4 cr) Prereq: CHEM 252 and or 254, or 262, or 264, or equivalent or permission. CHEM 861 may be taken once only for credit. Use of advanced spectroscopic techniques (e.g., NMR, ESR, IR, and mass spectrometry) and molecular modeling in the elucidation of organic structures.

863. Advanced Organic Preparations (1-5 cr, max 5) Lab 3-15. Prereq: CHEM 252 and or 254, or 262, or 264, or equivalent or permission. Laboratory work in organic chemistry preparatory to research. Preparation of a number of typical organic compounds.


869. Chemistry for Secondary School Classrooms (CURR R *869; BIOS 883) (1 cr) Lec 3. Prereq: CHEM 851 or permission. Preparation of a number of typical organic compounds.

874. Spectroscopy and Scattering (3 cr) Prereq: CHEM 871. This course will not count towards a graduate degree in chemistry. For course description, see CURR R *874.

887. Physical Chemistry (4 cr) Lec 3, rec 3. Prereq: CHEM 114 and 116, or CHEM 221 and a grade of C or better. 1 yr college physics, 1 yr calculus. Concepts and mathematical foundations of classical and statistical thermodynamics. Applications of thermodynamics to phase and chemical equilibrium. The thermodynamics of solutions of small molecules and of polymers. Biological applications of thermodynamics. Introduction to chemical and biochemical spectroscopy.

888. Physical Chemistry (4 cr) Lec 3, rec 3. Prereq: CHEM 114 and 116 or CHEM 221 and a grade of C or better. 3 hrs in physical chemistry, 1 yr calculus. Concepts and mathematical foundations of classical and statistical thermodynamics. Applications of thermodynamics to phase and chemical equilibrium. The thermodynamics of solutions of small molecules and of polymers. Biological applications of thermodynamics. Introduction to chemical and biochemical spectroscopy.

898. Biochemistry for Secondary School Classrooms (CURR R, BIOC *898; BIOS 885) (1 cr) Lec 3. Prereq: CHEM 851. This course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. C ore taught via W and Widelab.

*899. Survey of Modern Physical Chemistry (3 cr) 1 cr, 2 cr. A one-semester survey course in modern physical chemistry, covering covering chemical thermodynamics, chemical kinetics, quantum chemistry, molecular structure and spectroscopy.

899. Advanced Topics in Biophysical Chemistry (BIOC, BIOS 899) (3 cr) Prereq: CHEM 871 or 881. Applications of thermodynamics to biochemical phenomena, optical properties of proteins and polynucleotides, and kinetics of rapid reactions.

899. Spectroscopy and Scattering (3 cr) Prereq: CHEM 882 or 885 or 972. A quantitative treatment of the principal methods of electronic optical and magnetic resonance spectroscopy as well as light and electron scattering.
897L. Introduction to Molecular Spectroscopy Lab (1 cr) Lab 1. Prereq: CHEM 881 or 885. Parallel: CHEM 887.
Optional lab work to accompany CHEM 887.

*898. Special Problems (1-24 cr) Prereq: Permission.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.

920. Seminar in Analytical Chemistry (1-5 cr)

921. Selected Topics in Analytical Chemistry (1-6 cr) Prereq or parallel: CHEM 821 or 824 or permission.

930. Seminar in Biological Chemistry (BIOC 930) (1-2 cr I, II) Prereq: BIOC 832 or 839 and permission. For course description, see BIOC 930.

932. Proteins (BIOC, BISO 932) (3 cr) Lec 3. Prereq: BIOC 832 or 839, or permission. For course description, see BIOC 932.

933. Enzymes (BIOC, BISO 933) (3 cr) Lec 3. Prereq: BIOC 832 or 839, or permission. For course description, see BIOC 933.

934. Nucleic Acids (BIOC, BISO 934) (3 cr II I) Lec 3. Prereq: BIOC 832 or 839 or permission. 0.fired even-numbered calendar year.
For course description, see BIOC 934.

935. Intermediary Metabolism (BIOC, BISO 935) (3 cr I) Lec 3. Prereq: BIOC 832 or 839 or permission. 0.fired even-numbered calendar year.
For course description, see BIOC 935.

937A. Advanced Topics in Plant Biochemistry; Photo-synthesis and Related Processes (BIOC 937A) (3 cr) Lec 3. Prereq: Permission. For course description, see BIOC 937A.

939. Photobiology (BIOC 939) (2 cr I) Lec 2. Prereq: One year biochemistry and physics. For course description, see BIOC 939.

940. Seminar in Inorganic Chemistry (1 cr)

941. Special Topics in Inorganic Chemistry (1-6 cr) Prereq: CHEM 845 and permission.

942. Physical Inorganic Chemistry (2-3 cr) Prereq: CHEM 845.
A study of the physical aspects of inorganic chemistry with emphasis on spectroscopic and kinetic properties of inorganic compounds.

943. Solid-State Chemistry (2 cr) Prereq: CHEM 845 and 888. Advanced course dealing with the structure, bonding, properties, and reactions of inorganic solid materials.

945. Advanced Inorganic Chemistry (2 cr) Prereq: CHEM 845. Chemistry of the metallic compounds.

946. Organometallic Chemistry (1-6 cr) The chemistry of compounds that occupy the boundary between inorganic and organic chemistry.


951. Special Topics in Organic Chemistry (2-4 cr) Prereq: CHEM 855. Topics of special interest in modern organic chemistry.


953. Organic Reaction Mechanisms (2-4 cr) Prereq: CHEM 855. Classes of reaction mechanisms and the methods whereby mechanisms may be studied. Kinetic and equilibrium studies, isotopic labeling, activation parameters, linear free energy relationships; stereochemistry; NMR and other spectroscopic methods as applied to reaction mechanisms, including direct observation of reactive intermediates. Interpreting the results of semi-empirical calculations of reaction pathways and studies of acid- and base-catalyzed mechanisms.

954. Physical Organic Chemistry (2-4 cr) Prereq: CHEM 855 or permission. Elementary aspects of molecular orbital (MO) theory. Selected concepts in molecular symmetry and topology. Applications of MO calculations to reaction mechanisms and elucidation of electronic structure for organic molecules; calculations vs. experiment. Introduction to selected interdisciplinary topics.

963. Metals in Organic Synthesis (2-4 cr) Prereq: CHEM 865 or permission. Use of organometallic reagents and catalysts in organic synthesis.

964. Bioorganic Chemistry (2-4 cr) Prereq: CHEM 865 or permission. Occurrence of biological systems with particular emphasis on the molecular mechanisms of action of enzymes and their associated cofactors.


970. Seminar in Physical Chemistry (1-5 cr) Prereq: CHEM 885 or permission.

971. Special Topics in Physical Chemistry (1-6 cr) Prereq: CHEM 861 and 862 or CHEM 895 or permission.

972. Quantum Chemistry I (3 cr) Prereq: CHEM 885. Elementary principles of quantum mechanics applied to problems in molecular structure and chemical bonding.

973. Chemical Thermodynamics (3 cr) Prereq: CHEM 885 or permission. Principles of thermodynamics, with applications to chemical systems and processes, and illustrations from current literature.


978. Chemical Kinetics (2 cr) Prereq: CHEM 885 or 895 or permission. Concepts and equations: successive, competing, and reversible reactions; equilibrium, collision, and activated:complex theory; reaction mechanism; heterogeneous reactions; current literature.

980. Radiochemical Techniques (2 cr) Lec 1, lab 4. Prereq: CHEM 867 or permission. Radiochemical experiments illustrating the applications of radiotopes to various chemical problems, with emphasis on radiation safety and safe handling of radiotopes.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

### Classics and Religious Studies

**Department Chair:** Sidnie White Crawford, Ph.D.
**Graduate Committee:** Professors Leinieks (chair), Turner; Associate Professors Akin, Rinkelvich, Witter.

**Master of Arts.** The prerequisite for admission to the program in classics leading to the degree of master of arts is normally an undergraduate major in Greek or Latin.

**For the degree of master of arts, a candidate must specialize in either Greek or Latin.** The remaining work, or the minor when required, may be in courses in Greek (where the specialization is Latin), Latin (where the specialization is Greek), anthropology, art, English, history, modern languages and literatures, philosophy, theater arts, or any other area approved to offer the master's degree.

### Classics (CLAS)

**807. Early Christianity** (HIST 807, RELG 307) (3 cr) Life, literature, thought, and institutions of the Christian movement from Jesus to Constantine. A critical, historical approach to the sources in English translation and how they reflect the interaction of Christian, Jew, and pagan in late antiquity. The historical Jesus vis-a-vis the Christ of Faith. The impact of Paul's thought, the formation of Christian dogma, methods of interpreting canonical and extracanonical Christian literature, the problem of hedy or orthodoxy.

**808. Dead Sea Scrolls** (DUS D, RELG 408) (3 cr) Prereq: CLAS 205 or 306 or permission. Dead Sea Scrolls, including the history and thought of the Qumran inhabitants, the archaeology of Qumran, and the corpus of the Scrolls; concentrations on the reading of selected primary texts from the Dead Sea Scrolls.

**809. The Religion of Late Western Antiquity** (HIST 809, RELG 409) (3 cr) For course description, see HIST 809.

**810. Gnosticism** (RELG 410) (3 cr) Nature, history, literature, ritual, and impact of the classical Gnostic religions, 100 B.C.E. to 400 C.E. Extensive reading of original Gnostic treatises in English translation, with particular attention to their appropriation and transformation of earlier Jewish, Christian, and pagan religious and philosophical traditions. The principal Gnostic schools to be treated are Simonian, Sethian, Valentinian, Hermetics, and Marcionics.

**838. Topics in Old World Prehistory** (ANTH 838) (3 cr) Prereq: 12 hours of anthropology. For course description, see ANTH 838.

**883. Classical Drama** (ENGL 840) (3 cr) Greek and Roman tragedy and comedy in translation.

### Greek (GREK)

**816. Greek Lyric Poetry** (3 cr) Reading and analysis of original texts, discussion of Greek lyric poetry, poets, dialects, ideas, and influence.

**822. Aeschylus** (3 cr)

**863. Sophocles** (3 cr)

**864. Euripides** (3 cr)

**865. Greek Comedy** (3 cr) Reading, analysis of original texts, discussion of comedic matters with a view to dramatic forms and development of ethical modes.

**871. Herodotus** (3 cr) A Greek worldview of the Ancient Near East from the fifth century BC, culminating in the struggle for freedom at Marathon, Salamis, Plataea and Thermopylae.

**873. The Greek Orators** (3 cr) Selected orations from the people's parliament and the people's court.
Courses of Instruction/ Communication Studies

*986. Reading and Research (1-6 cr) Prereq: Permission.
*989. Master's Thesis (6-10 cr) Prereq: Admission to master's degree program and permission of major advisor.
961-962. Seminar in Latin Literature (1-6 cr each)

Hebrew (HEBR)
*986. Readings and Research (1-24 cr) Prereq: Permission

Latin (LATN)
841. Roman Comedy (3 cr) Plautus and Terence.
843. Vergil (3 cr)
844. Horace (3 cr) Reading of selections from the odes, satires, epistles; discussion of poetics, ethics, and politics expressed in the corpus.
846. Roman Satire (3 cr)
854. Roman Historians (3 cr) Ovid and Livy.
859. Human Communication Theory (3 cr) Evolution of human communication theory as a social science. Major writers, works, and concepts involved in the study of human communication interaction.
870. Interpersonal Communication Theory (3 cr) Prereq: COMM 200 and 201 or permission. Central concerns of interpersonal communication theory and research, and the various approaches to issues in the interpersonal communication context.
880. Critical and Interpretive Research (3 cr) Prereq: COMM 200, 201 or permission. Introduction to critical and interpretive research in communication studies, relationship of theory and methodology, text and context, selecting appropriate research questions, writing research proposals, and the ethics of research. Philosophical and theoretical assumptions underlying such research as well as on procedures for conducting research.
882. Experimental Research (3 cr) Prereq: COMM 200, 201 or permission. Introduction to experimental approaches to research in communication with an emphasis on the nature of experimental research, design of research studies, data collection and interpretation.
885. Small Group Communication Theory (3 cr) Prereq: COMM 200, 201 and 210 or permission. Sketches out the conceptual territory of small group communication via a review of the small group communication literature so that students with little or no theoretical background in the small group communication area can develop an integrative picture of small groups.
886. Organizational Communication (3 cr) Prereq: COMM 200, 201, 311 or permission. Principles and theories relevant to communication behavior within organizations which can be used to guide the way people communicate in organizations.
887. Consulting and Training in Communication (3 cr) Prereq: COMM 200, 201, 311 or permission. In-depth examination of research conducted on communication consulting and training design of consulting and training programs for use in organizational environments.
890. Internship in Communication Studies (1-6 cr, max 6) Prereq: Permission. A structured professional experience in the field of communication studies outside of the traditional academic setting. Communication problems are confronted not as abstractions, but as specific occurrences with which the student must cope.
898. Special Topics (1-3 cr, max 24) Prereq: COMM 200 and 201 or permission. Topic for the term will be announced prior to early registration. Topic varies.
*999. Master's Thesis (6-10 cr) Prereq: Admission to master's degree program and permission of major advisor.

Introduction to Graduate Studies in Communication (3 cr) Prereq: Permission. Will be required for all graduate students in communication studies. Systematic introduction to the discipline of communication studies, focusing upon the various dimensions of scholarship essential to successful pursuit of an advanced degree in communication studies. Function of communication studies, major research trends of the discipline, and student's epistemology from a human communication perspective, and helps to develop writing and research skills.

911A. The Classical Tradition (3 cr) Prereq: Permission. In-depth study of the evolution of rhetorical theory from its origin to St. Augustine, with emphasis on rhetorical theory in Classical Greece and Rome.
911B. The Modern and Renaissance Tradition (3 cr) Prereq: Permission. In-depth study of the evolution of rhetorical theory from the middle ages through the modern period, with emphasis on eighteenth- and nineteenth-century British rhetorical thought.
911C. The Contemporary Period (3 cr) Prereq: Permission. In-depth study of the development of rhetorical theory in the twentieth century.
912. Seminar in Argumentation (3 cr) Prereq: Permission.
927A. Seminar in Instructional Communication (3 cr) Prereq: Permission. Literature and research pertaining to the basic psychological concepts, principles, and communication skills employed in effective instruction. Communication as it applies to instruction by studying and applying theories of learning and communication to instructional contexts.

927B. Seminar in Instructional Communication Research (3 cr) Prereq: Permission. To review and analyze the seminal and current research related to communication in instructional contexts. Foundation for developing theory and generating original research.

927C. Current Issues in Instructional Communication (3 cr) Prereq: Permission. Investigation of current topics in instructional communication and speech communication education. Specific content depends on the semester the course is offered and the research interests of the instructor assigned.

930. Perspectives in Communication and Culture (3 cr) Prereq: Permission. The ways race, gender, ethnicity, and nationality are constructed in cultural discourses. Influence of various media on the standardizations of images.

950A. Seminar in Gender and Communication (3 cr) Prereq: Permission. Investigation of the relationship between gender and communication. Theories and research on gender and communications, as well as the basis for studying the interrelationships among language, social reality, sex role stereotypes, and cultural values.

950B. Seminar in Intercultural Communication (3 cr) Prereq: One of the following: COMM 827, 852, 853, 870, 883, 886, permission. Introduction to theory and research in intercultural communication, role of culture in the rhetorical and communication processes, and on theory-building methodology, and research design in intercultural communication.


950D. Seminar in Gender and Communication (3 cr) Prereq: Permission. In-depth study of the influences of communication behavior on political events. Communication within political campaigns and governmental processes.

950E. Seminar in Intercultural Communication (3 cr) Prereq: Permission. Fundamental concepts, theories, and research in intercultural communication. Selected topics and contemporary research.

950F. Advanced Seminar in Intercultural Communication (3 cr) Prereq: Permission. Intensive evaluation and application of theories and research on interpersonal processes in particular contexts. Developing research programs in interpersonal communication.

960. Current Research in Intercultural Communication (3 cr) Prereq: Permission. Surveys current research in interpersonal communication. Issues with a sound foundation in planning theory, practice, and subject to approval from the department graduate committee.

961. Critical Research Design (3 cr) Prereq: COMM 880 or permission. Advanced course in rhetorical criticism and textual analysis. Designing and conducting an in-depth research project from a critical perspective.

962. Advanced Experimental Research (3 cr) Prereq: Permission. Experimental design with emphasis on assessing strengths and limitations of the various approaches. Individual research projects are planned, conducted, and reported.

963. Interpretive Research Design (3 cr) Prereq: Permission. Theory and practice of interpretive research methodologies and methods. Individual and or group research projects are planned, conducted, and reported.

964. Cultural Criticism (3 cr) Prereq: COMM 880 or permission. Advanced course focusing on the critical analysis of cultural artifacts, especially upon the relationship of media, language, and culture. Designing and conducting a research project from a cultural studies perspective.

965A. Perspectives in Organizational Communication (3 cr) Prereq: Permission. Perspectives in organizational communication range from a system-cultural-applied orientation to that of the paradigm. The relationship of media, language, and culture to organizations. Strengths and weaknesses of each, and looks at empirical and theoretical research representative of these views.

965B. Problems and Issues in Organizational Communication (3 cr) Prereq: Permission. Basic issues in the study of organizational communication range from differences in the structure of the organization itself to differences in the task activities of work units. How such differences influence the communication behavior of those involved.

965C. Current Research in Organizational Communication (3 cr) Prereq: Permission. Investigation of current topics in organizational communication over a two-year period. Emphasis on issues studied, the focus organizational communication research takes, and the methodology employed.

966. Research Problems Other Than Thesis (1-6 cr) Prereq: COMM 880 and permission. Special topics in communication studies.

990. Doctoral Dissertation (1-24 cr, max 55) Prereq: Permission. Admission to doctoral degree program and permission of supervisory committee chair.

Community and Regional Planning

Department Chair: Sharon L. Gaber, Ph.D.
Graduate Committee: Associate Professor S. Gaber (chair); Professors Luther, M. Mutunayagam, Scholz; Associate Professor's Cantarero, J. Gabel, H. Ulvershorn

Application for Admission. Applications for admission to the MCRP degree program must be submitted by March 1 for fall semester admission and by October 1 for spring semester admission. Applications must include the following: 1) Application for Admission to the Graduate College; 2) two official copies of all college transcripts; 3) official score report for the Graduate Record Exam General Test; 4) letters of recommendation on standard Graduate Studies forms; 5) an essay responding to departmental application form questions submitted to the department office.

Prerequisites. Students with diverse undergraduate and graduate background are encouraged to enter the MCRP degree program. No prior course work in planning is required. However, applicants are expected to have completed at least one course each in statistics, economics, and the social sciences, with a grade of C or better. The Department graduate committee may specify how the applicant is to make up deficiencies in any of these areas.

Degree Program. The master of community and regional planning (MCRP) degree program provides preparation for professional planning practice in the public, private, and nonprofit sectors. Planning is an interdisciplinary problem-solving profession that influences a broad range of future-oriented decision making. Planners work with individuals, groups, and organizations to formulate plans, policies, and strategies through which desired change can be achieved. Planners utilize a wide variety of methods and techniques to identify problems and needs and to formulate plans of action that effectively address those needs. Planners often need to accommodate differing viewpoints in the process of formulating desirable and compatible land use decisions.

The MCRP degree program emphasizes the understanding of the importance and interrelationships among human resources, natural resources, sociocultural characteristics, economic activity, political, and institutional roles, and characteristics of the natural and built environment. The program provides students with a broad foundation in planning theory, methods, process, and application—a background which enables graduates to formulate, initiate, and coordinate a broad range of planning and development actions.

The MCRP degree program requires completion of 48 graduate credit hours, 24 of which are in the following required core courses:

980. Introduction to Planning (3 cr)
982. Planning Theory (3 cr)
984. Legal Aspects of Planning (3 cr)
985. Qualitative Techniques for Planners (3 cr)
983. Introduction to Computers in Planning (3 cr)
984. Planning Methods and Analysis (3 cr)
990. Professional Planning Practice (3 cr)
990. Planning Studio (3 cr)

In addition, students must complete at least 9 graduate credit hours in an area of concentration and 15 graduate credit hours in one of the following three tracks: 1) 9 credit hours of approved electives, a 6-credit-hour master's thesis, and an oral examination; 2) 9 credit hours of approved electives, a 6-credit-hour professional project, and an oral examination; or 3) 15 credit hours of approved electives and a comprehensive written examination with oral examination.

The written comprehensive examination for track 3 is scheduled and administered by the department. The examination is taken on the examination dates established by the department. The examination covers the student's program of studies for the MCRP degree, as approved by the department and the Office of Graduate Studies.

Six areas of concentration are offered by the department: 1) physical planning; 2) social planning; 3) environmental planning; 4) economic development planning; 5) transportation planning; and 6) Great Plains Studies. Courses in these concentrations are offered inside and outside the Department. Other individualized areas of concentration may be proposed and pursued by students subject to approval from the Department graduate committee.

Dual Degree Programs. The MCRP degree may be pursued within three dual degree programs at the University of Nebraska-Lincoln:

One program is the MCRP/JD dual degree program, offered in collaboration with the College of Law. This program enables completion of both the MCRP degree and the juris doctor degree in a four-year period.
The second program is the MCRP/MArch dual degree program, offered in collaboration with the Department of Architecture. This program enables completion of both the MCRP degree and the master of architecture degree in a three-year period. This program is intended for persons who hold the bachelor of science in architectural studies (BSAS) or equivalent undergraduate degree.

The third program is the MCRP/MS in civil engineering, with a transportation planning option. This program is intended for persons holding the bachelor of science in civil engineering.

Persons interested in the MCRP/JD, MCRP/MArch or MCRP/MS dual degree programs should inquire with the Chair of the Department of Community and Regional Planning.

Interdepartmental Programs. The department cooperates with other disciplines in offering courses for the Water Resources Planning and Management Interdepartmental Area, the Environmental Studies Interdepartmental Area, and the certificate of specialization in policy analysis and evaluation. See "Water Resources Planning and Management" on page 17, and "Certificate of Specialization in Public Policy Analysis" on page 24 for separate descriptions of these interdepartmental programs.

Specializations available for the MCRP degree: Environmental Studies, Great Plains Studies, Water Resources Planning and Management.

Faculty

* Cantarero, Rodrigo - 1985; Associate Professor; BS 1975 Iowa State; MA 1979 & 1980 Iowa; PhD 1988 Southern California

* Fischer, Marie - 1975; Professor Emeritus; BS 1952 George Washington; MA 1950 & 1953 Nebraska (Lincoln)

* Gaber, John - 1995; Associate Professor; AICP; BA 1966 California; M Arch 1986 & 1992 California (Los Angeles); PhD 1993 California

* Gaber, Sharon L. - 1991; Associate Professor and Chair; AB 1985 Occidental; M Arch 1987 Southern California; PhD 1993 Cornell

* Hulvershorn, John - 1973; Associate Professor; AICP; BS 1965, M S 1966 Indiana; PhD 1977 N Arizona (Lincoln)

* Luther, Joseph - 1983; Professor of Community and Regional Planning and Architecture; BA 1972 Eastern Washington; M U 1973; DED 1975 Texas A&M

* McGraw, James - 1972; Professor Emeritus; AICP; BA 1955 Oklahoma State; MA 1961, M R 1963 Kansas State

* Mutua, Brian - 1981; Associate Dean of Architecture and Professor of Community & Regional Planning and Architecture; BSEngr 1963 Kenya (India); M T 1967 School of Planning and Architecture (India); M Engr 1974 Asian Institute of Technology (Thailand); DEDP, VPI and SU 1981

* Scholz, Gordon P. - 1975; Professor of Community and Regional Planning and Architecture; Registered Architect, AICP; BA 1968 & 1971 IIT (Lincoln); M Arch and MUP 1971 Illinois (Urbana); M BA 1974 Nebraska (Omaha)

Courses (CRPL)

800. Introduction to Planning (3 cr) Lec.
Field of community and regional planning is introduced in relation to the history of cities, urbanization, and regionalization. Origins and evolution of American urban and regional planning practices. The planning process as a response to social, economic, political, physical, and economic factors is analyzed. Community comprehensive planning process, plan implementation, and functional areas of planning.

805. Planning Theory (3 cr) Lec./sem. Prereq or parallel: CRPL 800, 810, 814. Linkages between knowledge and organized action in planning practice are analyzed in terms of philosophical underpinnings, decision theory, programing, political, societal, and social trends. Historical traditions of contemporary planning theory, its development, and its impact on the profession.

840. Legal Aspects of Planning (3 cr) Lec./sem. Prereq or parallel: CRPL 800 or permission.
Origins and evolution of American urban and regional planning, with an emphasis on state and law. Analysis of legal theories, issues, cases, and applications relevant to professional planning practice, as well as the legal responsibilities of planners in the planning process.

810. Qualitative Techniques for Planners (3 cr) Lec./sem. Prereq or parallel: CRPL 800.
Qualitative methods and techniques used in planning and policy analysis. Techniques used in the qualitative approach to planning, including content analysis, case study methodology, and other qualitative research techniques.

815. Housing, Renewal, and Development (3 cr) Lec. Prereq or parallel: CRPL 800.
Introduction to the housing, renewal, and development process. Analysis of the factors that influence housing, renewal, and development decisions, and the role of planners in the planning process.

820. Grant Writing and Fund-raising (3 cr) Lec.
Introduction to grant writing and fund-raising techniques. Analysis of the factors that influence grant writing and fund-raising decisions, and the role of planners in the planning process.

825. Environmental Planning and Policy Analysis (3 cr) Lec./lab. Prereq: CRPL 800 or permission.
Introduction to the comparative study of urbanization and environmental planning and policy analysis. Focus on the theories, principles, techniques, and methods of environmental planning and policy analysis. Examples of existing and proposed projects.

896. Special Problems in Community and Regional Planning (1-9 cr) Prereq: CRPL 800. Permission.
Individual or group investigations of problems relating to community and regional planning.

971. Professional Planning Practice (3 cr) Lec. Prereq: CRPL 800.
Analysis of the professional planning practice. Focus on the theories, principles, techniques, and methods of professional planning practice. Examples of existing and proposed projects.
The master of science program may be carried out under Option I or Option III, see "Requirements for the M.S. Degree" on page 15, and conforms to the general requirements of the Graduate College. Students interested in computer engineering can take the computer engineering specialization within the master of science program.

Master of Engineering. Applicants for admission to the master of engineering program in computer science require the equivalent of the MS program as stated above. Admission to full graduate standing in the M.S. program requires the successful completion of a qualifying examination. Admission to candidacy for the M.S. degree requires 1) the successful completion of a written comprehensive examination; and 2) the submission of an acceptable written proposal for the dissertation research to the student's M.S. Supervisory Committee.

Cooperative doctor of philosophy programs are also offered in conjunction with the Department of Mathematics and Statistics and the College of Engineering and Technology.

Faculty

*Chouery, Berthe - 1999; Assistant Professor; M S 1974, PhD 1994 Swiss Federal Institute of Technology (Lausanne)
**Deogun, Jitender - 1981; Professor; M S 1970 Delhi (India); M S 1974, PhD 1979 Illinois (Urbana)
**Elbaum, Sebastian - 1999; Assistant Professor; BS 1995 Universidad Catolica de Cordoba (Argentina); MS 1997, PhD 1998 Idaho (MOSCOW)
**Fayyad, Mohamed - 1999; Associate Professor; BS 1972 Cairo (Egypt); MS 1993, PhD 1994 Minnesota
**Goddard, Steve - 1998; Assistant Professor; BA 1985 Minnesota, MS 1995, PhD 1998 North Carolina (Chapel Hill)
**Henninger, Scott - 1995; Associate Professor; BS 1983 Southern California; MS 1990, PhD 1993 Colorado (Boulder)
**Jiang, Hong - 1991; Associate Professor; BS 1982 Huazhong (China); MS 1987 Toronto; PhD 1991 TexasA&M
**Magliveras, Spyros - 1978; Professor Emeritus BEE 1963, MA 1963 Florida; PhD 1970 Birmingham (England)
**Ramamurthy, Byrav - 1998; Assistant Professor; BTech 1994 Indian Institute of Technology Madras (India); MS 1995, PhD 1998 California (Davis)

**Reichenbach, Stephen - 1999; Associate Professor; BA 1970, M S 1973 Lincoln; MS 1984 Washington (St. Louis); PhD 1989 William and Mary

**Revesz, Peter - 1992; Professor; BS 1985 Tulane (New Orleans); MS 1987, PhD 1991 Brown (Providence)

**Samal, Ashok - 1988; Associate Professor; BTech 1983 Indian Institute of Technology (Kanpur, India); PhD 1988 Utah

**Scott, Stephen D. - 1999; Assistant Professor; BS 1992, MS 1994 Nebraska (Lincoln); PhD 1998 California (Davis)

**Seth, Sharad - 1970; Professor; BS 1966 Indian Institute of Technology (Kanpur, India); PhD 1970 Illinois

**Sincovec, Richard F. - 1999; Professor and Chair; BS 1964 Colorado (Boulder); MS 1967, PhD 1968 Iowa State

**Sohwon, Hyoung - 2001; Assistant Professor; BS 1991, MS 1993, PhD 1998 Kansas (Lawrence)

**Surkan, Alvin J. - 1969; Professor; BS 1954 Alberta; M A 1956 Toronto; PhD 1959 West Ontario

**Varjani, Vinodchandran N. - 2001; Assistant Professor; MS 1990 Regional Engineering College (Calicut, India); MS 1993 Indian Institute of Technology (Madras); PhD 1999 Institute of Mathematical Sciences (Chennai, India)

Courses (CSCE)


820. Language Structures (3 cr) Prereq: CSCE 310. Credit not applicable toward graduate degree in Computer Science. Basic elements of programming language design and compiler writing. Grammars of Chomsky Hierarchy; regular sets and finite automata; context-free grammars and their normal forms; pushdown automata; deterministic top-down and bottom-up parsing; simple precedence grammars; operator precedence grammars; syntax-directed translation.

821. Foundations of Constraint Processing (3 cr) Prereq: CSCE 235. Constraint processing as a powerful formalism for articulating and solving industrial problems such as design, scheduling, and resource allocation. Foundations of constraint satisfaction, its basic mechanisms (e.g., search, backtracking, and consistency-checking algorithms), and constraint programming languages. New directions in the field, such as strategies for decomposition and symmetry identification.


825. Compiler Construction (3 cr) Prereq: CSCE 310 and 820. Review of program language structures, translation, loading, execution and storage allocation. 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, error diagnostics, object code optimization techniques, and overall design.

827. Combinatorial Methods for Computer Science (3 cr) Prereq: CSCE 310. Models of computation, generating functions, recurrence relations, graphs and algorithms on graphs, Ramsey theory, applications of planar graphs to VLSI.
82. Automata, Computation and Formal Languages (3 cr) Prereq: CSCE 340, MATH 614 and 821. Introduction to the classical theory of computer science. Finite state automata and regular languages, minimization of automata, context free languages and pushdown automata, Turing machines and other models of computation, undecidable problems, introduction to computational complexity.

83. Computer Architecture (3 cr) Prereq: CSCE 320, 231, 310, and parallel: STAT 880 or ELEC 810 or permission. Credit not applicable towards graduate degree in computer science. Addresses the architecture of single processor (Vin Eunum or SSD) computer systems. Covers the evolution, design, implementation and evaluation of state of the art systems. Topics: Memory Systems, including interlacing, hierarchies, virtual memory and cache implementations; Communications and I/O, including bus architectures arbitration; I/O processors and DMA channels and Central Processor Architectures, including RISC and Stack machines; High-speed arithmetic,fetch/execute overlap and parallelism in a single processor system.

84. Mobile and Mobile Processor Architectures (3 cr) Prereq: CSCE 330, MATH 614, and STAT 880 or ELEC 810 or permission. Introduction to distributed and multiprocessor computer architectures. Addresses the principles of and relationship between the shared memory and the message passing architecture. Survey of the current areas of research in multiprocessor systems.


86. Software Engineering (3 cr) Prereq: CSCE 310 or permission. Techniques used in the disciplined development of large software systems. Software requirements analysis and specification, program design, coding and integration, testing, and software maintenance. Software estimation techniques, design tools, and complexity metrics. Students participate in group design and implementation of a software project.


89. Introduction to Numerical Analysis (2 cr) Prereq: MATH 138 or 814. Introduction to the concepts, design, and application of numerical methods. Focus on numerical methods in connection with the solution of differential equations and the simulation of physical processes. Topics include: Interpolation, numerical differentiation and integration. Includes analysis of effects of finite precision.

90. Finite-State Machines (3 cr) Prereq: CSCE 310. Moore and Mealy finite state machines. Design and implementation of a software project.

91. Introduction to Artificial Intelligence (3 cr) Prereq: CSCE 310. Introduction to the fields of artificial intelligence and machine learning. Topics include: problem solving, search, machine learning, planning, representation and reasoning, expert systems, and applications.

92. Cryptography and Computer Security (3 cr) Prereq: CSCE 310, MATH 614 or equivalent. Introduction to the fundamentals of cryptography and computer security. Topics include: classical cryptography, substitution and transposition ciphers, the one-time pad, block ciphers and DES, the Data Encryption Standard, public key cryptography, including RSA and El-Gamal signatures, key exchange, key management, and identification protocols.


94. Introduction to Neural Networks (3 cr) Lec. Introduction to the concepts, design, and application of connection-based computing. Topics include: neural networks, connectionist architectures, and the multi-layered feed-forward systems. The role of unsupervised learning and the rudiments of training neural networks addressed to reduce training time and improve generalization. Algorithms for training and synthesizing effective neural networks are implemented in high-level language programs running on conventional computers. Methods for synthesizing and simplifying network architectures for improved generalization are introduced. Topics include: back-propagation, computer vision, robotics, medical diagnosis, weather and economic forecasting.

95. VLSI Design (3 cr) Prereq: CSCE 335. Design and implementation of VLSI design using metal-oxide semi-conductor (MOS) technology. Design and implementation of a project under the supervision of a member of the Computer Science faculty. Solution and documentation of the project.

96. Database Organization and Management (3 cr) Prereq: MATH 614. Introduction to database organization and management in contemporary business environments. Topics include: Transaction processing, database design and implementation, and database management systems.

97. Advanced Topics in Database Systems (3 cr) Prereq: CSCE 310. Study of advanced topics in database systems. Topics vary from year to year. Specific areas include: data models, query languages, transaction processing, distributed databases, and transaction processing systems.

98. Constraint Systems (3 cr) Lec. Introduction to constraint satisfaction problems and constraint programming. Constraint programming is a technique for solving combinatorial problems. Applications include scheduling, planning, and route-finding.

99. Constraint Programming (3 cr) Prereq: CSCE 310 or equivalent. An introduction to constraint programming, a paradigm for solving combinatorial problems. Topics include: constraint satisfaction, constraint logic programming, and constraint propagation.

100. Constraint-Based Programming (3 cr) Prereq: CSCE 310. An introduction to constraint-based programming, a paradigm for solving combinatorial problems. Topics include: constraint satisfaction, constraint logic programming, and constraint propagation.

101. Constraint Programming and AI (3 cr) Prereq: CSCE 310. An introduction to constraint programming and artificial intelligence, a paradigm for solving combinatorial problems. Topics include: constraint satisfaction, constraint logic programming, and constraint propagation.

102. Constraint Programming and Optimization (3 cr) Prereq: CSCE 310. An introduction to constraint programming and optimization, a paradigm for solving combinatorial problems. Topics include: constraint satisfaction, constraint logic programming, and constraint propagation.

103. Constraint Programming and Verification (3 cr) Prereq: CSCE 310. An introduction to constraint programming and verification, a paradigm for solving combinatorial problems. Topics include: constraint satisfaction, constraint logic programming, and constraint propagation.

104. Constraint Programming and Verification (3 cr) Prereq: CSCE 310. An introduction to constraint programming and verification, a paradigm for solving combinatorial problems. Topics include: constraint satisfaction, constraint logic programming, and constraint propagation.
CEEN 8736. Mobile and Personal Communications (4 cr) Prereq: CEEN 3830 or equivalent. Concepts on mobile and personal communications. Techniques for mobile radio, equalization, diversity, channel coding, and speech coding.

CEEN 8750. Satellite Communications (4 cr) Lec 3; Lab 3. Prereq: CEEN 4630 or equivalent. Fundamental concepts of satellite communications. Basic communications concepts such as modulation, multiple access, spectrum efficiency and spread spectrum. Integrates propagation, speech coding, radio, standards, Internet working, link budget and design. Overview of satellite communications. Current issues in wireless communications.

CEEN 8756. Satellite Communications (4 cr) Prereq: CEEN 3250 or equivalent. Fundamental concepts of satellite communications. Emphasis on orbits, launching satellites, modulation and multiplexing, multiple access, earth stations, coding, interfacing, and special problems in satellite communications.

CEEN 8760. Wireless Communications (3 cr) Prereq: Permission. Fundamental concepts of wireless communications. Physics of orbits, launching satellites into orbit, spacecraft design and operation, radio frequency link, modulation and multiplexing, multiple access, satellite transponders, earth stations, interference and special problems in satellite communications.

CEEN 8766. Wireless Communications (3 cr) Prereq: Permission. Fundamental concepts of wireless communications. Basic communications concepts such as multiple access and spread spectrum. Integrates propagation, radio standards, and Internet working. Current issues in wireless communications are discussed.


CEEN 8902. Individual Study in Computer and Electronics Engineering IV (3 cr) Prereq: Departmentally approved proposal. Individual study at the senior level in a selected computer and electronics engineering area under the supervision and guidance of a computer and electronics engineering faculty member.

CEEN 8940. Special Topics in Computer and Electronics Engineering IV (3 cr) Lec 3; Prereq: Permission. Special topics in the newly emerging areas of computer and electronics engineering at the senior level which may not be covered in the other courses in the computer and electronics engineering curriculum.

ENGR 8690. Technology, Science and Civilization (3 cr) Lec 2, dis 2; Prereq: Permission. Development of technology as a trigger of change upon humankind, from the earliest tools of Homo Habilis to the advent of the radio telescope in exploring the creation of the universe. Traces the paths from early science to technology of the 21st century. Traces the paths from early science to development of technology as a trigger of change upon humankind. Traces the paths from early science to development of technology as a trigger of change upon humankind.

Conservation and Survey Division

Division Director: Mark S. Kuzila, Ph.D.

The Conservation and Survey Division, which includes the state geological survey and the state soil survey, is an affiliate of the School of Natural Resources and provides the following services: it investigates and records the state's natural resources; studies the geological and biological resources of the state; inventories, analyzes, and evaluates the groundwater supplies of the state; investigates and analyzes the mineral and rock deposits of the state; assists public, private, and governmental agencies working to conserve the state's natural resources; and studies the geological history of Nebraska as an aid to growth and economic development; and publishes maps and reports about these activities.

Faculty

**Avary, Jerry F.** - Associate Professor; BA 1972, MS 1976 California State; PhD 1980 Washington State

**Carlson, Marvin P.** - Professor; BS 1957, MS 1963, PhD 1969 Nebraska (Lincoln)

**Chen, Xun-Hong.** - Associate Professor; MS 1988 California State; PhD 1994 Wyoming

**Difendal, Robert F. Jr.** - Professor; PhD 1962 Franklin and Marshall; MS 1964, PhD 1971 Nebraska (Lincoln)

**Gosselin, David C.** - Professor; PhD 1982 St. Thomas; PhD 1987 South Dakota School of Mines

**Harvey, F. Edwin.** - Assistant Professor; BS 1970 Purdue; PhD 1996 Waterloo (Ontario)

**Kuzila, Mark S.** - Professor; BS 1973, MS 1976 Kansas State; PhD 1988 Nebraska (Lincoln)

**Lawson, Merlin P.** - Professor; BS 1963 SU NY (Buffalo); MS 1966, PhD 1973 Clark

**Mason, Joseph A.** - Assistant Professor; BS 1989 Wisconsin (Stevens Point); MS 1992 Minnesota; PhD 1995 Wisconsin (Madison)

**Merchant, James W.** - Professor; BS 1969 Towson State; MS 1975 Kansas; PhD 1984 Kansas

**Pabian, Roger K.** - Professor; BS 1964, MS 1970 Nebraska (Lincoln)

**Peters, Albert J.** - Associate Geoscientist; BA 1968, MA 1970 San Jose State; PhD 1989 Nebraska (Lincoln)

**Rundquist, Donald C.** - Professor; BS 1967 Wisconsin (Whitewater); MS 1971 Nebraska (Oma); PhD 1977 Nebraska (Lincoln)

**Swinehart, James B.** - Professor; BS 1965, California (Riverside); MS 1979 Nebraska (Lincoln)

**Szilagyi, Jozsef** - Associate Professor; BA 1989 Eotvos (Budapest); MS 1994 New Hampshire; PhD 1997 Wisconsin (Madison)

Criminal Justice

Department Chair: Robert F. Meier, Ph.D.

The criminal justice program is administered through the University of Nebraska at Omaha and criminal justice graduate courses must be taken on the Omaha campus. Certain option courses, however, could be completed on the Lincoln campus in consultation with the student's advisor.

The Department of Criminal Justice offers the student a choice of either the standard master of science curriculum or a master of science with an option in public administration, a master of science with an option in counseling, or a master of science with an option in social work.

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 PhD.

Master of Science. The master of science degree is a 36-credit hour non-thesis program. 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, a master of science with an option in counseling, or a master of science with an option in social work.

Doctor of Philosophy. The PhD in criminal justice requires a minimum of 90 credit hours, including credit for 30 hours earned in a master's degree program. This program is organized around five components: 1) a core of required courses in theory and research on the criminal justice system and the nature of crime; 2) a core of required courses in research methods and statistical analysis; 3) elective courses in criminal justice and related fields; 4) comprehensive examinations; and 5) a dissertation. Satisfactory completion of a teaching practicum is also required.

Additional information may be obtained from the:

Department of Criminal Justice University of Nebraska at Omaha, NE 68182-0149 (402) 554-2610

Department of Criminal Justice University of Nebraska-Lincoln 1100 N 16th Street P.O. Box 880633 Lincoln, NE 68588-0630 (402) 472-3677

Faculty

**DeLone, Miriam.** - Associate Professor; BS 1987, MS 1989, PhD 1992 Florida State

**Eskridge, Chris.** - Professor; BS 1975 Brigham Young; MA 1976, PhD 1978 Ohio State

**Herz, Denise.** - Assistant Professor; BS 1991 Hood; MA 1994, PhD 1997 Wisconsin

**Hoffman, Dennis.** - Professor; BS 1971 Northern Iowa; MA 1974 Drake; PhD 1979 Portland State

**Horney, Julie.** - Professor; BA 1990 North Carolina; PhD 1993 California (San Diego)

**Jacobs, Susan.** - Associate Professor; PhD 1987 Nebraska (Lincoln)

**Kuzila, Mark S.** - Professor; BS 1973, MA 1978, PhD 1978 Nebraska (Lincoln)

**Marshall, Christopher E.** - Associate Professor; BA 1971, MA 1975, Bowling Green; PhD 1978 Iowa State

**Meier, Robert.** - Professor and Chair; PhD 1974 Wisconsin (Madison)

**Ogala, Robin.** - Associate Professor; BS 1982 Central Missouri State; MS 1990 Pennsylvania State; PhD 1995 Penn State

**Ronczek, Dennis.** - Professor; BS 1987 Illinois (Chicago); MA 1987, PhD 1990 Illinois (Urbana)

**Spohn, Casia.** - Professor; BA 1969, MS 1974 Nebraska (Oma); PhD 1979 Nebraska (Lincoln)

Construction Management

See "Construction Management" on page 108.
Economics

Department Chair: James R. Schmidt, Ph.D.
Graduate Committee: Professor Anderson (Chair); Associate Professor's Cushing, Fuess, McGarvey, and Assistant Professor Klaus

All PhD applicants are required to provide GRE aptitude test scores. Applicants must arrange to have the scores reported to the Graduate College, University of Nebraska–Lincoln. Information concerning the GRE may be obtained either from Educational Testing Service, Box 955, Princeton, NJ 08540, or at <www.gre.org/taketest.html> or from the Career Planning and Placement Center, 230 Nbraska Union, the office which administers the GRE locally.

The minimum general requirement for admission to the economics graduate program is an undergraduate degree from an accredited American or foreign college or university with at least a 3.0 GPA.

Course requirements for admission to the masters program without deficiencies are a semester each of intermediate level macroeconomic theory, microeconomic theory, statistics, and calculus. Students are also advised to have additional background in mathematics and matrix algebra. The absence of adequate background in probability, statistics, and calculus can be a serious impediment to success in any graduate program in economics.

A one semester calculus course for business or social science students often proves to be inadequate preparation.

Applicants to the PhD program (and applicants to the masters program anticipating the possibility of pursuing the PhD degree) should have a full calculus sequence, mathematical statistics, and matrix algebra in their backgrounds.

Applicants who lack required background may be considered for provisional admission. Unless specific prerequisites are indicated, the general prerequisite for all courses in the 800- and 900-series is graduate standing, including the removal of any undergraduate deficiencies, or permission of the instructor teaching the course.

All students pursuing the MA degree must demonstrate mastery of microeconomic theory, macroeconomic theory, and econometrics by passing appropriate courses in each of these areas with grades of B or better in each course. Three options are available to MA students. Option I provides the opportunity to write a masters thesis. Option II is an applied degree program that includes an outside area of concentration, and Option III is a PhD-leading track that provides the opportunity to continue directly into the doctoral program. All MA degree options require a total of 36 hours of graduate coursework. All MA candidates are required to undergo written and oral comprehensive examinations in the last semester of their program.

The PhD degree in economics requires a minimum of four academic years (or 90 semester hours) of graduate study, including the completion of a doctoral dissertation. All doctoral students must pass the qualifying examination in Advanced Economic Theory by the end of the third semester after entry into the program. The department offers courses in advanced micro and macroeconomic theory to help prepare students for the qualifying examination. In addition to the advanced economic theory, PhD students are required to pass two econometrics courses with a B or better grade in each course. Furthermore, doctoral candidates can choose three major areas or two major and two minor fields of specialization. One of these areas of specialization may be outside the economics department. Twelve hours of work usually constitute the formal minimum requirement in a major field, while nine hours are sufficient for a minor area. Every doctoral aspirant must undergo comprehensive written and oral examinations covering his or her areas of study. The doctoral dissertation must be a thorough and well-written original investigation in economics.

In all other respects the requirements for the degrees of master of arts or doctor of philosophy in economics conform to the general rules of the Graduate College except that there is no formal language requirement for the PhD degree. A student may, however, be required to offer a research tool, the nature of which shall be determined by the supervisory committee. Students should consult the chair of the Graduate Committee of the department for types of research tools which may satisfy this requirement.

Faculty

**Allgood, Sam** - 1996; Assistant Professor; BA 1989, PhD 1993 Georgia

**Anderson, John E.** - 1961; Professor; BA 1975, MA 1976, PhD 1977 Michigan

**Cushing, Matthew J.** - 1992; Associate Professor; BA 1977, PhD 1985 Virginia (Charlottesville)

**Fuess, Scott M.** - 1986; Associate Professor; BA 1982 Delaware; MS 1983, PhD 1986 Purdue

**Hayden, Gregory** - 1967; Professor; BA 1962 Kansas State; PhD 1968 Texas

**Kim, Benjamin J. C.** - 1983; Associate Professor; BA 1972 Seoul National; MA 1977 Saskatchewan; PhD 1983 California (Los Angeles)

**Klaus, Bettina E.** - 1998; Assistant Professor; MS 1994 Technology Aachen; PhD 1998 M aastricht

**Lamphear, F. Charles** - 1966; Professor; BS 1962, M S 1964, PhD 1967 Kansas State

**MacPhee, Craig R.** - 1969; Professor and Chair; BS 1966 Idaho; MA 1968, PhD 1970 Michigan State

**May, Ann Maria** - 1987; Associate Professor; BA 1980, PhD 1988 Colorado State

**McGarvey, Mary G.** - 1992; Associate Professor; BA 1976, PhD 1983 Virginia (Charlottesville)

**Riefler, Roger F.** - 1973; Professor; BA 1962 Bowdoin; MA 1965, PhD 1966 Washington

**Rosenbaum, David L.** - 1985; Professor; BA 1979 Maryland; MA 1983, PhD 1985 Wisconsin

**Schmidt, James R.** - 1977; Professor; BS 1973 Nebraska (Lincoln); MA 1977, PhD 1978 Rice

**van den Berg, Hendrik** - 1994; Associate Professor; BA 1971, MA 1972 SUNY (Albany); MS & PhD 1989 Wisconsin (Madison)

**Welsh, William B.** - 1982; Professor; BA 1972 Wisconsin; MA 1975, MS 1981, PhD 1978 Minnesota

Courses (ECON)

**803. Money and the Financial System** (3 cr) Prereq: ECON 211 and 212. Basic policy implications of monetary economics with special reference to the role of money in the determination of income, employment, and prices. Demand for and supply of money, commercial and central banking system, monetary policy-making, nonbank financial system, and other issues in monetary economics.

**804. Current Issues in Monetary Economics** (3 cr) Prereq: ECON 211 and 212. M onetary as developed by both classical and modern economists. Origins of money, interest rates, inflation, unemployment, business cycles, rational expectations, fiscal policy, international aspects of monetary policy, and related topics in monetary economics.

**809. Applied Public Policy Analysis** (3 cr) Prereq: ECON 210 or 211 and ECON 213 or equivalent. Application of research methods in economics. Statistical analysis to investigate economic issues and related policies; find relevant data perform and interpret univariate and multivariate statistical analyses; and formulate and test specific hypotheses.

**813. Social Insurance** (3 cr) T he nature and causes of economic insecurity. Analysis of public programs such as Social Security, unemployment insurance, workers’ compensation, and public assistance.

**814. Insurance Law** (LAW 783/783G) (1-4 cr) For course description, see economics and law courses that follow.


**816. Statistics for Decision Making** (3 cr) Prereq: ECON 213. Decision making under conditions of uncertainty. Introduction to Bayesian methods including main methods of traditional statistics. Both prior knowledge and consequences of decision error are explicitly taken into account in the analysis.

**817. Introductory Econometrics** (3 cr) Prereq: ECON 210 or 211 and ECON 213 or equivalent. Basic econometric methods including economic model estimation and analysis of economic data. Hypothesis formulation and testing, economic prediction and problems in analyzing economic cross-section and time series data.

**819. Topics in Applied Research** (3 cr) Prereq: ECON 816. Use of quantitative methods in applied research.

**821. International Trade** (3 cr) Prereq: ECON 210, or 211 and ECON 312. Determinants of the volume, prices, and commodity composition of trade. Effects of trade, international resource movements, and trade restrictions on resource allocation, income distribution, and social welfare.

**822. International Finance** (3 cr) Determinants of exchange rates, international payments, and inflation, unemployment, national income, and interest rates in an open economy. International monetary system and capital and financial markets, and of the mechanisms by which a national economy and the rest of the world adjust to external disturbances.

**823. Economics of the Less-Developed Countries** (3 cr) Prereq: ECON 210 or 211 and 212. Advanced survey of development problems and goals roles of land, labor, capital, entrepreneurship, and technical progress in economic growth of the less-developed countries. T heories and strategies relating to international trade and economic development.
86. Government Intervention in Markets (3 cr) Prereq: ECON 212.
Tracing the economic and legal incentives for government involvement in the marketplace. Examine why various forms of intervention make sense in certain situations. Attention to defining the limits of allowable competition, and to replacing free market forces with regulation. Analysis of utilities and their evolving regulation.

87. Land Use Planning (LAW 699/699G) (1-4 cr)
For course description, see economics and law courses that follow.

88. Antitrust and Trade Regulation (LAW 628/628G) (1-4 cr)
For course description, see economics and law courses that follow.

89. Unfair Competition (LAW 645/645G) (1-4 cr)
For course description, see economics and law courses that follow.

90. Regulation of Product-Marketing Liability Seminar (LAW 793/793G) (1-4 cr)
For course description, see LAW 793/793G.

91. History of Economic Thought (3 cr)
Development and evolution of economic ideas, including diverse mainstream and dissenting schools of thought from ancient Greek to contemporary texts. Consideration of selected influences: economic writings, relation between economic conditions and ideas and the antecedents of current economic controversies.

92. Market Competition (3 cr) Prereq: ECON 212.
Differing schools of thought about how well a market economy performs economic analysis and extensive reviews of rivalry among corporations in various sectors of the U.S. economy.

93. Regional Development (3 cr) Prereq: ECON 210, 211 and 212.
Advanced analysis of regional growth and development. Relationship between national and regional growth as well as local attributes influencing development patterns. Comparisons between development among countries and high-light similarities and differences in development patterns and policies. Empirical applicability of regional economic models.

94. Regional Analysis (3 cr) Prereq: ECON 840.
Advanced study of techniques for regional analysis. Indexes of spatial dispersion and concentration, shift-share analysis, export base, and input-output analysis. Equips students with the basic analytical tools of regional economic analysis.

95. Economics for Teachers (2-6 cr, max 6)
Structure and functions of the economic system in the United States and some of the problems involved in achieving its goals of efficient allocation of resources, full employment, stable economic growth, and economic security. 0-6 cr offered in off-campus courses with enrollment limited to high school and grade school teachers, administrators, and supervisors.

96. Economics Issues for Teachers (1-6 cr, max 6)
Application of economic principles to current problems. Evaluation of economic education materials in scope and sequence for development of economic concepts in the primary and secondary schools.

97. Teaching College Economics and Business (3 cr)
Organization and planning, instructional strategies, assessment methods, and related topics for teaching economics and business courses in colleges and universities.

98. Economics of Education (3 cr)
Survey of methods, theories, and analyses of education from an economics perspective. Education and human capital, educational production and cost functions, cost-benefit analysis, supply and demand for educators, education and economic growth.

99. Economic Education Research (3 cr)
Survey of research studies in the field of economic education. Research questions, data sources, theoretical models, experimental designs, statistical procedures, and research findings.

100. U.S. Economic History I (HIST 857) (3 cr) Prereq: ECON 211 and 212 or ECON 210.
Transformation of the U.S. society from an agrarian to an industrial society and the impact of that transformation on peoples' lives and livelihoods. Focus on the late eighteenth and nineteenth centuries. Economics of slavery, the impact of the railroads, immigration, and the collective response of business and labor to industrialization.

Transformation of the U.S. economy in the twentieth century. Continued consolidation of the business enterprise, business cycle episodes including the Great Depression of the 1930s, organized labor, and the role of government in managing and coping with this transformation in economic life.

102. Pro-seminar in International Relations (POLS 501/501G) (1-2 cr)
For course description, see POLS 501/501G.

103. Pro-seminar in International Relations (POLS 687) (3 cr) Prereq: Permission.
For course description, see POLS 687.

104. Public Finance (3 cr) Prereq: ECON 210 and 211 and 212.
This course is for economics majors and others wanting a thorough treatment of the topics.

105. Microeconomic Models and Applications (ECON 827) (3 cr)
Also see the following Economics courses: (ECON 210, 211 and 212). This course is intended for MA 0 Plan II students and others who do not plan to proceed to Ph.D. studies.

106. Macroeconomic Models and Applications (ECON 828) (3 cr)
This course is intended for students who plan to proceed to Ph.D. studies.

107. Antitrust and Trade Regulation (LAW 645/645G) (1-4 cr)
For course description, see economics and law courses that follow.

108. Regulation of Product-Marketing Liability Seminar (LAW 793/793G) (1-4 cr)
For course description, see LAW 793/793G.

109. History of Economic Thought (3 cr)
Development and evolution of economic ideas, including diverse mainstream and dissenting schools of thought from ancient Greek to contemporary texts. Consideration of selected influences: economic writings, relation between economic conditions and ideas and the antecedents of current economic controversies.

110. Market Competition (3 cr) Prereq: ECON 212.
Differing schools of thought about how well a market economy performs economic analysis and extensive reviews of rivalry among corporations in various sectors of the U.S. economy.

111. Regional Development (3 cr) Prereq: ECON 210, 211 and 212.
Advanced analysis of regional growth and development. Relationship between national and regional growth as well as local attributes influencing development patterns. Comparisons between development among countries and high-light similarities and differences in development patterns and policies. Empirical applicability of regional economic models.

112. Regional Analysis (3 cr) Prereq: ECON 840.
Advanced study of techniques for regional analysis. Indexes of spatial dispersion and concentration, shift-share analysis, export base, and input-output analysis. Equips students with the basic analytical tools of regional economic analysis.

113. Economics for Teachers (2-6 cr, max 6)
Structure and functions of the economic system in the United States and some of the problems involved in achieving its goals of efficient allocation of resources, full employment, stable economic growth, and economic security. 0-6 cr offered in off-campus courses with enrollment limited to high school and grade school teachers, administrators, and supervisors.

114. Economics Issues for Teachers (1-6 cr, max 6)
Application of economic principles to current problems. Evaluation of economic education materials in scope and sequence for development of economic concepts in the primary and secondary schools.

115. Teaching College Economics and Business (3 cr)
Organization and planning, instructional strategies, assessment methods, and related topics for teaching economics and business courses in colleges and universities.

116. Economics of Education (3 cr)
Survey of methods, theories, and analyses of education from an economics perspective. Education and human capital, educational production and cost functions, cost-benefit analysis, supply and demand for educators, education and economic growth.

117. Economic Education Research (3 cr)
Survey of research studies in the field of economic education. Research questions, data sources, theoretical models, experimental designs, statistical procedures, and research findings.

118. U.S. Economic History I (HIST 857) (3 cr) Prereq: ECON 211 and 212 or ECON 210.
Transformation of the U.S. society from an agrarian to an industrial society and the impact of that transformation on peoples' lives and livelihoods. Focus on the late eighteenth and nineteenth centuries. Economics of slavery, the impact of the railroads, immigration, and the collective response of business and labor to industrialization.

119. U.S. Economic History II (HIST 858) (3 cr) Prereq: ECON 211 and 212 or ECON 210.
Transformation of the U.S. economy in the twentieth century. Continued consolidation of the business enterprise, business cycle episodes including the Great Depression of the 1930s, organized labor, and the role of government in managing and coping with this transformation in economic life.

120. Pro-seminar in International Relations (POLS 501/501G) (1-2 cr)
For course description, see POLS 501/501G.

121. Pro-seminar in International Relations (POLS 687) (3 cr) Prereq: Permission.
For course description, see POLS 687.

122. Public Finance (3 cr) Prereq: ECON 210 and 211 and 212.
This course is for economics majors and others wanting a thorough treatment of the topics.

123. Microeconomic Models and Applications (ECON 827) (3 cr)
Also see the following Economics courses: (ECON 210, 211 and 212). This course is intended for MA 0 Plan II students and others who do not plan to proceed to Ph.D. studies.

124. Macroeconomic Models and Applications (ECON 828) (3 cr)
This course is intended for students who plan to proceed to Ph.D. studies.

125. Antitrust and Trade Regulation (LAW 645/645G) (1-4 cr)
For course description, see economics and law courses that follow.

126. Regulation of Product-Marketing Liability Seminar (LAW 793/793G) (1-4 cr)
For course description, see LAW 793/793G.
Economics and Law

The joint JD in law and MA in economics is a four-year program administered jointly by the College of Law and the Graduate College. Students entering this program must be formally admitted to the College of Law and to the Graduate College for work toward the masters degree in the Department of Economics. They will complete the following:

Economics Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of General Application in Insurance Law</td>
<td>3 (LAW 783)</td>
</tr>
<tr>
<td>Analysis of the Legal and Administrative Aspects of the Regulation of Land Use and Development</td>
<td>3 (LAW 784)</td>
</tr>
<tr>
<td>Control of Business Activity through the Antitrust Laws</td>
<td>3 (LAW 785)</td>
</tr>
</tbody>
</table>

Law Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of General Application in Insurance Law</td>
<td>3 (LAW 783)</td>
</tr>
<tr>
<td>Analysis of the Legal and Administrative Aspects of the Regulation of Land Use and Development</td>
<td>3 (LAW 784)</td>
</tr>
<tr>
<td>Control of Business Activity through the Antitrust Laws</td>
<td>3 (LAW 785)</td>
</tr>
</tbody>
</table>

Joint Economics-Law Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of General Application in Insurance Law</td>
<td>3 (LAW 783)</td>
</tr>
<tr>
<td>Analysis of the Legal and Administrative Aspects of the Regulation of Land Use and Development</td>
<td>3 (LAW 784)</td>
</tr>
<tr>
<td>Control of Business Activity through the Antitrust Laws</td>
<td>3 (LAW 785)</td>
</tr>
</tbody>
</table>

Certification Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of General Application in Insurance Law</td>
<td>3 (LAW 783)</td>
</tr>
<tr>
<td>Analysis of the Legal and Administrative Aspects of the Regulation of Land Use and Development</td>
<td>3 (LAW 784)</td>
</tr>
<tr>
<td>Control of Business Activity through the Antitrust Laws</td>
<td>3 (LAW 785)</td>
</tr>
</tbody>
</table>

Economic Education

850. Economics for Teachers (2-6 cr, max. 6)
Structure and functions of the economic system in the United States and some of the problems involved in achieving its goals of efficient allocation of resources, full employment, stable economic growth, and economic security. Offered in off-campus courses with enrollment limited to high school and grade school teachers, administrators, and supervisors.

851. Economics Issues for Teachers (1-6 cr, max. 6)
Course is of three-weeks duration; credit will not be granted unless an acceptable individual term paper or project is submitted. This must be completed within nine months after the close of the seminar. A series of workshops for teachers in developing competence in economics.

852. Teaching College Economics and Business (3 cr)
Organization and planning, instructional strategies, assessment methods, and related topics for teaching economics and business courses in colleges and universities.

853. Economics of Education (3 cr)
Survey of methods, theories, and analyses of education from an economic perspective. Education and human capital, educational production and cost functions, cost-benefit analysis, supply and demand for educators, education and economic growth.

854. Economic Education Research (3 cr)
Survey of research studies in the field of economic education. Research questions, data sources, theoretical models, experimental designs, statistical procedures, and research findings.

855. Seminar in Economic Education Research (3 cr)
Prepared; ECNO 854 or permission.

Prerequisites

In addition to the specific requirements of each course, a person must meet the following general prerequisites to be eligible to pursue courses in these departments.

Education Courses

Courses in education are offered in the following administrative units of Teachers College: Curriculum and Instruction, Educational Administration, Educational Psychology, Health and Human Performance, and Special Education and Communication Disorders. Only rarely, as in the case of EDUC 900, does the student simply register in education.

Prerequisites

In addition to the specific requirements of each course, a person must meet the following general prerequisites to be eligible to pursue courses in these departments.

The general prerequisite for all courses in the 800 series consists of not fewer than 12 hours of undergraduate credit in education. However, students who have earned a baccalaureate degree from a regionally accredited college or university may be admitted to 800-level courses if: (a) they have an academic major of not fewer than 24 hours and a minor of not fewer than 15 hours, and (b) they meet the other requirements for graduate study, and (c) they have earned at least 12 semester hours of credit in social science courses relevant to the study of education, and (d) they have the approval of the Teachers College department concerned. To pursue a course in the 900 series the student must present no fewer than 18 hours of credit in education.

Workshop Seminars in Education

The purpose of the Workshop Seminars (890, 893, 990 or 993) is to give students in the departments of education an opportunity to work singly or in groups on practical educational problems which are of special focus, interest but which are not included in other professional education course work. Workshops are offered on a variety of topics by College faculty and selected educational consultants. As a rule, the individual or group is expected to produce some kind of a product as a part of the workshop experience. The amount of credit in a Workshop Seminar at either the 800 or 900 level may not exceed 12 semester hours in meeting requirements for the masters degree. Upon approval a maximum of 12 additional semester hours may be included in the program for the doctoral degree.

Certification Courses

Courses of study provide for state administrator certification in four different endorsement areas: General Administration (Superintendent, Elementary Principal, Middle Level Principal and Secondary Principal); Director of Special Education Programs; Curriculum Director; and Director in the Area of Speech-Language Pathology and Audiology.

Education

Coordinator: David E. Wilson, Ph.D.

Doctoral Field Graduate Committee Chairs:
- Administration, Curriculum and Instruction and Community and Human Resource Management (Professor Wilson)
- Psychological and Cultural Studies (Associate Professor Healey)

Doctoral Programs

Teachers College offers two doctoral degrees, both the Ed.D. and Ph.D., under three major headings: Administration, Curriculum and Instruction (ACI), Community and Human Resources (CHR), and Psychological and Cultural Studies (PCS).

ACI offers six specializations: Instructional Technology, Internet-based Education; and Teaching.

Curriculum and Learning are hosted by the Center for Curriculum and Instruction.

ACI offers six specializations: Instructional Technology; Internet-based Education; and Teaching.

CHR functions as an interdepartmental program with three areas of emphasis: Educational Gerontology, Human Resource Development, and Leadership Studies. Applicants must affiliate with one of these areas, but it is important to note that, unlike areas of specialization, areas of emphasis do not appear on student transcripts.
PCS offers nine specializations: Cognition, Learning and Development; Counseling Psychology; School Psychology; Quantitative and Qualitative Methods in Education; and Survey Research. These programs are housed within the Department of Special Education and Communication Disorders.

Up-to-date information on each of these doctoral programs and specializations is available online at <tc.unl.edu/grad> or by contacting:

University of Nebraska-Lincoln
116 Hinzlik Hall
PO Box 880385
Lincoln, NE 68588-0385
(402) 472-5333
Email: tcgrad2@unl.edu

Courses (EDUC)

800. Foundations of Educational Research (3 cr)
Prereq: EDPS 859 or parallel; EDPS 859 or equivalent.
Purpose and characteristics of research process; selection of research problems in education and social sciences; critical review of published research; research ethics and institutional review; sampling methods; threats to validity in research.

900A. Correlational and Experimental Methods in Educational Research (3 cr)
Prereq: EDUC 800 or equivalent and EDPS 859 or equivalent.
Integrated view of correlational and experimental research in education and social sciences. Builds on idea of relationships among variables and concept of causal relationships between variables. Explores variety of research designs in light of these general principles.

900B. Single Case/Small N Methods in Educational Research (3 cr)
Prereq: EDUC 800 or equivalent and EDPS 859 or equivalent.
General issues explored in the use of single case/small N methods in which individuals are observed over time before and subsequent to experimental intervention. Comparison to traditional experimental methods. Instruction and practice provided in repeated measurement techniques. Contrasts various research designs appropriate to single case methods.

900D. Survey Methods in Educational Research (3 cr)
Prereq: EDUC 800 or equivalent and EDPS 859 or equivalent.
Basic principles and applications of survey research. Use of appropriate sampling techniques and applications of survey methods to the study of variability, distribution, and relationships of educational, sociological, and psychological variables.

900J. Historical Methods in Educational Research (3 cr)
Prereq: EDUC 800 or equivalent and EDPS 859 or equivalent.
Connections of general study of history to study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. Knowledge and skills are developed through practical exercises demonstrating the methodology of historical research.

900K. Qualitative Approaches to Educational Research (3 cr)
Prereq: EDUC 800 or equivalent and EDPS 859 or equivalent.
Uses of qualitative research methods in education, exploration of theoretical premises of research using qualitative methods, and application of this information through critique and planning research. Qualitative methods for data collection examined through readings, exercises, and sample projects.
80. Teaching Foreign Language in the Elementary School (3 cr)
Theory, research and practice of most recent foreign language teaching models and strategies.

822. Principles and Practices in Social Studies Education (1-3 cr, max 9)
Current issues and trends in the curriculum and teaching of social studies.
A. Special Topics (1-3 cr)

825. Coordination in Occupational Training Programs (EDAD 825) (1-3 cr)
Foundations of current and projected vocational cooperative educational programs and general educational work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.

868. Improvement of Instruction in Industrial Education (3 cr)
Special contemporary curricular and teaching aspects of industrial education. Research, curriculum content, teaching strategies, and the application to the instructional setting.

830. Introduction to Philosophy of Education (3 cr)
Introduction to fundamental ideas and skills that students use to begin to form personal philosophical perspectives on education. Students develop an analytic and philosophical approach to the theoretical work of many writers in education, students explore conceptions of teaching, learning, curriculum, and the relationship between school and society.

831. History of Education in the United States (3 cr)
Social, economic, political, and religious factors as they relate to the development of American public schools and the ideas of democracy.

832. Higher Education in America (3 cr) Prereq: 12 hrs education, 1 yr American history or permission.
History and development of America's colleges and universities and a study of some recent trends and problems in higher education.

833. Comparative Education (3 cr)
Foundations and development of selected national systems of education as seen in cultural perspective.

834. Ethics and Education (1-3 cr, max 12)
Study of theory, policies, and practices in ethics and education.
A. Policies and Practices for Moral Education (1-3 cr)
B. Readings in Moral Theory for Education (1-3 cr)
C. Special Topics in Ethics and Education (1-3 cr)

835. Ethnic Minorities and American Education (3 cr)
Chronological survey of American immigrant groups and the social and historical development of American public schools. Historical, sociological, and psychological implications of this development, and the relationship of American education to the national development.

836. Latin American Education (3 cr) Prereq: 12 hours education, social sciences, or Latin American Studies or permission.
Survey of contemporary practices and problems in Latin American education, with special emphasis on the role of education in the national development.

838. Linguistics for the Classroom Teacher (3 cr)
Analysis of various aspects of linguistic study, including dichotomous usage, modern grammar, semantics, lexigography, et cetera, and their application in the K-12 classroom. Investigation and clarification of language concepts and the development of teaching materials that can be used in the classroom.

839. Literature for Adolescents (3 cr)
Wide range of young adult literature available for use in schools. Critical and interpretative tools for responding to a variety of literary texts and techniques for eliciting a wider range of responses to literature; special consideration for readers 11-16.

840. Culture and Schooling (1-3 cr)
Description and explanation of cultural values as they relate to education.
A. Gender (1-3 cr)
B. Gender and Science (1-3 cr)
C. Special Topics (1-6 cr)

841. Content Area Reading, Grades 4-12 (3 cr)
Students develop teaching of academic content and functional teaching of reading in the context areas; assessment of comprehension, vocabulary, concept attainment; analysis of text; improvement of content area learning through reading/writing development.

*842. Objectives and Methods of Science Teaching (1-3 cr)
A. Elementary (1-3 cr)
B. Middle School (1-3 cr)
C. Secondary and College Courses (1-3 cr)
D. Special Topics (1-3 cr)

*843. Introduction to Research in Music Education (M UED *843) (2-3 cr) Prereq: Undergraduate degree in music education or permission. For course description, see M UED *843.

*853. School Media Programs (1-3 cr)
Research on the media specialist as a member of the instructional team.
A. Administration (3 cr)
B. Reference (3 cr)
C. Cataloging (3 cr)
D. Budgeting (3 cr)
E. Selection (3 cr)
F. Special Topics in School Media (1-3 cr)

*854. Foundations for Graduate Study in Music Education (M UED *845) (2-3 cr) Prereq: Undergraduate degree in music education or permission. For course description, see M UED *845.

*856. Studies in Middle Level Schooling (1-9 cr, max 9)
Historical, developmental, psychological, and current literature of middle school practice.
A. Curriculum (1-3 cr, max 3)
B. Leadership (1-3 cr, max 3)
C. Teacher-Based Advisory (1-3 cr, max 3)
D. Special Topics (1-3 cr, max 9)

*847. Principles of Business Education (3 cr)

*848. Introduction to Curriculum Studies (1-3 cr)
Historical development and philosophy of high school curriculum, review of research on school, curriculum, and school organization.
A. Elementary Schools (1-3 cr)
B. Secondary Schools (1-3 cr)
C. Special Topics (1-6 cr)

*849. Introduction to the Transcendent Student (3 cr) N ot open to students with credit in CURR 449.
For course description, see CURR 449.

850. American Cultural Perspectives through Popular Music and Guitar (MUED 850) (3 cr)
For course description, see M UED 850.

851. Learning and Teaching Principles and Practices (3-4 cr) Prereq: Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a grade of C+ (2.5) or better.
Theoretical issues in the area of teaching and learning as applied to the individual disciplines.
A. Secondary Art (3-4 cr) Prereq: As listed above and CURR 306 or 806. Prereq: Secondary Language Arts (3-4 cr) Prereq: As listed above, including ENG 476, ENG 857 and CURR 838; and a grade point average of 3.0 (B) or better in subject area.
B. Secondary Mathematics (3-4 cr) Prereq: As listed above.
C. Secondary Modern Languages (3-4 cr) Prereq: As listed above.
**852. Curriculum Principles and Practices (2-3 cr)**
Prereq: Admission to the Teacher Education Program and completion of 80% of the subject area course work with a grade of "C+" (2.5) or better.

Practical issues in the area of teaching and learning as applied to the individual disciplines.

1. **Secondary Art (2-3 cr)**
   Prereq: As listed above and C U R R 306 or 806.
   Theory and research into curriculum incorporating technology, interdisciplinary approaches, active learning, and course content designed to enhance understanding by students of diversity.

2. **Secondary Language Arts (2-3 cr)**
   Prereq: As listed above and parallel C U R R 397.
   Planning and teaching art language arts lessons for diverse learners.

3. **Secondary Modern Languages (2-3 cr)**
   Prereq: As listed above.
   Second-language acquisition and learning theory and their relationship to curriculum planning and development. Practice in creating language-use activities designed to build second languages reading, writing, speaking, listening, and culture skills. Development of teacher as observer, reflector, and recorder of student performances.

4. **Secondary Science (2-3 cr)**
   Prereq: As listed above and C U R R 851V.
   Curriculum materials, including the application of technology, as they relate to classroom instruction with diverse populations.

5. **Secondary Social Science (2-3 cr)**
   Prereq: As listed above.
   Societal diversity and its impact on the 7-12 social science curriculum, regional and national curricular trends, and emerging theory and research in social studies education.

*854. Literary Response and Analysis (3 cr)*
Role of the reader in the construction of literary meaning and implications for English/language arts classrooms.

*855. Teaching Learners to Learn (EDAD, EDPS, HHT, SPED,VAED) (3 cr)*
For course description, see EDPS 855.

*856. Utilization of Modern Technology (3 cr)*
Strategies of incorporating modern technology into the professional workplace, provides a thorough understanding of the operation and evaluation of integrating technology into the curriculum.

*859. Instructional Message Design (3 cr)*
Using selected principles from behavior science (perception, memory, attitudes, concepts), students analyze and design instructional messages. Systematic process for instructional development.

*860. Production and Utilization of Instructional Materials (3 cr)*
This course is designed to be taken after and in sequence with C U R R 859.
Unique characteristics and contributions of selected instructional media and technologies to the teaching and learning process. Students produce materials for specific instructional purposes.

*861. Education for a Pluralistic Society: Foundation and Issues (3 cr)*
Educational practices and policies for people from historically oppressed groups in the United States. Foundation of multicultural education. Discussion of contemporary educational issues within the context of multicultural and cultural diversity. C ritical view of curricular materials and resources promoting a multicultural perspective.

*869 (*869c). Chemistry for Secondary School Classrooms (1 cr)*
Prereq: Subject to the approval of the instructor and the School of Education. A minimum of 12 hours per week in the laboratory. The course is designed to prepare secondary school teachers to teach chemistry in the classroom.

*870. Music for the Exceptional Child (M U E D 870) (3 cr)*
Prereq: M E D 344 or permission. For course description, see M U E D 870.

*871. Approaches to Middle School General Music (M U E D 871) (3 cr)*
Prereq: M E D 344 or permission. For course description, see M U E D 873.

*874 (*874a). Topics in Chemical Pedagogy (CHEM 874 (*874a)) (1-3 cr, max 12 cr)
A maximum of 12 credits hours from the CHEM 874 course will count towards a graduate degree in chemistry. C redit in this course will not count towards a graduate degree in chemistry. Laboratory-based courses addressing specific issues connected with teaching laboratory work in high school chemistry programs.

*875 (*875a). Chemical Pedagogy in the High School Laboratory (CHEM 875 (*875a)) (1-3 cr, max 6 cr) C redit in this course will not count towards a graduate degree in chemistry. Laboratory-based courses addressing specific issues connected with teaching laboratory work in high school chemistry programs.

*880. Teaching with Technology (1-3 cr, max. 15)*
Survey and analysis of the application of technology to improve teaching. R eview and analysis of the application of technology and the development of instructional technology. A ppropriate application of technology and the development of instructional technology. A ppropriate application of technology to improve teaching. R eview and analysis of the application of technology to improve teaching. R eview and analysis of the application of technology to improve teaching. R eview and analysis of the application of technology to improve teaching.

M. Technology Supported Assessment and Evaluation (1-3 cr)
N. Web Teaching (1-3 cr)
P. Special Topics (1-3 cr)

*881. Music in Early Childhood Education (M U E D 881) (3 cr)*
Prereq: M E D 370 or 344 or permission. For course description, see M U E D *881.

*882. Instructional Applications of Technology (1-3 cr, max. 15)*
Prereq: Permission.
Task-oriented providing an opportunity for the demonstration of fluency with advanced technology and the application of cognitive needs for diverse learners.

A. Modern Programming Tools (1-3 cr)
D. Database and Interactive Development (1-3 cr)
E. Advanced Web Design and Management (1-3 cr)
F. Creation of Instructional Activities for Portable Devices (1-3 cr)
J. Special Topics (1-3 cr)
N. Web Teaching (1-3 cr)
R. Secondary Modern Languages (2-3 cr)

*885. Education of Gifted Children (SPED *885) (3 cr)*
Prereq: Permission. For course description, see SPED *885.

*888. Education of Gifted Children (SPED *885) (3 cr)*
Prereq: Permission. For course description, see SPED *885.

*889. Masters Seminar (1-3 cr, max. 9)*
Prereq: Permission.
Topics in literacy assessment and development of a proposal for an inquiry project.
A. Special Topics in Inquiry (1-3 cr, max. 3)
B. Early Childhood Education (1-3 cr, max. 9) Prereq: Permission.
E. English as a Second Language (1-3 cr, max. 9) Prereq: Permission.
I. Secondary Science (1-3 cr, max. 9) Prereq: Permission.


*894. Professional Practicum Experiences (1-10 cr)* Fid. Prereq: Admission to Teacher Education Program. This course does not count toward the M.A. degree. P/N only.
Guided observations and/or clinical experiences in schools or agencies offering programs for children/youth.
A. Elementary (K-6) (1-10 cr)
B. Elementary Art (1-10 cr)
C. English as a Second Language (1-10 cr)
D. Elementary Foreign Language (1-10 cr)
E. Secondary Art (1-10 cr)
F. Secondary Business Education (1-10 cr)
G. Secondary Foreign Language (1-10 cr)
H. Secondary Mathematics (1-10 cr)
I. Secondary Science (1-10 cr)
J. Secondary Social Science (1-10 cr)
K. Secondary Technology (1-10 cr)
L. Reading (1-10 cr)
M. Secondary Science (1-10 cr)
N. Secondary Social Science (1-10 cr)
O. Mainstreaming (1-10 cr)
Z. Multicultural (1-10 cr)

*895. Independent Study (1-6 cr)* Prereq: Permission. Selected topic with the direction and guidance of a staff member.

*896. Problems in Secondary Education (1-6 cr, max. 6)* Prereq: Permission.
Develop plans, procedures or directed experiences to the improvement of the curriculum or administration of the secondary school.

*897. Student Teaching Internship (1-10 cr)* Prereq: Admission by application only. Student Teaching in the United States. Foundation of multicultural education. Discussion of contemporary educational issues within the context of multicultural and cultural diversity. Critical view of curricular materials and resources promoting a multicultural perspective.
Course Descriptions

I. Secondary Art (1-10 cr)
J. Business Education (1-10 cr)
K. Health (1-10 cr)
M. Industrial Education (1-10 cr)
N. Secondary Language Arts (1-10 cr)
P. Secondary Mathematics (1-10 cr)
Q. Middle School (1-10 cr)
R. Secondary Modern Language (1-10 cr)
U. Secondary Physical Education (1-10 cr)
V. Secondary Science (1-10 cr)
W. Secondary Social Science (1-10 cr)
Y. Multicultural (1-10 cr)

896. Problems in Elementary Education (2-3 cr) Prereq: Permission. Opportunities to develop plans, procedures, and models designed to the improvement of elementary school education on an independent study basis.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

901. Supervision and Administration in Vocational Education (ALEC, FACSA, VAED 901) (3-3 cr) Lec, act. For course description, see ALEC 901.

902. Colloquium in Educational Policy and Practice (1-3 cr, max 6) Ongoing scholarly inquiry into educational policy and practice and their interconnections.


905. Practicum in Postsecondary Teaching (ALEC 905) (1-3 cr) Lab. Prereq: ALEC 905 or permission. For course description, see ALEC 905.

907. Seminar in Elementary School Mathematics (3 cr) Prereq: CURR 908 or equivalent. Theories, literature, and research procedures related to elementary mathematics education.

908. Seminar in Teacher Education (1-12 cr, max 12) Overview of literature and scholarship in teacher education.
A. Supervision of Pre-service Teachers (1-3 cr)
B. Teacher Development (3 cr)
D. Initial Teacher Preparation (1-3 cr)
E. Special Topics in Teacher Education (1-3 cr)

911. Seminar in Elementary School Science (3 cr) Prereq: 12 hours laboratory science including courses in both physical and biological fields. CURR 403 or 804 or equivalent; teaching experience. Literature which deals with research and experimentation in science for the elementary school. A design for the teaching and supervision of elementary school science that requires investigation and research.

920. Seminar in Curriculum and Teaching of Career and Technical Education (3 cr) Current research and theory within the curriculum and teaching of career and technical education.

921. Seminar in Literacy Studies (1-3 cr, max 9 cr) Research in literacy and schooling.
A. Curriculum and Teaching (1-3 cr)
B. Special Topics (1-3 cr)
D. Language, Culture, and Education (1-3 cr)

922. Seminar in the Curriculum and Teaching of Secondary School Foreign Languages (3 cr) Prereq: Undergraduate teaching major and teaching experience in foreign languages. Critical evaluation of current literature, yearbooks, research, and experiments in the curriculum and teaching of foreign languages.


924. Seminar in the Curriculum and Teaching of Science (1-3 cr) Prereq: Undergraduate teaching major and teaching experience in science, and CURR 842 and EDPS 859. Exploration of current literature, yearbooks, research, and experiments in the curriculum and teaching of science.
A. Elementary (1-3 cr)
B. Middle School (1-3 cr)
D. Secondary (1-3 cr)
E. Inclusive Science Teaching (1-3 cr)
J. Special Topics (1-6 cr)

925. Seminar in the Curriculum and Teaching of Social Science (3 cr) Current research and literature in social sciences education.
A. Elementary (1-3 cr)
B. Middle School (1-3 cr)
D. Secondary (1-3 cr)
E. Great Plains Studies (1-3 cr)
G. Special Topics in Social Sciences (1-3 cr)

928. Seminar in the Curriculum and Teaching of Music (MUED 928) (2-3 cr) Prereq: Undergraduate degree in music education or permission. For course description, see MUED 928.


931. Research in the History of Education (3 cr) Historical research methods in education culminating in the research and writing of a historical article as a publication report.

932. Contract Studies in International Education (1-6 cr) Prereq: Permission. Student proposed course of study in international education may include field experiences, individual (group) research, participation in mini-seminars, etc.

935. Seminar in Qualitative Research (EDPS 955) (3 cr) Prereq: EDUC 900K or permission. Seminar intended for doctoral-level students who have completed an initial qualitative methodology course and who want to increase their skills in qualitative research. Data collection, analysis strategies, and the application of these strategies to research problems.

936. Seminar in Problems in College Teaching (1-3 cr) Prereq: Permission. Critical examination of issues in college teaching. Design, implementation, and evaluation of new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

937. Philosophy of Science and Educational Research (3 cr) Major themes in philosophy of science and relates these to conceptions of research on human beings and social institutions; particularly as applied to teaching, Students consider such fundamental issues as epistemology, sociology, methodology, and research in science as they apply to teaching, Research, and education research, and what research might imply for practice.

944. Seminar in Curriculum Studies (1-3 cr, max 15) Critical examination of issues in curriculum development with an analysis of research and literature on the subject.
A. Curriculum as Aesthetic Text (1-3 cr)
B. Special Topics in Curriculum (1-3 cr)
D. Curriculum Evaluation (1-3 cr)
E. Curriculum as Spatial Text (1-3 cr)

946. Instructional Improvement and Decision Making (1-3 cr) Study and application of teaching models and techniques based on research, theory, and exemplary practice.
A. Instructional Assessment (1-3 cr)
B. Special Topics in Instruction (1-3 cr)

948. Instructional Leadership: Emerging Trends and Practices (EDAD 948) (3 cr) Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective instructional strategies is included. These strategies serve as the basis for designing and applying this information to a variety of educational settings such as: teacher empowerment and site-based management, along with cooperative learning. Provides an overview of the activities.

949. Seminar in Education (1-3 cr, max 6) Critical analysis of literature and research on teaching, learning, and schooling.
A. Special Topics in Education (1-3 cr)

950. Contextual Research in English/Language Arts (3 cr) Uses of quantitative research in English language arts interpreting, planning, conducting, and reporting contextual research.

951. Seminar in Reading Education (3-9 cr, max 9) Prereq: Permission. Critical analysis of reading education, including the nature, results, and implications of past and present research and non-research and contributions of historically significant scholars in the field of reading.
A. Research in Reading Education (3 cr)
B. Special Topics (1-6 cr, max 6)

952. Language and Learning (3 cr) Role that language plays in empowering and constraining children as they attempt to make sense of the world. Consideration of application of language scholarship for general instruction.

953. Seminar on Writing in the Curriculum (3 cr) Writing development, writing instruction, and the use of writing in the content areas. Consideration of application of scholarship in writing for general learning instruction.

955. Portfolio in Instructional Technology Competencies (1-12 cr) Prereq: Permission. A non-doctoral graduate student completes an initial portfolio of research in a delimited problem area within instructional technology (e.g., IT, VCA, videoic, simulations, programmed instruction). Empirically testable research questions related to the topic.

961. Current Approaches to Elementary Music Education (MUED 961) (3 cr) Prereq: Teaching experience. For course description, see MUED 961.

961. Psychology of Reading (EDPS 989) (3 cr) Prereq: CURR 900K or SPED 986. For course description, see EDPS 989.


971. Field Studies in Education (EDAD, HHFG) (1-3 cr, max 6) Prereq: Permission. Identification and solutions of problems associated with program planning, organizational, administrative, and instructional issues within an institutional setting. Research, designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.


975. Doctoral Seminar (3 cr, max 18) Prereq: Permission. Intensive study of doctoral level research, although non-doctoral graduate students may be admitted with special permission of the instructor. Students are immersed in outcome-based scholarly activities with a faculty mentor. Working on either an individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

976. Individual Research Projects (1-10 cr, max 30) Prereq: Permission. Individual research under faculty supervision.

977. Minor Research (1-6 cr) Individual research on approved topics in Elementary Education.

977. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Educational Administration

Department Chair: Larry L. Dlugosh, Ph.D., Graduate Committee Professors Uetting (chair), Grady, Seagren, Stick; Associate Professors Bryant, Dlugosh, Isernhagen, LaCret, Torrace

The Department of Educational Administration offers programs leading to the masters degree (M Ed, M A) and the certificate of specialization in educational administration and supervision and programs leading to the doctoral degree (PhD, EdD) with an emphasis in
educational administration and leadership. A specialization in student affairs is available at the master's level.

The joint UNL/UNO doctoral program in educational administration enables students to pursue a course of study for elementary-secondary administration. The educational leadership and higher education doctorate provides opportunities for students to pursue a program of study in either educational leadership or higher education. Programs leading to a Nebraska Administrative and Supervisory Certificate, with a number of different K-12 administrative endorsements, are available.

Primary emphasis in all department courses is on the principles, processes, and practical skills necessary for the leadership, organization, and administration of education institutions. Further information about academic programs and admission procedures and criteria may be obtained through the department office or the department Web site at <www.unl.edu/tcweb/EdAdmin/EDAD/edadmin.html>.

Prerequisites. The prerequisite for the following courses is 18 hours in education, the stated course prerequisite, or permission.

Faculty

**Bryant, Miles T.,-1965; Associate Professor; BA 1964, MA 1969 Middletown; EdD 1985 Stanford**

**Dlugosz, Larry C.-1980; Associate Professor and Chair; BS 1965, EdD 1970 Nebraska (Lincoln); EdSP 1978 Nebraska (Omaha); PhD 1981 Nebraska (Lincoln)**

**Englert, Edward A.-1971; Professor; BA 1966, MA 1970 Nebraska (Omaha); PhD 1971 Wiscconsin**

**Grafe, Marilyn L.-1986; Professor; BA 1971 St. Mary's; M.S. 1972 Eastern Illinois; PhD 1980 Ohio State**

**Hoover, Richard E.-2000; Senior Lecturer; BA 1965 Penn State; M Ed 1967 Rutgers; PhD 1970 Florida State**

**Hervonen, James C.-1998; Associate Professor; BS 1970 James Madison; M.A. 1981, EdD 1989 Virginia Polytechnic Institute**

**LaCorte, Barbara A.-1990; Associate Professor; BS 1964 Illinois State; Ed M 1964 Illinois; PhD 1984 Southern Illinois University**

**Saegor, Alan L.-1963; Vice President for Administration; Professor; BS 1953, Ed M 1958, EdD 1962 Nebraska (Lincoln)**

**Stokke, Sheldon L.-1971; Professor; BA 1960 Northeastern; MA 1966 Kansas; PhD 1972 Michigan**

**Sybott, Ward H.-1964; Professor Emeritus; BS 1950, M Ed 1955, EdD 1964 Oregon**

**Torres, Richard A.-1994; Associate Professor; MS 1983 Boston; PhD 1994 Minnnesota**

**Uerling, Donald F.-1979; Associate Professor; BS 1962, M S 1970 Kearney; EdS 1972, JD 1979, PhD 1980 Nebraska (Lincoln)**

**Wendel, Frederick C.-1974; Professor Emeritus; BS 1959 Concordia; M Ed 1963, EdD 1969 Nebraska (Lincoln)**

Courses (EDAD)

**800. Cross-Cultural Leadership Studies (3 cr) Prereq: Permission.** For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their own understanding of different cultural perspectives on leadership through readings, interviews, and field trips. Provides students with a valuable perspective on their own and other cultural perspectives and a better understanding of cultural viewpoints. N abe Nebraska American understanding of leadership.

**802. Educational Gerontology (EDPS 810 GERO 410/810) (3 cr) Prereq: EDAD 800 or equivalent.** Development of an understanding of the relationship between the field of education and the condition of older people.

**810. Human Relations Training and Foundations of Building Administration (3-9 cr) Prereq: EDAD 800 or equivalent.** Basic organizational and administrative principles of human relations training and building level administration. Key concepts related to multicultural education; role and function; leadership development and competition of older people.

**813. Practicum in Educational Administration and Supervision (3-4 cr) Prereq: Permission.** Raising and supervision of teachers; principles and procedures in the development of school policies; selection and promotion of teachers; courses of study and professional ethics.

**815. Management of School Activities (3 cr) Prereq: Permission.** A management of school activities is intended to provide educators and students in-depth understanding of the theories and philosophy of secondary school programs in school activities or cocurricular activities. Various topics involved in performing activities; student leadership development and competition of older people. Will relate theory to practice. Planning and evaluating, financing, scheduling, staffing and legal consideration of school activities.

**816. Administration in Physical Education and Athletics (HHP/GERO 813) (3 cr) Prereq: 18 hrs health and human performance courses including HHP/GERO 810. Organization and administration of physical education and athletics programs in college and school systems. Practices and policies as they relate to various situations and problems and in the theoretical base for these practices and policies.**

**819. Risk Management for Sports Facilities (3 cr) Prereq: Permission.** Legal and risk management of college and school systems. Practices and policies as they relate to various situations and problems and in the theoretical base for these practices and policies.

**820. Dynamics of Small Groups (EDPS 852) (3 cr) For course description, see EDPS 852.**

**821. Foundations of Human Resource Development (3 cr) Prereq: Permission.** For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their own understanding of different cultural perspectives on leadership through readings, interviews, and field trips. Provides students with a valuable perspective on their own and other cultural perspectives and a better understanding of cultural viewpoints. N abe Nebraska American understanding of leadership.

**822. Instructional Strategies in Human Resource Development (3 cr) Prereq: Permission.** Introduces students to the philosophy of human resource development. The analysis of instructional methods and media to achieve program objectives. The transfer of learning, and evaluating the effectiveness of instruction. The performance enhancing potential of systematically linking needs analysis, instructional design, and program evaluation.

**825. Coordination in Occupational Training Programs (C U R R 825) (1-3 cr) For course description, see CURR 825.**

**833. Educational Finance (3 cr) Prereq: Permission.** Critical analysis of the political and economic elements impacting K-12 school finance. Content and activities address both building and district level concerns with an emphasis on principles, programs, and trends in school finance.

**834. Administration of Adult Education Agencies (3 cr Prereq: 12 hrs education and permission.** Analysis of administrative research and theory as it applies to administration of a variety of adult education agencies institutional goals, curriculum, personnel, assessment, communication, finance, decision making.

**835. Leadership of Complex Education Organization (3 cr) Prereq: Permission.** Analysis of administrative research and theory as it applies to administration of a variety of adult education agencies institutional goals, curriculum, personnel, assessment, communication, finance, decision making.

**836. Business Management of Schools (3 cr) Prereq: Permission.** The development of school management and budgeting, and evaluating the effectiveness of instruction. The performance enhancing potential of systematically linking needs analysis, instructional design, and program evaluation.

**837. Education Law (1-4 cr) Prereq: Permission.** Evolution, principles, and practice of education law in relation to local, state, and national units of organization. Education law of Nebraska.

**838. Educational Surveys (2-3 cr) Prereq: Permission.** School systems and its educational program in terms of needs assessment area served. Organization and interpretation of pertinent data and formulation of recommendations for improvement of educational systems. Long-range planning.

**839. Educational Facilities (3 cr) Prereq: Permission.** Techniques for planning educational facilities through use of surveys, educational specifications, and standards. Function of the school administrator in school facility planning, construction, and utilization.

**840. Cross-Cultural Leadership (3 cr) Prereq: Permission.** Techniques for planning educational facilities through use of surveys, educational specifications, and standards. Function of the school administrator in school facility planning, construction, and utilization.

**841. Introduction to School Improvement (3 cr) Prereq: Permission.** Theory and research about school improvement. Components of school improvement planning and potential effects of change upon the process. Build upon experiences in a school setting and gain insights through interviews, best practice, literature, and student performance data. Collect and display initial school profile data to assist in making decisions when planning for school improvement.


**843. Educating Communities about the School Improvement Process (3 cr) Prereq: Permission.** Education of the community about school improvement. Components of school improvement planning and potential effects of change upon the process. Build upon experiences in a school setting and gain insights through interviews, best practice, literature, and student performance data. Collect and display initial school profile data to assist in making decisions when planning for school improvement.

**844. Developing and Reporting Results of the School Improvement Process (3 cr) Prereq: Permission.** Education of the community about school improvement. Components of school improvement planning and potential effects of change upon the process. Build upon experiences in a school setting and gain insights through interviews, best practice, literature, and student performance data. Collect and display initial school profile data to assist in making decisions when planning for school improvement.

**845. Administrative Theory in Educational Organizations (3 cr) Prereq: Permission.** Introduces students to the philosophy of human resource development. The analysis of instructional methods and media to achieve program objectives. The transfer of learning, and evaluating the effectiveness of instruction. The performance enhancing potential of systematically linking needs analysis, instructional design, and program evaluation.

**855. Teaching Learners to Learn (CURR 875, EDPS, HHP/GERO, SPE 856) (3 cr) For course description, see EDPS 855.**
901. Issues in Educational Personnel Administration (2-3 cr)
Contemporary issues related to the organization and administration of the personnel function within educational agencies. Research, special field experiences, and in-depth exploration of special topics.

902. Issues in Educational Organization Theory (3 cr)
Useful theory from the field of organizational literature in order to inform the practice of educational administration. Schools of organizational theory, professional and bureaucratic conflicts, motivation, power, leadership, and organizational culture.

903. Issues in Community Relations (3 cr)
Principles of community relations and public relations; development of school and community understanding; collaboration of educators and community agents and public relations; communication tools and evaluation.

904. Issues in Building Level Administration (3 cr)
Pre-req: EDAD 810 or equivalent.
Intensive consideration of research and literature pertaining to selected problems faced by elementary, middle, and secondary administrators at the building level.

905. Issues in Governance of Educational Institutions (1-3 cr, max 3)
Issues in the governance of K-12 schools including administration of the personnel function within educational agencies. Board of education, school district, school board, and school superintendent.

906. Issues in Economics of Education (1-4 cr)
Current trends and topics related to issues of human capital, productivity, cost-benefit analysis, rates of return, and the role of education in promoting economic growth.

907. Issues in Educational Politics and Policies (3 cr)
Analyze and evaluate policy processes involved in making choices; develop understanding, apply and evaluate knowledge about key political concepts and theories to the analysis of educational policy issues; analyze and evaluate issues as points of political conflict between institution structures with competing interests; understand people as the actors in roles they occupy in the political system.

908. Seminar in Human Resource Development (1-3 cr)
Pre-req: EDAD 821 or 822.
Current research and theory within the field of human resource development, broadly defined. Stress key problems affecting the training, development, and education of human resources within organizational settings.

909. The Higher Education Environment (3 cr)
Universities are adaptive, living systems interacting with their environment. Equips participants with the skills required to analyze and assess the environment of higher education institutionally. Environments concepts and structures are studied together with analysis techniques and mythological approaches future study.

910. Administrative Issues in Postsecondary Education (3 cr)
Introduction to contemporary issues in the administration of postsecondary education with a focus on the scholarly literature. A comprehensive analysis of administration in types of institutions, leadership and planning, institutional and environmental issues and selected topics.

921. Administrative Issues in Postsecondary Education (3 cr)
Federal and state government funding, institutional planning, technological and community influences, human resources, finance, budgeting, and sources of financial support as they relate to postsecondary education institutions and agencies.

922. The Community/University College (3 cr)
Lec. D designed specifically for those interested in upper secondary and college level, junior college movement, relationship to movement to provide for an adequate educational program; functions of the junior college, legal status and basis for extension of junior college problems of organization, administration, and curriculum.

923. Administration of Postsecondary Education Instructional Programs (3 cr)
Examination of postsecondary educational programs. Examination of curricular issues including an assessment of program quality and reputation, program reallocations, reenrollments, and expansions.

925. Law and Postsecondary Education (3 cr)
Law and postsecondary education. Examination of legal principles applicable to postsecondary education institutions. Overview of the legal system, postsecondary education institutions as legal entities, authority for governance and administration, faculty rights and responsibilities, student rights, student liability, and other selected issues.

926. The American Professoriate: An Administrative Perspective (3 cr)
Contemporary faculty issues in postsecondary education institutions from the perspective of college administrators. Current status of faculty, assigning faculty workloads and monitoring performance levels, evaluating faculty performance, structuring development activities, and special topics.

929. Seminar in Adult and Continuing Education (EDPS 929) (1-6 cr)
For course description, see EDPS 929.

948. Instructional Leadership: Emerging Trends and Practices (CURR 948) (3 cr)
For course description, see CURR 948.

951. Seminar: Culture and Context of Schooling (3 cr)
Pre-req: Admission to joint UNL/UNO Doctoral Program in Educational Administration.
First of three required seminars in the joint UNL/UNO Doctoral Program in Educational Administration. The seminar has three goals: (1) develop and enhance understanding of cultural and social forces, trends, and issues that influence the operation and effectiveness of schools, and of possibilities for substantially improving them, and to develop and reinforce skills in collecting and interpreting data on the influence and implications of cultural and social forces affecting education.

952. Seminar: Achieving Excellence in Schooling (3 cr)
Pre-req: EDAD 951.
Second of three required seminars in the joint UNL/UNO Doctoral Program in Educational Administration. A focus on the role of influence, persuasion, power, and ethics in the pursuit of change from an administrative frame of reference. The seminar has three goals: (1) develop and reinforce skills in collecting and interpreting data on the influence and implications of cultural and social forces affecting education.

953. Seminar: Paradigms and Practices of Schooling (3 cr)
Pre-req: EDAD 951.
Third of three required seminars in the joint UNL/UNO Doctoral Program in Educational Administration. Existential and epistemological perspectives on schooling and formulating new possibilities for education. A problem-based approach is used to address themes of effectiveness, efficiency, equity, and ethics.

956. Employment Law Seminar (LAW 759/759G) (3 cr)
For course description, see Educational Administration and Law courses that follow.
Dual Degree Program for Law and Education

The dual degree program leading to a regular law degree, the JD (Juris Doctor), and a Ph.D in administration, curriculum, and instruction is a program administered cooperatively by the College of Law, the Teachers College, and the Graduate College. The primary objective of this program is to produce lawyer-administrators whose training will enable them to perform both the task of an attorney and an administrator.

To earn both degrees each student will be expected to study at least five academic years within the program. Since the objective of this program is to provide the student with a fully integrated approach to studying law and educational administration, the curriculum reflects this integration by requiring students to mix their study in each field.

Admission. Each college will separately admit or reject each candidate by its normal procedure. The Dual Degree Committee will then consider those students accepted into both the College of Law and the Graduate College for admission to the dual degree program.

Educational Administration and Law

The following courses are cross-listed in both educational administration and law. These courses are normally open only to students enrolled in the joint JD in law and PhD in administration, curriculum, and instruction program, but under any circumstances admission to these courses requires approval of the College of Law. Students not seeking a law degree may be admitted to one or more of these courses with the specific approval of the faculty member teaching the course and the Dean of the College of Law.

*874. Torts I (LAW 503/503G) (3 cr)
For course description, see LAW 503G.

*875. Torts II (LAW 504/504G) (3 cr)
For course description, see LAW 504G.

956. Employment Law Seminar (LAW 759/759G) (3 cr)
Selected current national and state legal issues pertaining to private and public employment.

959. Law and Educational Administration (LAW 695/695G) (1-4 cr) Prereq: Permission.
Current legal issues of national significance relating to educational institutions, analysis of constitutional provisions, statutes, and court decisions affecting education, separation of church and state, rights of equality, student rights, responsibilities, and protective measures; use of school property; control of the curriculum and extracurricular activities, contractual and tort liability; hiring, collective actions, tenure, outside activities, discharge, and retirement of teachers, other employees, or students; public and private school employment.

960. Public Employment Law (LAW 760/760G) (1-4 cr)
Legal issues relating to public employment with particular emphasis on public schools and colleges collective bargaining by public employees; impasse resolution of public employee disputes; grievances, arbitration, and enforcement of agreements; civil rights of public employees; and laws applicable to public employment apart from collective bargaining such as discrimination acts, wages and hours laws, retirement plans, and public records.

961. Trial Advocacy (LAW 761/761G) (1-4 cr) Prereq: Permission.
Emphasis on current national and state legal issues pertaining to private and public employment.

963. Legislation Seminar (LAW 777/777G) (1-4 cr)
Development of further skills in drafting and interpreting statutes, understanding the legislative processes and decision making, and evaluating the role of legislation in governmental regulation. Subjects pertaining to or involving legislation concerning subjects considered by the Nebraska legislature and the Nebraska legislative process.

964. Municipal Corporations (LAW 788/788G) (1-4 cr)
Law of municipal corporations and local government units with emphasis upon current problems in the operation and administration of local government.

968. Education-Law Seminar (LAW 621/621G) (1-4 cr)
Selected current national and state legal issues pertaining to education.

970. Criminal Law (LAW 508/508G) (3 cr)
Substantive criminal law with emphasis on the theoretical foundations and general principles and doctrines that govern the rules of liability and defenses.

971. Evidence (LAW 646/646G) (1-4 cr)
Concepts of relevancy and admissibility of evidence including hearsay and the admissibility of confessions. Rights of defendants; criminal procedure in state and federal courts; procedures for obtaining and using evidence, including expert testimony.

973. Jurisprudence (LAW 672/672G) (1-4 cr)
Selected problems in legal thought. Historical context of proposed solutions.

976. The Legal Control of Discrimination (LAW 680/680G) (1-4 cr)
Inequalities in American society which arise from discrimination against minorities and other under-represented groups, how these inequalities have been redressed by federal and state laws, and how law can be used to remedy many of these inequalities.

977. Legal History (LAW 619/619G) (1-4 cr)
Development of fundamental English and American institutions. Emphasizes the American legal profession and, when so designated by the instructor, meets the faculty's requirement for a course in professional responsibility.

978. Mass Communications Law (LAW 649/649G) (1-4 cr)
Law applicable to the mass communications media, including the constitutional status of mass communications, the conflict between a free press and a fair trial, and governmental regulation of electronic mass communications media, with particular attention to freedom of information, the right to privacy, libel, and obscenity, freedom of speech, the relationship of media to specialized areas such as antitrust, labor law, and copyright law.

*875. Constitutional Law II (LAW 609/609G) (1-4 cr)
Overview of the structure of the federal government, including the history and judicial interpretation of the constitution, the relation of the states to the federal government, interstate commerce, due process, and separation of power.

980. Educational Psychology

Graduate Committee: Professor Creswell (chair); Professor Adsit (co-chair); Assistant Professor Anson

All students who wish to work toward a master's degree in educational psychology or a doctoral degree in psychological and educational studies must take the entire core of the Graduate Record Examination (GRE). Each applicant should arrange to have their scores reported to the Graduate Studies Office at the University of Nebraska-Lincoln. Early submission of the scores is important because the application file will not be considered until it is complete. Applications and information concerning the GRE may be obtained from the Graduate Studies Office, 301 Canfield Administration Building, or from Professional and Graduate School Testing, 125 Canfield Administration Building. Full information concerning the tests and testing locations may be obtained from the Educational Testing Service, Princeton, New Jersey 08540. Students considering advanced degrees (masters, educational specialist, or doctoral) should submit information about their experiences in research and program development, teaching, and human relations, and writing.

Masters Degree. The master of arts (MA) degree may be obtained with a specialization in either cognition, learning, development, or survey research and analysis. Endorsement programs are offered in secondary school counseling, and elementary school counseling.

Educational Specialist Degree. The Department of Educational Psychology offers the educational specialist degree (EDS) (67-72 hours beyond the BA) in school psychology. The EDS in school psychology leads to certification as a school psychologist.

Doctoral Degrees. The PhD degree is available to students wishing careers in cognition, learning and development, research methods, counseling psychology, and school psychology through the field of educational specialization called Psychological and Cultural Studies. For further information, see “Requirements for Doctoral Degrees in Education” on page 21 and contact the Chair of the Department’s Graduate Committee.

Psychological and Educational Diagnosis. The Psychological and Educational Services Clinic in the Department of Educational Psychology serves the dual function of providing training for qualified students and of making available to all qualified students services for the diagnosis and treatment of emotional and learning problems. The clinic is staffed by doctoral candidates, candidates in the Master of Arts in psychology and the Doctor of Philosophy in educational psychology.

Buros Center for Testing. The Buros Center for Testing comprises two separate institutes dedicated to improving the quality of contemporary assessment practice. Founded by O. Scar K. Buros in 1937, the Buros Institute of Mental Measurements (BIMM) publishes critical evalu-
Courses (EDPS)

839. Community Services for Older Adults (3 cr)
Developing community services to meet the needs of older adults. Services to meet health, financial, transportation, education, legal, housing, recreational, safety, and spiritual needs including means of initiating, financing, and administering, coordinating, and evaluating service delivery systems.

*840. Educational Gerontology (EDAD *820, GER 410/610) (3 cr)
For course description, see EDAD *802.

850. Child Psychology (3 cr)
Advanced study of the behavior and development of preschool and elementary school children. Developmental changes in cognitive, social, and emotional development.

851. Psychology of Adolescence (3 cr)
Emotional, social, and emotional development of boys and girls during the adolescent period.

*852. Dynamics of Small Groups (EDAD *820) (3 cr)
Dynamics, structure, and developmental patterns of small, face-to-face groups in instructional and organizational settings. Group formation, conflict, the emergence and function of role structures, leadership and power, recurring paradoxes, and other problems of group life, and the contribution of small groups to personal and social change.

*853. Psychological Assessment I (3 cr) Prereq: EDPS 870 or equivalent
Basic assessment and testing skills including behavioral observation, psychometric issues, intake diagnostic interviewing, psychological testing, test interpretation feedback, and integrative report writing. Commonly used screening instruments, personality tests, career interest inventories, and symptom-based tests.

854. Human Cognition and Instruction (3 cr)
Basic survey of cognitive psychology and its applications in instruction. Memory, problem solving, cognitive process in reading, research approaches, and applications to teaching.

*855. Teaching Learners to Learn (CUR R, EDAD, H HPT, SPED, VAED *855) (3 cr)
Effective teachers facilitate student learning. Facilitating student learning depends on understanding learning principles and on designing instruction that is compatible with learning principles. Instructors can provide learning-compatible instruction that helps students learn more effectively and ultimately teaches them how to learn. Assistants teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

857. Statistical Methods (3 cr)
Examination of the research and theoretical literature related to the relationship between various disabling conditions and the psychological functioning of the person with disability.

*860. Applications of Selected Advanced Statistics (3 cr) Prereq: EDPS 859.
Various parametric and non-parametric analyses, including analysis of variance (completely randomized design and various factorial designs), regression analysis, analysis of covariance, full model stepwise multiple regression, chi square, Mann-Whitney U, and Wilcoxon test. Understanding and application of these analyses.

861. Multicultural Counseling (3 cr) Prereq: EDPS *866 or comparable course or permission.
Ethnic subcultures in the United States, critical cultural communication systems, and change strategies. Cultural cues and barriers in counseling, personal assumptions and values, and active experiencing of cultural diversity and the counseling relationship.

863. Developmental Psychopathology (3 cr)
Investigation of the etiology, course, classification, and treatment of the psychological problems encountered by children, youth, and their families. Current research and theoretical viewpoints regarding psychopathological behavior.

870. Introduction to Educational and Psychological Measurement (3 cr) Prereq: EDPS 859 or equivalent.
Introduction to the collection, evaluation, and ethical use of measurement instruments commonly used in education and psychology. Test construction principles, item analysis, reliability, validity, ethical issues in testing, and evaluation of standardized tests.

871. Human Sexuality and Society (FACS, SOC, PSYC 871) (3 cr)
For course description, see PSYC 871.

878. Pro-seminar in Latin American Studies (ANTH, GEOG, HIST, M D L, POL, SOCS 878) (3 cr, max 6)
Prereq: Permission.
For course description, see ANTH 878.

881. Psychopharmacology of Addiction (3 cr)
Psychopharmacological and psychological aspects of drug and alcohol use and abuse. Review of the field emphasizes aspects that are important for the chemical dependency counselor. Physiology of drug use, major drugs of abuse, and psychoactive medications.

882. Treatment Methods and Modalities in Chemical Dependency (3 cr)
Survey of common, and not so common approaches to treating chemical dependency (e.g., inpatient vs outpatient treatment, halfway houses, alcoholics anonymous, Alcohol and drug abuse subpopulations reviewed, with special consideration given to their needs in treatment.

*890. Workshop Seminar (1-12 cr, max 12)
See "Workshop Seminars in Education," on page 87.

*893. Workshop Seminar (1-12 cr, max 12)
See "Workshop Seminars in Education," on page 87.

896. Directed Field Experience (1-24 cr) Prereq: Permission.

*897. Student Teaching: Gifted and Talented (SPED *897) (1-12 cr) Prereq: By application only (Gifted and Talented Program).
For course description, see SPED *897.

898. Special Topics (1-6 cr, max 6) Prereq: Permission.
Seminars on current issues or topics in educational psychology. Topic varies.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.

901. Creativity in the Classroom (SPED 901) (3 cr) Prereq: SPED *885.
Surveys methods whereby creative students are identified and describes the characteristics of the creative student. Methods of enhancement of creative behavior are exemplified and presented to course participants on an individual basis. At least one intervention program is required per participant.

902. Identification and Characteristics of Gifted Children (SPED 902) (3 cr) Prereq: SPED *885.
Surveys methods and instruments used to identify gifted children. Characteristics and needs of gifted children are explored with particular attention given to intellectual and personality variables. At least one episode of tutoring a gifted child is required.

929. Seminar in Adult and Continuing Education (EDAD 908) (1-6 cr)
Computation, interpretation, and application of analysis of variance methods, including factorial and mixed model designs. Computer and microcomputer software accessed.

Various correlation-based statistical procedures presented, including linear regression, multiple regression, statistical control, analysis of interactions, the general linear model, factor analysis, and discriminant analysis.

945. Computer-Assisted Research Data Analysis (3 cr) Prereq: One or more courses beyond EDPS 859. R egistration is on a pass no pass basis only. Practical opportunity to learn several statistical software packages for both mainframe and microcomputers (a) how to develop and manage data files, (b) how to transfer data files between computers, and (c) principles of data transformation and selection.

Current issues related to psycho-educational service delivery to children and families from different cultural and linguistic backgrounds. Integrating research and field experiences to provide students with skills to develop, implement, and deliver culturally sensitive and effective school psychological services.

949. Cognitive and Behavioral Therapy with Children and Adolescents (3 cr) Prereq: Permission.

950. Intellectual Assessment (1-4 cr) Prereq: or coreq: EDPS 859, 870, and permission.
Formal evaluative methods for the investigation of children's learning difficulties, including supervised practicum in administration, scoring, and interpretation of individually administered tests of cognitive abilities.

953. Psychological Assessment II (4 cr) Prereq: EDPS 853 or equivalent.
Advanced assessment and testing including selection, administration, and interpretation of a battery of psychological tests. Integration and synthesis of relevant test and non-test data into accessible report writing format. Development of effective consultation and test interpretation feedback skills.

954. Ecobehavioral Interventions in Schools (3 cr) Prereq: EDPS 856, 855, pre- or coreq, or permission.
Prepares school psychologists and other professionals to function as direct and indirect service providers who are knowledgeable and capable of offering a variety of ecobehavioral interventions in school settings. Applied orientation which integrates discussions of ecobehavioral theory and research.

Advanced practicum course that facilitates students scholarly acquisition of principles and concepts relevant to conducting therapy, and provides opportunities for practical integration of knowledge and skills essential to conducting individual, group, and family psychotherapy. Students acquire competencies in developing, implementing and evaluating interventions by conducting therapy sessions, observing sessions, exchanging feedback with peers, and receiving supervision.

956. Internship in School Psychology (3 cr) Prereq: Doctoral standing in professional psychology program and permission.
Supervised clinical experience working with children, adolescents, and families in a variety of school and community settings.

957. Clinical Practice in School Psychology: Consultation, Assessment, and Intervention (2-8 cr, max 24) Lec, lab, tv, Prereq: EDPS 952, 954 and permission.
Supervised clinical experiences in social, behavioral, and emotional disorders of children and adolescents. Parent and family treatment and behavior interventions emphasis.
A. Clinic-based Practicum (2-8 cr, max 12) Practicum experiences provided in the Department of Educational Psychology Clinic.
B. School-based Practicum (2-8 cr, max 12) Practicum experiences provided in local school districts.

958. Internship in School Psychology (Non-doctoral) (2-3 cr per sem, max 12) Prereq: Permission of the director of the School Psychology Program.
Full-time supervised practicum of school psychology in the facilities of public or private schools or educational service agencies.

958B. Practicum in School Psychology Consultation Techniques (1-4 cr per sem, max 8) Prereq: EDPS 863, 952, 9970 and equivalent, and permission.
Practicum experiences in ecological, behavioral, mental health, and organizational consultation techniques within a school or related setting. Supplemented by individual and small group supervisory/breakfast sessions each week.

959. Professional Psychology Internship (Doctoral) (2-3 cr per sem, max 15) Prereq: Permission of program director.
Full-time or half-time supervised practicum of psychology and related activities in schools and supportive mental health and health agencies with emphasis on assessment, diagnosis, and treatment of mental, emotional, and behavioral disorders.

960. Problem Solving and Concept Learning in Humans (3 cr) Prereq: EDPS 850 or 851 and 854.
Critical examination of the non-Piagetian research literature and theory which examines higher mental processes in humans throughout the lifespan.

961. Cognitive Development (3 cr) Prereq: EDPS 850 or 851 and 854.
Critical examination of theories and research on cognitive development throughout the lifespan, including Piagetian and alternative perspectives.

962. Research Literature in Personality and Social Development (3 cr) Prereq: EDPS 850 or 851 and permission.
Critical examination of the concepts and principles derived from the study of personality and social development with special emphasis on the research literature.

963. Developmental Psychology (3 cr) Prereq: EDPS 850 or 851 and permission.
Biological foundations of human psychological development, including anatomical, physiological, and evolutionary considerations.

A view of the theoretical approaches to counseling. Close examination of selected theories and intervention procedures.

965A. Group Counseling: Social Psychological Aspects (3 cr) Prereq: EDPS *866. Parallel: EDPS 996 and 997A.
Develops student competencies in analyzing organizational contexts, designing group counseling experiences, and evaluating group experiences.

965B. Group Counseling II: Group Leadership Practicum (3 cr) Prereq: EDPS 960A and 997A.
A advanced practicum aimed at enhancing student competencies in designing group counseling interventions, in analyzing group dynamics, in developing and leading various types of group sessions (e.g., pre-group, intake to group closing) and in evaluating group experiences and students' leadership skills.

966. Psychology of Learning (3 cr) Prereq: EDPS 854 and 870.
Theories of learning and experimental investigation in the field of animal and human behavior and their application to the classroom.

967. Research Seminar in Educational Psychology (3 cr) Prereq: EDPS 859 and 3 hrs of EDUC 900.
Analysis and comparison of issues involved in designing research in diverse areas of psychology and education.

968. Nonparametric Statistical Methods (3 cr) Prereq: EDPS 900K, or permission.
Presentation of statistical procedures that do not require fundamental assumptions about the distribution property of the variables to be analyzed. Chi-square and rank-tests (location) tests of goodness of fit (Chi-square, Kolmogorov-Smirnov), tests of randomness (Run's).

969. Theory and Methods of Educational Measurement (3 cr) Prereq: EDPS 859 or equivalent.
Presentation of various measurement theories and concepts, current statistical true-score theory, reliability and validity, test construction, item response theory, test equating, test bias, and criterion referenced tests.

Introduction to the techniques of path analysis, confirmatory factor analysis and structural equation modeling with emphasis on the use of LISREL. Models and testing analysis and goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.

972. Multivariate Analysis (3 cr) Prereq: EDPS 859 or 951.
Techniques of multivariate analysis, including multivariate analysis of variance and covariance, multivariate multiple regression analysis, canonical analysis, repeated measures (multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

973A. Evaluation Theory and Practice (EDAD 973A) (2-3 cr) Prereq: EDPS/EDAD 973 A.
Theories and strategies of evaluation examined within the context of society at large and educational and human service programs in particular. Key evaluation models examined as they relate to judgments and decisions about programs. Methodological, social, and political issues in evaluation which pertain equally to an educational program or a human service agency.

978. Evaluation Practicum (2-3 cr) Prereq: EDPS 973A or permission.
Actual supervised evaluation of a program or project.

979. Guidance and Counseling in Schools (3 cr) Prereq: EDPS 850 or 851, 854, and 856.
Study of the theory and practice of testing and counseling students, and other related issues. Supplemented by individual and small group supervisory feedback sessions.

980. Academic and Behavioral Assessment (3 cr) Prereq: EDPS 952, 954 and permission.
Formal evaluative methods for the investigation of children's learning difficulties, including supervised practicum in administration, scoring, and interpretation of individually administered tests of academic abilities.

981. Intellectual Assessment (1-4 cr) Prereq: or coreq: EDPS 859, 870, and permission.
Formal evaluative methods for the investigation of children's learning difficulties, including supervised practicum in administration, scoring, and interpretation of individually administered tests of intellectual abilities.

985. Seminar in Qualitative Research (CURR 935) (3 cr) Prereq: EDUC 900K or permission.
For course description, see CURR R 935.

993. Seminar in Qualitative Research (CURR R 935) (3 cr) Prereq: EDUC 900K or permission.
For course description, see CURR R 993.

997. Seminar in College Student Development (EDAD 975) (3 cr) Prereq: EDAD 973 A.
Current knowledge, theories, and practices, and related issues in the area of college student development. Special field experiences and research projects are available to students for additional credit.

999. Seminar in College Student Personnel Work (EDAD 979) (2-3 cr per sem, max 6)
Current problems related to the organization and administration of student personnel within higher education. Exploration of research literature, some field experiences, and in-depth examination of special topics.
Health and Human Performance

Health and human performance offers graduate study in two areas: exercise physiology and health education. Within each of these areas the student is expected to complete several core courses and research tools. Health education and exercise physiology offer thesis and non-thesis options. Elective courses are taken to strengthen and broaden the student’s area of interest.

Admission to the Graduate Studies program in health and human performance is granted by the Dean of Graduate Studies upon recommendation of the Health and Human Performance Graduate Committee. Representatives on the Graduate Committee of the area in health and human performance in which the student wishes to study will be responsible for making recommendations to the Graduate Chairman concerning admissions.

Recommendations for admission to the masters program in the Department of Health and Human Performance shall be based upon the following:

1. A bachelor’s degree from an accredited institution and an appropriate pattern of undergraduate courses as a foundation for the graduate area the student wishes to pursue. Students lacking such a pattern may be admitted provisionally, pending removal of identified deficiencies.

2. An undergraduate grade point average minimum of 3.0. The specific grade point average will depend on the types of courses taken and the grades in courses specifically related to the masters program to be pursued.

3. Student goals that match the goals of the program area.

Information relating to options in the masters degree program may be found in “Requirements for the Master’s Degree” on page 27.

Doctoral Degree Programs in Education

Students wishing to pursue a doctoral degree can do so under the interdisciplinary doctoral options psychological and cultural studies or in community and human resources. Two areas of specialization are possible at the doctoral level: exercise physiology and health education. Admission to the exercise physiology specialization is through the psychological and cultural studies option. Admission to the health education specialization is through either psychological and cultural studies or community and human resources.

Faculty

**Ansorge, Charles J.** - 1972; Professor; BS 1962 Valparaiso; MA 1967, PhD 1971 Iowa

**Doutis, Panayiotis** - 1996; Assistant Professor; Bachelors 1986 Athens (Greece); MA 1990 South Carolina PhD 1997 Ohio State

**Housh, Terry J.** - 1986; Associate Professor; BA 1977 Doane; MPE 1979, PhD 1984 Nebraska (Lincoln)

**Johnson, Glen O.** - 1971; Professor; BS 1960, M S 1964, MA 1969, PhD 1970 South Dakota

**Martin, Gary L.** - 1970; Associate Professor; BS 1966 Iowa; M A 1969, PhD 1970 South Dakota

**Newman, Ian M.** - 1970; Professor; BS 1963, M S 1964 George Williams, PhD 1968 Illinois

**Scheer, John** - 1970; Associate Professor; BS 1968, M Ed 1971, PhD 1979 Nebraska (Lincoln)

**Schmidt, Richard J.** - 1971; Associate Professor; BS 1969, M Ed 1971, PhD 1988 Nebraska (Lincoln)

**Sime, Wesley E.** - 1977; Professor; BS 1965, M S 1967 George Williams, PhD, MPH 1975 Pittsburgh

**Housh, Terry J.** - 1986; Associate Professor; BA 1977, M S 1974 Queens, PhD 1977 Ohio State

Courses (HPG)

Health Education

803. Physiological Foundations of Health and Disease (3 cr)

Topical review of concepts of disease and disease including homeostasis, bioenergetics, epidemiology, and the major chronic and infectious diseases.

**855. Teaching Learners to Learn (CURR, EDAD, EDPS, SPED, VED)* (3 cr)

For course description, see EDPS *855.

**869. History and Philosophy of Public Health (3 cr)

Enables persons working in public health positions and preparing for public health-related careers to complete a critical review of public health history and examine present public health practice and philosophy as they relate to past experiences, present day problems and anticipated trends.

**870. Behavioral Foundations of Health Education (3 cr)

Presents health as a medical, psychosocial concept and provides a foundation for analyzing human health-related behavior including: the acquisition and maintenance of human health behavior and exploration of learning opportunities and approaches in the prevention and management of health problems.

**871. Contemporary Approaches to Health Education (3 cr)

Contemporary theory and research related to changing human health behavior. Develops skills in the specification of behaviors influencing health problems and in the diagnosis of opportunities for educational intervention.

**890. Workshop Seminar

See "Workshop Seminars in Education." on page 87.

**893. Workshop Seminar

See "Workshop Seminars in Education." on page 87.

**896. Independent Study (1-6 cr)

Selected topic with the direction and guidance of a staff member.

**899. Masters Thesis (6-10 cr)

Admission to masters degree program and permission of major adviser.

941. Seminar in Health Education (1-9 cr)

Consideration of research data and theory applicable to special problems and topics in health education.

**990. Workshop Seminar

See "Workshop Seminars in Education." on page 87.

**991. Field Studies in Education (CURR, EDAD 991) (1-3 cr, max 6)

For course description, see CURR 991.

**993. Workshop Seminar

See "Workshop Seminars in Education." on page 87.

**995. Doctoral Seminar (3 cr, max 18 cr)

Prereq: Permission. Students are immersed in outcome-based scholarly activities with a faculty mentor. Working on either an individual or small group basis, students develop, execute, and report one or more projects addressing the interaction between research and practice.

996. Research Other Than Thesis (1-24 cr, max 55)

Prereq: Permission. The course is intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor. Students are immersed in outcome-based scholarly activities with a faculty mentor. Working on either an individual or small group basis, students develop, execute, and report one or more projects addressing the interaction between research and practice.

999. Doctoral Dissertation (1-24 cr, max 55 cr)

Prereq: Admission to doctoral degree program and permission of supervisory committee chair.
Physical Education

98  Courses of Instruction  Education

**98. Advanced Exercise Physiology** (3 cr) Prereq: H H PT 207; H H PT / B I O S 848; H H PG / B I O S 884; and H H PT 486/ H H PG 886. Cardiovascular, pulmonary, metabolic, pharmacologic, endocrinologic, renal, neurologic, inflammatory, and orthopedic aspects of clinical physiology as they relate to exercise testing and programming.

**99. Doctoral Dissertation** (1-24 cr) Prereq: 12 hrs biological sciences including BIOS 113 (4 hrs) or equivalent. Cardiovascular, pulmonary, metabolic, pharmacologic, endocrinologic, renal, neurologic, inflammatory, and orthopedic aspects of clinical physiology as they relate to exercise testing and programming.

99. Doctoral Dissertation (1-24 cr) max 55 Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

**Music Education**

See "Music Education (M U E D)" on page 154.

**Special Education and Communication Disorders**

Department Chair: John E. Bernthal, Ph.D.
Graduate Committee: Professor Vasa (chair); Communication Disorders: Associate Professor Hux; Assistant Professors Boney, Cress
Special Education: Professor Epstein; Associate Professor Siegel; Assistant Professor Ramsey

The Department of Special Education and Communication Disorders offers graduate programs leading to the master of science degree in speech-language pathology and audiology, and the master of arts and master of education degrees in special education. Doctoral-level specializations are also available in special education (ED), speech-language pathology and audiology (PhD). For more information on doctoral programs in education, see "Doctoral Programs" on page 87.

The department also offers programs leading to the educational specialist degree in special education.

The masters degree programs in speech-language pathology and audiology are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

For more information regarding graduate programs offered by the Department of Special Education and Communication Disorders, please call (402) 472-2141 or visit our Web site at <www.unl.edu/barkley>.

**Special Education and Communication Disorders**

Masters Degree Programs. Students seeking admission to a masters program should:

1. Request application materials from the Office of Graduate Studies, 1100 Seaton Hall, and the departmental office. Students with a strong potential but without an academic background in the major will be admitted on a provisional basis until deficiencies have been removed. Completion of the masters degree requires a minimum of 47-50 hours of approved graduate work, including appropriate clinical practicum experiences for those seeking certification/licensure.

Certification and the Masters Degree. Masters degrees may be obtained with teaching certificate endorsements for special education, speech-language pathology and audiology. Candidates in special education must qualify for a Nebraska Teaching Certificate (see the Undergraduate Bulletin) for employment in the public schools.

Doctoral Degree Programs. Students planning to work toward PhD or EdD degrees will follow essentially the same procedures for admission as described above under the masters degree programs. They should request admission materials from the Graduate Studies Office, 1100 Seaton Hall, and the departmental application from the department. They should submit three letters of recommendation along with the department application, a copy of their masters thesis and other relevant publications (if the student completed a thesis or has published) to the department Graduate Committee Chair. A current academic transcript and scores for the General Test of the Graduate Record Examination need to accompany the application when it is submitted to the Graduate Studies Office. Initial review of all applications is made within the Department of Special Education and Communication Disorders where consideration is given to whether or not an applicant meets the qualifications for entrance into the program and if a student's interests are in accord with the type of education and direction which can be provided by the department. Final review of an application is made by the appropriate doctoral graduate committee in special education or communication disorders.

Faculty

**Allinder, Rose** - 1990; Associate Professor; BSE 1976, MSE 1978 Central Arkansas; PhD 1990-Vanderbilt

**Bernthal, John E.** - 1984; Chair and Professor; BFA in Ed 1962 Wayne State; MA 1964 Kansas; PhD 1971 Wisconsin

**Beukelman, David R.** - 1985; Distinguished Professor; BA 1965 Western Michigan; MA 1968, PhD 1971 Wisconsin

**Boney, Stephen** - 1985; Associate Professor; BA 1971 University of Nebraska;

**Carrell, Thomas D.** - 1994; Associate Professor; BA 1976 California (Berkeley); PhD 1984 Indiana
Courses

Special Education (SPED)

800. Characteristics of Exceptional Persons (3 cr)
Etymology, growth, and development, and characteristics of persons who differ from the norm.

801A. Accommodating Exceptional Learners in the Elementary School Classroom (3 cr) Prereq: Admission to the Teacher Education Program; EDPS 362, C.U.R.R. 195; one methods course; or permission.
Legal and ethical requirements for educating exceptional learners; identification, referral, and placement procedures; development and use of the Individual Education Program; strategies for teaching and evaluating; managing the academic and social behaviors of a range of exceptional and other at-risk learners in the elementary school.

801B. Accommodating Exceptional Learners in the Secondary School Classroom (3 cr) Prereq: Admission to the Teacher Education Program; EDPS 362, C.U.R.R. 195; one methods course; or permission.
Legal and ethical requirements for educating exceptional learners; identification, referral, and placement procedures; development and use of the Individual Education Program; strategies for teaching and evaluating; managing the academic and social behaviors of a range of exceptional and other at-risk learners in the secondary school.

802. Advanced Assessment Techniques (3 cr) Prereq: SPED 800 or equivalent; or permission.
Comprehensive study of criterion-referenced and normative-referenced assessment instruments used by school personnel.

803. Effective Instruction for Learners with Special Needs (3 cr) Prereq: SPED 800 and 802; or permission.
Interaction of classroom-based assessment and effective instructional strategies for use with individual and group formats. Development of individual education plans, curriculum analysis, delivery of instruction, curriculum-based measurement, and specific and generic instructional strategies.

Functional approaches that can be used by teachers and mental health practitioners for assessing, preventing, and managing learners' challenging behavior. Basics of applied behavior analysis, functional analyses of behavior, individual- and group-oriented interventions, self-management training, and strategies for promoting generalization.

805. Code-based Reading Instruction (3 cr)
Direct, systematic, multi-sensory techniques for teaching reading, writing, and spelling to students who struggle with the acquisition of literacy. Application of assessment techniques, lesson planning, and instructional strategies are provided through direct tutoring of students with reading difficulties.

806. Diagnosis and Correction of Reading Disabilities (3 cr)
Presents theory and techniques for assessing and instructing individuals who struggle with the acquisition of literacy skills. Strategies address word recognition and comprehension skills, including both individual and group methods of instruction.

807. Teaching Students with Disabilities in the Secondary School (3 cr) Prereq: SPED 201 and 202, or 800.
Overview of the secondary level student, including strategies, assessment, models for programs, social skills, behavior management, working with parents, and curriculum modification.

808. Issues in Secondary Programs for Students with Mild Disabilities (3 cr) Prereq: SPED 307 or 308.
Issues in secondary literature and needs of individual students.

815. Literary Instruction for Elementary Students with Diverse Needs (3 cr) Prereq: SPED 201.
Preservice teachers skills and strategies for instructing students who struggle with literacy skills, including students with verified disabilities and low-achieving students. Small group and individual strategies address oral language, reading, writing, and spelling.

833. Characteristics of Specific Learning Disabilities (3 cr) Prereq: SPED 800 or permission.
History, theories, etiologies, and assessment methodologies for special needs learners.

834. Introduction to Special Vocational Needs (3 cr) Prereq: SPED 800.
Overview of work-related assessment, models and instructional strategies for special needs learners.

835. Instructional Strategies for Special Vocational Needs Learners (3 cr)
Identification and utilization of appropriate instructional strategies for special needs learners.

836. Career Education for the Special Needs Student (3 cr) Prereq: SPED 434 or permission.
Philosophical and practical base of career education as it relates to special needs students. Career education units developed for infusion into subject matter areas.

837. Directed Field Experiences in Special Vocational Needs (3 cr) Prereq: SPED 800.
Class participants observe and work in the field. Field sites selected on class participant preference.

841. Emotional and Behavioral Disorders (3 cr) Prereq: SPED 800 or permission.
Etiology, theories, and assessment of child and adolescent emotional and behavioral disorders. A discussion of definitions and classification (DSM-IV) and special education classification of deviant behavior and psychopathology, as well as an overview of service delivery systems in education and mental health.

851. Education of the Visually Impaired I (1-6 cr, max 6)
Five-week summer course course for preparing teachers of persons with visual impairments and one or two-week courses (1-2 cr each) under the following titles:

A. Survey: Education of the Visually Impaired/Multihandicapped
B. Structure and Function of the Eye
C. Educational Implications of Low Vision
D. Methods and Materials for Teaching the Visually Impaired/Multihandicapped (2 cr)

852. Education of the Visually Impaired II (1-6 cr, max 6)
Five-week summer course for preparing teachers of persons with visual impairments and one or two-week courses (1-2 cr each) under the following titles:

A. Braille Codes and Formats (two-week course)
B. Nemeth Code
C. Communications for the Visually Impaired/Multihandicapped
D. Social-Psychological Aspects of Vision Loss

853. Visually Impaired/Multihandicapped (1-6 cr)
Six one-credit-hour courses for preparing teachers of persons with visual impairments and multihandicaps.

855. Teaching Learners to Learn (CUR R, EDAD, EDPS, HHPT, VAED *855) (3 cr)
For course description, see EDPS *855.

856. Supervising Special Education (EDAD *856) (3 cr)
For principal or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

857. Special Education Administration (EDAD *857) (3 cr)
Intensive preparation for special educators who intend to administer special education programs in the public schools. Information about best practices in special education, including programming, supervision, legal/ regulatory issues, financ- ing, personnel, as well as current controversial topics which are affecting these programs in the schools.

858. Special Education Law (EDAD *858) (3 cr)
Body of law that pertains to the organization, administration, and implementation of special education programs in PreK-12 schools. Substantive and procedural rights of disabled students, and the authority and responsibility of state and school districts that are grounded in state and federal law.

860. Issues in Early Childhood Special Education (3 cr)
Introduction to the history, philosophy, and research related to early intervention practices with children 0-5 years of age. Discussion of issues related to legal mandates, model programs, family involvement, integration, transition, service delivery systems, team collaboration and systematic use of instructional programs.

861. Intervention for Infants with Disabilities (3 cr)
Assessment and intervention strategies are presented for developing appropriate early intervention programs for infants and toddlers with disabilities. Rationale and principles for conducting home-based, family-centered, interdisciplinary services.

862. Program for Preschool Children with Disabilities (3 cr)
Selection, design and implementation of developmentally appropriate classroom interventions are presented for preschool children with disabilities. Activity-based instruction is emphasized as students consider such instructional factors as classroom arrangements, activity planning, home-school communications, team collaboration and systematic use of instructional programs.

863. Medically Fragile Infants (3 cr)
Unique needs, family-coping strategies, specialized medical staff, and various health-care settings of chronically ill infants and toddlers. Overview of etiology, characteristics, and development of appropriate medical conditions related to developmental disabilities.

870. Education of the Hearing Impaired (3 cr) Prereq: SPED 201, or equivalent. This is an introductory course.
Overview of the hearing impaired including identification procedures, basic terminology, educational programming, and educational achievement. Historical developments and vocational adjustments of hearing impaired individuals. Roles of teachers and other professionals serving this population.
872. Psychology and Sociology of Deafness (3 cr)
A brief overview of the psychology and sociology of deafness, including historical perspectives, social interactions, and educational approaches.

873. Teaching the Content Areas to the Hearing Impaired (3 cr)
Prereq: Permission. Methods for teaching content areas to the hearing impaired, focusing on effective strategies and adaptations for instruction.

874. Language Arts for the Hearing Impaired (3 cr)
Prereq: Permission. Development of language arts instruction for students with hearing impairments, including curricular and instructional methods.

875. Reading for the Hearing Impaired (3 cr)
Prereq: Permission. Techniques for reading development in hearing impaired students, emphasizing phonological and linguistic approaches.

880. A Lifespan Approach to Mental Retardation (3 cr)
A comprehensive approach to mental retardation across the lifespan, including identification, education, and support services.

881. Teaching Students with Retardation or Severe Disabilities (3 cr)
Prereq: SPED *880 or permission. Strategies for teaching students with severe disabilities, focusing on mainstreaming and special education programs.

882. Instructional Strategies for Educating Students with Multiple Disabilities (1 cr, each or 3 cr, max 3) Prereq: SPED *881 (for Severely/Moderately Handicapped endorsement) or SPED *882 (for Preschool Handicapped endorsement program) or permission. Strategies for teaching students with multiple disabilities, emphasizing integration and co-teaching.


891. Directed Field Experience (1-6 cr) Prereq: Permission. Supervised work experience in a field related to the student's major.

892. Multicultural Education (1 cr)
Focus on cultural awareness and sensitivity in education, with an emphasis on multicultural pedagogies.

893. Advanced Topics in Educating Students with Special Needs (3 cr) Prereq: Permission. Specialized topics in the education of students with special needs, exploring advanced theories and practices.

894. Seminar in Psychology of Exceptional Children (2 cr per sem, max 8) Prereq: Permission. Advanced study of exceptional children, including learning disabilities, giftedness, and other challenges.

901. Creativity in the Classroom (EDPS 901) (3 cr) Prereq: Permission. Course on fostering creativity in educational settings, strategies for promoting creativity.


903. Seminar in Special Education (cr arr. max 12) Prereq: Permission. Seminar on various topics in special education, tailored to student interests.

907. seminar in Individualized Instruction for Gifted, Talented, and Creative Students (CURR 929) (3 cr) Prereq: Permission. Seminar on individualized instruction for gifted and talented students.


929. Seminar in Individualized Instruction for Gifted, Talented, and Creative Students (CURR 929) (3 cr) For course description, see CURR 929.

932. Cognitive Strategy Instruction (3 cr) Prereq: SPED 800, 803, and 831 or permission. Advanced strategies for teaching cognitive skills to special education students.

942. Strategic Approaches for EBD (3 cr, max 6) Prereq: SPED 800, 804, and 841, or permission. Strategies for teaching students with emotional and behavioral disorders.


966. Research Other Than Thesis (1-12 cr, max 55) Prereq: Permission. Independent research project.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Permission. Original research project leading to a dissertation.

999. J. Clinical Phonology: Assessment and Management (3 cr) Prereq: Permission. Clinical phonological assessment and management.


999. L. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.


999. N. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.

999. O. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.


999. Q. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.


999. V. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.


999. X. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.

999. Y. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.

999. Z. Multicultural Education (1 cr) Prereq: Permission. Strategies for teaching in multicultural contexts.
*881. Medical Aspects of Audiology: Sensorineural Disorders

Theories of speech and language development as they apply to hearing impaired children. Evaluation and intervention of speech and language, with emphasis on maintenance of communicative functions.

*884. Speech and Language Development of the Hearing Impaired

Theories of speech and language development as they apply to hearing impaired children. Evaluation and intervention of speech and language, with emphasis on maintenance of communicative functions.

*885. Fluency Disorders

Examination of prominent theories relating language to cognitive development and learning. Student interacts on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials content and classroom settings to accommodate a child that has a language and learning disorder.

888. Linguistic Needs of Bilingual and Culturally Different Students

Provides theoretical and applied information about situational factors which have an impact on spoken and written language; addresses how individual differences due to gender, handicap, social, economic status, and cultural and ethnic background contribute to diversity in communication patterns and often act as a barrier to successful interactions in learning and social settings.

*890. Workshop Seminar

See "Workshop Seminars in Education." on page 87.

896. Readings and Research in Speech Pathology and Audiology

Readings or research in a special area in speech pathology, language pathology, language and learning disorders, audiology, or speech and hearing science.

*897. Advanced Practicum

Prereq: SLPA 250 or equivalent. R Explore prominent theories relating language to cognitive development and learning; student interacts on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials content and classroom settings to accommodate a child that has a language and learning disorder.

*898. Special Topics in Speech Pathology and Audiology

Special topics in speech pathology and audiology.

899. Masters Thesis

Admission to masters degree program and permission of major adviser.

956. Linguistics of American Sign Language

Theoretical and practical aspects of ASL structure. Issues relevant to the use of sign language in education, the development of sign systems, the linguistic structure of ASL, and sociolinguistic aspects of sign language among deaf individuals.

961. Advanced Clinical Evaluation

Instruction and practice in understanding, applying, and interpreting advanced clinical tests. Understanding the use of diagnostic and audiometric tests used in assessment of peripheral and central lesions.

962. Electrophysiologic Assessment of Hearing

Instruction and practice in the electrophysiologic evaluation of the auditory system. Procedures and special tests include Electrocochleography, Auditory Brainstem Response, Middle Latency Response, Late Cortical Response, and others.

963. Sensory Technology and Rehabilitation for the Hearing Impaired

Students who are hearing impaired will identify and take on the development and use of electrodes to measure and accompanying instrumentation, external and internal hearing aids, and cochlear implants. Evaluation and selection procedures for adults and children, orientation for users and families, and dispensing.

964. Speech Perception and Processing

Prereq: SLPA 250 or equivalent. Human and computer perception and processing of speech. The speech code and its representation in the brain. Laboratory techniques for perceptual experimentation, acoustic analysis of speech, and computer synthesis of speech.

965. Psychoacoustics

Psychoacoustic aspects of audition, including psychoacoustic instrumentation, masking levels, psychoacoustic scaling, difference limens for intensity and frequency, loudness, critical bands and critical ratios, absolute threshold measurement, differential threshold measurement, and temporal summation. Brief investigations of certain psychoacoustic phenomena.

966. Swallowing Disorders

Prereq: SLPA 464 or equivalent. Communication, dental, medical, and associated problems related to speech.

968. Motor Speech Disorders


980A. Seminar in Speech Physiology

Prereq: Permission. The speech code and its representation in the brain. Laboratory techniques for perceptual experimentation, acoustic analysis of speech, and computer synthesis of speech.

980B. Seminar in Speech Acoustics

Prereq: Permission. The speech code and its representation in the brain. Laboratory techniques for perceptual experimentation, acoustic analysis of speech, and computer synthesis of speech.

982. Sensory Technology and Rehabilitation for the Hearing Impaired

Prerequisite: SLPA 271 or equivalent. Students will initiate and carry out a directed laboratory assignment. Conventional analog hearing aids which include the design and operation of hearing aids, electroacoustic measurements, and accompanying instrumentation, external and internal hearing aids, and cochlear implants. Evaluation and selection procedures for adults and children, orientation for users and families, and dispensing.

983. Seminar in Augmentative Communication

Prereq: SLPA 886. Advanced seminar on research literature in the augmentive communication field.

984. Seminar in Augmentative Communication

Prereq: SLPA 886. Advanced seminar on research literature in the augmentive communication field.

985. Traumatic Brain Injury

Prereq: SLPA 853. Assessment and treatment of child and adult cognitive and communication disorders resulting from traumatic brain injury.

987. Aphasia in Adults

Prereq: SLPA 853. Adult language disorders resulting from stroke or other acquired central nervous system insult. Includes historical and theoretical development of understanding, cerebral dominance for language, classifications, rationale for diagnostic and therapeutic management, prognostic factors, agrammatism, and apraxia.

990. Workshop Seminar

See "Workshop Seminars in Education." on page 87.

995. Doctoral Seminar

Prereq: Permission. The course is intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor.

996. Research Problems Other Than Thesis

Prereq: Permission.

999. Doctoral Dissertation

Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

## Engineering

**Graduate Engineering Board:**

**Associate Professor Snyder (chair);** Professors D. Hab, M. artin, N. eghan, Palmer, R. eid, R. oberston, Samal, Williams

Engineering

Courses of study in engineering leading to the doctoral degree are offered through a unified PhD program which is governed by a graduate board of faculty members elected from each participating department. In addition to addressing the traditional engineering fields, this program encourages multidisciplinary approaches to engineering research. Faculty in the various engineering departments is engaged in the engineering sciences, chemical, civil, electrical, industrial and management systems, and mechanical engineering; engineering mechanics and computer science and engineering; staff are engaged in both biological and cultural systems engineering; civil engineering; chemical and materials engineering; computer engineering; electrical engineering; engineering mechanics and mechanical engineering. Students interested in studies leading to the PhD degree in engineering should contact the:

**Coordinator of Engineering Doctoral Studies**

College of Engineering and Technology

University of Nebraska-Lincoln

W 181 N ebraska H all

PO Box 88051

Lincoln, NE 68588-0501

Students holding the M S degree from a recognized engineering school or having substantially completed the requirements for that degree may apply for admission to the PhD program in engineering. Those with the M S degree in other disciplines may be required to eliminate prerequisite deficiencies or formally the BS or the M S degree or both should be held in some engineering discipline before
admission to the PhD program. Those holding only the BS degree will be requested to enter first a program leading to the MS degree. Admission to the PhD program will depend upon academic performance at both undergraduate and graduate levels. Also, three letters of recommendation must be submitted to the Coordinator of Doctoral Studies. Graduates of the undergraduate and graduate levels may also submit a GRE aptitude and advanced scores where appropriate for evaluation before admission.

Demonstration of foreign language proficiency or competence in special research techniques is not a general requirement for the PhD in engineering. Decisions concerning such requirements are within the purview of the individual supervisory committees and will be consistent with the educational objectives of the student.

Courses (ENGR)

856. History of Modern Technology (3 cr) Lec. 3, T. This course is not to be used for graduate credit in engineering and technology. Survey of the developments in the various types of technology with emphasis on the time period after 1750. Social and economic impacts of technological developments are considered. In-depth studies of three important developments in different fields of technology are undertaken.

Master of Engineering Program

Master of Engineering Board: Professors Riley (chair), Eisenhauer, Hoffman, M Catty; Associate Professors Jiang, Khattab, Sharif-Kashani.

The master of engineering is a professional practice-oriented degree program in engineering. It is designed for individuals who possess at least one degree in engineering but is also available for exceptional individuals who have significant engineering practice and a degree in a related field. The MEng degree program provides a student with additional broad-based technical education in a selected area of concentration. The student must select an area of concentration. Currently available areas of concentration are:

- Construction (CNST)
- Engineering Management (EMGT)
- Software Engineering (SWE)
- Telecommunications Engineering (TELE)
- Architectural Engineering (AREN)

The area of concentration graduate committees will evaluate the qualifications of the students for admissions and make recommendations to the Master of Engineering Board and to the Dean of Graduate Studies. Each area of concentration has different requirements consistent with its focus.

Concentrations

Construction. This area of concentration requires two years of engineering or equivalent construction work experience, a bachelor of science (or higher) degree in engineering or a quantitative area, one semester of analytic geometry, Calculus I, and one semester of statistics. The program requires 36 graduate hours which includes 18 hours of core courses in construction focus areas, 9 hours of business electives and 9 hours of secondary area electives. Eighteen of the 36 hours must be from courses open only to graduate students. The program is designed for individuals who wish to pursue advanced studies in construction-related areas. Flexibility within the program allows students to pursue a variety of related topics that will impact any construction-oriented organization. The graduate coordinator for this area of concentration is D. M. Ostafu Khattab.

Engineering Management. This area of concentration requires two years of engineering work experience, a BS in engineering or quantitative area, at least one year of calculus, a calculus-based probability and statistics course, an engineering economy course and at least one engineering science course for admission. The program requires 36 graduate hours which includes 18 hours from industrial and management systems engineering and 9 hours from management or business administration. Eighteen of the 36 hours completed must be open exclusively to graduate students. The program is for those who wish to acquire knowledge and skills for the administration and management in the engineering profession. The degree combines advanced engineering and management education. The graduate coordinator for this area of concentration is D. R. Obert W. illiams.

Software Engineering. This area of concentration requires one year of professional software engineering practice, a BS in software engineering, computer science, computer engineering or other engineering field and a foundation in computer science and advanced mathematics courses for admission. The program requires 48 graduate hours which includes 12 hours from a computer science and engineering software engineering core, 12 hours from a business core, 12 hours of approved electives from computer science and engineering or business courses and 12 hours of computer science and engineering studio projects. The degree prepares graduates for advanced professional practice as software engineers. The program focuses on advanced knowledge and skills in software design, quality process engineering and architecture. The central features of the program are the studio projects. The graduate coordinator for this area of concentration is D. R. Obert Williams.

Telecommunications Engineering. This area of concentration requires two years of practical engineering experience and a BS in electronics engineering, computer engineering, electrical engineering, electronics engineering technology or related degree with sufficient engineering mathematics for admission. The program requires 36 graduate hours including 12 hours in computer and electronics engineering core, 9 hours of approved courses in telecommunications from computer and electronics engineering, electrical engineering, computer science and engineering, and information science and technology, and 9 hours from approved courses in information systems, business administration, and mathematics and statistics. The program prepares the student for the engineering practice in the advanced areas of telecommunications engineering such as high-speed networks, wireless communications and optical communications. The graduate coordinator for this area of concentration is D. R. Obert Williams.

Architectural Engineering. This area of concentration requires at least six months of architectural engineering or related engineering area work experience, a bachelor's degree in engineering, completion of all engineering mathematics and physics courses required by the College of Engineering for a bachelor of engineering degree. The program requires 36 graduate hours which includes 27 hours of architectural engineering and related areas and 9 hours of management or business administration. Twelve of the 36 hours must be from courses open exclusively to graduate students. The program is for individuals with a degree in engineering or a quantitative area who have engineering work experience and who wish to acquire knowledge and skills for higher level technical work, and who want an introduction to administration and management in the engineering profession. The graduate coordinator for this area of concentration is D. R. Obert W. illiams.

Courses

Architectural Engineering (AREN)

810. Solar Energy Systems (3 cr) Prereq: M ECH 820 or permission. Fundamentals of solar energy system modeling analysis and design. Solar radiation modeling, surface properties of opaque and transparent materials, flat-plate collector design, solar energy storage, solar system thermal calculation, system application and design.

811. Indoor Air Quality Engineering (3 cr) Prereq: AE 3120 (UNO) or permission. Engineering approach to understanding indoor air quality. Codes, standards, HVAC equipment, commissioning, operation, maintenance, installation and remediation.


814. Building Energy Systems-Primary Energy Systems (3 cr) Prereq: M ECH 300 or permission. Design and analysis of primary energy systems. Vapor compression chillers, absorption chillers, central cooling plants, boilers systems and heating plants, cooling storage systems and plants, and cogeneration systems and plants.

815. Building Energy Simulation and Performance (3 cr) Prereq: AE 3100, 4120, 4140, and 4100 (UNO). Integrated approach to deliver energy improvement retrofit projects that provide economical and ecological benefits. Proficiency in EnergyPlus or Design Build facility and in retrofit cost estimation will be attained and integrated into an energy economic analysis. Partnering configurations, contracts, financing, and measurement and verification. Concepts applied to a practical case project.

817. Theory and Application of Thermal Systems Control (3 cr) Prereq: STAT 8805 (UNO) or equivalent. Analysis theory and methods of instrumentation for thermal systems energy consumption measurement and scientific research testing. Emphasis on sensors, transducers, and error analysis.

818. Indoor Air Quality Design (3 cr) Prereq: AREN 811 or permission. Fundamentals of project management within the mechanical and electrical contracting industry. Emphasis on codes, contracts, documents, productivity coordination, project control and administration, scheduling, safety, and project closeout, all from a specialty contracting perspective.
### Biological Systems Engineering

**Department Head:** Glenn J. Hoffman, Ph.D.

**Graduate Committee Members:** Professors M. Artin (chair), Bashford, Eisenhauer, H. Mann, M. Eyer, Schindt, and Schultz; Associate Professors G. Jones, Woldt

The Department of Biological Systems Engineering offers graduate programs leading to the Master of Science degree with a major in agricultural and biological systems engineering. The department offers courses in agricultural and biological systems engineering. Also, the department offers a Master of Science degree with a major in mechanized systems management (see "Mechanized Systems Management" on page 146) and a cooperating department offering a Master of Science degree with a major in environmental engineering (see "Environmental Engineering" on page 111).

Students wishing to pursue graduate work in agricultural and biological systems engineering must meet the admission requirements for students in engineering. Graduate study in this area may be directed to the fields of agricultural and biological systems engineering, soil and water conservation, irrigation system design, ground and surface water management, water quality in plant environments, bioprocessing, animal health, food engineering, animal waste management, solid and hazardous waste management, materials handling and processing systems, food process engineering, computer applications, monitoring and controlling biological systems, decision support systems, global positioning systems, geographic information systems, and other areas of engineering science and design related to agricultural and biological systems.

The program in meteorology and climatology is available with degree options in engineering, agronomy, or horticulture.

**Masters Degree.** Graduate programs leading to the degree of Master of Science with a major in agricultural and biological systems engineering are governed by the general requirements for graduate degrees and the rules of the Graduate Council. Graduate students are advised to consult with their faculty advisor in the Department of Biological Systems Engineering for more information about course requirements.

The program in meteorology and climatology is available with degree options in engineering, agronomy, or horticulture.

**Doctor of Philosophy Degree.** Studies leading to the Doctor of Philosophy degree are conducted under the engineering doctoral program; see "Engineering" on page 101.

### Faculty

- **Amstutz, Richard A.** - 2001; Assistant Professor; MS 1993, MS 1995 N. Dakota State University; MS 1997 Purdue University

- **Bashford, Donald L.** - 1989; Professor; BS 1963 Washington University; MS 1989, PhD 1992 Michigan State University

- **Bashford, Donald L.** - 1989; Professor; BS 1963 Washington University; MS 1989, PhD 1992 Michigan State University

- **Brand, Rhonda M.** - 1997; Assistant Professor; Biological Systems Engineering; BS 1986, MS 1988, PhD 1992 Michigan State University

- **Brown-Brandt, Tami M.** - 1998; Adjunct Assistant Professor; Biological Systems Engineering and U. S. Meat Animal Research Center; MS 1993, MS 1995 Nebraska Wesleyan University

- **D'Heurle, Elbert C.** - 1978; Associate Dean, Cooperative Extension and Professor; BS 1979, MS 1979, PhD 1981 Illinois

- **Eisenberg, Roger A.** - 1995; Adjunct Assistant Professor; Biological Systems Engineering and U. S. Meat Animal Research Center; BS 1970, M. Eng. 1979, PhD 1994 Nebraska Wesleyan University

- **Eisenberg, Dean D.** - 1979; Professor; BS 1973 Kansas State University; PhD 1983 Colorado State University

- **Feng, Qi** - 2001; Adjunct Assistant Professor; BS 1982 Tsinghua University; PhD 1999 Chinese University of Technology; M. S. 1995 Kansas State University; PhD 1997 Nebraska Wesleyan University

- **Fitzgerald, Jody B.** - 1994; Professor; BS 1985 University of Missouri; PhD 1987 Purdue University

- **Fremont, Thomas B.** - 1993; Associate Professor; BS 1983 Western Illinois University; PhD 1987 Purdue University

- **Gilley, John E.** - 1982; Adjunct Professor; BS 1979 Southern Illinois University; MS 1981 Illinois Institute of Technology; PhD 1982 Colorado State University

- **Hanna, Milford A.** - 1975; Director, Agricultural Products Center and Kenneth E. M. Millerson; Professor; Biological Systems Engineering and Food Science & Technology; BS 1969, MS 1971, PhD 1973 Pennsylvania State University

- **Hoffman, Glenn J.** - 1989; Head; Professor; BS 1963, MS 1964, Ph. D. 1970 North Carolina State University

- **Howell, Terry** - 1990; Adjunct Professor; BS 1969, MS 1970, PhD 1974 Texas A&M University

- **Hubbard, Kenneth G.** - 1981; Professor School of Agriculture Sciences; BS 1971 Chadron State; MS 1973 South Dakota School of Mines and Technology; PhD 1981 University of Utah

- **Jones, David D.** - 1989; Associate Professor; BS 1984, MS 1986 Texas A&M University; PhD 1988 Oklahoma State University

- **Kocher, Michael F.** - 1990; Associate Professor; BS 1979, MS 1983 Nebraska Wesleyan University; PhD 1986 Oklahoma State University

- **Koelsch, Richard K.** - 1996; Associate Professor; Biological Systems Engineering and Animal Science; BS 1976, MS 1977 Kansas State University; PhD 1992 Cornell University

- **Kranz, William L.** - 1985; Assistant Professor; Biological Systems Engineering and Northeast Research and Extension Center; BS 1976 South Dakota State; MS 1981 Nebraska Wesleyan University; PhD 1990 Iowa State University

- **Martin, Derrel L.** - 1982; Professor; BS 1975, MS 1979 Nebraska Wesleyan University; PhD 1984 Colorado State University

- **Meagher, Michael C.** - 1996; Associate Professor; Food Science and Technology and Biological Systems Engineering; BS 1980 Colorado State University; MS 1984, PhD 1987 Iowa State University

- **Meyer, George E.** - 1978; Professor; BS 1971, MS 1972 Massachusetts Institute of Technology

- **Nickels, Jean P.** - 1980; Adjunct Professor; Biological Systems Engineering and Animal Science; BS 1974, MS 1977 Iowa State University; PhD 1981 Iowa State University

- **Nickels, John A.** - 1971; Adjunct Professor; Biological Systems Engineering and Northeast Research and Extension Center; BS 1970, MS 1971 Nebraska Wesleyan University; PhD 1981 Iowa State University

- **Schindt, Jack L.** - 1977; Professor; Biological Systems Engineering and Associate Dean, College of Agricultural Sciences; BS 1974 University of Illinois; MS 1976 University of Nebraska

- **Schulte, Dennis D.** - 1978; Professor; BS 1968 Nebraska Wesleyan University; MS 1970, PhD 1975 Cornell University

- **Shelton, Richard J.** - 1976; Professor; Biological Systems Engineering and Northeast Research and Extension Center; BS 1975, MS 1976 Colorado State University

- **Skopp, Joseph M.** - 1980; Professor; Agronomy; BS 1971 California State University; MS 1975 Arizona State University; PhD 1980 University of California, Davis

- **Smith, John A.** - 1981; Professor; Biological Systems Engineering and Panhandle Research and Extension Center; BS 1970 Tri-State; MS 1972, PhD 1978 Michigan State University
**Weiss, Albert**
School of Natural Resource Sciences; BS 1978 Central Colorado; PhD 1971 Colorado State

**Walter-Shea, Elizabeth A.**
Colorado; PhD 1971 Colorado State Resource Sciences; BS 1965 Ranchi (India); MS 1967

**Weiser, Charles L.**
Center; BS 1974, MS 1978 Wyoming Colorado State; MS 1986, PhD 1990 Nebraska (Lincoln)

**Verma, Shashi B.**
and Director, Agricultural Research Division; BS 1962, MS 1968, PhD 1971 Illinois

**Vanderholm, Dale H.**
-1974; Professor, School of Natural Resources; BS 1974 Central Wyoming, PhD 1978 Wyoming

**Vonderheide, H. W.**
1983, PhD 1987 Illinois

**Vonderheide, H. W.**
-1992; Professor, Biological Systems Engineering and Civil Engineering; BS 1978 Colorado State; MS 1986, PhD 1990 Nebraska (Lincoln)

**Wells, Donald A.**
-1991; Associate Professor, Biological Systems Engineering and Civil Engineering; BS 1978 Colorado State; MS 1986, PhD 1990 Nebraska (Lincoln)

**Yents, C. Dean**
-1980; Associate Professor, Biological Systems Engineering and Panhandle Research and Extension Center; BS 1974, MS 1978 Wyoming

**Courses of Instruction/ Engineering**

**Agricultural Engineering (AGEN)**

824. Machine Design in Agricultural Engineering (3 cr I)
Lec 3. Prereq: ENGM 325.
Design of machine elements: deflection, analysis, and solution of a design problem in agricultural engineering.

826. Agricultural Tractors (3 cr)
Lec 2, lab 3. Prereq: AGEN 325.
Effect of soil-machine relationship upon the application of power to agriculture; technical study of design and performance of agricultural tractors.

853. Irrigation and Drainage Systems Engineering (AGEN 853) (3 cr I) Lec 2, lab 2, rec 2. Prereq: M ECH or CIVE 310, and AGEN 344 or permission.

855. Analysis of Engineering Properties of Biological Systems (AGEN 855) (3 cr)
Lec 2, lab 2, rec 2. Prereq: BSEN/CIVE 326; BSEN/AGEN 350 or CIVE 352; permission.

856. Instrumentation and Controls (BSEN 860) (3 cr I) Lec 2, lab 2. Prereq: Permission.
For course description, see BSEN 860.

857. Special Problems (BSEN *896) (1-6 cr) Prereq: Permission.
For course description, see BSEN *896.

858. Instrumentation and Controls (BSEN *898) (1-6 cr) Prereq: Permission.
For course description, see BSEN *898.

860. Advanced Irrigation and Drainage Systems Engineering (3 cr) Lec 2, lab 3. Prereq: AGEN 853, MATH 321 or permission.
Advanced analytical considerations of environmental aspects of soil-plant systems; movement of water in soils; water movement through plants; and irrigation and drainage systems for controlling water in the soil-plant environment.

943. Hydrologic Modeling of Small Watersheds (2 cr)
Lec 2. Prereq: AGEN 854 and CIVE 822.
Mathematical modeling of the runoff process for small rural and urban watersheds. Appraisal of techniques for estimating runoff volume and peak discharges for ungauged watersheds; hydrograph synthesis; composite hydrographs; and frequency relationships of rainfall and runoff.

960. Solute Movement in Soils (AGRO, CIVE 955; GEOL 985) (3 cr I) Lec 3. Prereq: MATH 208; and either AGRO 860 or GEOL 888 or M S M 852 or CIVE 855.
Knowledge of a programming language is recommended. Prereq: MATH 210; 0-6 credit-earned number of years.


962. Advanced Topics (BSEN 962) (1-6 cr) Prereq: Permission.
For course description, see BSEN 962.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

**Biological Systems Engineering (BSEN)**

841. Animal Waste Management (3 cr I)
Lec 3. Prereq: Permission.
Characterization of wastes from animal production. Specific conditions of collection, transport, storage, treatment, and pollution and management aspects.

846. Unit Operations of Biological Processes (3 cr I) Lec 2, rec 1. Prereq: BSEN 225 and CH EM 332 or equivalent. Application of heat, mass, and moment transport in analysis and design of units for biological and agricultural processes. Manipulation, drying, distillation, extraction, teaching, thermal processing, membrane separation, centrifugation, and filtration.

851. Bioengineering Relationships of Plant Systems (AGRO 951) (3 cr)
Lec 2, lab 2, rec 2. Prereq: Permission.
An engineer's analysis of livestock, their environment, and the interaction between the two; mathematical models; heat transfer, energy balances, environmental measurements, physiological measurements, calorigraphy.

853. Irrigation and Drainage Systems Engineering (AGEN 853) (3 cr I) Lec 2, lab 2, rec 2. Prereq: M ECH or CIVE 310, and AGEN 344 or permission.

855. Nonpoint Source Pollution Control Engineering (CIVE 855) (3 cr I) Lec 2, lab 2, rec 2. Prereq: M ECH or CIVE 310, and AGEN 344 or permission.
For course description, see AGEN 855.

858. Groundwater Engineering (CIVE 858) (3 cr) Prereq: CIVE 352 or AGEN/BSEN 350 or equivalent.
For course description, see CIVE 858.

860. Instrumentation and Controls (AGEN 860) (3 cr I) Lec 2, lab 2. Prereq: Permission.
Analysis and design of instrumentation and controls for agricultural and biological production, management and processing. Theory of basic sensors and transducers, analog and digital control circuits, the interfacing of computers with instruments and controls. Signal analysis and interpretation for improving system performance.

899. Special Problems (AGEN *896) (1-6 cr) Prereq: Permission.
Investigation and written report on engineering problems not covered in sufficient depth through existing courses. Topic varies by semester.

899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

935. Analysis of Engineering Properties of Biological Materials (3 cr) Lec 2, lab 2, Prereq: BSEN 846 or equivalent.
Current and relevant mechanical, rheological, thermal, electrical, and optical properties related to the engineering of processing, storage, handling, and utilization systems for biological materials are selected for analysis.

941. Agricultural Waste Management (AGEN 941) (3 cr)
Lec 3. Prereq: Permission.
Aerobic, anaerobic, and physical-chemical treatment; energy recovery and protein synthesis processes for high-strength organic materials; agricultural applications including composting, anaerobic stripping, nitrification, denitrification, and land disposal of organic and chemically treated materials.

An engineer's analysis of livestock's environment and the interaction between the two; mathematical models; heat transfer, energy balances, environmental measurements, physiological measurements, calorimetry.

951. Bioengineering Relationships of Plant Systems (3 cr) Lec 3. Prereq: MATH 821, AGEN 853 or permission. Engineering properties of plant systems; plant structure and function; the concept of water potential; effect of temperature, light, and CO2 level on dynamics of growth; mathematical modeling of plant systems; the air-soil microclimate; heat transfer in soils and in the air; gaseous diffusion of O2 and CO2; climate, effect and control; greenhouse design parameters; growth; design parameters; mathematical modeling of cropping systems.

954. Turbulent Transfer in the Atmospheric Surface Layer (N RES 954) (3 cr) Prereq: MATH 821, M ECH 310 or N RES 808 or BIO 857; or equivalent or permission. 0-6 credit-earned number of odd-numbered calendar years.

999. Seminar II (AGEN 989) (1 cr I II) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

**Chemical Engineering**

Department Chair: James M. Eakman, Ph.D.
Graduate Committee: Associate Professor Vlijm (chair); Professor Timm; Associate Professor Lauterback

To begin candidacy for the masters degree, a student must have completed an undergraduate major in chemical engineering or have completed all required deficiency courses.

All applicants for admission must take the verbal, quantitative, and analytical sections of the Graduate Record Exam (GRE) and should arrange to have the scores reported to the Graduate Office at the University of Nebraska-Lincoln at the earliest possible date. In order to receive favorable consideration for admission an applicant should score at least 400 on the verbal and 700 on the quantitative and analytical sections of the GRE. The Advanced
Masters Degree. The masters degree requires a minimum of 30 credit hours which includes a required thesis. Of these 30 credit hours, 12 are in required core courses (Advanced Chemical Engineering Analysis, Theoretical and Applied Thermodynamics for Chemical Engineers, Transport Phenomena, and Advanced Chemical Engineering Kinetics) and 6 in a required thesis. Students must take required core courses the first time they are offered. All elective courses must be approved by the student’s thesis advisor or the Chair of the Department’s Graduate Committee. Students are required to pass either a comprehensive examination or a final oral examination, at the discretion of the thesis advisor.

Doctor of Philosophy Degree. Courses of study leading to the doctoral degree are offered through a unified PhD program in engineering which is governed by a graduate board of faculty members elected from each participating department. In addition to addressing the traditional engineering fields, this program encourages multidisciplinary approaches to engineering research.

Faculty

**Brand, Jennifer L.** - 1992; Assistant Professor; BS 1973, MS 1978 Michigan; PhD 1992 California (San Diego)

**Clements, Donald L.** - 1984; Professor; BS 1966 Oklahoma State; MS 1968 Illinois; PhD 1973 Oklahoma

**Eakman, James M.** - 1997; Professor and Chair; BS 1960, PhD 1966 Minnesota

**Hendrix, James L.** - 1994; Professor and Chair; BS 1966, MS 1968, PhD 1969 Nebraska (Lincoln)

**Larsen, Gustavo** - 1993; Associate Professor; BS 1985, MIEEE, PhD 1992 Fundue

**Lauderback, Lee L.** - 1990; Associate Professor; BS 1975, MS 1977, PhD 1982 Purdue

**Meagher, Michael** - 1989; Associate Professor; BS 1980 Colorado State; MS 1984, PhD 1987 Iowa State

**Noureddini, Hosein** - 1993; Research Assistant Professor; BS 1975, MS 1977, PhD 1991, NIEEE, Lincoln

**Timmel, Delmar C.** - 1967; Professor; BS 1962, MS 1965, PhD 1967 Iowa State

**Viljoen, Hendrik J.** - 1992; Associate Professor; BA 1979, MS 1981, PhD 1988 Pretoria (South Africa)

Courses (CHME)

**805. Multiple Contact Separation Processes (3 cr)**
Prereq: CHME 823 and permission.
Application of the principles of physical kinetics and the equilibrium stage to separation processes such as distillation, extraction, and distillation.

**822. Advanced Topics in Chemical Engineering Computation (3 cr)**
Prereq: CHME 823 and permission.
Intensive treatment of special topics of current research interest in such areas as steady-state and dynamic process simulation, design optimization, chemical process synthesis, computer-aided product research, stochastic optimization, and numerical methods applied to transport problems.

**833. Advanced Chemical Engineering Analysis (3 cr)**
Prereq: CHME 833, MATH 820, or CHME 823 and permission. Application of advanced mathematics to chemical engineering design, with emphasis upon the derivation of differential equations as well as upon the solution of these equations. Design methods for tubular and stirred tank reactors, ion exchange units, bubble heating, gas absorbers, mixers, etc.

**823. Chemical Engineering Thermodynamics and Kinetics (3 cr)**
Prereq: CHME 823, CHME 832 continued with application of kinetics to reactor design.

**825. Theoretical and Applied Thermodynamics for Chemical Engineers (3 cr)**
Prereq: CHME 823, CHME 823 or CHME 862, MATH 820 or 821 or equivalent. Application of classical engineering and chemical thermodynamics to problems in chemical engineering.

**830. Chemical Engineering Laboratory (4 cr)**
Lec 1, lab 4. Prereq: CHME 203, 833, or permission. Selected experiments in chemical engineering. Experimental design, interpretation of results, and formal oral and written reports.

**832. Transport Operations (3 cr)**
Prereq: MATH 208, CHME 260, MATH 208, or MATH 208. Analysis and design of automatic control systems. Dynamic responses of measuring instruments, control elements, and process controls.

**842. Chemical Reactor Engineering and Design (3 cr)**
Prereq: CHME 823 or permission. Basic principles of chemical kinetics are coupled with models descriptive of rates of energy and mass transfer for the analysis and design of reactor systems.

**845. Advanced Chemical Engineering Kinetics (3 cr)**
Prereq: CHME 815, 823, or permission. Kinetics of chemical reactions in several categories of reactors for interpretation of experimental data and design of equipment.

**847. Principles and Applications of Catalysis in Reaction Engineering (3 cr)**
Prereq: CHME 842. Kinetics of chemical reactions in several categories of reactors for interpretation of experimental data and design of equipment.

**852. Chemical Engineering Process Economics and Optimization (3 cr)**
Prereq: CHME 823 or 823 or permission. Application of classical engineering and chemical thermodynamics to problems in chemical engineering.

**873. Biochemical Engineering (3 cr)**
Lec 3. Prereq: CHME 823 or 822, MATH 820 or 821. Dynamics of microbial growth and death. Engineering processes for microbiological synthesis of cellular material and industrial products with emphasis on food and pharmaceutical production by bacteria and fungi.

**874. Advanced Biochemical Engineering (2-6 cr)**
Prereq: CHME 873 or permission. Recent theoretical and technical developments in biochemical engineering.

**882. Polymers (3 cr)**
Prereq: CHME 262 and 264. Introduction to polymer science and engineering.

**886. Electrochemical Engineering (3 cr)**
Lec 3. Prereq: CHME 832, 833 or permission. Thermodynamic and kinetic principles of electrochemistry are applied to the design and analysis of electrochemical processes, including chemical production, batteries, fuel cells, and corrosion prevention.

**892. Air Pollution, Assessment and Control (3 cr)**
Prereq: Permission. Survey of the present status of the air pollution problem and the application of engineering and scientific principles to its practical and effective control.

**899. Masters Thesis (1-10 cr)**
Prereq: Admission to masters degree program and permission of major advisor.

**900. Seminar in Chemical Engineering (1 cr)**
Prereq: 899. Discussion of research projects and review of current literature in chemical engineering.

**915. Systems Analysis in Chemical Engineering (3 cr)**

**925. Transport Properties (3 cr)**
Prereq: CHEM 805, 835, 842. Application of the kinetic theories of gases, liquids, and solids to the prediction and correlation of transport properties.

**935. Membrane Principles and Processes (3 cr)**
Prereq: CHME 823 and 833. Fundamental principles relating to membrane structures, the structure and properties of membranes, and applications in electrofiltration, ultradiffusion, diffusion control, artificial organs, and other processes.

**955. Advanced Process Dynamics and Control (3 cr)**
Prereq: CHME 862 or permission. Transient behavior of typical industrial processes and systems — heat exchangers, dryers, distillation columns, absorbers, chemical reactors, etc. — emphasis on the control of such processes. Introduction to systems engineering.

**995. Special Problems in Chemical Engineering (1-9 cr)**
Prereq: CHME 823 or 833 or equivalent.

**999. Doctoral Dissertation (1-24 cr, max 55)**
Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Civil Engineering

Department Chair—Lincoln: Mohamed F. Dahab, Ph.D., P.E.
Department Chair— Omaha: Raymond K. Moore, Ph.D.
Graduate Committee: Professors Dahab (chair), Bogard, Associate Professors M. Musawi, R. Rossin, Zhang

Graduate work in civil engineering is governed by the general requirements of the Graduate College. Selection of the option and program subject to approval by the student’s 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 environmental, geotechnical, structural, transportation, and water resources engineering.
minor area may be designated from any one of the related civil engineering areas or from other related departments such as in construction management. Other supporting courses may be selected from advanced or graduate courses having some relation to the major group.

Masters-level specializations available:
Environmental Studies Geotechnical Engineering: Structural Engineering: Transportation Engineering: Water Resources Planning and Management.

Doctor of Philosophy Degree. Studies leading to a PhD degree in engineering are conducted under the engineering doctoral program; see "Engineering" on page 101.

Courses (CIVE)


802. Hazardous Waste Management (3 cr) Prereq: CIVE/BSEN 320 or permission. Survey of components of the hazardous waste management system in the U.S. Overview of federal and state regulations, classification, chemical characteristics, prevention, treatment and disposal technologies, superfund site analysis and clean-up technologies, and risk analysis.

821. Hazardous Waste Treatment (3 cr) Prereq: CIVE. Parallel CIVE 421, or permission. Analysis and design of unit operations and processes used for hazardous waste remediation of soil, water and air. Both in-situ and ex-situ technologies and applications discussed.

822. Physical and Chemical Treatment Processes in Environmental Engineering (3 cr) Prereq: CIVE 326, 425 or permission. Evaluation and analysis of physical and chemical unit operations and processes applied to the treatment of water, wastewater, and hazardous wastes.

824. Solid Waste Management Engineering (3 cr) Lec 3. CIVE 326, 334. Planning, design, and operation of solid waste collection, processing, treatment, and disposal systems including materials, resources and energy recovery systems.

826. Design of Water Treatment Facilities (3 cr) Prereq: CIVE 425 or permission. Analysis of water supplies and design of water treatment and distribution systems.

827. Design of Wastewater Treatment and Disposal Facilities (3 cr) Prereq: CIVE 425 or permission. Analysis of systems for wastewater treatment and disposal.


829. Biological Waste Treatment (3 cr) Lec 2, lab 3. CIVE 326. Principles of biological processes and their application in the design of waste treatment systems. Laboratory involves waste analysis and treatability studies.


832. Soil Mechanics II Lab (1 cr) Lab 1. CIVE 334, 334A (2 cr). Laboratory procedures for soil mechanics testing and the design of soil structures. Testing of soils for strength and deformation properties.

833. Experimental Soil Mechanics (2 cr) Prereq: CIVE 834 or permission. Advanced field and laboratory procedures involving soil behavior. Testing of soils for shear strength, deformation characteristics, and material properties. Design and execution of soil testing procedures.


842. Reinforced Masonry (3 cr) Prereq: CIVE 326, 334, 425. Reinforced masonry design principles and special applications including columns and footings. Design of masonry structures with emphasis on the application of techniques in the design of masonry structures.


848. Introduction to the Principles of Hydrologic Cycle (3 cr) Prereq: CIVE 326. Principles of hydrologic cycle including precipitation, evaporation, interception, infiltration, and groundwater flow. Application of these principles to the design of civil engineering structures.


853. Hydrology (3 cr) Prereq: CIVE 326. Principles of hydrologic cycle including precipitation, evaporation, interception, infiltration, and groundwater flow. Application of these principles to the design of civil engineering structures.

854. Hydraulic Engineering (3 cr) Prereq: MATH 221. Principles of hydrologic cycle including precipitation, evaporation, interception, infiltration, and groundwater flow. Application of these principles to the design of civil engineering structures.

855. Nonpoint Source Pollution Control Engineering (3 cr) Prereq: CIVE 326, 334, 336. Principles of hydrologic cycle including precipitation, evaporation, interception, infiltration, and groundwater flow. Application of these principles to the design of civil engineering structures.

858. Groundwater Engineering (BSEN 858) (3 cr) Prereq: CIVE 352 or AGEN 830. Application of engineering principles to the movement of groundwater, determination of flow rates, and prediction of groundwater levels. Use of groundwater in the design and construction of facilities. Design of pumping systems.

861. Urban Transportation Planning (3 cr) Prereq: CIVE 361. Development of urban transportation planning objectives and goals. Data collection procedures, land use and travel forecasting techniques, trip generation, trip distribution, modal choice analysis, and traffic assignment. Site development and traffic impact analysis.

862. Airport Planning and Design (3 cr) Prereq: CIVE 361. Planning and design of general aviation and air-carrier airports. Landside components include aircraft ground access systems, vehicle circulation parking, and terminal buildings. Airside components include aircraft apron, gate area, taxiway system, runway system, and air traffic control facilities and airspace. Emphasis on design projects.


865. Traffic Engineering Laboratory (1 cr) Lab 3. Prereq: CIVE 361 and STAT 880. Traffic engineering experiments and field studies used to measure traffic parameters, driver/pedestrian behavior, and queue lengths. Experimental field testing and modeling of traffic flow, speed, density, travel time, delay, and saturation flow, the characteristics of per capita travel and social interaction. Investigation of traffic lights and media traffic conditions.

866. Transportation Planning and Economics (3 cr) Prereq: Permission. Community growth and development based on planning decisions regarding land use whereby transportation facilities are fitted to land use. Economic studies consider the consequences to transportation agencies, industries, and nonusers. Agency expenses include capital outlay and annual expenses for maintenance and operations. User consequences include items such as time costs, accident costs, and inconvenience costs and the assignment of monetary values to pleasure, recreation, and culture. Nonuser consequences include items such as cost reductions or increase in public services. Users in value of goods and natural resources where areas become more readily accessible; changes in business and industrial activities; and increases in or decreases of residential property values.

867. Transportation Safety Engineering (3 cr) Prereq: Permission. Safety criteria in the planning, design, and operation phases of highways, railroads, airways, and waterways. Determination of safety legislation and funding requirements. Identification of high accident locations and methods to determine cost/benefit effectiveness of improvements.

868. Portland Cement and Asphalt Concrete Laboratory (1 cr) Prereq: CIVE 378 or equivalent. Laboratory and field procedures used to obtain Portland cement and asphalt concretes for engineering construction.


870. Analysis and Estimation of Transportation Demand (3 cr) Prereq: Permission. Introduction to conceptual, methodological, and mathematical foundations of analysis and design of transportation services; review of probabilistic modeling; application of discrete choice models to demand analysis.

871. Analysis and Design of Transportation Supply Systems (3 cr) Prereq: CIVE 334 or permission. Operations research techniques for modeling system performance and design of transportation services utilizing network equilibrium and partially distributed queueing systems.


888. Special Topics in Civil Engineering (1-6 cr) Prereq: Permission. Special problems, topics, or research in civil engineering.

899. Master's Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

915. Water Resources Engineering (3 cr) Prereq: MATH 821. Pavement Design and Evaluation. Laboratory and field procedures used to obtain Portland cement and asphalt concrete laboratory analyses, and pilot plant studies.

921. Advanced Topics in Hazardous Waste Treatment (3 cr) Prereq: CIVE 822 or permission. Advanced Topics in Water Treatment. Application of existing and innovative technologies in the remediation of hazardous wastes, including methods for treatment and disposal of contaminated soil, surface waters, groundwaters, and gases.

926. Advanced Topics in Water Treatment (3 cr) Prereq: CIVE *826 or 830. Theoretical basis of water treatment, advanced and emerging systems for water treatment, purification and reclamation.

927. Advanced Topics in Wastewater Treatment (3 cr) Prereq: CIVE *826 or 830. Theoretical basis of wastewater treatment study of advanced and emerging systems for wastewater treatment and reclamation.

928. Industrial Waste Management Engineering (3 cr) Prereq: CIVE 852 and permission. Industrial waste sources, characteristics, treatment and disposal.

929. Industrial Waste Laboratory (1 cr) Prereq or parallel: CIVE 927. Determination of the characteristics of industrial wastewaters and methods of treatment and disposal including field surveys, laboratory analyses, and pilot plant studies.


934. Theoretical Soil Mechanics I (3 cr) Prereq: CIVE 834 or permission. MATH 821. Analytical and approximate solutions to seepage problems encountered in the analysis of earth structures that impound water. Problems dealing with estimating the quantity of seepage at the ground level, uplift pressure piping, and slope stability.

936. Advanced Foundation Engineering (3 cr) Prereq: CIVE 836 or permission. Case histories of select projects in foundation engineering; current procedures for design and construction of excavations, foundations, and earth-retaining structures.

937. Applied Soil Mechanics (3 cr) Prereq: CIVE 834, 836, or permission. Case histories representing state-of-the-art solutions of geotechnical problems (e.g., structures composed of soil, preloading, slope stability, seismic design, and earthquake engineering). Design and construction of earth structures.

940. Behavior of Steel Members (3 cr) Prereq: CIVE 845, MATH 820 or 821. Behavior of structural components of hot rolled steel as interpreted by experimental evidence and related theory. Apllications to loadings producing elastic or plastic strains or a combination of both. Selected laboratory demonstrations on the behavior of steel members.

941. Behavior of Reinforced Concrete Members (3 cr) Prereq: CIVE 841. Rigid behavior of structural components of reinforced concrete, both conventionally reinforced and prestressed as interpreted by experimental evidence and related theory, when subjected to such loads producing elastic or plastic strains or a combination of both. Selected laboratory demonstrations on the behavior of reinforced concrete members.

942. Structural Systems in Steel (3 cr) Prereq: CIVE 940. Analysis and design of steel structural systems composed of hot rolled steel components & requirements determined by current approved national specifications or codes. Selected laboratory demonstrations of the behavioral characteristics of structural steel systems.

943. Structural Systems in Reinforced Concrete (3 cr) Prereq: CIVE 941. Behavioral characteristics of structural systems composed of reinforced concrete components are studied in detail. Specific requirements within the limits defined by currently approved national specifications or codes. Selected laboratory demonstrations of the behavioral characteristics of structural systems.

944. Behavioral of Miscellaneous Structural Materials (3 cr) Prereq: CIVE 845, MATH 820 or 821. Analysis of the behavior of structural components and systems composed of such materials as light gage cold-formed steel, aluminum, timber, plywood, brick, and concrete block, and composite arrangements of structural systems. Use is made of currently approved national specifications or codes. Selected laboratory demonstrations of the behavior of members constructed from miscellaneous structural materials.


946. Advanced Structural Engineering (2-6 cr) Prereq: Permission. Comparative developments in the analysis and design of space- and space-enclosing structures, including appropriate mathematical and mechanical methods of analysis. Laboratory instruction in the testing and interpretation of the behavior of space- and space-enclosing structures.


949. Bridge Design (3-6 cr) Prereq: CIVE 836, 846, 847. Design and analysis of steel and concrete bridges for short-, medium-, and long-span crossings, including field surveys, laboratory analyses, and pile and footings. Advanced Bridge Engineering, design, and construction. Applications of design and construction of bridges and the design of space- and space-enclosing structures. Comparative design projects done by students. Special study areas for individuals may include such topics as fatigue, cracking, defects, fracture control, and reliability design.

952. Water Resources Planning (3 cr) Prereq: CIVE 852 or permission. Techniques of solving topical water problems including groundwater contamination control, conflict resolution and risk analysis for contamination and management. Special study or special topics. Applications to both flood control and pollution problems. Applications to both flood control and pollution problems. Applications to both flood control and pollution problems. Applications to both flood control and pollution problems. Applications to both flood control and pollution problems.
The place of mass transit in solving urban transportation problems.
Terminal characteristics and planning criteria. Speed, capacity, accessibility, and operation of mass transit systems. Future prospects in transit technology and case studies of existing systems.

964. Theory of Traffic Flow (3 cr) Prereq: At least 1 sem.
Analysis of traffic characteristics applied to traffic engineering. Facility design and flow optimization. Capacity of expressway ramps, weaving sections, and intersections. Analytical approaches to flow analysis, queueing theory, flow density relationships, and traffic simulation.

965. Traffic Control Systems (3 cr) Prereq: CIVE 864 or equivalent.
Principles of traffic control. Design and analysis of intersectional systems. Traffic surveillance and driver information systems.

989. Seminar in Civil Engineering (1 cr per sem, max 6)
Prereq: Permission.
Current topics, research projects, and review of current literature in the various areas of civil engineering.

998. Special Problems in Civil Engineering (1-6 cr)
Prereq: Permission.
A reading and evaluation of technical publications concerned with theory and/or experimental data. Subsequent assignments are coordinated with the student's particular interests in his/her field of specialization.

999. Doctoral Dissertation (1-24 cr, max 55)
Pre req: Admission to doctoral degree program and permission of supervisory committee chair.

Computer Science and Engineering


Construction Management

Department Chair: Paul Harmon, M.S.
The master of engineering with a concentration in construction management offers a unique blend of courses in construction, business, and law. The program is geared towards individuals who want to pursue advanced studies in construction with an emphasis on construction applications. For more information on the M Eng program, see "Master of Engineering Program" on page 102.

Faculty

*Berrymman, Charles W. - 1996; Assistant Professor; BS 1991, MS 1992, PhD 1995, Texas A&M
Harmon, Paul E. - 1980; Associate Professor; BSEE 1972, MS 1976, N ebraska (Lincoln)

*Khattak, Mostafa M. - 1990; Associate Professor; BSC 1976, MSEE 1980, Naval Postgraduate School

*Stenzel, Terry - 1990; Assistant Professor; BA 1970, BS 1974, MS 1996, PhD 1997, Nebraska (Lincoln); MA 1989 Dartmouth; MPH 2000 Harvard

Courses (CNST)

815. Mechanical/Electrical Project Management (3 cr)
Fundamentals of project management within the mechanical and electrical contracting industry. Codes, contract documents, productivity, coordination, project control, and administration, scheduling, and project closeout, all from a specialty contracting perspective.

820. Professional Practice and Ethics (3 cr)
Orienting to professional practice through study of the design and the contractor's responsibilities and legal role, ethical considerations, client and professional relations, ethical standards in the building industry.

826. Occupational Health and Safety (3 cr)
Pre req: Permission.
Occupational health and safety hazards in the construction environment. Safety regulation and compliance issues, health assessment and monitoring, safe building methods design, toxic substance exposure, abatement methods, and worker training and protection.

834. Professional Trends in Design/Build (3 cr)
Pre req: Permission.
Master in engineering in construction or a related discipline.

835. Design/Build Methods and Application (3 cr)
Pre req: Permission.
Design and build projects. Application of current design and build processes and methodology in the design and build sector.

841. Industrialized Systems Building (3 cr)
Prereq: At least 1 sem.
Historical background of industrialized building systems. Technological and social relevance in modern society. Influence of the traditional role of the contractor within the construction industry on changes in the industrialized systems building field.

850. Productivity and Human Factors in Construction (3 cr)
Pre req: CIV 242 and MENG 320.
A study of productivity and productivity improvement methods in the management of construction workers in their typical job environment along with methods to improve working environment in the field as well as the office. Various procedures and mechanisms to human behavior concepts for enhanced productivity and safety.

885. Construction Project Scheduling and Control (3 cr)
Pre req: CIV 242 and MENG 320.
Planning, scheduling, and controlling construction projects using CPM. Construction applications of CPM network graphic variations as well as bar charts and program evaluation review techniques (PERT) for detailed construction projects.

886. Construction Management Systems (3 cr)
Pre req: CIV 242 (or equivalent background in mathematics, statistics, and computer science).
Application of selected topics in systems analysis (operations research) to construction management: competition strategy, linear programming, queuing, transportation, time-cost trade-off, learning curves, and other models of computer applications.

895. Construction Leadership and Strategic Planning (3 cr)
Pre req: Permission.
A study of construction leadership and strategic planning. Strategic planning and marketing in construction. Leadership and strategic problem solving techniques.

899. Special Topics in Construction Management (1-6 cr, max 6)
Pre req: MEng in engineering in construction or related discipline and permission. A signed student-instructor learning agreement is required. Individual or small group investigation of special topics in construction management. Topic varies.

Electrical Engineering

Interim Department Chair: A. John Boyes, Ph.D.
Graduate Committee: Associate Professor Palmer (chair); Professors Bahar, Sawod; Associate Professor Dillon; Assistant Professor Bakir

The graduate program in the Department of Electrical Engineering is governed by the general requirements of the Graduate College. In addition, the department requires the aptitude and analytical parts of the Graduate Record Examination of all students who wish to work toward a graduate degree in electrical engineering must have completed a substantial undergraduate program in electrical engineering or its equivalent.

Doctor of Philosophy Degree.
Studies leading to a PhD degree in engineering are conducted under the engineering doctoral program, see "Engineering" on page 101.

Faculty

**Alexander, Dennis R. - 1976; Kingery College Professor; BS 1971, MS 1973, PhD 1976 Kansas State

**Asghapoor, Sohrab - 1989; Associate Professor; BS 1971, MS 1971, PhD 1976 Texas A&M

**Bahar, Ezekiel - 1967; George Holmes Professor; BS 1961, MS 1965 Institute of Technology (Israel); PhD 1964 Colorado

**Bakir, Sina - 1998; Associate Professor; BS 1987, MS 1989, PhD 1992 Northwestern

**Billesbach, David P. - 1982; Associate Professor; BS 1979, PhD 1987 Nebraska (Lincoln)

**Boyce, A. John - 1974; Professor and Interim Chair; BS 1968, MS 1973, PhD 1984 Nebraska (Lincoln)

**Dillon, Rodney O. - 1982; Associate Professor; BS 1965 California; MS 1970, PhD 1974 Maryland

**Hoffman, Michael W. - 1993; Associate Professor; BS 1985 Rice; MS 1987 Southern California; PhD 1992 Minnesota

**Ianno, Natalie J. - 1981; Professor; BS 1978, MS 1980, PhD 1981 Illinois

**Narayan, Ram Mohan - 1988; Professor; BTech 1976 Indian Institute of Technology (Madras); PhD 1988 Massachusetts (Amherst)

**Nelson, Don J. - 1955; Professor Computer Science; BS 1953, MS 1958, PhD 1962 Stanford

**Palmer, Robert D. - 1993; Associate Professor; BS 1984, MS 1986, PhD 1989 Oklahoma

**Perez, Lance C. - 1996; Associate Professor; BS 1987 Virginia; MS 1989, PhD 1994 Notre Dame

**Sawod, Khalid - 1982; Professor; BS 1977, MS 1979 Rochester; PhD 1982 Texas A&M

**Snyder, Paul G. - 1985; Associate Professor; BS 1979 Texas; MS 1981, PhD 1984 Southern California

**Soukup, Rodney J. - 1976; Professor; BS 1961, MS 1964, PhD 1969 Minnesota

**Williams, P. Frazer - 1984; Professor; BS 1967 California; PhD 1973 Southern California

**Woolam, John A. - 1979; George Holmes Distinguished Professor; BS 1961 Kenyon; MS 1963, PhD 1967 Michigan State; MS 1978 Case Western Reserver University
Courses (ELEC)

800. Electronic Instrumentation (3 cr)
Applications of analog and digital devices to electronic instrumentation are studied. Transducer, instrumentation amplifiers, mechanical and solid-state switches, data acquisition systems, phase-locked loops and modulation techniques. Demonstrations with working circuits and systems.

Symmetrical components and fault calculations, power system stability, generator modeling, circuit control, generation, volt-ampere regulation, high-voltage DC transmission, and system protection.

807. Power Systems Planning (3 cr) Prereq: ELEC 305 and 838.
Economic evaluation, load forecasting, generation planning, transmission planning, simulation, system power plant and reliability characteristics and generation system reliability.

810. Multivariable Random Processes (3 cr) Prereq: ELEC 304 and 305.
Probability space, random vectors, multivariate distributions, moment generating functions, conditional expectations, discrete and continuous time random processes, random process characterization and representation, linear systems with random inputs.

816. Materials and Devices for Computer Memory, Logic, and Display (3 cr) Prereq: ELEC 315.
Survey of fundamentals and applications of devices used for logic, memory and display: Magnetic, superconductive, semiconductor, and dielectric materials.

817. Integrated Circuits (3 cr I) Lec 2, Lab 1. Prereq: ELEC 315.
Integrated circuit technology with emphasis on the circuit design considerations of interest to the circuit designer. Detailed investigation of various aspects of fabrication technology. Laboratory work involves primarily design and fabrication of an integrated circuit.

820. Plasma Processing of Semiconductors (3 cr)
Physics of plasma and gas discharge developed. Static collision theory, the Boltzmann equation and the concept of electron energy distributions. Effects related to specific gas discharge systems used in semiconductor processing, such as sputtering, etching, and deposition systems.

Fundamentals of various phenomena in solids: Superconductivity, magnetic, dielectric and optoelectronic properties. Emission of electrons from solids is covered.

832. Introduction to Physics and Chemistry of Solids (PHYS 822) (3 cr) Lec 3. Prereq: PHYS 213 or CHEM 881; MATH 820 or 821; or permission. For course description, see PHYS 822.

838. Introduction to Electric Power Engineering (3 cr)
Prereq: ELEC 306.
Power systems principles, three phase circuits, transmission line parameters, transmission, power line communication, computer systems, standards and computer software. Power flow analysis.

842. Basic Analytical Techniques in Electrical Engineering (3 cr) Prereq: MATH 821.
Applications of partial differential equations, matrices, vector analysis, complex variables, and infinite series to problems in electrical engineering.

844. Linear Control Systems (3 cr) Prereq: ELEC 404.
Classical control techniques: Frequency response, Bode plots, root loci, stability analysis, design of control systems.

851. Linear System Analysis and Design (3 cr) Prereq: ELEC 304.
In-depth introduction to the theory of linear systems. The concept of state and state-variable models of both time-varying and time-invariant continuous and discrete-time systems. Linear state feedback, controllability and pole placement design. Observability and observer design, stability theory, and realization theory.

Characteristics and generating units; Control of generation, economic dispatch, transmission losses, unit commitment, generation with limited supply, hydrothermal coordination, and interchange evaluation and power pool.

858. Modern Active Filter Design (3 cr I) Prereq: ELEC 804 and 301.
Fundamental design concepts, trade-offs and design techniques of modern active filters are studied. Active filter, network compensation, op-amp imperfections, switched capacitor filters introduced.

862. Communication Systems (3 cr) Prereq or parallel: ELEC 305.
Principles of modulation and demodulation, communication theory, noise, introduction to signal processing techniques and computer communication networks.

863. Digital Signal Processing (3 cr II) Prereq: ELEC 810 and 862.
Principles of digital transmission of information in the presence of noise: Design and analysis of baseband and channel transmissibility systems and various carrier systems including AM, FM, PSK.

865. Introduction to Data Compression (3 cr) Prereq: ELEC 810. 862.
Introduction to the concepts of information theory and redundancy removal. Simulation of various data compression schemes such as Huffman coding, differential Pulse Code Modulation, Transform Coding and run-length coding.

867. Electromagnetic Theory and Applications (3 cr) Prereq: ELEC 308.
Theoretical and practical applications of Maxwell’s equations. Fundamental parameters of antennas, microwave theory, analysis and synthesis of antenna arrays, and aperture antennas.

868. Microwave Engineering (3 cr) Prereq: ELEC 308.
Applications of active and passive devices to microwave systems: Impedance matching, resonators, and microwave antennas.

Analysis and design of analog integrated circuits: Bipolar and MOS circuits, circuit elements such as differential pairs and current sources, output drivers, and operational amplifiers.

870. Digital and Analog VLSI Design (3 cr) Prereq: ELEC 260 and 315.
Introduction to VLSI design techniques for analog and digital circuits: Fabrication technology and device modeling. Design rules for integrated circuit layout. LSI design options with emphasis on standard cell approach of digital and analog integrated circuits. Lab experiments, computer simulation and layout exercises.

871. Continuous System Simulation (3 cr I) Lec 2, Lab 1. Prereq: ELEC 305 or equivalent.
Basic operation of analog computers, analog simulation, Z-transforms, analysis of digital integration algorithms.

875. Introduction to Digital System Design (3 cr) Prereq: ELEC 370.
Introduction to the design of digital systems: Register transfer design; design of digital systems: Design, timing analysis and testing; computer-aided tools for design and testing.

878. Microprocessor Hardware, Software, and Interfacing (3 cr) Prereq: ELEC 876. Students taking this course are expected to write programs in assembly language or in C and assembly language to design hardware.

891. Fourier Optics and Image Analysis (3 cr) Prereq: ELEC 876.
Applications of Fourier transforms to image analysis, optical computing, and holography. Other selected applications.

Radar systems, system and subsystems: detection in noise, clutter phenomena, pulse compression, radar tracking, synthetic aperture radar, and radar polarimetry.

894. Radar Signal Processing (3 cr) Prereq: ELEC 305 or 306.
Introduction to the design and operation of various types of radar systems, including weather radar and wind profilers. Signal processing concepts used with modern Doppler radar systems.

896. Applied Electromagnetics (3 cr) Lec 2, Lab 1. Prereq: ELEC 305 or permission.
Introduction to the use of electromagnetic radiation for performing optical measurements in engineering applications. Basic electromagnetic theory and light interaction with matter are covered with corresponding laboratory experiments conducted.

898. Special Topics in Electrical Engineering IV (1-6 cr, max 6) Prereq: Permission.
Electrical engineering topics for fourth year and graduate students that are not covered in other courses.

*899. Masters Thesis (3-12 cr) Prereq: Admission to masters degree program and permission of major advisor. P/N only.

911. Communication Theory (3 cr) Prereq: ELEC 862, and 864 or 810.
Applications and statistics of signals and noise; correlation; sampling; shot noise; spectral analysis; Gaussian processes; filtering.

916. Advanced Techniques in Image Processing (3 cr) Prereq: ELEC 866 or permission.
Advanced techniques of digital image processing and computer vision. 3-D object representation and recognition, artificial neural network, image understanding, and expert system design.

930. Advanced Digital Signal Processing (3 cr) Prereq: ELEC 810 and 863 or permission.
Analysis and design of adaptive digital signal processing algorithms. Signal processing system concepts and implementation issues.

945. Optimal Control Theory (3 cr) Prereq: ELEC 851 or permission.
Theory of optimal control by means of various techniques. Calculus of variations, dynamic programming, the maximum principle, gradient techniques and linear programming applied to control systems.

946. Optimal Filtering, Estimation and Prediction (3 cr) Prereq: ELEC 810 and 852 or permission.
Techniques for optimally extracting information about the past, present, or future status of a dynamic system from noise-corrupted measurements on that system.

952. Topics in Electrical Engineering (3 cr) Prereq: Permission.
Selected topics in electrical engineering.

960. Solid-State Devices (3 cr) Prereq: ELEC 315 or equivalent.
Gallium arsenide and silicon devices. Device properties based on structure and physical properties of the materials.

965. Passive Microwave Components (3 cr) Prereq: ELEC 867 or 868.
Applications of microwave components to the analysis of waveguides, resonant cavities, and other passive microwave devices.

966. Active Microwave Components (3 cr) Prereq: ELEC 867 or 868.
Analytical treatment of microwave amplifiers and generators.

967. Introduction to Quantum Electronics (3 cr) Prereq: Permission.
Introduction to the quantum aspects of electron devices.

Quantum mechanical properties of the conduction electron in a solid. Basic quantum mechanics, Schrödinger equation, band structures, electronic band structure, quantum mechanics of the solid state.

970. Electron Theory of Solids II (3 cr) Prereq: ELEC 867 or 868.
Quantum mechanics of solids, electronic transport, superconductivity, optical properties, magnetic properties and plasma effects.

971. Seminar (1-12 cr)

975. Optical Properties of Materials (3 cr) Prereq: ELEC 867, equivalent, or permission.
Quantitative description of the optical properties of materials: complex refractive index and its dispersion, effects of electric and magnetic fields, temperature, stress, additional special topics as desired.
The current schedule of classes is offeredings. Treatment of special topics in engineering mechanics by experimental computational and/or theoretical methods. Topic varies from term to term.

**959. Masters Thesis** (1-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

**910. Continuum Mechanics** (3 cr) Prereq: ENGM 848 and permission.


**916. Theory of Plates and Shells I** (3 cr) Prereq: ENGM 848 and MATH 821.

Basic equations for the bending and stretching of thin plates with small deformations. General theory of deformation of thin shells with small deflections. Large deflections theories of plates and shells. Effect of edge conditions.


ENGM 916 continued. Large deflection shell theory. Critical examination of effects of boundary conditions. Additional topics from folded plates, orthotropic plates and shells, sandwich plates and shells. Use of complex transformations, etc.

**918. Fundamentals of Finite Elements** (3 cr) Lec 3.

Derivation and implementation of the finite element method. Introduction to the theory of finite element methods for elliptic boundary-value problems. Applications to time-independent physical phenomena (e.g., deformation of elastic bodies, heat conduction, steady-state fluid flow, electrostatics, flow through porous media). Basic coding techniques. A basic understanding of ordinary differential equations and matrix algebra as well as some programming skills are assumed.
Nonconservative systems. Perturbation theory for the eigenvalue methods: Ritz and Galerkin. Gyroscopic systems. Formulations for linearly elastic bodies. Eigenvalue and

975. Advanced Vibrations

Surface strains and their measurement, principally by bonded non-linear finite element analysis; and treatment of constraints linear algebraic systems; architecture of computer codes for systems; "enhanced" strain methods; methods for solving non-linear phenomena; treatment of singularities; dynamics of large elements for the analysis of fracture; mixed variational formulation of the general solution of the equations of plane theory of elasticity. Conformal mapping. Solutions of problems in three-dimensional elasticity in terms of potential functions. Axially symmetric problems. Variational methods.


952. Experimental Stress Analysis II (3 cr) Lec 2, lab 3. Prereq: ENGM 848 and 852. Surface strains and their measurement, primarily by bonded wire resistance strain gages. Static and dynamic measurements using both oscilloscopes. Direct writing oscillograph, associated electrical circuits. Us e of brittle coating in conjunction with strain gages. Evaluation of stresses from strain data.


978. Seminar in Engineering Mechanics (I cr per sem, max 4) Prereq: Permission. Presentation and discussion of topics in the various branches of engineering mechanics.


999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Environmental Engineering

(Interdepartmental Program)

Program Director: Mohamed F. Dahab, Ph.D., P.E.

Program Committee: Professors Dahab (chair), Clements, Schultz, Walters, Associate Professor Zhang

Cooperating Departments: Biological Systems Engineering, Civil Engineering, Chemical Engineering

The Departments of Biological Systems Engineering, Civil Engineering, and Chemical Engineering at the University of Nebraska jointly administer a multi-disciplinary program of teaching and research leading to the masters of science in environmental engineering (MSEE) degree. Environmental engineering faculty members in the three departments offer a broad range of expertise covering four major areas of environmental engineering, as sanctioned by the American Academy of Environmental Engineers (AAEE). The fields in which students may specialize include water supply engineering, wastewater engineering, hazardous waste management, and solid waste management engineering. In addition, a fifth area in diffuse (non-point) and agricultural waste management is offered.

The area committee evaluates the qualifications of students for admission into the program. Students must work toward the degree under either Option I or Option II, and all requirements under those options must be met. All students are required to complete CIVE 829 (Environmental Engineering Chemistry, 3 cr), CIVE 829 (Biological Treatment Processes, 3 cr), and CIVE 823 (Physical Chemical Treatment Processes, 3 cr). All students must also take ENVE 990 (Seminar in Environmental Engineering, 1 cr). Attendance and participation in another seminar also may be required by the student's home department. Students having equivalent courses from a previous degree program may substitute or waive a core course or courses with the express written approval of the MSEE Graduate Committee. Working with their advisors, students are expected to formulate coherent programs of research and study. Any student receiving support as a teaching and/or research assistant from the program is expected to enroll under Option I and complete a thesis.
Courses (ENVE)

*898. Special Problems in Environmental Engineering (1-6 cr) Prereq: Permission. Special research-oriented problems in current topics in environmental engineering.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

990. Seminar in Environmental Engineering (1 cr) Prereq: Permission. Presentation and discussion of current research topics and projects in environmental engineering and closely allied areas.

998. Special Topics in Environmental Engineering (1-6 cr) Prereq: Permission. Independent library and/or experimental research, analysis, evaluation and presentation of current and advanced topics in environmental engineering and closely related areas.

In addition, the courses listed below are offered by the participating departments.

Offered in the Department of Biological Systems Engineering
AGEN 853. Irrigation & Drainage Systems Engineering
AGEN 893. Advanced Irrigation & Drainage Systems Engineering
AGEN 954. Hydrologic Modeling of Small Watersheds
AGEN 955. Solute Movement in Soils (AGRO 955, CIVE 954)
BSEN 846. Unit Operations of Biological Processes
BSEN 855. On-Site Source Pollution Control Engineering (CIVE 855)
BSEN 941. Agricultural Waste Management

Offered in the Department of Chemical Engineering
CHME 832. Transport Operations
CHME 835. Transport Phenomena
CHME 842. Chemical Reactor Engineering & Design
CHME 845. Advanced Chemical Engineering
CHME 873. Biochemical Engineering
CHME 892. Air Pollution Assessment & Control

Offered in the Department of Civil Engineering
CIVE 821. Hazardous Waste Management
CIVE 822. Hazardous Waste Treatment
CIVE 823. Physical/Chemical Treatment Processes
CIVE 824. Solid Waste Management Engineering
CIVE 826. Design of Water Treatment Facilities
CIVE 827. Design of Wastewater Treatment & Disposal Facilities
CIVE 828. Environmental Engineering Chemistry
CIVE 829. Biomedical Waste Treatment
CIVE 830. Fundamentals of Water Quality Modeling
CIVE 852. Water Resources Development
CIVE 853. Hydrology
CIVE 854. Hydraulic Engineering
CIVE 855. On-Source Pollution Control Engineering (BSEN 855)

Industrial and Management Systems Engineering

Department Chair: Michael W. Riley, Ph.D.
Graduate Committee: A. Associate Professor William J. Williams (chair); Professor Cochran; A. Assistant Professor M. Alhambra

Programs leading to the master of science and doctor of philosophy degrees are offered by the Department of Industrial and Management Systems Engineering. Majors for these degrees may be selected from systems management, ergonomics, operations research, or manufacturing.

Masters Degree. It is expected that all students in this program have the necessary prerequisites or additional work may be required.

Doctor of Philosophy Degree. Studies leading to a Ph.D. degree in engineering are conducted under the engineering doctoral program, see "Engineering" on page 101.

Faculty

Adams, Stephanie G. - 1998; Assistant Professor; BS 1989 & 1992; Virginia Tech, Virginia Polytechnic Institute and State University

**Ballard, John L. - 1974; Professor; BSIE 1971, M SIE 1972, PhD 1974 (Arizona State University)

**Bishnoi, Ranjan K. - 1987; Professor; BSEE 1971, M SIE 1980, PhD 1984 (Indian Institute of Technology, Madras)

**Choobineh, Fred - 1978; Professor; BS 1972, M SIE 1974, PhD 1979 (Iowa State University)

**Cooper, David J. - 1972; Professor; BS 1963, M S 1970, PhD 1973 (Oklahoma State University)

**Cox, William T. - 1980; Professor; BS 1971, M S 1979, PhD 1981 (University of Nebraska)

**Hajek, Robert - 1986; Professor; BS 1984, M S 1987, PhD 1990 (University of Nebraska)

**Hollerteau, R. - 1987; Professor; BS 1987, M S 1987, PhD 1992 (University of Nebraska)

**Khalil, M. A. - 1990; Professor; BSME 1976, M SIE 1981, PhD 1992 (University of Nebraska)

**Khalil, M. A. - 1990; Professor; BSME 1976, M SIE 1981, PhD 1992 (University of Nebraska)

**Mehedi, Esmaul - 2000; Assistant Professor; BS 1987 (Tehran), ECE 1988, PhD 1990 (Toronto)

**Pajak, J. - 1983; Professor; BSE 1974 (Rolla), M S 1978, PhD 1981 (Iowa State University)

**Riley, Michael W. - 1975; Professor; BSEE 1968 (Rolla), M S 1973, PhD 1975 (Texas Tech University)

**Savory, Paul A. - 1994; Associate Professor; BS 1988, M S 1989 (Oklahoma State University)

**Schneider, Morris H. - 1965; Professor Emeritus; BS 1959, PhD 1966 (University of Oklahoma)

**Williams, Robert E. - 1993; Associate Professor; BS 1984 (Lehigh), M S 1989, PhD 1993 (University of Nebraska)

Courses (IMSE)


806. Engineering Economy II (3 cr) Prereq: IMSE 206, 321 or STAT 880. Extension of basic concepts of engineering economy and managerial economics to decision making under risk and uncertainty.


815. Cognitive Ergonomics (3 cr) Lec 2, Lab 3. Prereq: IMSE 201. Introduction to human factors affecting work. Focus on human factors in the design, development, and implementation of safety, health, and environmental systems.

816. Physical Ergonomics (3 cr) Lec 2, Lab 3. Prereq: IMSE 201. Human factors in the design and implementation of safety, health, and environmental systems.

817. Occupational Safety & Health Systems Analysis (3 cr) Prereq: Permission. Focus on human factors affecting work. Introduction to human factors in the design, development, and implementation of safety, health, and environmental systems.

821. Applied Statistics and Quality Control (3 cr) Prereq: IMSE 321. Introduction to the techniques and applications of operations research. Topics include linear programming, queuing theory, decision theory, network analysis, and simulation.

822. Applied Statistical Analysis for Industrial Problems (3 cr) Prereq: IMSE 321 or STAT 200. Introduction to the techniques and applications of operations research. Topics include linear programming, queuing theory, decision theory, network analysis, and simulation.

823. Principles of Operations Research (3 cr) Prereq: IMSE 321 or STAT 200. Introduction to the techniques and applications of operations research. Topics include linear programming, queuing theory, decision theory, network analysis, and simulation.

824. Applied Linear Models in Operations Research (3 cr) Prereq: IMSE 328 or equivalent. Introduction to the techniques and applications of operations research. Topics include linear programming, queuing theory, decision theory, network analysis, and simulation.

825. Stochastic and Nonlinear Models in Operations Research (3 cr) Prereq: IMSE 328 or equivalent. Introduction to the techniques and applications of operations research. Topics include linear programming, queuing theory, decision theory, network analysis, and simulation.
870. Theory and Practice of Materials Processing (3 cr)
Theory, practice and application of conventional machining, forming and nontraditional machining processes with emphasis on tool life, dynamics of machine tools and adaptive control.

871. Tool and Die Design (3 cr) Prereq: IM SE 370.
General consideration in tool design, design of tool and workholding devices, forming machines and presswork tools, application of computer graphics and finite element techniques, and prediction of tool paths in CNC machines.

Principles of automated production lines, analysis of transfer lines, group technology, just-in-time and optimization strategies for discrete parts manufacturing systems.

876. Computers in Manufacturing (3 cr) Lec 2, Lab 3.
Prereq: ELEC 233. Interfacing issues, data acquisition, A/D and D/A conversions, sensors and sensor-based control, control systems and adaptive control, and real-time control of mechanical devices.

Basic robotics technology, application in manufacturing, manipulators and mechanical design, program languages, intelligence and control.

883. Production and Inventory Control II (3 cr) Prereq: IM SE 433.
Deterministic and probabilistic inventory models, introduction to the theory of sequencing and scheduling.

884. Industrial Systems Analysis I (3 cr) Lec 2, Lab 3.
Prereq: IM SE 321, 328 or permission. Analysis of technologically based systems and problems using digital simulation with emphasis on the construction of simulation models and the use of special techniques for translating simulation languages with applications for industrial systems.

888. Nonlinear Optimization in Engineering (EN GM 888) (3 cr) Prereq: MATH 208 and 814; ENGM 880; or permission. Numerical analysis and computer programming recommended. For course description, see EN GM 888.

889. Laboratory Investigation (1-6 cr) Investigation and written report of research into a specific problem in any area of industrial or management systems engineering.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

Continuation of concepts and principles of engineering management applied to production cases.

906. Industrial Decision Models II (3 cr) Prereq: Permis- sion. Analysis of the industrial firm, short-run cost relationships, long-run cost analysis, development of industrial forecasting models, with applications to management systems engineering.

914. Physiological Aspects of Ergonomics (3 cr) Prereq: IM SE 816 or permission.
Lecture and laboratory study of physiological factors affecting human performance during work. Includes evaluation and testing of physical work capacity, applied work physiology, and factors affecting work performance in stress producing environments.

Introduction and historical developments, theoretical fundamentals of the mechanics of the body. The link system of the body and kinematic aspects of extremity joints. Biomechanics of human motion.

916. Biotechnology (3 cr) Prereq: IM SE 815, 816.
Focus on man in system, man-man and man-machine communication. Design and arrangement of controls and displays, experimental evaluation concepts.

919. Determinants of Occupational Performance (3 cr) Prereq: IM SE 815, 816 or permission.
Focus on the individual in the industrial working environment. Emphasis on evaluation of fatigue, training, shift work, perception, vigilance, and work-rest scheduling as they relate to the working environment.

921. Reliability Engineering (3 cr) Prereq: IM SE 821.

922. Quality Engineering: Use of Experimental Design and Other Techniques (3 cr)
Prereq: IM SE 829.
Extends industrial quality control methods and techniques. Off-line and on-line quality control methods. Development of quality at the design stage through planned experiments and analyses. Experimental design methods include factorial, 2k, 3k, and fractional factorial designs. Includes applied project in design of quality.

923. Manufacturing and Dynamic Systems Modeling (3 cr) Prereq: MATH 621 and IM SE 822 or equivalent.
Difference and differential equation models directly from series of observed data. Underlying system analysis including input response, stability and feedback interpretation. Forecasting and accuracy of forecasts. Periodic and exponential trends and seasonal series. Modeling two series simultaneously.

Theory of integer and network flow programming and application to industrial problems.

928. Large Scale Optimization Models (3 cr) Prereq: IM SE 829.
Theory of linear programming and decomposition principles with emphasis on formulation and solution of large-scale models of industrial problems.

930. Applied Queueing Theory (3 cr) Prereq: IM SE 830.
Application of queueing theory to the solution of industrial problems, consideration of queueing networks and steady state behavior.

935. Advanced Manufacturing Processes (3 cr) Prereq: IM SE 870 or permission.
Theory, practice and technology of advanced manufacturing processes, with emphasis on process mechanism, surface integrity, tool and machine design, adaptive control and expert systems.

Concepts and models of programmable automation and materials handling systems of artificial intelligence for shop floor control, design and analysis of flexible manufacturing systems.

Continuation of IM SE 884 with emphasis on the theory of systems simulation including output analysis, random variable generation, model validation and verification and experimental design.

991. Seminar I (1-3 cr) Prereq: Permission. Presentation and discussion of current topics in the field of industrial engineering.

996. Advanced Topics in Industrial Engineering (3 cr each, max 12).
Current topics in major areas of study with the Department of Industrial and Management Systems Engineering, student projects in the areas of: A. Engineering Management B. Human Factors Engineering C. Manufacturing Engineering D. Operations Research

998. Advanced Laboratory Investigation (1-12 cr) Prereq: Permission.
Semester projects involving research into a specific problem in industrial or management systems engineering.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

The Area Committee will evaluate the qualifications of students leading to the master of science degree. The work for the degree may be done under either Option I or Option II, and all requirements under those options must be met. In place of the usual major requirements, the masters program must include at least one-half of the program from courses listed in the core area. Course work must be taken in at least three of the participating areas. The minor, if needed, must include 9 hours in any one of the participating departments, and these 9 hours may include core courses if they have not been used on the program to meet core course requirements in the major. Additional courses other than those listed may be used in the program upon approval of the Area Graduate Committee.

Faculty

* **Bhui, Ramaratnam** - 1985; Associate Professor, B.Tech 1970 Indian Institute of Technology (Madras); M.S. 1983, Ph.D. 1986 SUNY (Buffalo)
**Choo, Fred** - 1978; Associate Professor, B.S.EE. 1972, M.S. 1976, Ph.D. 1979 Iowa State
**Hoffman, Richard O.** - 1970; Professor; B.S. 1963, M.S. 1966 Iowa State; Ph.D. 1971 Virginia Polytech Institute
**Rajvarat, Kamalakaran** - 1983; Professor; B.E. 1966 Jabalpur (India); M.S. 1978, Ph.D. 1981 Michigan Tech
**Schade, George R.** - 1979; Associate Professor, M.E. 1967, M.S. 1969, Ph.D. 1974 Iowa State
**Schnieder, Morris H.** - 1965; Professor Emeritus; B.S. 1959, M.S. 1961, Ph.D. 1966 Oklahoma State
**Schneider, Marc J.** - 1981; Professor; Management; B.S. 1972 Missouri; M.B.A. 1974, Ph.D. 1978 Saint Louis University
**Vanier, Jerald L.** - 1959; Associate Professor; B.S. 1963, M.S. 1965, Ph.D. 1972 Nebraska

Courses

Courses listed below are offered by the participating departments.

**Offered in the Department of Electrical Engineering**

(See “E Electrical Engineering” on page 108.)
851. Linear System Analysis & Design
863. Digital Signal Processing
871. Continuous System Simulation
944. Digital & Sampled Data Control Systems
945. Optimal Control Theory
946. Optimal Filtering, Estimation & Prediction

**Offered in the Department of Industrial and Management Systems Engineering**

(See “Industrial and Management Systems Engineering” on page 112.)
806. Engineering Economy II
812. Occupational Safety—A Systems Analysis
815. Ergonomics I
821. Industrial Quality Control
822. Applied Statistical Analysis for Industrial Systems
870. Theory & Practice of Materials Processing
875. Manufacturing Systems I
876. Computers in Manufacturing
877. Robotics
884. Industrial Systems Analysis I
921. Reliability Engineering
975. Manufacturing Systems II

**Departments Cooperating:**

- **A. Engineering Management**
- **B. Human Factors Engineering**
- **C. Manufacturing Engineering**
- **D. Operations Research**
- **E. Optimal Control Theory**
- **F. Digital & Sampled Data Control Systems**
- **G. Linear System Analysis & Design**
- **H. Continuous System Simulation**
- **I. Digital Signal Processing**
- **J. Applied Statistical Analysis for Industrial Systems**
- **K. Principles of Operations Research**
- **L. Theory & Practice of Materials Processing**
- **M. Computers in Manufacturing**
- **N. Robotics**
- **O. Industrial Systems Analysis I**
- **P. Reliability Engineering**
- **Q. Manufacturing Systems I**
- **R. Manufacturing Systems II**
- **S. Engineering Economy II**
- **T. Occupational Safety—A Systems Analysis**
- **U. Ergonomics I**
- **V. Industrial Quality Control**
- **W. Applied Statistical Analysis for Industrial Systems**
- **X. Principles of Operations Research**
- **Y. Theory & Practice of Materials Processing**
- **Z. Computers in Manufacturing**
- **AA. Robotics**
- **BB. Industrial Systems Analysis I**
- **CC. Reliability Engineering**
- **DD. Manufacturing Systems I**
- **EE. Manufacturing Systems II**
Offered in the Department of Mechanical Engineering
(See "Mechanical Engineering" on page 114.)
850. Mechanical Engineering Control Systems
852. Digital Control of Mechanical Systems

Offered in the Department of Management
(See "Management" on page 73.)
931. Operations Planning & Control Systems
994. Seminar in Selected Topics I
995. Seminar in Selected Topics II

Mechanical Engineering

Department Chair: David Y. S. Lou, Sc.D.
Graduate Committee: Associate Professor Reid; Chair; Associate Professors Gogos, R. Robertson; Assistant Professor Farritor

Programs leading to the master of science and the doctor of philosophy degrees are offered by the Department of Mechanical Engineering. There are three primary areas of emphasis: thermal-fluids engineering, systems design engineering, and metallurgical engineering.

Students entering the graduate program are expected to have undergraduate training substantially equivalent to that of a bachelors degree in mechanical engineering. Students with undergraduate backgrounds in fields other than mechanical engineering may be required to take additional prerequisite course work. Foreign students without degrees from U nited States institutions are required to take the TOEFL and GRE general examinations with a minimum TOEFL score of 550 and minimum GRE scores of 600 quantitative and 450 analytical. Further details concerning Departmental application requirements and procedures can be obtained by contacting the Departmental Graduate Chair.

Masters Degree. Unless specific permission is given, the student must complete requirements for the degree under Option I. For Option II, a minimum total of 30 hours of graduate credit, consisting of a minimum of 24 hours of regular course work and a minimum of 6 hours of masters thesis, is required. Of the 24 hours of regular course work: a minimum of 12 hours must be taken within the Mechanical Engineering Department, at least one 3-hour mechanical engineering course must be taken in an area outside the student's primary area of emphasis, and at least one 3-hour course must be taken in engineering mathematics. A transfer of a maximum of 6 credit hours is allowed with approval by the Departmental Graduate Committee. The student may complete requirements for the degree under Options II and III. Further details concerning departmental masters degree requirements can be obtained by contacting the Departmental Graduate Chair.

Students may get a masters degree in mechanical engineering with an area of specialization in materials science engineering or metallurgy. Further details concerning Departmental requirements concerning the materials science engineering area of specialization can be obtained by contacting the Departmental Graduate Chair.

Doctor of Philosophy Degree. Studies leading to a PHD degree in engineering are conducted under the engineering doctoral program; see "Engineering" on page 101.

Faculty

**Barton, John G.** - 1989; Associate Professor; BS 1973 Missouri; MS 1974, PhD 1980 Stanford
**Cole, Kevin D.** - 1988; Associate Professor; BS 1977 Iowa State; MS 1979 Minnesota; PhD 1986 Michigan State
**DeAngelis, Robert J.** - 1990; Professor Emeritus BS 1956 C UAWestern; MS 1963, PhD 1968 Northwestern
**Ethers, Lawrence E.** - 1966; Professor Emeritus BS 1957, MS 1960 Kansas State PhD 1969 Oklahoma State
**Farritor, Shane.** - 1990; Assistant Professor; BS 1992 Nebraska (Lincoln); MS 1994, PhD 1998 MIT
**Gogos, George.** - 1994; Associate Professor; BS 1980 MIT; MS 1982, PhD 1986 Pennsylvania
**Johnson, Donald L.** - 1963; Professor Emeritus M E T E 1950, MS 1956 Colorado M ines PhD 1968 New bra kota (Lincoln)
**Lou, David Y. S.** - 1994; Chair and Professor; BS 1959 National (Taiwan); MS 1963, ScD 1967 M IT
**Nelson, Russell C.** - 1961; Professor Emeritus BS 1948 Lehigh; MS 1949, DSc 1951 Colorado M ines
**Olson, Lorraine.** - 1991; Professor; BS 1980, MS 1983, PhD 1985 MIT
**Reid, John D.** - 1994; Associate Professor; BS 1981, MS 1983, PhD 1990 Michigan State
**Robertson, Brian W.** - 1994; Associate Professor; BS 1975, PhD 1979 Glasgow (Scotland)
**Rohde, Suzanne L.** - 1992; Associate Professor; BS 1985 Iowa State; MS 1988, PhD 1991 Northwestern
**Schaedel, George R.** - 1979; Associate Professor; BS 1987 South Dakota School of Mines PhD 1992 Iowa State
**Shiel, Jeffrey E.** - 2001; Associate Professor; BS 1975 Morningside, MS 1980 Iowa State
**Szydlowski, Wieslaw M.** - 1994; Associate Professor; MS 1966, PhD 1973 Technical (Warsaw, Poland)
**To, C. W. Solomon** - 1996; Professor; BS 1973 Southampton; MS 1975 Calgary; PhD 1980 Southampton
**Wang, Xinwei** - 1996; Associate Professor; BS 1994, MS 1996 Science and Technology (China); PhD 2001 Purdue
**Wolford, James C.** - 1994; Professor Emeritus BS 1947, MS 1952 Nebraska (Lincoln); PhD 1996 Purdue

Courses

Mechanical Engineering (MECH)


803. Internal Combustion Engines (3 cr) Lec 3. Prereq: MECH 300 or equivalent. Basic cycle analysis and engine types, fundamental thermodynamics and operating characteristics of various engines analyzed; combustion processes for spark and compression-ignition engines; fuels, testing procedures and lubrication systems evaluated. Understanding and understanding the basic operation of various engine types.


805. Air Conditioning Systems Design (3 cr) Lec 3. Prereq: MECH 300 or equivalent. Application of thermodynamic and fluid dynamic principles to the design of air conditioning systems. A comprehensive design project is an integral part of course.

807. Power Plant Systems Design (3 cr) Lec 3. Prereq: MECH 300 or equivalent. Application of thermodynamic and fluid dynamic principles to the design of power plants. A comprehensive design project is an integral part of course.

808. Heat Exchanger Design (3 cr) Lec 3. Prereq: MECH 300 or equivalent. Design methodology for various heat exchangers employed in mechanical engineering. Introduction to computer-aided design as applied to heat exchangers. Practical exercises in actual design tasks.

810. Viscous Flow I (3 cr) Lec 3. Prereq: MECH 310 and MATH 821. Dynamics and kinematics of laminar and turbulent flow. Development of the equations of motion in general and some exact solutions to them. Flows with small to large (laminar) Reynolds numbers including fundamental concepts of the boundary layer on a flat plate.


828. Solar Energy Engineering (3 cr) Lec 3. Prereq: MECH 820 or permission. Conversion of solar energy into more useful forms with emphasis on environmental heating and cooling applications. Includes solar energy availability, solar collectors and design, solar systems and their simulation and solar economics.


845. Mechanical Engineering Design Concepts (3 cr) Lec 2, lab 3. Prereq: MECH 200, 310, 342, 349. Development of design concepts. Introduction to synthesis techniques and mathematical analysis methods. Applications of these techniques to mechanical engineering design projects.

and empirical solutions. Selected applications.

Theory of heat transfer by convection. Analytical, numerical, and analog methods of solution.

Methods of description and basic equations of turbulent flows.


Selected topics from one or two of the following fields: magneto-fluid-mechanics; three-dimensional boundary layer fluid-mechanical stability; hyperbolic flow theory of turbulence; rarefied gas dynamics or other current research interest area.

Methods of definition and basic equations of turbulent flows. Isotropic and homogeneous turbulence, energy spectra and correlations, introduction to measurements. Transition theory and experimental evidence. Wall turbulence, engineering calculations of turbulent boundary layers. Free turbulent jets and wakes.

Theory of heat conduction; analytical, numerical, graphical and analog methods of solution.

Graduate Committee:

Department Chair: Linda Ray Pratt, Ph.D.

Prerequisite: Permission.

Supervised non-thesis research and independent study.

997. Research Other Than Thesis (1-3 cr per sem, max 9)

Advanced Thermodynamics of Materials (3 cr)

970. Advanced Thermodynamics of Materials (3 cr Lec 3, Prereq: METL 870, MATH 821 or equivalent.


Lattice modeling. Experimental methods; computer modeling in materials systems. Systematics of solution theories and Applications of thermodynamic concepts to phase equilibria

Lec 3. Prereq: METL 870, MATH 821 or equivalent.

116 Courses of Instruction

Doctor of Philosophy Degree.

Graduate Committee.

The application for admission to work leading to the degree of Doctor of Philosophy in English is normally an undergraduate major in English. The application for admission must include transcripts, three letters of recommendation, GRE general test score, vita, evidence of teaching potential, a statement of educational goals and a sample of the student's scholarly writing. If the student is applying to the Creative Writing Program, a creative writing sample must be submitted, in addition to the critical writing sample. Foreign students whose native language is not English must submit a TOEFL score of 600 or above. Doctoral students are expected to complete at least 60 hours of course work beyond the bachelor's degree and 24-30 hours in dissertation credit. Further information about the program is available upon request from the chairperson of the Graduate Committee.

Specializations available for both the MA and PhD degrees:

Great Plains Studies; International Human Rights and Diversity; Nineteenth Century Studies

Faculty

**Ages, Jonis - 2000; Professor; BA 1966 Iowa; MA 1969, PhD 1979 SUNY (Binghamton)

**Bauer, Grace - 1995; Associate Professor; BA 1974 Temple; MA 1987 M. A. University of Pennsylvania; PhD 1987 Texas A & M

**Behrendt, Stephen - 1980; George Holmes Professor; BA 1970, MA 1972, PhD 1979 SUNY (Binghamton)

**Belasco, Susan - 2000; Professor; BA 1972, MA 1974, PhD 1978 LSU; MA 1974 Duke

**Bliha, Franz G. - 1969; Associate Professor; BA 1969 Loyola; MA 1968 Duke

**Brooks, Robert E. - 1985; Professor; BA 1979 Gonzaga; MA 1982, PhD 1984 M. I. T.

**Buhler, Stephen - 1989; Associate Professor; BA 1976 California State; MA 1983, PhD 1987 California

**Caramagno, Thomas - 1990; Associate Professor; BA 1970, MA 1975 Loyola; PhD 1984 California (Los Angeles)

**DiBernard, Barbara J. - 1978; Professor and Chair; BA 1970 Wilson; MA 1975; PhD 1976 SUNY (Binghamton)

**Dixon, Wheeler W. - 1984; Professor and Chair; BA 1972, MA 1978, PhD 1978; PhD 1982 R. Utters

**Dreher, Kwakilut L. - 2001; Assistant Professor; English and Ethnic Studies BA 1980 South Carolina; MA 1996 Clark (Atlanta); PhD 2001 California (Riverside)

**Ford, James E. - 1981; Associate Professor; BA 1968 Brigham Young; MA 1971 California State; PhD 1981 Chicago

**Foster, Gwendolyn A. - 1997; Associate Professor; BA 1983 R. Utters M A 1992, PhD 1995 Nebraska (Lincoln)

**Gallagher, Christopher - 1992; Associate Professor; BA 1991 M. I. T., MA 1993 New Hampshire; PhD 1998 SUNY (Albany)

**Goodburn, Amy M. - 1994; Associate Professor; BA 1987, MA 1990, PhD 1994 Ohio State

**Grajeda, Ralph R. - 1970; Associate Professor; English and Ethnic Studies BA 1960, MA 1962 Colorado; PhD 1974 Nebraska (Lincoln)

**Gregory, Donald L. - 1967; Associate Professor; AB 1960 Bucknell; MA 1962, PhD 1967 Ohio State

**Haller, Robert S. - 1967; Professor; AB 1955 Amherst; PhD 1960 Princeton

**Harpending, Michael - 1999; Associate Professor and Chair; PIESL Program; BA 1972 Arkansas (Little Rock); MA 1976 San Francisco; PhD 1996 Texas A & M

**Hilliard, Stephen S. - 1964; Professor; AB 1961 Harvard; PhD 1967 Princeton

**Honey, Maureen A. - 1979; Professor; BA 1967, MA 1970, PhD 1979 Michigan State

**Kaye, Frances S. - 1977; Professor; BA 1970, MA 1972, PhD 1973 Cornell

**Kooser, Ted - 1993; Adjunct Professor; BS 1962 Iowa State; M. A. 1968 Nebraska (Lincoln)

**Kuzma, Greg S. - 1969; Professor; AB 1966, MA 1967 Syracuse

**McShane, James A. - 1967; Associate Professor; AB 1960 Georgetown; MA 1961, PhD 1968 Emory

**Minter, Deborah W. - 1990; Assistant Professor; BA 1985 California State; MA 1989; PhD 1996 Michigan State

**Montes, Amelia - 2000; Assistant Professor; English and Ethnic Studies BA 1980 Loyola; MA Ed 1989 Azusa Pacific; MA 1994, PhD 1999 Denver

**Nisce, Ruth - 1995; Associate Professor; BA 1987 Columbia; MA 1995 California (Berkeley)

**Olson, Paul A. - 1957; Foundation Professor; BA 1953 Nebraska; MA 1957 Princeton

**Owomoyela, Oyekan - 1972; Professor; BA 1963 London; MFA 1966, PhD 1970 California (Los Angeles)

**Patton, Venetria K. - 1996; Associate Professor; English and Ethnic Studies BA 1990 LaVerne; MA 1992, PhD 1994 California (Irvine)

**Powell, Malea - 1986; Assistant Professor; BA 1992 Indiana University; MA 1994, PhD 1998 Miami (Ohio)

**Pratt, Linda R. - 1968; Professor and Chair; AB 1965 Florida Southern; MA 1966, PhD 1971 Emory

**Price, Kenneth M. - 2000; Professor and Chair; AB 1965 Florida Southern; MA 1966, PhD 1971 Emory

**Raz, Hilda - 1993; Professor and Editor "Prairie Schooner"; MA 1960 Boston

**Ritchie, Joy - 1988; Professor; BA 1967 Columbia; MA 1969 Indiana; PhD 1983 Nebraska (Lincoln)

**Rosowski, Susan J. - 1982; Associate Professor; BA 1974 Whittier; MA 1976, PhD 1974 Arizona

**Shapiro, Gerald D. - 1987; Professor; BA 1972, MA 1973 Kansas; MFA 1987 Massachusetts

**Slater, Judith - 1987; Professor; BA 1973 Oregon; MA 1981 Pennsylvania State; MA 1977 California (Irvine)

**Spencer, Nicholas - 1997; Assistant Professor; BA 1987 St. John's (Oxford); MA 1994, PhD 1996 Emory

**Stock, Robert D. - 1967; Professor; AB 1963 Kent; MA 1965, PhD 1967 Princeton

**White, Laura Mooneyham - 2000; Associate Professor; BA 1980 Yale; MA 1984, PhD 1986 Vanderbilt

**Wolf, George E. - 1966; Associate Professor; AB 1961 Brooklyn; PhD 1971 Connecticut

Courses (ENGL)

Course Offerings—Important Note. The course offerings in English are described in this bulletin for the most part in general terms only. For the precise courses offered or to be offered in the next semester, see the Schedule of Classes and Course Description Booklet. The booklet is available in the Department of English.

Course Requirements. Beginning students must take ENGL 990 (Introduction to Literary Scholarship). Teaching assistants must take ENGL 997 (Composition Theory and Practice). Students may not take more than 6 hours of independent directed reading (ENGL 897 or 997) as part of their MA or PhD program.
801. Drama (3 cr)
Particular historical periods or other groupings of dramatic works, examining the relation of the writers both to one another and to the aesthetic and intellectual climate of their times. Examples: drama survey, modern drama, American drama, Shakespeare's contemporaries in drama.

801K. Gay and Lesbian Drama (3 cr)
Overview of contemporary gay and lesbian drama.

802. Poetry (3 cr)
Courses under this number are drawn from such areas as epic, Renaissance, Romantic, Victorian, American, and contemporary poetry.

803. Fiction (3 cr)
Fiction, primarily novels, in particular historical periods or other groupings, examining the relation of the writers both to one another and to the aesthetic and intellectual climate of the times.
   A. 19th Century British Novel (3 cr)
   B. 20th Century British Novel (3 cr)
   C. Modern Fiction (3 cr)
   D. American Novel I (3 cr)
   E. American Novel II (3 cr)

806. Genre (3 cr)
History and theory of the concept of genre as exemplified in literary works in various forms. Examples: comedy, tragedy, and satire.

811B. Plains Literature (3 cr)

813. Film (3 cr)

814. Survey Women's Literature (3 cr)
Particular historical or other groupings of literature by and about women, seen in their aesthetic and intellectual context. Examples: women's literature, continental women writers, twentieth-century women writers.

820. Introduction to Linguistics (3 cr)
Introduction for advanced students to the history and methods of linguistics, to the theory of language, and to applications of linguistics in a variety of fields and disciplines.

826. History of the English Language (3 cr)
Survey of historical development of contemporary English with attention to its Old and Middle English background.

827. Applications of Linguistics (3 cr)

828. Old English (3 cr)
Old English aimed at enabling students to read and understand literary texts of the period in their historical context.

828B. Middle English (3 cr)

830. British Authors to 1800 (3 cr)
Works of a particular major author seen in literary, historical, biographical, and critical context. Examples: Chaucer, Shakespeare, Milton.

832. American Authors to 1900 (3 cr)
Works of a particular major author seen in a wide critical context. Example: Mark Twain.

833. American Authors since 1900 (3 cr)

839. Film Directors (3 cr)
Films of one director or a small group of directors, with emphasis on an auteur approach. Weekly film screenings.

840. Classical Drama (CLA 883) (3 cr)
For course description, see CLAS 883.

845. Ethnic Literature (3 cr)
Works of writers with connections to one or more American ethnic communities, seen in their historical, intellectual, and cultural context. Examples: survey of ethnic literatures, Native American literature, African American literatures, and African-American literatures.

852. Advanced Fiction Writing (3 cr) Prereq: ENGL 252 or 263 or permission.
For advanced students with previous experience in fiction writing. Longer projects in fiction writing emphasized.

853. Advanced Poetry Writing (3 cr) Prereq: ENGL 253 or permission.
For advanced students with previous experience in poetry writing.

854. Advanced Writing Projects (3 cr) Prereq: 3 hrs English composition above the ENGL 200 level or permission.
Advanced writing workshop in which experienced writers develop extended projects in writing, analyzing their own and others' writing processes, and read widely in genres related to their projects.

857. Composition Theory and Practice (3 cr)
Rationale and development of theory composition instruction, especially in K-12 grades.

857A. Composition and Rhetorical Theory (3-4 cr)
Theoretical approaches to writing instruction and to the field of composition and rhetoric.

859. Writing for Film and TV (3 cr)
For advanced students with previous experience in script writing. Emphasis on development of longer forms of screenplay.

862. Survey of Medieval Literature (3 cr)
Readings in the various genres and movements of Medieval English literature and their cultural context.

862A. Ideas of Ethnicity in Medieval Literature (3 cr)
Medieval literary texts involving encounters between different religions and cultures. Rhetoric of Women Writers.

863. Survey of Renaissance Literature (3 cr)
Major authors and works of the sixteenth and early seventeenth centuries with attention to the development of poetic and prose literary forms and their cultural context.

864. British Literature 1660-1800 (3 cr)
Major writers and critical issues of the period. Emphasis on poetry and nonfiction prose.

865. Nineteenth-Century British Literature (3 cr)
Poetry and prose of the Romantic and Victorian periods with emphasis on their intellectual and cultural context.

867. Literary History (3 cr)
Theory of literary periods and movements and the causes for change among them. Periods, movements, and readings are usually taken from British literature from about 1475 to about 1950.

871. Literary Criticism (3 cr)
Survey of the history and theory of literary criticism from ancient times to the present.

875. Rhetoric (3 cr)

*881. GESL Academic Research (3 cr)
*882. Literacy Issues and Community (3-6 cr)
Literacy theory and its application in school, community, and workplace environments. May include a literacy and/or writing internship in a community or workplace setting.

*884. GESL Advanced Academic Writing (1-3 cr)
Prereq: Permission.
Individualized tutorial instruction focused on the student's particular grammar and writing problems.

*886. GESL and/or Academic Language Skills (3 cr)
Prereq: Permission.
For international graduate students interested in developing academic language skills.

*887. GESL and/or Academic Research Skills (3 cr)
Prereq: Permission.
Advanced tutorial in academic writing for international graduate students.

*888. Spoken English for International Students (3 cr)
Speech improvement course for international graduate students.

899. Medieval Literature and Theology (RELG 889) (3 cr)
Exploration of the relationship between significant medieval theologies and primary medieval poets and prose masters.

*895. Internship in Teaching English (1-3 cr) Prereq: Permission.

*895A. Nebraska Writing Project Internship (1-3 cr)
Prereq: Permission.

*897. Independent Directed Reading (1-6 cr) Prereq: Permission.

898. Special Topics in English (1-6 cr, max 6)

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.

901. Seminar in Drama (1-24 cr)

902. Seminar in Poetry (1-24 cr)

905. Seminar in Prose Fiction (1-24 cr)

911. Seminar in Plains Literature (1-24 cr)

913. Studies in Film (3-4 cr)

914. Seminar in Women Writers (1-24 cr)

915. Popular Literature (1-24 cr)

919. Interdisciplinary Approaches to the Nineteenth Century (HIST, MODL, RELG) (3 cr)
Introduction to the nineteenth century in North America (focusing on the U.S., Great Britain, and Europe (focusing on France, Germany, Russia, and Spain), organized through themes such as constructions of gender and sexuality, democracy in the nation-state, and challenges to religion.

920. Seminar in Linguistics (1-24 cr)

927. Stylistics (1-24 cr)

930. Seminar in British Authors to 1800 (1-24 cr)

931. Seminar in British Authors since 1800 (1-24 cr)

932. Seminar in American Authors to 1900 (1-24 cr)

933. Seminar in American Authors since 1900 (1-24 cr)

940. Seminar in African-American Literature (1-24 cr)

953. Seminar in Creative Writing (1-24 cr)

957. Composition Theory and Practice (1-24 cr)

961. Seminar in American Literature (1-24 cr)

962. Seminar in Medieval Literature (1-24 cr)

963. Seminar in Renaissance Literature (1-24 cr)

964. Seminar in Restoration and Eighteenth-Century Literature (1-24 cr)

965. Seminar in Nineteenth-Century Literature (1-24 cr)

967. Seminar in Modern Literature (1-24 cr)

970. Literary Theory (3-4 cr)

971. Seminar in Literary Theory (1-24 cr)

973. Seminar in Literacy Studies (1-24 cr)

976. Seminar in Rhetorical Theory (1-24 cr)

986. Approaches to English Studies (3 cr)
Emerging models of English studies that cross traditional boundaries. Traces interdisciplinary concerns across three registers: disciplinarity, curriculum, and pedagogy.

987. Seminar in Humanities and Public Policy (3-4 cr)
Strategies for using the humanities to change or develop policy, the public policy roles of humanities and education scholars, and strategies for obtaining funding, permanence, and effectiveness.

988. Introduction to the Interdisciplinary Study of the Middle Ages (AHIS, HIST, MODL, MUSC) (3 cr)
For course description, see AHIS 988.

989. Introduction to the Interdisciplinary Study of the Renaissance (AHIS, HIST, MODL, MUSC) (3 cr)
For course description, see AHIS 989.

990. Introduction to Literary Scholarship (1-24 cr)

991. Nebraska Literature Project (1-24 cr)

992. Nebraska Humanities Project (1-24 cr)
Courses of Instruction/ Entomology

994. Application of Learning and Teaching English (2-4 cr)
995. Teaching of College English (1-24 cr)
996. Bibliography and Methods (3-4 cr)
997. Independent Directed Reading (1-24 cr)
999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Entomology

Department Head: ZB Mayo, Ph.D.
Graduate Committee: Professors Foster (chair), Baependale, Higley; Associate Professor Danielson

Work is offered in the following divisions of the department: ecology and behavior, taxonomy, morphology, physiology, economic entomology, insect transmission of plant pathogens, insect pathology, pest management, veterinary entomology, and toxicology.

International students must have a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). English proficiency is required for admission.

Master of Science Degree. To qualify for acceptance as a candidate for the degree of master of science, a student must hold a bachelor of science or bachelor of arts degree from an accredited college, including course work in chemistry, physics, mathematics, biology, and introductory entomology. A limited number of deficiencies may be made up during the graduate program. Curriculum must include biology and classification of insects plus a minimum of one of the following courses in insect physiology or insect ecology.

Doctor of Philosophy Degree. Prospective candidates for this degree must meet the minimum undergraduate preparation noted for the masters degree. Curriculum must include biology and classification of insects plus a minimum of two of the following courses in insect physiology, insect morphology, or insect ecology. The Supervisory Committee of the PhD student will decide which of the following requirements is to be met seven months prior to the final oral examination: 1) foreign language; or 2) research technique (approved technique); or 3) collateral field (15 semester hours); or 4) minor.

Faculty

- Foster, John E. - 1990; Professor; BA 1964 Central Methodist; MS 1966 M issouri; PhD 1971 Purdue
- Harrell, Mark O. - 1980; Professor; BS 1975 William and Mary; MS 1978, PhD 1980 University of Wisconsin
- Harshman, Lawrence. - 1994; Assistant Professor; BS 1975 California; MS 1977, PhD 1982 SUNY
- Hein, Gary - 1986; Professor; BS 1976 Concordia College; MS 1979 Indiana State
- Heinrichs, E.A. - 1995; Adjunct Professor; BS 1962, MS 1964 N ebraska (Lincoln); PhD 1967 Kansas State
- Heng-Moss, Tiffany M. - 2001; Assistant Professor; BS 1995, MS 1997, PhD 2000 N ebraska (Lincoln)
- Higley, Leon G. - 1989; Professor; BA 1980 Cornell; MS 1984, PhD 1988 IOWA State
- Holbach, Willey - 1999; Assistant Professor; MS 1999 N ebraska (Lincoln)
- Hunt, Thomas E. - 1990; Assistant Professor; BS 1990, MS 1993, PhD 1999 N ebraska (Lincoln)
- Hutchins, Scott H. - 1997; Adjunct Professor; BS 1981 Auburn; MS 1985 Mississippi; PhD 1987 IOWA State
- Jameson, Mary Liz - 1998; Research Assistant; BS 1986, MS 1988 N ebraska (Lincoln); PhD 1997 Kansas State
- Joern, Anthony - 1978; Professor; BS 1970 Wisconsin; PhD 1977 Texas (Austin)
- Jones, Jack - 1978; Assistant Professor Emeritus; BS 1956 South, MS 1963 Virginia; PhD 1973 IOWA State
- Kambale, Shripat T. - 1978; Professor; BS 1964, MS 1966 Nagpur (India); PhD 1974 N orth Dakota State
- Keith, David L. - 1967; Professor; BS 1962 Gustavus Adolphus; MS 1965 M innesota; PhD 1969 N ebraska (Lincoln)
- Kramer, Wayne L. - 1986; Adjunct Assistant Professor; BS 1972 IOWA State; MS 1975, PhD 1979 California (Riverside)
- Mayo, Z. B. - 1972; Professor; BS 1967 Texas Tech; MS 1968, PhD 1971 O klahoma State
- Meinke, Lance J. - 1984; Professor; BS 1975 N orth Dakota State; MS 1977 Arizona; PhD 1984 N orth Carolina State
- Moellenbeck, Daniel - 1997; Adjunct Assistant Professor; BA 1986 IOWA State; PhD 1992 Louisiana State
- Peterson, II, Richard D. - 1992; Adjunct Assistant Professor; BS 1965 IOWA State; MS 1968, PhD 1978 N orth Dakota State
- Peterson, Robert K.D. - 1996; Adjunct Associate Professor; BS 1987 IOWA State; MS 1987, PhD 1995 N ebraska (Lincoln)
- Powers, Thomas O. - 1985; Associate Professor; BS 1976 Purdue; MS 1979 Florida; PhD 1983 California (Riverside)
- Prues, Kenneth R. - 1957; Professor Emeritus; BS 1954, MS 1955, PhD 1957 O hio State
- Quisenberry, Sharon - 1995; Adjunct Professor; MA 1975 Hood; MS 1977, PhD 1980 IOWA State
- Ratcliffe, Brett C. - 1980; Professor and Curator Entomology; MS 1988, MS 1970, PhD 1975 N ebraska (Lincoln)
- Siegfried, Blair D. - 1990; Professor; BS 1981 Lock Haven; MS 1984 Florida; PhD 1988 Penn State
- Skoda, Steven R. - 1992; Adjunct Associate Professor; BS 1982 Kearney IOWA State; MS 1985, PhD 1989 N ebraska (Lincoln)
- Smith, C. Michael - 1997; Adjunct Professor; BS 1971 Southwestern Oklahoma State; MS 1973, PhD 1976 Texas (Austin)
- Stanley, David - 1989; Professor; BA 1975 California State; PhD 1983 California
- Taylor, David B. - 1992; Adjunct Associate Professor; BS 1977, PhD 1982 N orth Dakota
- Thomas, Gustave D. - 1982; Adjunct Professor Emeritus; BS 1962, MS 1964 Missouri State; PhD 1967 Missouri State
- Witkowski, John F. - 1975; Professor; BS 1965, MS 1970 Nebraska (Lincoln); PhD 1975 IOWA State
- Wright, Robert J. - 1988; Professor; BS 1975 California (Santa Barbara); MS 1977 Arizona (Tucson); PhD 1981 N orth Carolina State
- Young, Linda J. - 1980; Professor; BS 1974, MS 1976 West Texas State; PhD 1981 Oklahoma State
- Zera, Anthony J. - 1988; Associate Professor; BS 1970 SUNY (Buffalo); MS 1977 Connecticut; PhD 1984 SUNY (Stony Brook)

Courses (ENTO)

800. Biology and Classification of Insects (4 cr) Lec 3, Lab 3. Offered fall semester even-numbered calendar years. Biology and ecology of common families of insects. Sight recognition of 22 families and 105 families, identification of other families with keys. Student project at species level.

801. Insect Physiology (4 cr) Lec 2, Lab 2. Prereq: CHEM 251. 12 hrs entomology or biological sciences (zoology). Offered fall semester odd-numbered calendar years. Functions and other phenomena associated with the major organ systems of insects; the circulatory, respiratory, digestive, nutrition, locomotion, reproduction, growth and development.

802. Aquatic Insects (BIO 895, NRES 892) (2 cr) Lec 2, Prereq: 12 hrs biological sciences or permission. Biology and ecology of aquatic insects.

802L. Identification of Aquatic Insects (BIO 885L, NRES 882L) (1 cr) Lec 1, Lab 1. Prereq: Must be taken parallel with ENTO 892L. Identifications of aquatic insects to the family level.

803. Management of Horticultural Insects (3 cr) Prereq: Introductory biology course or permission. Internet-based course. Aids in computer and email required. Credited cannot be received for both ENTO 810 and 810. Biology, ecology, and management of insect pests of horticultural crops such as vegetables, fruits, trees, shrubs, greenhouse crops, turf and ornamentals. Emphasizes IPM strategies to maintain pest levels below damaging levels while minimizing the use of traditional insecticides.

804. Comparative Insect Anatomy and Histology (4 cr) Lec 2, Lab 4. Prereq: 12 hrs entomology and/or biological sciences or permission. Offered spring semester odd-numbered calendar years. Analysis and comparison of macro- and microanatomical features of major insect groups presented as the basis for understanding insect development, variation, homologies of structures, and synthesis of theories of evolution.

806. Insect Ecology (BIO 860) (3 cr) Lec 3. Prereq: BIO 810 and 810L or permission; ENTO 115 recommended. Offered fall semester of odd-numbered years. Interrelationships of the biotic and abiotic factors that influence insect development, behavior, distribution, and abundance.

807. Urban and Industrial Entomology (3 cr) Lec 3. Prereq: BIO 810 and 810L or permission; ENTO 115 recommended. Offered fall semester of odd-numbered years. Insects and selected vertebrate pests that infest homes, hospitals, and health facilities, museums, restaurants, grain mills, processing plants and warehouses and their management.

809. Insect Control by Host Plant Resistance (2 cr) Lec 2. Prereq: 12 hrs agricultural sciences and/or biological sciences including one course in entomology and one course in genetics. AGRO 815 desirable but not required. Offered spring semester odd-numbered calendar years. N catalogue and mechanisms of plant resistance to insect attack and the utilization of resistance for insect control.

810. Insects as Educational Tools for the Classroom (3 cr) Prereq: Introductory entomology course or permission. Offered fall semester. Lab uses using insects as a tool for inquiry-based learning. Includes study of insect structure and function, insect ecology and behavior, and the beneficial and detrimental roles of insects. Integrates the study of insects into the classroom to enhance science education.

811. Field Entomology (BIO 882) (4 cr) Prereq: 12 hrs agricultural sciences and/or biological sciences and permission. Offered summers only at Custer Point Biological Station. For course description, see BIO 882.
816, Veterinary Entomology/ Ectoparasitology (ASCI, N R E S / V B M S 816) (2 cr, I, II) Lect 2. Prereq: 10 hrs entomology or biological sciences or related fields or permission. Arthropods that cause or vector diseases in animals. Arthropod recognition and biology, and disease epidemiology.


*817, Pest Management Systems (3 cr I, II) Prereq: 10 hrs entomology and crop production courses or permission. 0 flr. fall semester odd-numbered calendar years.

*820, Insect Toxicology (2 cr I, II) Lect 2. Prereq: 12 hrs of biological sciences, 4 hrs of organic chemistry, or permission. 0 flr. spring semester even-numbered calendar years. Principles of toxicology as they relate to insecticides and insect pest species. Insecticide classification, mode of action, metabolism and environmental consequences of insecticide use.

*821, Insect Toxicology Laboratory (1 cr I, II) Lab 3. Parallel registration in ENTO *820. 0 flr. spring semester even-numbered calendar years. Laboratory study as discussed in ENTO *820.

*865, Insect Transmission of Plant Diseases (B IOS 865) (2 cr I, II) Lect 2. Prereq: 8 hrs of biological sciences including BIOS 864 preceding or parallel and 6 hrs of entomology or biological sciences (zoology). 0 flr. even-numbered calendar years. For course description, see BIOS 865.

896, Independent Study in Entomology (1-6 cr I, II, III) Prereq: 12 hrs of biological sciences or agricultural sciences. Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member. Independent study contracts for ENTO 896 must be filed with department.

*899, Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

901, Advanced Topics in Entomology (1-5 cr I, II) Prereq: Permission. Course offered as the need arises. Credit determined by instructor at the time the course offering is announced. May be repeated for credit. Advanced study of selected topics not presented in established courses.

902, Advanced Insect Physiology: Designing Bionorma- l Insect Control Strategies (3 cr I, II) Lect 4. Prereq: student presentations, discussions, 6 hrs entomology or agricultural sciences related talks. 0 flr. fall semester even-numbered calendar years. Selected topics in insect biochemistry and physiology are treated in advanced detail. Emphasis is placed on specific areas that have potential for development in the design of novel insect control strategies. Includes endocrinology, immunology, the invertebrate endocrine system, pheromones, digestive proteins, and tracheal metabolism. Major thrust placed on transplanting basic research into research aimed at understanding the potential applications of novel and practical insect control strategies.

905, Seminar in Entomology (1 cr per sm, max 8 I, II) 920, Pesticide Dissipation in Soils and Plants (N R E S, AGRO 920) (4 cr I) Lect 3, Lab 3. Prereq: CHEM 251 or equivalent. Recommended: AGRO 855, and AGRO 860 or BIOS 847; or equivalent. 0 flr. odd-numbered calendar years. For course description, see N R E S 920.

960, Biostatistics and Nomenclature (BIOS 960) (2-3 cr) Lect 3, arranged readings. For course description, see BIOS 960.

988, Becoming a Professional Scientist (AGR 988) (2 cr I, II) Lect 2. Designed to make a difference between thriving or merely surviving scientific careers. Students gain insights in developing their own scientific careers and in forming philosophical groundings in the process of science. Includes nuts-and-bolts issues, such as applying for jobs, developing research and teaching programs, writing and other communication skills, and the scientific publication process. Philosophical issues include frameworks and innovation in science, student-professor relationships, building interdisciplinary teams, human diversity, and ethics. Format features short lectures and active discussion. Assignments aimed to improve writing skills and personal presentation of ideas and opinions. Beyond the specific issues presented, course is intended to create a forum for personal exploration of the meaning of a scientific career.

989, Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Environmental Studies

Courses (ENTR)

821, Entrepreneurship and Venture Management (M N G T 821) (3 cr) Prereq: M N G T 331, 360; M R K T 341; FINA 361; ACCT 201 and 202 or 306; ENTR 331 or permission. For course description, see M N G T 821.

822, Small Business Management (M N G T 822) (3 cr) Prereq: M N G T 331, 360; M R K T 341; FINA 361; ACCT 201 and 202 or 306. For course description, see M N G T 822.

823, Small Business Growth and Development (M N G T 823) (3 cr) Prereq: M N G T 331, 360; M R K T 341; FINA 361; ACCT 201 and 202 or 306. For course description, see M N G T 823.

Environmental Studies

(Interdepartmental Area of Specialization)

Advisory Committee: Associate Professor Kuzelka (chair); Professor A. Medes; Borner, C; (2 cr, 1-2 cr) Lect 2. Prereq: 12 hrs biological sciences or agricultural sciences. Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member. Independent study contracts for ENTO 896 must be filed with department.

*899, Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

901, Advanced Topics in Entomology (1-5 cr I, II) Prereq: Permission. Course offered as the need arises. Credit determined by instructor at the time the course offering is announced. May be repeated for credit. Advanced study of selected topics not presented in established courses.

902, Advanced Insect Physiology: Designing Bionorma- l Insect Control Strategies (3 cr I, II) Lect 4. Prereq: student presentations, discussions, 6 hrs entomology or agricultural sciences related talks. 0 flr. fall semester even-numbered calendar years. Selected topics in insect biochemistry and physiology are treated in advanced detail. Emphasis is placed on specific areas that have potential for development in the design of novel insect control strategies. Includes endocrinology, immunology, the invertebrate endocrine system, pheromones, digestive proteins, and tracheal metabolism. Major thrust placed on transplanting basic research into research aimed at understanding the potential applications of novel and practical insect control strategies.

905, Seminar in Entomology (1 cr per sm, max 8 I, II) 920, Pesticide Dissipation in Soils and Plants (N R E S, AGRO 920) (4 cr I) Lect 3, Lab 3. Prereq: CHEM 251 or equivalent. Recommended: AGRO 855, and AGRO 860 or BIOS 847; or equivalent. 0 flr. odd-numbered calendar years. For course description, see N R E S 920.

960, Biostatistics and Nomenclature (BIOS 960) (2-3 cr) Lect 3, arranged readings. For course description, see BIOS 960.

988, Becoming a Professional Scientist (AGR 988) (2 cr I, II) Lect 2. Designed to make a difference between thriving or merely surviving scientific careers. Students gain insights in developing their own scientific careers and in forming philosophical groundings in the process of science. Includes nuts-and-bolts issues, such as applying for jobs, developing research and teaching programs, writing and other communication skills, and the scientific publication process. Philosophical issues include frameworks and innovation in science, student-professor relationships, building interdisciplinary teams, human diversity, and ethics. Format features short lectures and active discussion. Assignments aimed to improve writing skills and personal presentation of ideas and opinions. Beyond the specific issues presented, course is intended to create a forum for personal exploration of the meaning of a scientific career.

Successful completion of the requirements will be indicated on the student's final transcript in parentheses following the name of the student's academic discipline, for example, Biological Sciences (Environmental Studies).

Each student will be required to complete:
1. a masters degree in one of the participating departments or programs
2. 9 credit hours of environmentally-related courses from departments of programs outside the student's major department. Courses must be taken from at least three of the five categories listed below; and
3. when Option I (thesis) is available, in the student's program, a thesis oriented toward some aspect of the environment.

The masters degree will be granted in one to the basic disciplines and students must be formally admitted to a degree objective in one of the participating departments.

Doctoral-level Specialization Requirements: An intra-U niversity of Nebraska-Lincoln doctoral-level specialization in environmental studies is available to any student pursuing a PhD degree within any of the participating departments and programs Successful completion of the requirements will be indicated on the student's final transcript in parentheses following the name of the student's academic discipline, for example, Biological Sciences (Environmental Studies).

Each student will be required to complete:
1. a doctoral degree in one of the participating departments or programs
2. a program of study that includes a 15-hour interdisciplinary component of environmentally-related courses from departments of programs outside the student's major department. At least one course must be selected from four of the five categories listed below; and
3. a dissertation dealing with an environmentally-relevant issue.

Environmental Studies Courses: Courses in environmental studies to comprise the interdisciplinary component of the student's program of study are listed below by category and department. Course descriptions and prerequisites are contained in the appropriate departmental listings. With approval by the Supervisory Committee, a student may take courses cross-listed with an outside department to meet program requirements if the faculty member teaching the course is not in the student's home department.

Environmental Studies Courses: Courses in environmental studies to comprise the interdisciplinary component of the student's program of study are listed below by category and department. Course descriptions and prerequisites are contained in the appropriate departmental listings. With approval by the Supervisory Committee, a student may take courses cross-listed with an outside department to meet program requirements if the faculty member teaching the course is not in the student's home department.
Courses

Physical Sciences

Offered in the Department of Agronomy
861. Soil Physics
877. Great Plains Field Pedology
881. Water Resources Seminar
920. Pesticide Dissipation in Soils & Plants
955. Solute Movement in Soils

Offered in the Department of Chemistry
821. Analytical Chemistry
823. Analytical Chemistry Laboratory
824. Survey of Analytical Chemistry
*825A. Ionic Equilibria
*825B. Electrochemical Methods
*825D. Mass Spectrometry
*825E. Data Handling
*825G. Chromatographic Separations
*825J. Optical Methods of Analysis
831. Biochemistry I
832. Biochemistry II
871. Physical Chemistry

Offered in the Department of Civil Engineering
821. Hazardous Waste Management
828. Environmental Engineering Chemistry
829. Biological Waste Treatment
858. Groundwater Engineering
875. Water Quality Strategy
926. Advanced Topics in Water Treatment
927. Advanced Topics in Wastewater Treatment
930. Advanced & Industrial Waste Water Treatment
958. Groundwater Mechanics

Offered in the Department of Geography
851. Severe Storms Meteorology-Climatology
852. Synoptic Meteorology
853. Physical Climatology
854. Regional Climatology
856. Dynamic Meteorology
857. Advanced Synoptic Meteorology/Climatology
858. Dynamic Meteorology II
866. Physical Meteorology
867. Soil Morphology, Classification & Survey
868. Satellite Meteorology
881. Water Resources Seminar
*895. Internship in Meteorology-Climatology
998. Advanced Special Problems
993. Seminar in Meteorology & Climatology
954. Seminar in Climatic Change

Offered in the Department of Geosciences
816. Isotope Geochemistry
817. Organic Geochemistry
819. Applications of Remote Sensing in Agriculture & Natural Resources
850. Surficial Processes & Landscape Evolution
881. Environmental & Urban Geology
888. Groundwater Geology
*893. Hydrogeology
*898. Special Problems in Geology
986. Containment Hydrogeology
988. Introduction to Groundwater Modeling

Offered in the Department of Horticulture
907. Agricultural Climatology

Offered in the Department of Physics
831. Thermal Physics

Biological Sciences

Offered in the Department of Agronomy
840. The Range Ecosystem
842. Range Plants
860. Soil Microbiology
875. Water Quality Strategy

Offered in the Department of Animal Science
851. Livestock Management on Range & Pasture

Offered in the Department of Biological Sciences
847. Soil Microbiology
850. Biology of Wildlife Population
854. Population & Community Ecology
855. Great Plains Flora
856. Mathematical Models in Biology
863. Experimental Methods in Animal Behavior
864A. Plant Pathology Epidemiology
864B. Plant Pathology Physiology
*867. Plant Pathogenic Fungi
*869. Phytopathogenic Fungi
870. Prairie Ecology
871. Plant Taxonomy
873. Freshwater Algae
876. Mammalogy
882. Field Entomology
883. Cognitive Processes in Map Comprehension & Use
884. Advanced Field Methods
886. Pro-seminar in Latin American Studies
897. Hunters-Gatherers
898. Applied & Developmental Anthropology
899. Seminar in Anthropology & Geography

Offered in the Department of Anthropology
835. Introduction to Conservation Archaeology
846. Paleoanthropology
851. Indians of Contemporary North America
873. Ecological Anthropology
874. Applied & Developmental Anthropology
877. Hunters-Gatherers
883. Advanced Field Methods
953. Seminar in Anthropology & Geography

Offered in the Department of Architecture
856. Behavior & Social Factors in Environmental Design
866. Community Design Center

Offered in the Department of Community and Regional Planning
800. Introduction to Planning
870. Environmental Planning & Policy
877. Recreation & Park Planning

Offered in the Department of Economics
872. Efficiency in Government

Offered in the Department of Geography
806. Introduction to Spatial Theory
847. Political Geography
848. Pro-seminar in International Relations
850. Climate & Society
877. Great Plains Field Pedology
878. Pro-seminar in Latin American Studies
883. Cognitive Processes in Map Comprehension & Use
897. Internship in Geography
898. Advanced Special Problems
903. History & Philosophy of Geography
933. Seminar in Geography & Anthropology
935. Seminar in Historical Geography
940. Seminar in Human Geography
983. Seminar on Behavioral Processes in Person/Environment Relations

Offered in the Department of Political Science
826. Topics in American Public Policy
*836. Introduction to Public Policy Analysis

Offered in the Department of Sociology
844. Social Demography
845. Sociology of Urban Areas
846. Environmental Sociology
998. Special Topics Seminar (approved topics are Environmental Sociology, Social Demography, & Social Movements)

Environmental Analysis

Offered in the Department of Agronomy
844. Rangeland Analysis

Offered in the Department of Architecture
*830. Architectural Systems Analysis
*836. Building Equipment Integration
*860. Environmental Survey & Analysis
*861. Studies in Environmental Design
*864. Urban Design I

Offered in the Department of Biometry
896. Independent Study in Biometry (approved topics are Spatial Variability and Statistical Ecology)
Offered in the Department of Civil Engineering
916. Interdisciplinary Seminar in Engineering: Economic & Legal Aspects of Water Resources Systems

Offered in the Department of Community and Regional Planning
860. Planning & Design in the Built Environment
872. Environmental Survey & Analysis

Offered in the Department of Geography
811. Field Geography
812. Introduction to Geographic Information Systems
814. Quantitative Methods in Geography
815. Introduction to Computer Mapping
817. Cartography II: Electronic Atlas Design & Production
818. Introduction to Remote Sensing I
819. Remote Sensing II-Non-photographic Systems
820. Remote Sensing III-Digital Image Analysis
822. Advanced Techniques in Geographic Information Systems
898. Advanced Special Problems
915. Seminar in Geographic Information Systems

Offered in the Department of Mathematics
842. Applied Mathematics I

Offered in the Department of Political Science
869. International Law

Family and Consumer Sciences

Department Chair: Julie Johnson, Ph.D.
Graduate Committee: Associate Professor Cramer (chair); Professors Abbott, DeFran, Edwards, Johnson, Stevens, Zeece; Associate Professors Bischoff, Davis, Prochaska-Cue, Smith, Torquati; Assistant Professors Bakken, Bisch, Churchill, Dalla, Gonzalez-Kruger, Lin, Rieder, Xia

The master of science degree in family and consumer sciences has a central focus on the family or issues that relate to the family. The degree is made up of four tracks: Child Development; Early Childhood Education, Employee Assistance, Family and Consumer Sciences Education, and Family Science. Two areas of specialization are also available: Family Financial Planning, and Marriage and Family Therapy. A master of science in family and consumer sciences with a specialization in family financial planning is offered via distance education. The Family and Consumer Sciences Master’s Degree Handbook, available at the University Bookstores, outlines the departmental graduate program requirements.

Candidates for the M.S. degree must hold a bachelor's degree from an accredited college/university and have completed at least 18 hours in family and consumer sciences or the equivalent from related fields. A minimum of 3.0 undergraduate GPA is required. Applicants must take the GRE and have their scores submitted as part of their application. Additional application procedures are required for those persons interested in the Employee Assistance degree track and the Marriage and Family Therapy specialization.

Although applications will be considered on a continuing basis, there are preferred deadlines. Applicants interested in the Child Development, Employee Assistance, Family and Consumer Sciences Education, and Family Science tracks, as well as the Family Financial Planning specialization, have the following deadlines: Census Office, January 15, and June 1. Applicants interested in Marriage and Family Therapy are considered only on January 15 or until available spots are filled.

The Interdepartmental Certificate Program in Medical Family Therapy is a joint program between the UNMC Department of Family Medicine and the UNL Department of Family and Consumer Sciences. This program offers intensive training in medical family therapy and collaborative health care. It is designed for both health and mental health professionals who are interested in implementing the biopsychosocial-family systems model in the clinical setting. A Certificate Program in Family Financial Planning has been proposed and is pending approval. Please contact the department for the most current information.

University of Nebraska-Lincoln Department of Family and Consumer Sciences
123 Holmes Economics Building
Lincoln, NE 68583-0801
(402) 472-1661

Doctor of Philosophy Degree. Studies leading to a Ph.D. are conducted under the guidance of experienced faculty. For information on faculty and research programs, see “Human Resource and Family Sciences” on page 134.

Faculty

**Abbott, Douglas A. - 1983; Professor; BS 1973 Oregon State; MS 1979 Brigham Young; PhD 1983 Georgia Tech**

Bakken, Rosalie - 2000; Assistant Professor; BS 1989 Iowa State; MA 1991 Drake; PhD 2000 Iowa State

**Bischoff, Richard J. - 1998; Associate Professor; BS 1988 Weber State; MS 1990 Auburn; PhD 1993 Purdue**

Bosch, Kathy - 2001; Assistant Professor; BS 1982, M S 1991, PhD 2000 Kansas State

**Churchill, Susan L. - 1998; Assistant Professor; BS 1991 Washington and Lee; MS 1993, PhD 1997 Georgia Tech**

**Cramer, Sheran L. - 1970; Associate Professor; BS 1963 South Dakota State; MS 1967 Iowa State; PhD 1980 Nebraska (Lincoln)**

**Dalla, Rochelle - 1996; Assistant Professor; BA 1991 Colorado; MS 1993, PhD 1996 Arizona**

**Davis, Elizabeth - 1987; Associate Professor; BS 1973 Baker; MS 1976, PhD 1981 Missouri**

**DeFran, John - 1975; Professor; BA 1970, MA 1971 Nebraska (Lincoln); PhD 1975 Wisconsin**

**Edwards, Carolyn Pope - 1997; Professor; BS 1969, MA 1974, EdD 1976 Harvard**

Gonzalez-Kruger, Gloria E. - 1998; Assistant Professor; BS 1985, MS 1990 & 1992, PhD 1998, Michigan State

**Holcombe, Melinda A. - 1957; Professor Emeritus BS 1954, MS 1962 Nebraska (Lincoln)**

**Johnson, Julie M. - 1980; Professor; BS 1971, M S 1972 North Dakota State; PhD 1984 Nebraska (Lincoln)**

**King, Kay F. - 1977; Professor Emeritus BS 1962, M S 1963 Brigham Young; PhD 1967 Florida State**

**Kostelnik, Marjorie - 2000; Professor and Dean of Human Resource and Family Sciences BS 1972 Pittsburgh; MS 1977, PhD 1987 Penn State**

Lin, Li-Wen - 2001; Associate Professor; BS 1988 National (Taiwan); M A 1988 Iowa; PhD 1992 Purdue

**Montgomery, Bette - 1994; Assistant Professor; BS 1983 Wisconsin (Stevens Point); MS 1990, PhD 1994 Wisconsin (Madison)**

**Prochaska-Cue, Kathy - 1994; Associate Professor; BS 1969, MS 1972, PhD 1988 Nebraska (Lincoln)**

**Rider, Mary Ellen - 1994; Assistant Professor; BS 1973 Florida State; MS 1978 Georgia; PhD 1986 Missouri**

**Rottmann, Leon H. - 1975; Professor Emeritus BS 1955, MA 1957, PhD 1960 Nebraska (Lincoln)**

**Rowe, George P. - 1978; Professor Emeritus BS 1951, M S 1954 Missouri; PhD 1966 Florida State**

**Smith, Craig - 1988; Associate Professor; BS 1976 Utah State; MS 1977 Arizona; PhD 1980 Brigham Young**

**Stevens, Georgia - 1989; Professor and Extension Specialist; BS 1966, MS 1971 Nebraska (Lincoln); PhD 1979 Maryland**

**Torquati, Julia - 1995; Associate Professor; BA 1987, MS 1993, PhD 1994 Arizona**

**Vanzandt, Sally L. - 1967; Professor Emeritus BS 1963, MS 1966 Nebraska (Lincoln)**

**Woodward, John C. - 1966; Professor Emeritus; BA 1950 Drake; MS 1953, PhD 1957 Nebraska (Lincoln)**

Xia, Yan - 2001; Assistant Professor; BS 1982 Hebei (China); MA 1988 South China Normal; M S 1990, PhD 2000 Nebraska (Lincoln)

**Zeece, Pauline - 1984; Professor; BS 1975, M S 1981, PhD 1986 Iowa State**
### Courses (FACS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>801</td>
<td>FACS Curriculum Theories and Concepts (3 cr)</td>
<td>(UNL) Prereq: FACS 210 or 810 or taken concurrently; 15 hrs in FACS, NUTR, TXCD, or permission.</td>
</tr>
<tr>
<td>802</td>
<td>Instructional Models and Design of FACS Curriculum (3 cr)</td>
<td>Distance delivered by South Dakota State University.</td>
</tr>
<tr>
<td>807</td>
<td>Supervisory Leadership (ALEC *807) (3 cr) Lec.</td>
<td>Prereq: ALEC 801 or permission.</td>
</tr>
<tr>
<td>810</td>
<td>Teaching and Learning in FACS Classrooms (2 cr)</td>
<td>(UNL) Prereq: 6 hrs in FACS, NUTR., or TXCD.</td>
</tr>
<tr>
<td>811</td>
<td>Perspectives on Family and Consumer Sciences (3 cr)</td>
<td>(Lect, max 3) Prereq: 24 hrs human resource and family sciences and financial planning course.</td>
</tr>
<tr>
<td>812</td>
<td>Developing Instruction in FACS (2 cr) (UNL)</td>
<td>Prereq: FACS 210 or 810.</td>
</tr>
<tr>
<td>813</td>
<td>Student Teaching in FACS (12 cr) (UNL) Prereq: FACS 210 or 810; 801.</td>
<td>P/N only.</td>
</tr>
<tr>
<td>818</td>
<td>Internship: Selected Experiences (3-6 cr) (UNL)</td>
<td>Prereq: Permission. P/N only.</td>
</tr>
<tr>
<td>81A</td>
<td>Evaluation in Career and Technical Education (CURR *814) (3 cr)</td>
<td>For course description, see CURR *814.</td>
</tr>
<tr>
<td>815</td>
<td>Advanced Instructional Theory in Family and Consumer Sciences (3 cr)</td>
<td>Different instructional models and their relationship to curricular frameworks.</td>
</tr>
<tr>
<td>816</td>
<td>Educational Programming (3 cr) Prereq: Permission.</td>
<td>N atural development and family science education majors in curricular task.</td>
</tr>
<tr>
<td>817</td>
<td>Critical Issues for the Beginning Teacher (1-3 cr, max 3)</td>
<td>Examines issues faced by beginning or returning teachers. Possible issues are classroom management, planning, selecting resources, and critical issues to the new teacher. The theory and its application to the students’ educational setting is discussed for each issue. The teacher and the mentor support one another as a collaborative group.</td>
</tr>
<tr>
<td>820</td>
<td>Family Economics (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>Prereq: Permission.</td>
</tr>
<tr>
<td>821</td>
<td>Insurance Planning for Families (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>Risk management, ethics, and social responsibility, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>822</td>
<td>Financial Counseling (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>T heory and practice of ethics and social responsibility, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>823</td>
<td>Estate Planning for Families (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>Estate planning, including insurance, property, and taxes; ethical considerations, and new and emerging issues in the field. Case studies provide experience.</td>
</tr>
<tr>
<td>832</td>
<td>Fundamentals of Financial Planning (3 cr) Prereq: Permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>838</td>
<td>Prognostic Financial Planning in Practice (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>840</td>
<td>Personal Income Taxation (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>Personal income taxation, including federal, state, and local taxes.</td>
</tr>
<tr>
<td>841</td>
<td>Housing &amp; Real Estate (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>845</td>
<td>Research in Leadership Education (ALEC *845) (3 cr) Lec.</td>
<td>For course description see ALEC *845.</td>
</tr>
<tr>
<td>858</td>
<td>Housing and the Family (3 cr) Prereq: Permission.</td>
<td>R ole of housing and real estate in the family financial planning process from a theoretical perspective.</td>
</tr>
<tr>
<td>860</td>
<td>Employee Assistance Program Seminar (3 cr) Prereq: One 800-level family and consumer sciences course; MINI, FACS 881.</td>
<td>Professional readiness of students in relation to the understanding, implementation, evaluation, and continuation of effective employee assistance programs.</td>
</tr>
<tr>
<td>862</td>
<td>Adulthood and Aging (3 cr)</td>
<td>Human development from young adulthood to old age with emphasis on interaction of bio-psychosocial factors.</td>
</tr>
<tr>
<td>865</td>
<td>Research and Methods (3 cr)</td>
<td>Q uantitative and qualitative research methods and techniques used in conducting research.</td>
</tr>
<tr>
<td>867</td>
<td>Implementing Research and Scholarly Practice (2 cr) Prereq: FACS 865.</td>
<td>T echnical writing of research papers.</td>
</tr>
<tr>
<td>871</td>
<td>Human Sexuality and Ethics (EDPS, PSY, SOC 871) (3 cr) Prereq: Permission.</td>
<td>T echnical writing of research papers.</td>
</tr>
<tr>
<td>872</td>
<td>The Adolescent in the Family (3 cr) (UNL, UNO) Prereq: 12 hours family and consumer sciences.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>881</td>
<td>Family Systems (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>883</td>
<td>Investing for the Family's Future (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>884</td>
<td>Research in Leadership Education (ALEC *845) (3 cr) Lec.</td>
<td>For course description see ALEC *845.</td>
</tr>
<tr>
<td>885</td>
<td>Housing and the Family (3 cr) Prereq: Permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>887</td>
<td>Family Systems (3 cr) Prereq: Admission to family and consumer sciences graduate program or permission.</td>
<td>T heory and practice of financial planning, including insurance, property, casualty, and automobile insurance.</td>
</tr>
<tr>
<td>888</td>
<td>Child and Family Policy (3 cr) Prereq: FACS 160, 215, 222, 280, 718 FS 138.</td>
<td>A nalysis of child and family policies including what is family planning and how it is implemented, how values and goals affect policy and future directions for child and family policies in America and in other countries.</td>
</tr>
</tbody>
</table>
950. Workshop Seminar (1-3 cr per sem, max 15) Prereq: 6 hrs education, 12 hrs in human resources and family sciences including some work in specific areas. Selecting and organizing content and instruction in specific subject areas to facilitate conceptual learning in different educational settings.

A. Related Art
B. Family Economics/Consumer Education
C. Food and Nutrition
D. Housing and Furnishings
G. Human Development and the Family
H. Textiles and Clothing

892. Contemporary Family Issues (1-3 cr, max 9) (U N L, U N O) Prereq: HR F S 183 and FACS 160, 280, or permission. Current family related issues such as cross cultural families, work and family, addiction in families, gender and family. Topic varies.

989. Independent Study (1-5 cr, max 5) Prereq: 12 hrs in major or closely related areas, and permission. Individual projects in research, literature review, or creative production may or may not be an extension of course work. Supervised and evaluated by departmental faculty members.

997. Supervised Educational Experiences in Family and Consumer Sciences (1-6 cr) Prereq: Permission. FAC S 897 is graded P/N only. Actual and simulated educational experiences in family and consumer sciences.

897A. Practicum in Early Childhood Education (3 cr) (U N L), Lec 3, lab 24. Prereq: FAC S 270 and 271, 381, with grade of C or better; or permission, P,N only. Integrating development theory into the planning, implementation, and evaluation of individual and group experiences for young children in the child development laboratory.

897B. Practicum in Family Financial Planning (3 cr, max 6) (U N L) Prereq: Admission to family and consumer sciences graduate program or permission.

970. Practicum in Family and Consumer Sciences (3-6 cr, max 6) (U N L, U N O) Prereq: HR F S 183, FAC S 160, 215, 222, 280, 381, and a minimum GPA of 2.5 in these courses or permission. Appropriate fieldwork experiences in areas of emphasis.

988. Research Experience in Family and Consumer Sciences (1-5 cr) (U N L, U N O) Prereq: 18 hrs in family and consumer sciences and/or social sciences. Permission/contract with individual faculty. Participation in an ongoing research project in child development/early childhood education, family science, marriage and family therapy, family and financial management, or family and consumer sciences education.

989. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

906. Consumer and Family Economics (3 cr) (1) Analysis and evaluation of current theories and sources of data in the area of consumer and family economics.


912. Advanced Curriculum Theory in Family and Consumer Sciences (1-3 cr) Prereq: Experience in teaching, or permission. Various conceptualizations or frameworks of curriculum. The mission of family and consumer sciences and the relationship of the mission to the frameworks, particularly critical consciousness. Family systems of action and practical reasoning as components of critical consciousness.

918. Teaching Family and Consumer Sciences in Colleges (3 cr) Prereq: Philosophy, objectives, and procedures as applied to teaching specific human resource and family sciences subject areas at the college level.

920. Teaching Practicum (U N T R, T X C D 920) (1-3 cr) Prereq: FAC S 918. Prereq for departmental chair. Supervised classroom experiences designed to develop competencies in teaching at the college level.

950. Family Law (LAW 630/630G) (1-4 cr) For course description, see LAW 630/630G.

951. Theoretical Foundations of Marriage and Family Therapy (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences. General systems theory, its derivations and application in family therapy. Family therapy's history, contributions, current theorists, and approaches.

952. Psychopathology and Dyfunction Interactions (3 cr) Prereq: Psychological, behavioral and emotional disorders identified in the Diagnostic and Statistical Manual and various interpersonal dysfunctions. Interpersonal antecedents and consequences of these disorders. Integration of individual and family diagnosis. Research supporting treatment from a family systems approach.

953. Issues and Ethics for Family Professionals (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences. Ethical and professional issues that family professionals confront as they assist families to cope with problems and strengthen family systems.

954. Assessment in Family Therapy (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences. Case studies of families and/or couples. Principles and procedures of clinical assessment.

955A. Clinical Family Therapy I (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences; masters admission in family and consumer sciences. Prereq: FAC S 951, or permission. Didactic training and supervised laboratory. Clinical experiences in marriage and family therapy.

955B. Clinical Family Therapy II (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences; masters admission in family and consumer sciences. Prereq: FAC S 955A, or permission. Didactic training and supervised laboratory. Clinical experiences in marriage and family therapy.

956. Treatment of Human Sexual Dysfunction (3 cr) Prereq: Permission. This course is only open to those students involved in clinical training. Investigation of the literature, research, and theories of typical and atypical sexual behavior and expression. A seminar on the causes, symptoms, and treatment of sexual dysfunctions and other problematic sexual behavior will be examined from a theoretical and applied perspective.


970. Advanced Early Childhood Education (3 cr) Prereq: 18 hrs psychology, educational psychology, sociology, or family and consumer sciences. Advanced philosophy, procedures, and policies relating to early childhood education in the primary, nursery school-kindergarten level and care of children outside the home.

971. Seminar in Child Development (3 cr) Prereq: 18 hrs psychology, educational psychology, sociology, or family and consumer sciences. Analysis of major studies and current literature in Child Development/Early Childhood Education.

972. Theories in Child Development (3 cr) (U N L) Prereq: FAC S 971, 972, or equivalent and 18 hours in sociology. Contemporary theories used in family analysis.

973. Social Processes in Children (3 cr) Prereq: FAC S 876, 971, or 972 and 18 hours family and consumer sciences, psychology, educational psychology, or sociology. Synthesis of current and historical perspectives in theory and research on children's social development including multiple contexts for socialization/individualization.

974. The Infant in the Family (3 cr) Prereq: 12 hrs in family and consumer sciences or social sciences. Infant development within the context of the family.

980. Comparative Family Systems (3 cr) Prereq: Analysis and critical evaluation of major theories and current research on family life as development of personality, mate selection, and adjustment in marriage.

984. Theories of Family Relational (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences. Contemporary theories used in family analysis.

987. Family strengths (3 cr) Prereq: 12 hrs in family and consumer sciences and/or social sciences. Theoretical literature and research on healthy families, and study of applications of these findings in various family life education and family therapy settings.

989. Innovative Approaches to Family Intervention (1, max 3) FAC S 989A, and FAC S 989B may be offered via the W and UNO site (W W W W).


B. Pharmacology and Family Therapy. Use of pharmacological treatments within the context of Marriage and Family Therapy.

D. Group Therapy. Group dynamics emphasizing skills for conducting groups for couples and families.

992. Seminar in Family and Consumer Sciences Education (1, max 2) (U N L) Prereq: Permission of departmental chair.

996. Scholarly Practice and Discovery (1-6 cr, max 6) Prereq: Permission. Investigation related to family and consumer sciences.

997. Advanced Practicum in Family Therapy (1-6 cr, max 9) and 998. Prereq: Permission. Supervised marital and family therapy in university and community agencies.

998. Special Topics Research in Human Resources and Family Sciences (U N T R, T X C D 998) (1-3 cr, max 3) Prereq: Permission.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Food Science and Technology

Department Head: Stephen L. Taylor, Ph.D.

Graduate Committee: Professors Bullerman (chair), Wieland, Zeece

The Department of Food Science and Technology offers graduate work leading to the master of science and doctor of philosophy degrees with a major in food science.

Students wishing to pursue graduate work must meet the admission requirements for students in agriculture; see “Requirements for Graduate Degrees” on page 15. Common undergraduate majors include food science and technology, other areas within agriculture, food and nutrition, biology, or chemistry. Each applicant will be evaluated by the departmental Graduate Committee to determine adequacy of training in the fields of chemistry, microbiology, mathematics, and physics. Students who do not meet all of the entrance requirements as determined by the departmental Graduate Committee must remove deficiencies while enrolled in the program in a provisionally status. In addition to the required application materials, applicants whose first language is not English must include a Test of English as a Foreign Language (TOEFL) score of at least 550. Any applicant who has not graduated from an undergraduate program in the United States must take the verbal and quantitative sections of the Graduate Record Examination.

Students pursuing the Ph.D. in food science and technology must complete a requirement for a research tool in one of the following ways before admittance to candidacy: 1) satisfactory completion of a minimum of 9 semester hours of course work in a related area of subject matter outside of the major or minor fields as approved
Courses (FDST)

803. Quality Assurance of Foods (2 cr) Prereq: FDST 207; BIO M 201 or ECON 215 or STAT 180, or equivalent; senior standing.

805. Food Microbiology (BIO S 845) (3 cr) Prereq: BIO S 312, CHEM 251 and BIO C 321, or permission.

806. Cereal Technology (3 cr) Lec 2, lab 4, Prereq: FDST 203, or permission. Corequisites: students must take FDST 203, CHEM 251, and BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) a fundamental understanding of the cereal grains, their quality, and the processes involved in their production and utilization; 2) a detailed examination of the factors that influence the quality of the cereal grains; and 3) an understanding of the application of these factors to the production and utilization of cereal grains.

806. Food Microbiology Laboratory (BIO S 846) (2 cr) Lab 6. Prereq: Parallel registration in FDST 805 or permission.

807. Food and Nutritional Science (3 cr) Lec 2, lab 2. Prereq: FDST 805, or permission. Corequisites: students must take FDST 805, CHEM 251, and BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the food and nutritional science; 2) an understanding of the application of these factors to the production and utilization of food and nutritional science; and 3) an understanding of the application of these factors to the production and utilization of food and nutritional science.

812. Food Science and Technology (3 cr) Lec 2, lab 4. Prereq: FDST 203, or permission. Corequisites: students must take FDST 203, CHEM 251, and BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the food science and technology; 2) an understanding of the application of these factors to the production and utilization of food science and technology; and 3) an understanding of the application of these factors to the production and utilization of food science and technology.

818. Eggs and Egg Products (ASC I 818) (3 cr) Lec 2, lab 3. Prereq: FDST 203, or permission. Corequisites: students must take FDST 203, CHEM 251, and BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the eggs and egg products; 2) an understanding of the application of these factors to the production and utilization of eggs and egg products; and 3) an understanding of the application of these factors to the production and utilization of eggs and egg products.

829. Dairy Products Technology (3 cr) Lec 2, lab 3. Prereq: FDST 203, or permission. Corequisites: students must take FDST 203, CHEM 251, and BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the dairy products technology; 2) an understanding of the application of these factors to the production and utilization of dairy products technology; and 3) an understanding of the application of these factors to the production and utilization of dairy products technology.

830. Sensory Evaluation (BIO M 830) (3 cr) Lec 2, lab 3. Prereq: STAT 180 or BIO M 201, 12 hours of food science or permission. Corequisites: students must take STAT 180 or BIO M 201, 12 hours of food science, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the sensory evaluation; 2) an understanding of the application of these factors to the production and utilization of sensory evaluation; and 3) an understanding of the application of these factors to the production and utilization of sensory evaluation.

841. Functional Properties of Foods (NUTR 841) (3 cr) Lec 2, lab 3. Prereq: NUTR 340 and BIO C 321 or permission. Corequisites: students must take NUTR 340 and BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the functional properties of foods; 2) an understanding of the application of these factors to the production and utilization of functional properties of foods; and 3) an understanding of the application of these factors to the production and utilization of functional properties of foods.

844. Food Chemistry Laboratory (BIO C 321) (1 cr) Prereq: FDST 207, FDST 448, or permission. Corequisites: students must take FDST 207, FDST 448, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the food chemistry laboratory; 2) an understanding of the application of these factors to the production and utilization of food chemistry laboratory; and 3) an understanding of the application of these factors to the production and utilization of food chemistry laboratory.

855. Bioprocessing of Foods (3 cr) Lec 2, lab 3. Prereq: FDST 805, BIO C 321 or permission. Corequisites: students must take FDST 805, BIO C 321, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the bioprocessing of foods; 2) an understanding of the application of these factors to the production and utilization of bioprocessing of foods; and 3) an understanding of the application of these factors to the production and utilization of bioprocessing of foods.

865. Food Engineering Unit Operations (SYM 865) (3 cr) Lec 2, lab 3. Prereq: FDST 804, or permission. Corequisites: students must take FDST 804, or permission, to complete the laboratory requirement. Selected topics include: 1) an understanding of the factors that influence the quality of the food engineering unit operations; 2) an understanding of the application of these factors to the production and utilization of food engineering unit operations; and 3) an understanding of the application of these factors to the production and utilization of food engineering unit operations.

**Faculty**

- Benson, Andrew K. - 1996; Assistant Professor; BS 1987 Iowa State; PhD 1992 Texas A&M
- Bullman, Lloyd B. - 1970; Professor; BS 1961, MS 1965 South Dakota State; PhD 1968 Iowa State
- Cuppitt, Susan L. - 1985; Professor; BS 1968, MS 1970 West Virginia; PhD 1985 Michigan State
- Hanna, Milford - 1975; Director, Industrial Agriculture Products Center; and Kenneth E. Mowbray Professor; Biological Systems Engineering and Food Science and Technology; BS 1969, MS 1971, PhD 1973 Penn State
- Helu, Susan L. - 1996; Assistant Professor; BS 1982, MS 1987, PhD 1991 Wisconsin (Madison)
- Hutkins, Robert W. - 1987; Professor; BS 1979, MS 1980 Missouri; PhD 1984 Mizzou
- Jackson, David S. - 1989; Professor; BS 1984 Cornell; MS, 1986, PhD 1988 Texas A&M
- McKenzie, Shelly R. - 1998; Assistant Professor; BS 1990, MS 1994, PhD 1997 Texas A&M
- Meagher, Michael M. - 1989; Associate Professor; BS 1980, MS 1984 Colorado State; PhD 1987 Iowa State
- Parkhurst, Anne M. - 1969; Professor; Biometry; BA 1962 Virginia; MS 1963 Yale
- Rupnow, John - 1970; Professor; BS 1967 Wisconsin; MS 1969 Illinois; PhD 1976 Purdue
- Smith, Durward A. - 1989; Associate Professor; BS 1972 Idaho; MS 1973, PhD 1976 Louisiana State
- Taylor, Stephen L. - 1987; Professor and Head; BS 1968, MS 1969 Oregon State; PhD 1973 California (Davis)
- Wehling, Randy L. - 1984; Professor; BS 1976, MS 1980, PhD 1985 Kansas State
- Weller, Curtis L. - 1992; Professor; BS 1977, MS 1983, PhD 1989 Illinois
- Zeece, Michael G. - 1984; Professor; BS 1968 St Louis; MS 1972 Illinois; PhD 1984 Iowa State
The overall objective is to establish a comprehensive program designed to educate students in geographic information science and provide them with GIS experience. Specifically, the overall objective is to establish a comprehensive foundation that will meet the needs of student scientists, analysts, planners, managers, and technicians.

A total of 22 semester hours are required for the completion of the certificate.

**Required Courses**


**Elective Courses**


GEOG 815. Intro to Computer Mapping (GEOG 815) (3 cr) Prereq: GEOG/NRES 812; or permission.


**Faculty**

- **Amedeo, Douglas M.** - 1972; Professor; Geography; BS 1962 Wisconsin State (Eau Claire; M A 1965, PhD 1967 Iowa

- **Anderson, Mark** - 1989; Associate Professor; Geosciences; BS 1977, M S 1980 Northern Illinois PhD 1985 Colorado

- **Archer, J. Clark** - 1985; Professor; Geography; BA 1964, M A 1968 Indiana PhD 1974 Iowa

- **Bleed, Peter A.** - 1972; Professor; Anthropology; BA 1965, M A 1968 M innnesota; PhD 1973 Wisconsin

- **Cantarero, Rodrigo** - 1989; Associate Professor; Community & Regional Planning; BS 1975 Iowa State; M A 1979 & 1980 Iowa PhD 1988 Southern California

- **Dewey, Kenneth F.** - 1974; Professor; Geosciences and Natural Resources Sciences; 1969 Emory, M S 1970 Northern Illinois PhD 1973 Toronto

- **Drafer, Patricia** - 1999; Professor; Anthropology; Chair, Anthropology and Geography; BA 1964/15; M A 1965, PhD 1970 Harvard

- **Gaber, John** - 1995; Associate Professor; Community and Regional Planning; BA 1997 California (Los Angeles); M L 1988 Southern California PhD 1988 Columbia

- **Gaber, Sharon** - 1991; Associate Professor and Chair, Community and Regional Planning; AB 1985 U Ontario; M L 1987 Southern California PhD 1993 Cornell

- **Hames, Raymond B.** - 1980; Professor; Anthropology; BA 1971, PhD 1978 California (Santa Barbara)

- **Hitchcock, Robert** - 1990; Professor; Anthropology; BA 1971, California (Santa Barbara); M A 1977, PhD 1982 New Mexico

- **Lawson, Merlin P.** - 1968; Professor; Geosciences; BA 1963 SU NY (Buffalo); M A 1966, PhD 1973 Clark

- **Lonsdale, Richard E.** - 1971; Professor Emeritus; Geography; AB 1949, M A 1952 California (Los Angeles); PhD 1966 Syracuse

- **Luther, Joseph** - 1993; Professor, Architecture and Community and Regional Planning; BA 1972 Eastern Washington; M D 1973, D E 1975 Texas A&M

- **Mcintosh, Charles B.** - 1958; Professor Emeritus; Geography; BA 1938 Huron; BS 1939, M A 1951, PhD 1955 Nebraska (Lincoln)

- **Merchant, James W.** - 1988; Professor and Associate Director, CALM I T (Conservation and Survey Division); BS 1969 Towson State; M A 1973, PhD 1984 Kansas

- **Narumalani, Sunil** - 1994; Associate Professor; Conservation and Survey Division; MA 1989 Georgia, PhD 1993 South Carolina

- **Rundquist, Donald** - 1967; Professor and Director, CALM I T (Conservation and Survey Division); BS 1967 Wisconsin; M A 1971 Nebraska (Omaha); PhD 1977 Nebraska (Lincoln)

- **Stoddard, Robert** - 1967; Professor Emeritus; Geography; BA 1950 Nebraska Wesleyan; MA 1960 Nebraska (Lincoln), PhD 1966 Iowa

- **Wardle, David J.** - 1974; Professor; Geography; BA 1967 Sheffield; MA 1968, PhD 1971 Nebraska (Lincoln)

**Courses (GEOG)**

- **800. Seminar in Great Plains Studies** (GPSP 800) (3 cr) Prereq: A course in the study of the Great Plains or permission.

- **805. Spatial and Environmental Influences in Social Systems** (3 cr) Prerequisites: A course in the study of the Great Plains or permission. For course description, see GPSP 805.

- **808. Microclimate: The Biological Environment** (AGRO, HORT, METR, N RES 808; WATS 408) (3 cr) Prereq: MATH 106 or equivalent; 5 hrs physics; or permission.

- **811. Field Geography** (2-3 cr) Techniques and practices used in making geographical observations in the field.

- **812. Introduction to Geographic Information Systems** (N RES 812) (4 cr) Lec 3, lab 2. Introduction to the conceptual foundations and applications of computer-based geographic information systems (G I S), GIS database development, spatial data analysis, spatial modeling, GIS implementation and administration. Lab exercises provide practical experience with GIS software.

- **814. Quantitative Methods in Geography** (3 cr) Prereq: ST AT 160 or 360 and 6 hrs geography.


- **818. Introduction to Remote Sensing** (N RES 818) (4 cr) Lec 3, lab 2. Prereq: A course in the study of the Great Plains or permission. Introduction to remote sensing of the earth from airborne and satellite platforms. Aerial photography, multispectral scanning, thermal imaging, and microwave remote sensing techniques. Physical foundations of remote sensing using electromagnetic energy, energy-matter interactions, techniques employed in data acquisition and methods of image analysis. Weekly laboratory provides practical experience in visual and digital interpretation of aerial photography, satellite imagery, thermal and radar imagery. Emphasis on applications in geographic, agricultural, environmental and natural resources analysis.

- **819. Applications of Remote Sensing in Agriculture and Natural Resources** (AGRO, GEOE 819, N RES 820) (4 cr) Lec 3, lab 2. Prereq: GEOG 815 or permission. Introduction to the practical uses of remote electromagnetic sensing in dealing with agricultural and water-resources issues.
820. Remote Sensing III: Digital Image Analysis (4 cr) Lec 3, lab 2. Prereq: GEOG 818 or 819, or equivalent or permission.
Introduction to the fundamental principles and methods of digital image processing remotely sensed data. BIophysical basis of remote sensing and the various sensor systems typically used for terrestrial monitoring. Algorithms discussed for the preprocessing, enhancement, classification and mapping of digital data for agricultural, urban, geological, environmental, and natural resource management problems.

822. Advanced Techniques in Geographic Information Systems (4 cr) Lec 3, lab 2. Prereq: GEOG 812 or equivalent or permission.
Vector and quadtree data structures, use of relational database management systems, topologically structured databases, query language and advanced analysis methods and research issues in GIS. Extensive practical experience with the AR/C/IF/NO GIS software.

825. Scientific Visualization in Cartography (4 cr) Lec 2, lab 3. Prereq: GEOG 317, 415 or 417, or permission.
Explores cartographic applications of computer animation and multimedia for the dual purposes of assisting visual thinking in map-oriented research and data exploration, and in communicating geographic ideas to others.

843. Industrial Location (2-3 cr)
Factors influencing US industrial firms' selection of regions and specific communities, how communities endeavor to attract new industry, and industrial development as a social environmental issue. Includes visits to development agencies and industrial plants.

844. Geodemographics Theoretical Concepts and Practical Applications (3 cr)
A demonstration of current interpretation of geographical patterns of population size, population composition and population change. Emphasis on application of geodemographic techniques to marketing research, environmental impact analysis, public facilities planning, electoral redistricting and the operation and maintenance of socio-economically oriented geographic information systems (GIS).

847. Political Geography (3 cr)
Importance of factors of a physical, economic, and human character in political development at local to global scales; international geopolitical aspects of environment, territoriality, core areas, capitals, and boundaries; national geographical patterns of voting, representation, public administration and public policy.

848. Pro-seminar in International Relations (ECON, POLS, SOC 186; ANTH, HIST 879) (3 cr)  Open to students interested in international relations by permission. For course description, see POLS 866.

850. Climate and Society (AGRO, METR 850; NRES 837) (3 cr) Prereq: METR 200 or 351, or equivalent, or permission.
Four week spring semester of even-numbered calendar years. For course description, see NRES 852.

851. Advanced Topics in Physical Meteorology (METR 851) (3 cr)  Prereq: METR 850. For course description, see METR 851.

852. Synoptic Meteorology (METR 852) (4 cr) Lec 3, lab 2. Prereq: METR 255. For course description, see METR 852.

853. Physical Climatology (METR 853) (3 cr) Prereq: METR 255. For course description, see METR 853.

854. Regional Climatology (METR 854) (3 cr) Prereq: METR 351. For course description, see METR 854.

855. Physiography (3 cr) Prereq: Orientation course in geography, geology, or agronomy.
Quaternary environment focusing on the theme of “man and nature.” Climatic changes of the Quaternary; theories of climatic change. Paleobiocene environments of the Old and New World; man/land relationships in prehistory.

856. Dynamic Meteorology (METR 856) (3 cr) Prereq: METR 255, MATH 208 and PHYS 211. For course description, see METR 856.

857. Advanced Synoptic Meteorology-Climatology (METR 857) (4 cr) Lec 3, lab 1. Prereq: METR 852. For course description, see METR 857.

858. Dynamical Meteorology II (METR 858) (3 cr) Prereq: METR 856 and CSC 120. For course description, see METR 858.

866. Physical Meteorology (METR 866) (4 cr) Prereq: METR 856. For course description, see METR 866.

868. Satellite Meteorology (METR 868) (3 cr) Prereq: METR 852 or parallel. For course description, see METR 868.

877. Great Plains Field Pedology (AGRO, NRES 877, SOIL 477) (4 cr) Prereq: AGRO/10 SOIL 153 or permission.
For course description, see NRES 877.

869. Bioclimatic Influence on Agriculture (AGRO, NRES 869; HORT 807) (3 cr) Lec 1, Lab 2. Prereq: MATH 106, 4 hrs. For course description, see NRES 869.

878. Pro-seminar in Latin American Studies (ANTH, HIST, EDPS, MODL, POLS, SOC 187) (3 cr, max 6) Prereq: Permission. For course description, see ANTH 878.

881. Water Resources Seminar (AGRO 881; GEOL, NRES 881) (1-2 cr) Prereq: Senior-level master's degree program and permission of major adviser. For course description, see AGRO 881.

How cognitive processes help individuals to comprehend the spatial context of a GIS and interact with the user interface. For course description, see METR 895.

893. Seminar in Climatic Change (METR 952) (3 cr, max 6) Prereq: METR 852 or equivalent or permission.
For course description, see METR 952.

895. Internship in Meteorology-Climatology (METR 895) (1-6 cr) Prereq: Permission. Prereq: NRES 852.
For course description, see METR 895.

897. Internship in Geography (1-6 cr) Prereq: Permission.
Applying geographic training to on-the-job learning.

898. Advanced Special Problems (1-24 cr) Prereq: Varies. For course description or registration guide. Eading course or special projects.

999. Masters’ Thesis (6-10 cr) Prereq: Admission to master’s degree program and permission of major adviser.

902. General Seminar (1-2 cr, max 3) Prereq: Permission.

History of geographical thought concentrating on the period since 1800. Emphasis on both the traditional and modern ways of viewing the nature of geography and to the linkages between them.

904. Explanation in Geography (2-3 cr)  Prereq: GEOL 890. For course description, see METR 890.

922. Seminar in Geographic Information Systems (NRES 892) (3 cr) Prereq: GEOL 892 and 822, or equivalent or permission. For students interested in advanced topics in computer oriented geographical data analysis. For course description, see METR 892.

931. Comparative Studies of the Dispossession of Indigenous Peoples (3 cr) Prereq: Permission. For course description, see METR 893.

932. Seminar in Geographic Information Systems (NRES 893) (3 cr) Prereq: Permission. For course description, see METR 894.

954. Seminar in Climatic Change (METR 954) (3 cr, max 6) Prereq: Permission.

967. Soil Genesis and Classification (AGRO, NRES 977) (3 cr) Lec 2, rec. 1. Prereq: AGRO 875, NRES 877/875/250, or permission. For course description, see NRES 977.


999. Doctoral Dissertation (1-24, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Geosciences

Department Chairperson: Norman D. Smith, Ph.D.

Graduate Committee: Associate Professor Kettler (chair); Professor Zoltan; Associate Professors Blum, Friz, Rowe

The department offers both the master of science and doctor or philosophy degrees in geosciences. Students may develop programs of study which emphasize specific areas within the atmospheric and geological sciences. A number of students are supervised by faculty members from the Conservation and Survey Division and the University of Nebraska State Museum. The department has established program requirements in addition to those stipulated by the Office of Graduate Studies. These requirements are outlined in the department's Graduate Student Handbook. Other program requirements (including language and research tools) are at the discretion of the supervisory committee and should be consistent with the educational objectives of the student.

Students are encouraged to complete the masters degree before beginning doctoral work. Those lacking calculus or physics may be admitted with the provision that the deficiencies be removed after enrollment.
Specializations available at the masters level: Environmental Studies; Geology; Great Plains Studies; Hydrogeology; M eotology; Climatology; Water Resources Planning and Management.

Specializations available at the doctoral level: Environmental Studies; Geology; Great Plains Studies; H ydrogeology; Meteorology; Climatology.

Faculty
**Anderson, Mark** - 1987; Associate Professor; BS 1977, M S 1980 N.ornith Illinois Ph D 1985 Colorado

**Blum, Michael D.** - 1995; Associate Professor; BS 1983, M S 1987, Ph D 1991 Austin (Texas)

**Dawes, Kenneth F.** - 1974; Professor; BA 1969 Elmhurst; M S 1970 N.ornith Illinois Ph D 1973 Toronto

**Fritz, Sheryl C.** - 1999; Associate Professor; BA 1974 M acolester; M S 1979 Kent State; Ph D 1985 M innesota

**Goble, R. J.** - 1979; Associate Professor; BS 1968, M Sc 1970 Alberta Ph D 1977 Queens

**Harwood, David M.** - 1970; Professor and Curator of Vertebrate Paleontology; BA 1963 Wooster; M S 1965 N.ew Mexico; Ph D 1971 Columbia

**Kettler, Richard M.** - 1989; Associate Professor; BS 1978 Wisconsin; M S 1982 California (Los Angeles); Ph D 1990 Michigan

**Lawson, Merlin P.** - 1963; Professor and Chair; BA 1962 St. Michael; M S 1966, Ph D 1968 Wisconsin State

**Loope, David B.** - 1987; Associate Professor; BS 1982 Fl omar; M S 1984 Northern Illinois; Ph D 1985 Colorado State

**Loope, David B.** - 1982; Associate Professor; BS 1987, M S 1990 Oregon; Ph D 1993 Colorado State

**Rowe, Clinton M.** - 1983; Professor; MS 1982 Florida State; PhD 1986 Northern Illinois

**Swinehart, James B.** - 1984; Professor; BS 1976, MS 1982, PhD 1988 Delaware State

**Watkins, David K.** - 1979; Associate Professor; BS 1968, MS 1971 North Dakota State; MS 1982 California (Los Angeles); PhD 1990 Columbia

**Watkins, David K.** - 1989; Associate Professor; BS 1978 Wisconsin; M S 1982 California (Los Angeles); Ph D 1990 Michigan

**Watson, Martin R.** - 1968; Professor; BA 1963 SUNY Buffalo; MA 1966, Ph D 1973 Clark

**Lindsey-Griffin, Nancy** - 1983; Professor; BS 1964 Colorado; M S 1969, Ph D 1982 California

**Lopes, David B.** - 1981; Professor; AB 1971 Duke; BS 1971 Utah State; PhD 1981 Wyoming

**Mason, Joseph A.** - 1979; Assistant Professor; BS 1969 Wisconsin (Stevens Point); M S 1992 Michigan; Ph D 1995 Wisconsin (Madison)

**Pederson, Darryl T.** - 1975; Professor; BS 1961 Valley City State; M S 1966, Ph D 1971 North Dakota

**Rowe, Clinton M.** - 1987; Associate Professor; BA 1978, M S 1982, Ph D 1988 Delaware

**Smith, Norman** - 1988; Professor and Chair; BS 1962 St. Lawrence; M S 1964, Ph D 1967 Brown

**Swinehart, James B.** - 1970; Professor; BS 1965 California (Riverside); M S 1979 Nebraska (Lincoln)

**Trevor, Samuel B.** - 1958; Professor; BS 1951 Minnesota and Technology (M ichigan); M S 1953 Idaho; Ph D 1959 Ohio State

**Voehl, Michael R.** - 1975; Professor; C urator and Coordinator of Vertebrate Paleontology; MSU; BS 1962 Nebraska (Lincoln); Ph D 1966 Wyoming

**Watkins, David K.** - 1984; Professor; BS 1976, M S 1979 Virginia Polytechnic; Ph D 1984 Florida State

**Zlotnik, Vitaly A.** - 1990; Professor; MS 1971 Byelorussian State (Minsk); Ph D 1997 National Institute for Hydrogeology and Engineering Geology (Moscow)

Courses

**Colloquium and Research (GEOS)**

099. Seminar and Colloquium (0 cr) Prereq: Graduate standing. All GEOS graduate students in residence must register for GEOS 099 each semester. GEOS 099 is P/F only.

808. Special Problems in Geosciences (1-6 cr, max 24) Prereq: 12 hours geosciences.

899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

966. Research Other Than Thesis (1-24 cr) Prereq: Permission of major and/or minor in meteorology/climatology. Application for major and/or the minor in meteorology/climatology. For course description, see NRES 980.

952. Agricultural Climatology (AGRO,HORT, NRES 907) (3 cr) Prereq: MATH 106 or equivalent; O nterval spring semester of odd-numbered calendar years. For course description, see NRES 952.

953. Seminar in Meteorology and Climatology (GEOG 953) (3 cr, max 6)

954. Seminar in Climatic Change (GEOG 954) (3 cr per sem, max 6) Prereq: METR 853 or 855 or equivalent or permission.

**Mineralogy, Petrology, and Geochemistry (GEOL)**


812. Advanced Mineralogy (3-6 cr) Prereq: 12 hrs geol- geography including GEOL 210; CHEM 113.

814. Clay Mineralogy (3 cr) Prereq: GEOL 210; CHEM 113 or equivalent. Structure and properties of common clay minerals; their formation and geologic/geochemical identity; clay mineral analysis. Application of clay mineralogy to determining the age of rocks, as well as the sources of the chemical components in the rocks.

817. Organic Geochemistry (3 cr) Lab 3; Prereq: GEOL 212 and CHEM 201; or permission. Opion and preservation, and transport of the organic compounds found in the rock record. Operations of organic geochemis- try to paleoecological and paleoenvironmental interpretations as well as to discerning the origins of coal, oil and natural gas.

818. Chemistry of Natural Waters (NRES 819) (3 cr) Lec 3. Prereq: Two semesters college chemistry or equivalent, or permission. O nterval spring semester of even-numbered calendar years. Principles of water chemistry and their use in precipitation, surface water, and groundwater studies. Groundwater applications used to determine the time and course of groundwater recharge, estimate groundwater residence time, identify aquifer water chemistry; and examine the age of mixing of waters of various sources; and evaluate what types of biological and chemical processes occurred during the water's travel through the aquifer system.

818L. Chemistry of Natural Waters Lab (NRES 819L) (1 cr) Lec 3. Prereq: Two semesters college chemistry or equivalent. O nterval spring semester of even-numbered calendar years. Principles of water chemistry and their use in precipitation, surface water, and groundwater studies. Groundwater applications used to determine the time and course of groundwater recharge, estimate groundwater residence time, identify aquifer water chemistry; and examine the age of mixing of waters of various sources; and evaluate what types of biological and chemical processes occurred during the water's travel through the aquifer system.

818. Chemistry of Natural Waters Lab (NRES 819L) (1 cr) Lec 3. Prereq: Two semesters college chemistry or equivalent. O nterval spring semester of even-numbered calendar years. Principles of water chemistry and their use in precipitation, surface water, and groundwater studies. Groundwater applications used to determine the time and course of groundwater recharge, estimate groundwater residence time, identify aquifer water chemistry; and examine the age of mixing of waters of various sources; and evaluate what types of biological and chemical processes occurred during the water's travel through the aquifer system.

820. Siliclastice Sedimentology (3 cr) Lec 2, Lab 3; Prereq: GEOL 310. Depositional processes, environments of deposition, and facies models. Description, classification, and analysis of modern and ancient siliclastic sedimentary rock.

821. Carbonate Sedimentology (3 cr) Lec 2, Lab 3; Prereq: GEOL 310. Depositional and interpretation of carbonate and evaporite sediments and rocks with emphasis on tectonography and field studies.


924. Biogeochemical Cycles (BIO S 838) (3 cr) Lec 3. Prereq: CHEM 200 and 113, 114, 115. 12 hrs in geology or biological sciences. Chemical cycling at or near the earth's surface. Interactions among the atmosphere, biosphere, geosphere, and hydrosphere. Modern processes, the geological record, and human impacts on elemental cycles.


934. Site Analysis in Vertebrate Paleontology (3 cr) Lec 2, lab 3. Prereq: GEOL 330. Geology majors should register for lab. Survey of the evolution of the vertebrates, including examination of the geological and biological factors that influence the pattern of evolution, and laboratory study of fossil materials of the major vertebrate groups.

935. Mammalian Paleontology (2 cr) Lec 2. Prereq: Permission. Survey of Mesozoic and Cenozoic mammalian history with emphasis on integration of geological and biological data on pattern and process in mammalian evolution.

936. Marine Ecology and Paleobiology (BIO S 861) (2-3 cr) Lec 2, lab 1. Prereq: 12 hrs in geology or biological sciences. Introduction to the principles of marine, ground-penetrating radar, and borehole geophysical methods and their application to groundwater, engineering, environmental, and archaeological investigations.

937. Mesozoic Calcareous Nannofossil Paleontology (3 cr) Lec 3. Prereq: GEOL 330 or GEOL 220, or permission. Survey of the evolution of the Mesozoic period as illustrated by a study of their fossil deposits.

938. Cenozoic Calcareous Microfossil Paleontology (3 cr) Lec 3. Prereq: GEOL 330 or permission. Study of the evolution of the Cenozoic period as illustrated by a study of their fossil deposits.


941. Advanced Tectonics (3 cr) Prereq: GEOL 840 or permission. Tectonics and regional structure of selected mountain belts: Precambrian Tectonics; tectonics and resources.

942. Environmental Geology I (NRES 442/842) (4 cr) Lec 3, lab 3. Prereq: MATH 107; PHYS 211; GEOL 101 or 106; or equivalent or permission. Geological and environmental sciences. Study of the development of model concepts for specific groundwater flow and transport conditions, selection of solution methods, including computer software and hardware, performance of computer modeling, and interpretation of results.

943. Field Geology (GEOL) *869. Regional Field Geology (1 cr) Prereq: 12 hrs geology including GEOL 103 and 330. Week-end field trips. Field investigation of classic areas of M. continent Geology emphasizing principles of stratigraphy, geology, sedimentology, and paleontology.

944. Field Techniques in Hydrogeology (3 cr) Lec 3. Prereq: GEOL 868 or permission. Emphasis on measurement of physical, chemical, and engineering processes affecting movement of contaminants in the hydrogeological environment and their applications.


946. Water Resources Seminar (AGRO, CRPL, CIV, M, NRES, POLS, SOIL, WATS 475) (3 cr) Lec 3. Prereq: Permission. For course description, see AGRO 875.


949. Environmental and Urban Geology (3 cr) Lec 3, lab 2. Prereq: 12 hrs geology or CRPL 600, or permission. Significance and application of regional and local geologic materials and processes that affect land-use potential as areas undergo urbanization.

950. Groundwater Geology (NRES 888) (3 cr) Prereq: GEOL 101, MATH 107 or equivalent. Occurrence, movement, and development of water in the geologic environment.

951. Mesozoic Geology (3 cr) Lec, lab. Prereq: Permission. Principles of flow through porous media with emphasis on basic classical solutions, flow-net analysis, and elementary modern numerical solutions that aid in the analysis and development of groundwater supplies.

952. Environmental and Urban Hydrology (NRES 917) (3 cr) Prereq: NRES 815 or equivalent or permission. Fundamentals of physical, mathematical, chemical, and engineering processes affecting movement of contaminants in the hydrogeological environment and their applications. Teamwork, projects, seminar presentations, field trips and invited lectures.


956. Contaminant Hydrogeology (3 cr) Prereq: GEOL 888, MATH 208 or equivalent, or permission. Occurrence, behavior and remediation of contamination in geological media. Fundamentals of physical, mathematical, chemical, and engineering processes affecting movement of contaminants in the hydrogeological environment and their applications.


958. Introduction to Groundwater Modeling (3 cr) Prereq: GEOL *889, MATH 208 or equivalent, or permission. Application of fundamentals of modeling techniques (analytical, stratigraphic, numerical) to development of model concepts for specific groundwater flow and transport conditions. Selection of solution methods, including computer software and hardware, performance of computer modeling, and interpretation of results.


963. Water Resources Seminar (AGRO, CRPL, CIV, M, NRES, POLS, SOIL, WATS 475) (3 cr) Lec 3. Prereq: Permission. For course description, see AGRO 875.

965. Special Problems in Geology (1-6 cr) Prereq: 12 hrs geology. Special Problems in Geology.


973. Seminar in Geologic Controls on Water Resources (1-6 cr) Prereq: 12 hrs in geology or biological sciences. Seminar in Geologic Controls on Water Resources.


978. Special Problems in Geology (1-6 cr) Prereq: 12 hrs geology. Special Problems in Geology.


---

**Gerontology**

**Omaha Program**

Departmental Chair: James A. Thorson, Ed.D.

A degree program in social gerontology is administered through the University of Nebraska at Omaha with courses available on both the Lincoln and Omaha campuses.

The master of arts in social gerontology is designed to help meet the educational needs of two principal groups. First, the degree program is designed for those who are mid-career professionals who wish to gain additional knowledge...
and insight from the research in the field of gerontology, who wish to interpret the research critically, and who may wish to be prepared to conduct research on their own. A second smaller group that may benefit from the program consists of those who wish to develop capacities of research and teaching in the field of aging. A third group from surrounding campuses, prepare teaching portfolios, present job talks, and engage in mock interviews. They discuss teaching and research expectations, tenure and promotion standards, campus life, and faculty governance at different types of colleges and universities.

The master of arts in social gerontology is not intended to be a practitioner's degree. Those who seek graduate preparation for entering the field of aging in a service capacity might wish to earn the graduate certificate in gerontology in conjunction with a master's degree in social work, counseling, public administration, health education, sociology, or human development and the family.

Additional information can be obtained from:
Department of Gerontology
University of Nebraska at Omaha Annex 24
Omaha, NE 68182
(402) 554-2272
or
College of Public Affairs and Community Service
University of Nebraska–Lincoln
1100 N e h a r d
PO Box 880633
Lincoln, NE 68588-0633
(402) 445-6750

Faculty

**Horacek, Bruce J. - 1974; Professor; BA 1963, MA 1963, M arquette, PhD 1978, Iowa**

**Kosloski, Karl D. - 1994; Professor; BA 1973, M inneosta, MA 1975, M iddle Tennessee State, PhD 1984, New (ret).**

**Powell, Falvey (Chuck) - 1974; Professor; BA 1969, Bellevue, M A 1972, O klahoma, PhD 1987, Nebraska, (Lincoln)**

**Thorson, James A. - 1977; Professor and Chair; BS 1967, N orthern Illinois, M Ed 1972, N orth Carolina, C hapel H ill; EdD 1975, Georgia**

**Waskel, Shirley A. - 1975; Professor; BS 1964, Alverno (m atron), MS 1971, Nebraska (Omaha), PhD 1979, Nebraska, (Lincoln)**

Great Plains Studies

**Advisory Committee:**
Associate Professor, Kuzelka (chair); Professor, Archer, Bolick, Crescent, Hayden, Hirst, Kaye, Lee, Moulton, Supalla, Swinehart; Associate Professors, Erdt, G. G.; Garber, Parsons; Asst. Professor, Wunder.

Departments Participating (Masters):
Agricultural Economics; Agricultural Leadership, Education and Communication; Anthropology; Architecture, Communication Studies; Community and Regional Planning; Curriculum and Instruction; Economics; Economics English, Geography, Geosciences; History; M useum; Studies; Near Asian and Near Eastern Studies; N atural Resource Sciences; and Textiles, C lothing and Design

Departments Participating (Doctoral):
Agricultural Economics; Ag Economics; Communication Studies: Curriculum and Instruction; Economics; Economics English; Geography; Geosciences; History; N atural Resource Sciences; and N atural Resource Sciences; and Textiles, C lothing and Design

The objective of the Great Plains Studies Interdepartmental Area of Specialization is to provide an understanding of the complex and unique features of the Great Plains. This inquiry invites an analysis of the relationships between the natural and managed environment and the cultures brought to it by various indigenous and immigrant populations, as well as the implications of these relationships for the future. The specialization is facilitated by the Center for Great Plains Studies, which is the oldest and largest interdisciplinary, intercollegiate, regional research and teaching center in the United States.

Masters-level Specialization Requirements:
The specialization is available to any student accepted to pursue a masters degree within a participating department. One student of the student's examining committee must be a fellow of the Center for Great Plains Studies.

Each student will be required to complete:
1. A masters degree in one of the participating departments.
2. GPSP 800 Seminar in Great Plains Studies (3 cr)
3. Six (6) additional credit hours of Great Plains Studies courses from departments outside the student's major department.
4. Under any option (I, II, or III) there should be a Great Plains component. For example, when a student completes option I (thesis), that thesis should present some issue(s) relevant to the Great Plains.

Doctoral-level Specialization Requirements:
The specialization is available to any student accepted into a doctoral program within any of the participating departments or interdepartmental areas. One member of the student's examining committee must be a Fellow of the Center for Great Plains Studies.

Each student will be required to complete:
1. A doctoral degree in one of the participating departments or interdepartmental areas.
2. GPSP 800 Seminar in Great Plains Studies (3 cr)
3. Twelve (12) additional credit hours of Great Plains Studies courses from departments outside the student's major department. No more than six (6) hours should be in one department.
4. The dissertation should present some issue(s) relevant to the Great Plains.

Courses (GPSP)

801. Seminar in Great Plains Studies (GEOS 801) (3 cr)
Prereq: A course in the study of the Great Plains or permission.
Interdisciplinary. Topic varies.

809. Internship (1-6 cr, max 6) Fld. Prereq: Permission. P/N only.

Interdepartmental Courses

Agricultural Economics
AECN 822: Economics of Agricultural Production

AECN 856: Environmental Law
AECN 857: Water & Natural Resource Law
AECN 865: R esource & Environmental Economics
AECN 868: Advanced R esource & Environmental Economics

Agricultural Leadership, Education and Communication
ALEC 801: Theoretical Foundations of Leadership
ALEC 810: Environmental Leadership: A Historical & Ethical Perspective
**Courses of Instruction**

<table>
<thead>
<tr>
<th>Department</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture and Horticulture</strong></td>
<td>AGRO 808. Microclimate: The Biological Environment (GEOG/NRES 808)</td>
</tr>
<tr>
<td></td>
<td>AGRO 835. Agroecology (NRES 835)</td>
</tr>
<tr>
<td></td>
<td>AGRO 840. The Range Ecosystem</td>
</tr>
<tr>
<td></td>
<td>AGRO 842. Range Plants</td>
</tr>
<tr>
<td></td>
<td>AGRO 844. Range Analysis Analysis</td>
</tr>
<tr>
<td></td>
<td>AGRO 845. Livestock Management on Range &amp; Pasture</td>
</tr>
<tr>
<td></td>
<td>AGRO 850. Climate &amp; Society (GEOG/METR 850, NRES 852)</td>
</tr>
<tr>
<td></td>
<td>AGRO 875. Water Quality Strategy (AGRO/GEOG 875)</td>
</tr>
<tr>
<td></td>
<td>AGRO 877. Great Plains Field Pedology (GEOG/NRES 877)</td>
</tr>
<tr>
<td></td>
<td>AGRO 881. Water Resources Seminar (GEOG 881, NRES 815)</td>
</tr>
<tr>
<td></td>
<td>HORT 909. Crop Responses to the Environment (AGRO/NRES 909)</td>
</tr>
<tr>
<td><strong>Anthropology and Geography</strong></td>
<td>ANTH 816. Topics in Cultural Anthropology</td>
</tr>
<tr>
<td></td>
<td>ANTH 819. Art &amp; Anthropology of Native North America (MUS 870)</td>
</tr>
<tr>
<td></td>
<td>ANTH 833. North American Archaeology</td>
</tr>
<tr>
<td></td>
<td>ANTH 834. An Intro to Plains Archaeology</td>
</tr>
<tr>
<td></td>
<td>ANTH 851. Indians of Contemporary North America</td>
</tr>
<tr>
<td></td>
<td>ANTH 854. Traveling Ethnographic Field School</td>
</tr>
<tr>
<td></td>
<td>ANTH 876. Human Rights, Environment &amp; Development</td>
</tr>
<tr>
<td></td>
<td>ANTH 880. Advanced Fieldwork</td>
</tr>
<tr>
<td></td>
<td>ANTH 882. Advanced Field Methods</td>
</tr>
<tr>
<td></td>
<td>ANTH 896. Special Readings in Anthropology</td>
</tr>
<tr>
<td></td>
<td>ANTH 898. Advanced Current Topics in Anthropology</td>
</tr>
<tr>
<td></td>
<td>ANTH 953. Seminar in Anthropology &amp; Geography (GEOG 933)</td>
</tr>
<tr>
<td></td>
<td>GEOG 850. Climate &amp; Society (AGRO/METR 850, NRES 852)</td>
</tr>
<tr>
<td></td>
<td>GEOG 877. Great Plains Field Pedology (AGRO/NRES 877)</td>
</tr>
<tr>
<td></td>
<td>GEOG 881. Water Resources Seminar (AGRO 881, NRES 815)</td>
</tr>
<tr>
<td></td>
<td>GEOG 933. Seminar in Geography &amp; Anthropology (ANTH 953)</td>
</tr>
<tr>
<td></td>
<td>GEOG 935. Seminar in Historical Geography: Great Plains</td>
</tr>
<tr>
<td><strong>Architecture</strong></td>
<td>IDES 860. Preservation &amp; Conservation of Historic Interiors</td>
</tr>
<tr>
<td></td>
<td>ARCH 848. Architecture of the Great Plains</td>
</tr>
<tr>
<td></td>
<td>ARCH 860. Environmental Survey &amp; Analysis (CR PL 872)</td>
</tr>
<tr>
<td></td>
<td>ARCH 863. Architectural Preservation</td>
</tr>
<tr>
<td><strong>Art and Art History</strong></td>
<td>ANTH 898. Special Topics American Art &amp; Regionalism; Great Plains</td>
</tr>
<tr>
<td><strong>Biological Sciences</strong></td>
<td>BIOS 855. Great Plains Flora</td>
</tr>
<tr>
<td></td>
<td>BIOS 859. Limnology (NRES 859)</td>
</tr>
<tr>
<td></td>
<td>BIOS 870. Prairie Ecology</td>
</tr>
<tr>
<td></td>
<td>BIOS 882. Field Entomology</td>
</tr>
<tr>
<td></td>
<td>BIOS 887. Field Plant Biology</td>
</tr>
<tr>
<td></td>
<td>BIOS 888. Natural History of the Invertebrates</td>
</tr>
<tr>
<td></td>
<td>BIOS 891. Ichthyology (NRES 859)</td>
</tr>
<tr>
<td></td>
<td>BIOS 892. Fisheries Biology (NRES 864)</td>
</tr>
<tr>
<td></td>
<td>BIOS 894. Ornithology</td>
</tr>
<tr>
<td></td>
<td>BIOS 895. Political Communication</td>
</tr>
<tr>
<td></td>
<td>BIOS 896. Seminar in Intercultural Communication</td>
</tr>
<tr>
<td></td>
<td>COM 898. Cultural Criticism</td>
</tr>
<tr>
<td><strong>Communication Studies</strong></td>
<td>COMM 830. Political Communication</td>
</tr>
<tr>
<td></td>
<td>COMM 850. Seminar in Intercultural Communication</td>
</tr>
<tr>
<td><strong>Community and Regional Planning</strong></td>
<td>CR PL 800. Intro to Planning</td>
</tr>
<tr>
<td></td>
<td>CR PL 804. Legal Aspects of Planning</td>
</tr>
<tr>
<td></td>
<td>CR PL 860. Planning &amp; Design in the Built Environment</td>
</tr>
<tr>
<td></td>
<td>CR PL 870. Environmental Planning &amp; Policy</td>
</tr>
<tr>
<td></td>
<td>CR PL 872. Environmental Survey &amp; Analysis (ARCH 860)</td>
</tr>
<tr>
<td></td>
<td>CR PL 875. Water Quality Strategy (AGRO/GEOG 875)</td>
</tr>
<tr>
<td></td>
<td>CR PL 877. Recreation &amp; Park Planning</td>
</tr>
<tr>
<td></td>
<td>CR PL 880. Economic Development Planning</td>
</tr>
<tr>
<td></td>
<td>CR PL 895. Selected Topics Environmental Issues &amp; Improvements</td>
</tr>
<tr>
<td></td>
<td>CR PL 895T. Selected Topics Historic Preservation Planning</td>
</tr>
<tr>
<td></td>
<td>CR PL 896. Special Problems: Rural &amp; Small Town Planning</td>
</tr>
<tr>
<td><strong>Curriculum and Instruction</strong></td>
<td>CRR 925E. Seminar in the Curriculum &amp; Teaching of Social Studies Great Plains</td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td>ECON 840. Regional Development</td>
</tr>
<tr>
<td></td>
<td>ECON 842. Regional Analysis</td>
</tr>
<tr>
<td></td>
<td>ECON 857. US Economic History: 19th Century (HIST 857)</td>
</tr>
<tr>
<td></td>
<td>ECON 858. US Economic History: 20th Century (HIST 858)</td>
</tr>
<tr>
<td></td>
<td>ECON 871. Public Finance</td>
</tr>
<tr>
<td></td>
<td>ECON 872. Efficiency in Government</td>
</tr>
<tr>
<td><strong>English</strong></td>
<td>ENGL 805K. Canadian Fiction</td>
</tr>
<tr>
<td></td>
<td>ENGL 811B. Plains Literature</td>
</tr>
<tr>
<td></td>
<td>ENGL 845K. Ethnic Literature: Native American Literature</td>
</tr>
<tr>
<td></td>
<td>ENGL 901. Seminar in Great Plains Literature</td>
</tr>
<tr>
<td></td>
<td>ENGL 933. Seminar in American Authors since 1900: Willa Cather</td>
</tr>
<tr>
<td><strong>Geosciences</strong></td>
<td>GEOG 815. Water Resources Seminar (AGRO/GEOG 815, NRES 815)</td>
</tr>
<tr>
<td></td>
<td>GEOG 823. Quaternary Ecology &amp; Climate (BIOG 823)</td>
</tr>
<tr>
<td></td>
<td>GEOG 850. Surficial Processes &amp; Landscape Evolution</td>
</tr>
<tr>
<td></td>
<td>GEOG 875. Water Quality Strategy (AGRO/CR PL/NRES 875)</td>
</tr>
<tr>
<td></td>
<td>GEOG 881. Environmental &amp; Urban Geology (NRES 888)</td>
</tr>
<tr>
<td></td>
<td>GEOG 888. Groundwater Geology (NRES 888)</td>
</tr>
<tr>
<td></td>
<td>GEOG 889. Hydrogeology (NRES 887)</td>
</tr>
<tr>
<td></td>
<td>GEOG 929. Mesozoic &amp; Cenozoic Stratigraphy</td>
</tr>
<tr>
<td></td>
<td>GEOG 934. Site Analysis in Vertebrate Paleontology</td>
</tr>
<tr>
<td></td>
<td>GEOG 935. CenozoicVertebrate Paleontology</td>
</tr>
<tr>
<td></td>
<td>GEOG 953. Glacial Geology</td>
</tr>
<tr>
<td></td>
<td>METR 850. Climate &amp; Society (AGRO/GEOG 850, NRES 852)</td>
</tr>
<tr>
<td><strong>History</strong></td>
<td>HIST 852. American Frontier in the Nineteenth Century</td>
</tr>
<tr>
<td></td>
<td>HIST 864. Native American History: Selected Topics</td>
</tr>
<tr>
<td></td>
<td>HIST 865. History of Plains Indians</td>
</tr>
<tr>
<td></td>
<td>HIST 889L. Directed Readings History of the Great Plains</td>
</tr>
<tr>
<td></td>
<td>HIST 899. Directed Readings The History &amp; Culture of the American Indian</td>
</tr>
<tr>
<td><strong>Museum Studies Program</strong></td>
<td>MUSS 801. History &amp; Philosophy of Museums</td>
</tr>
<tr>
<td></td>
<td>MUSS 870. Art &amp; Anthropology of Native America (ANTH 819)</td>
</tr>
<tr>
<td><strong>Natural Resource Sciences</strong></td>
<td>NRES 808. Microclimate: The Biological Environment (AGRO/GEOG 808)</td>
</tr>
<tr>
<td></td>
<td>NRES 815. Water Resources Seminar (AGRO/GEOG 815, GEOI 815)</td>
</tr>
<tr>
<td></td>
<td>NRES 823. Integrated Resource Management</td>
</tr>
<tr>
<td></td>
<td>NRES 835. Agroecology (AGRO 835)</td>
</tr>
<tr>
<td></td>
<td>NRES 850. Biology of Wildlife Populations</td>
</tr>
<tr>
<td></td>
<td>NRES 852. Climate &amp; Society (AGRO/GEOG 850)</td>
</tr>
<tr>
<td></td>
<td>NRES 859. Limnology (BIOS 859)</td>
</tr>
<tr>
<td></td>
<td>NRES 864. Fisheries Biology (BIOS 892)</td>
</tr>
<tr>
<td></td>
<td>NRES 866. Wetlands</td>
</tr>
<tr>
<td></td>
<td>NRES 875. Water Quality Strategy (AGRO/CR PL/GEOG 875)</td>
</tr>
<tr>
<td></td>
<td>NRES 877. Great Plains Field Pedology (AGRO/GEOG 877)</td>
</tr>
<tr>
<td></td>
<td>NRES 881. Hydrogeology (GEOG 889)</td>
</tr>
<tr>
<td></td>
<td>NRES 888. Groundwater Geology (GEOG 888)</td>
</tr>
<tr>
<td></td>
<td>NRES 889. Ichthyology</td>
</tr>
<tr>
<td><strong>Textiles, Clothing and Design</strong></td>
<td>TXCD 978. Seminar in Textiles History</td>
</tr>
</tbody>
</table>

---

**Health and Human Performance**

See "Health and Human Performance" on page 97.

---

**History**

Department Chair: Kenneth Winkle, Ph.D.
Graduate Committee: Professor Cobble (chair); Professors Ambrosius, Maslowski; Associate Professor Gorman

Admission to full graduate standing leading to the MA degree requires 26 hours of history at the undergraduate level and two college years or the equivalent of a foreign language. Applicants who do not meet these requirements may be admitted but must make good the deficiency before the MA degree is awarded.

All applicants for admission to graduate study in history and for financial assistance, fellowships, and assistantships must submit their scores on the verbal and quantitative portions of the Graduate Record Examination. The Graduate Committee also requires a written statement from candidates indicating their area of interest and why they wish to pursue graduate study in history, as well as a sample of their written work. For those desiring a minor in history, courses will be arranged between the student and a member of the department.
History/Courses of Instruction

Master of Arts Degree. The candidate for the masters degree must show competency by a written comprehensive examination and/or oral examination covering the student's approved program of study.

Doctor of Philosophy Degree. Research leading to the PhD degree is offered in the following general areas: North American History, European History, and Comparative World History. Within these areas students may specialize in the following fields: North America, Western Hemisphere, American Society and Culture, Indigenous Peoples, Military/Diplomatic/International History, Pre-Medieval Europe, Medieval Europe, German Studies, Comparative Literature, Gender Studies, and Women's History. The candidate for the doctoral degree also must show competency by passing written comprehensive examinations in their general area and in comparative world history. Faculty in two foreign languages is ordinarily required. The supervisory committee may approve an alternate research tool for one foreign language when it is particularly relevant to a student's chosen area of specialization.

Students should consult the Guide to Graduate Study in History for a complete statement of academic policies and student responsibilities in the history department's graduate program.

Specializations available for the MA and PhD degrees: Great Plains Studies, International Relations, History of Science, Technology, and Invention, Nineteenth Century Studies.

NOTE: Students who enroll for graduate credit in courses cross-listed with undergraduate courses must complete significant additional course requirements beyond those expected of students enrolling for undergraduate credit. These will be established by the instructor and will include more demanding criteria for evaluation, as well as, for example, additional research projects, readings, papers, etc.

Faculty

**Ambrosius, Lloyd E.** 1967, Professor; BA 1963, MA 1964, PhD 1967 Illinois
**Berg, Patricia** 1970, Professor; AB 1965 Columbia, MA 1967, PhD 1972 Chicago
**Bremer, John A.** 1965, Professor; AB 1954 Harvard; PhD 1960 John Hopkins
**Burnett, Amy N.** 1969, Associate Professor; BA 1979, MA 1984, PhD 1989 Wisconsin
**Cahen, David L.** 1982, Professor; AB 1969 California (Berkeley), MA 1977, PhD 1980 Hopkins
**Cable, Parks M.** 1976, Professor; BA 1968 South Carolina, MA 1971, PhD 1975 Illinois
**Cooper, Jessica** 1994, Associate Professor; BA 1990 Stanford; MA 1993, PhD 1998 California (Berkeley)
**Dorsen, Leathrum** 1990, Associate Professor; BS 1964 Pennsylvania State, MA 1972, PhD 1982 Michigan State
**German, Vanessa B.** 1994, Associate Professor; BA 1985 Brigham Young; MA 1988, PhD 1993 Pennsylvania
**Hoffman, Edward L.** 1965, Professor Emeritus; BA 1952, MA 1953 Bowling Green; PhD 1963 Pennsylvania State
**Hoffman, Samuel** 1962, Professor Emeritus; BS 1950 Concordia (Illinois); MA 1958 Claremont; PhD 1966 Nebraska (Lincoln)
**Kleinfeld, Ann** 1972, Professor; BA 1965, MA 1966, PhD 1970 Michigan
**Kleinhans, Frederick** 1962, Professor Emeritus; BS 1950 Concordia (Illinois); MA 1958 Claremont; PhD 1966 Nebraska (Lincoln)

Courses (HIST)

801. Documentary Editing (3 cr)

Historical editing with attention to literary editing as well. Topics: development of printed materials, organization of manuscripts, transcription of manuscripts, annotation and editorial apparatus, and preparation for publication. Other topics: interpretation of original sources, proofreading, indexing, and variety in editing.

803. United States Military History, 1607-1817 (3 cr)

Significance of military affairs in the context of American political, economic, and social history from the formation of the nation to the outbreak of the Civil War. Emphasis on military campaigns, major wars of this period, with emphasis on the role and influence of military leaders.

804. United States Military History since 1917 (3 cr)

Significance of military affairs in the context of American political, economic, and social history from the formation of the United States to the present. Major wars of this period, with emphasis on the role and influence of military leaders.

807. Early Christianity (CLAS 807, RELG 307) (3 cr)

For course description, see CLAS 807.

809. The Religion of Late Western Antiquity (CLAS 809, RELG 409) (3 cr)

Religious institutions, philosophies, and lifeways of the Heilige Welt from Ancient Greece to Constantine. Includes the development of Christianity, Zoroastrianism, Judaism, Islam, and Hinduism. Also includes the role of religion in society and the state.

810. The Ancient Near East (3 cr)

Primary civilizations of the Near East, including Egypt, Mesopotamia, and the Indus Valley. Also includes the role of religion in society and the state.

811. The Origins of the European State (3 cr)

Foundations of dominance in primitive Germanic society; monarchy and local government in the early Middle Ages; land and money as power in the central Middle Ages; early political administration; social ethos reflected in political concepts and theories; central government in theory and practice; the European “state system” at the end of the Middle Ages.

817. T. The Roman Revolution, 133 BC-68 AD (3 cr)

Critical period in Roman history when the republic was transformed into the rule of one man: Political and social functioning of the republic, causes for change, and factors influencing its final shape. Careers of the Caesars, M. Aurelius, Sulla, Pompey, C. Caesar, Anthony, and Augustus.

820. The Italian Renaissance (3 cr)

Intellectual and artistic achievements of the Italian Renaissance, relating them to the political developments and social changes which occurred throughout the Italian peninsula between ca. 1300-1550 and highlighting those elements which would influence the evolution of European culture. Emphasis placed on the development of humanism and its role in the transition from medieval to modern values.

821. The Age of Religious Reform, 1300-1650 (3 cr)

Cultural and intellectual developments of the Reformation against their social backgrounds while concentrating on the religious and political events of the sixteenth century, later medieval antecedents will receive considerable attention. Transition from M pastoral to modern Christianity, the problems of secularization and science, and the role played by the Reformation in laying the foundations of modern Europe.

822. The Scientific Revolution (3 cr)

Emergence of modern science in the sixteenth and seventeenth centuries and the impact of this new intellectual force on the social, political, and scientific thought of the Enlightenment. The philosophical, religious, and social background to the Scientific Revolution examined, and the institutional bases of the new science considered. Role of mysticism and alchemy in the rise of modern science and the relationship between science and religion which developed during the period of the Scientific Revolution. Personalities and careers of some of the great scientists of the age—Copernicus, Galileo, Newton—used to illustrate these and other issues.

823. European Enlightenment (3 cr)

Survey of European intellectual history from Locke and Bayeux to Kant and Condorcet. Definition of the Enlightenment, to be followed by examination of the writings of philosophers and through secondary literature. Treats the Enlightenment in its social and political as well as its intellectual context.

824. European Social and Cultural History (3 cr)

Survey of European social and cultural history from the Renaissance to the present with emphasis upon institutions, ideas, and artistic expression.

825. History of Germany 1314 to Present (3 cr)

A look at the history of Germany from the Thirty Years War to the present. Institutional, social and political factors that have shaped Germany and its historical personalities—such as W. Wohlmuth, H. Adenauer, and Brandt—who have led the Germans.

826. History of Fascism in Europe (3 cr)

Comparative conditions in Italy and Germany of the twenties leading to the rise of totalitarianism; the growth pattern of the two movements in and out of power; evolution of domestic and foreign policy to 1945.

830. Early European History through Biography (3 cr)

Specific individuals from late medieval/early modern Europe, such as Joan of Arc, Henry V, and Eleanor of Aquitaine. How history can be used to serve social, cultural, and political needs, and the difficulties of determining historic truth about a person or event.

831. Medieval England (3 cr)

Political, social, economic, institutional, and intellectual history of England from the Roman invasions through the accession of the Tudor dynasty in 1485.

832. England: Reformation to Revolution, 1530-1660 (3 cr)

History of English society, politics, and culture from the time of Henry VIII through that of Elizabeth I, Shakespeare, Donne, Charles I, Cromwell, and Milton.

833. England: Restoration to 1789 (3 cr)

History of English society, politics, and culture from the time of Charles II through the glorious revolution to the reign of George III.
Europe-wide programs of persecution and genocide carried out under the auspices of the Nazi-Aryan regime between 1933 and 1945. Primarily the Jewish dimension of the Holocaust, but examines N's policies targeted against Poles, Gypsies, homosexuals, disabled Germans, and other groups. Events analyzed from the perspectives of victims, perpetrators, and bystanders.

440. American Legal History (3 cr)
Evolution of a distinct American legal culture from colonial times to the present, emphasizing the history of the components of the legal system: the judiciary, the bar, litigants, law enforcement and corrections, and legal doctrine.

442. Antebellum America 1800-1850 (3 cr)
American life during the first half of the nineteenth century, after World War II. Explores the development of the American West and its impact on all aspects of American life before the Civil War. Focuses on institutional and cultural developments.

443. American Urban and Social History I (3 cr)
Survey and analysis of the impact of economic development and urbanization on the organization and character of American society from colonial times through the Civil War. Racial transformation, the rise of sectional conflict, and the development of the American West.

444. American Urban and Social History II (3 cr)
Survey and analysis of the impact of economic development and urbanization on the organization and character of American society from colonial times through the Civil War. Racial transformation, the rise of sectional conflict, and the development of the American West.

445. The American Civil War and Reconstruction (3 cr)
Development of the sectional crisis, war and its impact on America, institutions, reconstruction and reunion, from 1850 to 1877.

446. America in the "Gilded Age" (3 cr)
Sectional adjustment, national politics, the "Gilded Age," economic growth, and the revival of imperialism in the period 1877-1901.

447. Family History of the U.S. (3 cr)
Introduces students to the theory, sources, and methods of family history by exploring the impact of demography, economic, and social factors on family and community history.

448. The Women's West (3 cr) Prereq: Junior standing or permission.
History and historiography of both famous and anonymous women who shaped the history of the American West. Issues of race, class, politics, and sexuality that affected the women and the development of the American West.

449. Ideas in America to the Civil War (3 cr) Also see information on courses with undergraduate tie-ins regarding additional requirements.
Survey of the history of ideas in America from 1865 to the present, emphasizing the impact of Darwinism, "Second Enlightenment," and the diverse currents of modern thought.

450. Ideas in America Since the Civil War (3 cr) Also see information on courses with undergraduate tie-ins regarding additional requirements.
Survey of the history of ideas in America from 1865 to the present, emphasizing the impact of Darwinism, "Second Enlightenment," and the diverse currents of modern thought.

451. The Early American Frontier (3 cr)
Survey of the American frontier experience from earliest times to the mid-19th century, with emphasis in white, black, and Native American perspectives. The rise of sectional conflict, the rise of sectional conflict, and the development of the American West.

452. American Frontier in the Nineteenth Century (3 cr)
Survey of the American frontier experience from earliest times to the mid-19th century, with emphasis in white, black, and Native American perspectives. The rise of sectional conflict, the rise of sectional conflict, and the development of the American West.

453. From Progressivism to the Great Crash (3 cr) Also see information on courses with undergraduate tie-ins regarding additional requirements.

454. The Era of Franklin D. Roosevelt (3 cr) Also see information on courses with undergraduate tie-ins regarding additional requirements.
The Great Depression, Franklin D. Roosevelt, and the New Deal, the road to Pearl Harbor, and World War II.

455. Post-World War II America (3 cr) Also see information on courses with undergraduate tie-ins regarding additional requirements.
Survey of the major developments in domestic politics, foreign affairs, economic, and social, cultural spheres from the end of World War II to the present.

456. U.S. Economic History I (ECON 857) (3 cr) Prereq: ECON 211 or 222 or ECON 210. For course description, see ECON 857.

457. U.S. Economic History II (ECON 858) (3 cr) Prereq: ECON 211 or 222 or ECON 210. For course description, see ECON 858.

458. The Russian Revolution (3 cr)
Political, economic, social, and intellectual roots of the Russian Revolution of 1917, the transformation from liberal to Bolshevik leadership, and the establishment of the USSR.

459. History of Soviet Russia (3 cr)
Fifty years of effort at implementing the mandate of the so-called "October Revolution" both domestically and in foreign affairs. The Soviet Union today.

460. Native American History: Selected Topics (ETHN 464) (3 cr) Prereq: Junior standing or permission.
Racial and ethnic diversity, the role of Native Americans in American history, and the impact of American history on Native Americans.

461. History of Plains Indians (ETHN 465) (3 cr) Prereq: Junior standing or permission.
History and culture of Native Americans of the Great Plains from earliest times through the twentieth century, stressing the history of migration, religion, diplomacy, politics, and society. All of the Indian nations of the Great Plains considered.

462. Latin America and the Outside World (3 cr)
Analysis of the role of Latin American nations in world affairs, emphasizing both domestic and foreign policy.

463. Latin America and the Outside World (3 cr)
Analysis of the role of Latin American nations in world affairs, emphasizing both domestic and foreign policy.

464. Revolutions in Twentieth-Century Latin America (3 cr)
R evolutionary movements from the 19th century to the present, emphasizing the impact of democratic, economic, and political developments.

465. History of Brazil (3 cr)
History of Brazil from 1500 to the present, emphasizing political institutions, economic cycles, social structure, and religious and cultural patterns.
The following may be used as a part of course work in constructing a major in horticulture: BIO 801, 802, 901, 902; AGRO 815, 914, 932, 966.

**Faculty**

**Austin, Richard L.** - 1980; Associate Professor, Community Development, Community Resources and Research, M S 1972 North Texas State

**Coyne, Dermot** - 1961; Professor; BS 1953, MS 1954 Dublin (Ireland); PhD 1960 Dublin (Ireland)

**Fitzgerald, Jay B.** - 1981; Professor; BS 1965, MS 1969 Texas Tech; PhD 1976 Texas A&M

**Gaussoin, Roch E.** - 1991; Associate Professor; BS 1980, MS 1983 New Mexico State; PhD 1988 Michigan State

**Gustafson, William A.** - 1978; Professor; BS 1971, MS 1973 Kansas State; PhD 1978 Texas A&M

**Hedges, Laurie** - 1989; Assistant Professor; BS 1972 New Hampshire State; MS 1984 Auburn

**Horst, Gerald L.** - 1990; Associate Professor; MS 1967 Nebraska (Lincoln); MS 1969, PhD 1973 Michigan State

**Lindgren, Dale T.** - 1976; Professor; BS 1969 Nebraska (Lincoln); MS 1974, PhD 1975 Wisconsin

**Paparozzi, Ellen T.** - 1981; Associate Professor; BS 1976 Rutgers M S 1978, PhD 1980 Cornell

**Pavlita, Alexander D.** - 1988; Associate Professor; BS 1988 Montana Tech; MS 1989 Michigan State; PhD 1997 New York

**Read, Paul E.** - 1987; Professor; BS 1959, MS 1964 Cornell; MS 1967 Delaware

**Riordon, Terrance P.** - 1978; Professor; BS 1965, MS 1968, PhD 1970 Purdue

**Rodie, Steven N.** - 1994; Assistant Professor; Registered Landscape Architect; BS 1977 Colorado State; MA 1984 Kansas State

**Shearman, Robert C.** - 1989; Professor; BS 1967 Oregon; MS 1971, PhD 1973 Michigan State

**Sutton, R. K.** - 1975; Associate Professor and Landscape Architect; BS 1970 Colorado State; MA 1974 Utah State; PhD 1999 Wisconsin

**Gustafson, William A.** - 1980; Associate Professor, Community Development, Community Resources and Research; MS 1972 North Texas State

**Hedges, Laurie** - 1989; Assistant Professor; BS 1972 New Hampshire State; MS 1984 Auburn

**Horst, Gerald L.** - 1990; Associate Professor; MS 1967 Nebraska (Lincoln); MS 1969, PhD 1973 Michigan State

**Lindgren, Dale T.** - 1976; Professor; BS 1969 Nebraska (Lincoln); MS 1974, PhD 1975 Wisconsin

**Paparozzi, Ellen T.** - 1981; Associate Professor; BS 1976 Rutgers M S 1978, PhD 1980 Cornell

**Pavlita, Alexander D.** - 1988; Associate Professor; BS 1988 Montana Tech; MS 1989 Michigan State; PhD 1997 New York

**Read, Paul E.** - 1987; Professor; BS 1959, MS 1964 Cornell; MS 1967 Delaware

**Riordon, Terrance P.** - 1978; Professor; BS 1965, MS 1968, PhD 1970 Purdue

**Rodie, Steven N.** - 1994; Assistant Professor; Registered Landscape Architect; BS 1977 Colorado State; MA 1984 Kansas State

**Shearman, Robert C.** - 1989; Professor; BS 1967 Oregon; MS 1971, PhD 1973 Michigan State

**Sutton, R. K.** - 1975; Associate Professor and Landscape Architect; BS 1970 Colorado State; MA 1974 Utah State; PhD 1999 Wisconsin

For course description, see AGRO 907. For course description, see AGRO 815. For course description, see AGRO 816.

**Agroforestry Systems in Sustainable Agriculture (NRES 817) (3 cr) Lec 3. Prereq: 12 hours of biological sciences or agricultural sciences. At least one course in production agriculture and one course in natural resources is strongly encouraged. Offered odd-numbered calendar years. For course description, see NRES 817.**

**Postharvest Physiology and Food Processing (FDST 820) (3 cr) Lec 2, lab 2. Prereq: CHEM 251, BIOS 269, or permission. For course description, see FDST 820.**

**Plant Nutrition and Nutrient Management (AGRO 824) (3 cr) Prereq: BIOS 825 or a basic course in plant physiology or permission. A course in organic chemistry or biochemistry helpful. Offered odd-numbered calendar years. M committees and their function in the growth and development of plants, the role of single elements interaction between and nutrient deficiency of toxic effects as they affect the physiology of the whole plant, and the relationship between and production and environmental considerations (e.g. yield, drought, temperature, pests).**

**Turfgrass Science and Culture (AGRO 825) (3 cr I) Lec 3, lab rec 2. Prereq: 9 hrs of agricultural plant sciences and 3 hrs of science. Prereq: Offered even-numbered calendar years. M methods and principles of establishment and maintenance of turfgrasses. Emphasis on climate-adaptive methods, methods of identification and propagation, equipment, fertility and water practices, insects, diseases, and weed control.**

**1851. Forage and Range Physiology (AGRO 841, RNGE 441) (2 cr) 2nd half 8th week Lec 4. Prereq: AGRO 803. For course description, see AGRO 841.**

**1869. Woody Plant Growth and Development (BIOL 849) (3 cr) Lec 2, rec 1. Prereq: BIOL 841, BIOL 840 (1 cr) Lec 2, lab 1. Prereq: MATH 106, 4 hrs physics. Offered fall semester of odd-numbered calendar years. For course description, see NRES 849.**

**1889. Independent Study (1-5 cr, 1 II) Prereq: 12 hrs plant sciences, permission and advanced approval of plan of work. Individual or group projects in research and literature review under supervision and evaluation of a departmental faculty member.**

**1899. Geographic Systems Management (WATS 852, M SY M 852) (3 cr I) Lec 2, lab 2. Prereq: M SY M 109 or general physics AGRO or SOIL 153 recommended. For course description, see M SY M 852.**

**Urbanization of Rural Landscapes (AGRO, CRPL 899) (3 cr) Prereq: Permission. For course description, see AGRO 899.**

**1896. Independent Study (1-5 cr, 1 II) Prereq: 12 hrs plant sciences, permission and advanced approval of plan of work. Individual or group projects in research and literature review under supervision and evaluation of a departmental faculty member.**

**1899. Topics in Landscape Architecture (1 cr I) Sem 2. Prereq: Permission.**

**1899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.**

**1899. Agricultural Climatology (AGRO, NRES 907; METR 902) (3 cr II) Lec 2, lab 2. Prereq: NRES 808; BIOS M 801 or equivalent or permission. Offered even-numbered calendar years. Analysis and use of climatological data as applied to agricultural activities and the use of climatological information to assist in decision making.**
Crop Responses to Environment

For course description, see NRES 908. O ffered even-numbered calendar years.

Application of the principles of genetics and plant breeding to the environment facilities in plant research. Offered odd-numbered calendar years.

Plant Cytogenetics

(AGRO 918) (3-4 cr I) Lec 3, Lab 3. Prereq: AGRO 315 or equivalent. B I O S 876 and AGRO 813 or 919 recommended. For course description, see AGRO 918.

Plant Genetics

(AGRO 919) (2 cr II) Lec 2. Prereq: AGRO 315. For course description, see AGRO 919.

Population Genetics

(AGRO, ASCI 931) (3 cr II) Lec 3, Lab 3. Prereq: AGRO 315 and B I O S 801. For course description, see AGRO 931.

General Seminar

(AGRO 992, NRES 950) (1 cr, max 5 cr) Prereq: Permission. Expected of all horticulture graduate students and all agronomy PhD students optional for agronomy M S students. Presentation of thesis or non-thesis topics in agronomy, horticulture or related subjects.

Genetics of Host-Parasite Interaction

(AGRO, B I O S 963) (3 cr I) Lec 2 (90 min each per wk). Prereq: B I O S 241 or 820; and B I O S 312 or 805; B I O S *864A or *864B; B I O C 837 recommended. O ffered even-numbered calendar years For course description, see B I O S 963.

Seminar Presentation and Evaluation

(AGRO 991) (1 cr, max 2 cr) Required of all M S students. For course description, see AGRO 991.

General Seminar

(AGRO 992, NRES 950) (1 cr, max 5 cr) Prereq: Permission. Expected of all horticulture graduate students and all agronomy PhD students optional for agronomy M S students. For course description, see AGRO 992.

Research Other Than Thesis

(1-6 cr) Prereq: Permission. Investigations, without reference to thesis work, on genetic, physiological, ecological, meteorological, and morphological aspects of horticultural crops.

Doctoral Dissertation

(24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Human Resources and Family Sciences

Human Resources and Family Sciences Interdepartmental Area

Area Committee Chair: Lisa J. Crockett, Ph.D.

Area Committee: Associate Professors Bischoff, Cramer, Hamouz, Trout

Departments Cooperating: Family and Consumer Sciences; Nutritional Science and Dietetics; Textiles, Clothing, and Design

Graduate work in the Human Resources and Family Sciences Interdepartmental Graduate Program provides opportunities for broad-based study in human resources and family sciences. The program integrates the content areas and focuses on the development of theoretical knowledge, communication skills, and professional application. The Interdepartmental Area offers graduate work leading to the master of science degree and the doctor of philosophy degree.

Students applying for study in the Human Resources and Family Sciences Interdepartmental Area masters degree must hold a bachelors degree in human resources and family sciences or its equivalent. The undergraduate work must have included the equivalent of 24 hours in human resources and family sciences distributed in at least three subject matter areas and 20 hours in the natural and social sciences including a minimum of 9 hours in the natural and 6 hours in the social sciences. Each applicant must complete the Graduate Record Exam (quantitative and verbal), TOEFL (for international students whose first language is not English), hold an undergraduate GPA of 3.0 or higher, provide evidence of having completed 12 hours of undergraduate work beyond the freshman level related to the area of interest (i.e., home economics education, family and consumer sciences, textiles, clothing, community nutrition) and a written statement describing the applicant's background, strengths, and experience. Admissions to the program is based on the evaluation and recommendation of the Human Resources and Family Sciences Interdepartmental Graduate Committee.

Work leading to the masters degree in human resources and family sciences may be completed under Option I, II, or III. If Option I is selected the thesis research may be done in any one of the three cooperating departments. Under any option not more than one-half of the total program for the masters degree, including thesis research when applicable, may be completed in the major area of concentration. These subject matter areas are family and consumer sciences, nutritional science and dietetics, and 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 selected in cooperating departments or in the departments outside the College of H u m a n Resourses and Family Sciences. However, if Option II is selected the required minor must be completed in family and consumer sciences, nutritional science and dietetics, textiles, clothing, and design; or in a department other than those in the College of Human Resources and Family Sciences.

Separate programs leading to the masters degree are also offered by the Department of Family and Consumer Sciences, the Department of Nutrition Science and Dietetics, and the Department of Textiles, Clothing, and Design.

Doctor of Philosophy Degree. Courses of study in human resources and family sciences leading to the doctoral degree are offered through a unified PhD program that is governed by a graduate board of faculty members elected from each participating department (family and consumer sciences, nutritional science and dietetics, and textiles, clothing and design). Specific programs are designed to meet the needs and interests of individual students as directed by the supervisory committee. These programs will use one of three tracks representing functional areas critical to an individual's and/or a family's economic, physical, or psychological well-being. Students may select a specialization in one of three areas: family and consumer sciences; nutritional science and dietetics; textiles, clothing, and design. Each doctoral student must complete H R S 900 A, B, D, Integrative Studies Seminar. Courses applied to the doctoral program of studies may NOT be taken pass/no credit except for courses offered only on that basis.

Individuals applying for admission must have completed a bachelors degree in a human resources and family sciences subject area or in one of several closely allied fields. Scores from the Graduate Record Exam (general), a resume, transcript, TOEFL, and statement concerning previous educational and work experiences as well as post-PhD goals must be submitted for admission to be considered. For further information, contact the Associate Dean for Graduate...
International Human Rights and Diversity

(Interdepartmental Area of Specialization)

Advisory Committee: Professors Spinner-Halev (chair), Cahan, Forsythe, H itchcock, R affaelli, R itch, Shavers, W ishaw.

Departments Participating (Masters): Anthropology, English, History, Modern Languages and Literatures, Philosophy, Political Science

Departments Participating (Doctoral): English, Geography, History, Modern Languages and Literatures, Philosophy, Political Science

The goal of the International Human Rights and Diversity Interdepartmental Area of Specialization is to examine issues related to human rights in an international perspective, with particular interest in examining the relationship between cultural diversity and human rights. An advisory committee has been established to coordinate the interdisciplinary aspects of this specialization. One member of the student's examining committee or supervisory committee must represent a participating discipline other than the student's major area. Approval of the thesis or dissertation topic must have the concurrence of the student's faculty advisor and the International Human Rights and Diversity Advisory Committee.

Masters-Level Specialization Requirements: The specialization is available to any student pursuing a masters degree in any of the participating departments. Each student will be required to complete:

1. A masters degree in one of the participating departments.
2. Twelve (12) credit hours of International Human Rights and Diversity courses from the student's discipline, and at least one department outside the student's discipline, including:
   - 3 credit hours of core courses;
   - 6 credit hours from Course List A; and
   - when Option I (thesis) is available in the program, a thesis relating to International Human Rights and Diversity.

Doctoral-Level Specialization Requirements: The specialization is available to any student pursuing a doctoral degree in any of the participating departments. Each student for the specialization at the masters level may be counted toward meeting the requirements for the specialization at the doctoral level.

Each student will be required to complete:

1. A doctoral degree in one of the participating departments.
2. Eighteen (18) credit hours of International Human Rights and Diversity courses from the student's discipline, and at least two departments outside the student's discipline, including:
   - 3 credit hours of core courses;
   - a minimum of 6 credit hours from Course List A;
   - the remaining credit hours (between 3 and 9) from Course List B; and
   - a dissertation relating to International Human Rights and Diversity.

Core Courses

POLS 965. Seminar in International Human Rights (3 cr)
LAW 616/G. International Human Rights Law (3 cr)

Course List A

ANTH 876. Human Rights, Environment, & Development (3 cr)
LAW 714/G. Comparative Law: International Gender Issues (1-4 cr)
POLS 885. Contemporary Political Theory (3 cr)
POLS 960. Seminar in International Relations (3 cr, max 12)

Course List B

ANTH 820. Ethnographic & Ethnic Conflict (3 cr)
ANTH 851. Indians of North America (3 cr)
ANTH 874. Applied Development Anthropology (3 cr)
ENGL 845. English Literature (when taught as Studies in the African Diaspora) (3 cr)
GEOG 931. Diaspora of Indigenous Peoples (3 cr)
GEOG 933. Seminar in Geography & Anthropology (1-3 cr, max 6)
HIST 829. History of Fascism in Europe (3 cr)
HIST 839. The Holocaust (3 cr)
HIST 878. Pro-seminar in Latin American Studies (3 cr, max 6)
HIST 932. Seminar (when taught as O therness in British Culture) (3 cr)
MODL 854. Russian Intellectual Tradition (3 cr)
PHIL 823. Advanced Ethics (3 cr) OR PHIL 820. Ethical Theory (1-24 cr)
PHIL 825, Political & Social Philosophy (3 cr)
OR PHIL 925, Social & Political Philosophy (1-4 cr)
POLS 860. Seminar in International Politics (3 cr)
POLS 872, StateTerror (3 cr)
POLS 873, Problems in International Law & Organization (3 cr)
POLS 877, Israel & the Middle East (3 cr)

Journalism and Mass Communications

Department Chair: Will Norton, Jr., PhD
Graduate Committee: Professors Norton (chair), Hull, M ayaux, Shiple, Stricklin, Tuck, Walklin; Associate Professor Bender; Assistant Professor Berens, Lee; Professor Emeritus R okwell

The program in journalism is designed to prepare the student to translate more effectively to mass audiences the complexities of a rapidly changing society. Emphasis may be placed on advertising, broadcasting, news editorial, or an interdisciplinary program in advertising, marketing, and communication studies, or sports communication. Students entering the graduate program, with the exception of those in advertising, marketing and communication studies specialization, must have the equivalent of a journalism major from an accredited program in journalism. Applicants with an undergraduate major in an area other than journalism, or students with deficiencies in their journalism background, may be admitted with a provisional status and will be required to complete undergraduate journalism courses. An applicant's professional experience will be considered by the Graduate Committee of the College of Journalism and Mass Communications in determining the specific courses required to provide a background necessary to qualify for study in the master of arts degree program in journalism.

Master of Arts in Journalism. All candidates must complete a program which conforms to the general requirements of the Graduate College. See "R requirements for Graduate Degrees" on page 15. Completion of a minimum of 30 semester hours credit in approved courses is required for Option I students (see "R requirements for the Master's Degree" on page 15). Since the program is interdisciplinary in nature, at least 9 hours in graduate-level courses must be included from academic courses to be taken outside the College. Numbers are based on Andrews and M as Communication Research (3 cr); 954 M as Media and Government (3 cr); 932 Contemporary M as Communication: The Mass Message; or advanced level course work (6 cr); 899 M aster's Thesis (6-10 cr).

This is an Option II program. The program consists of a major-a minimum of 18 hours in advertising and two minors of 9 hours-one in communication studies and one in marketing. Eighteen hours of the program are specified courses which include 6 hours from each of the following three departments Advertising, Communication Studies, and Marketing. There is also a comprehensive exam which can be waived if the student has a 3.25 GPA or higher in all courses taken in the specialization. Applicants to this specialization must provide Graduate Record Examination scores.

The sports communication emphasis prepares students for careers in either sports marketing, sports information, sports video production, or sports photography. The 36-hour program includes 9 hours of required courses, 9 hours of electives and 9 hours of professional project within the College as well as 9 graduate hours outside the College.
can expect to be in residency for 24 continuous months. Space is limited in the program to ensure that those selected will have a substantial field experience in an appropriate area of athletics. This is an option II program with no thesis.

Specializations available for the MA in Journalism: Advertising; Broadcasting; Marketing, Communication and Advertising; News Editorial; Sports Communication

Faculty

* Bender, John R. - 1990; Associate Professor; BA 1970 Westminster (M Isauri); MS 1977 Kansas; PhD 1991 M Isauri

* Berens, Charlyne R. - 1996; Assistant Professor; BSEd 1967 Concordia; MA 1995 N ebr aka (Lincoln); MA 1972 O hio

** Copple, R. Neal - 1957; Professor Emeritus BA 1947 N ebr aka (Lincoln); MS 1948 N orthwestern

** C raimer, W illma - 1965; Professor Emeritus BA 1949 M i lland; MA 1963, PhD 1966 M Isauri

Danielson, Jim E. - 1986; Assistant Professor; BSEd 1960 C entral M i lwaukee State; MA 1962, PhD 1976 N ebr aka (Lincoln)

** F razzoli, Daryl L. - 1990; Associate Professor; BSJ 1959, MSJ 1960 N orthwestern

Goff, Michael J. - 2000; Assistant Professor; BSEd 1971, MS Ed 1978, EdS 1990 N ebr aka (Lincoln)

** Hull, Ronald E. - 1988; Professor; BA 1952 D akota Wesleyan; M S 1955 Sycamore; EdS 1970 N ebr aka (Lincoln)

James, Stacy - 1988; Director; BA 1970, MA 1992 N ebr aka (Lincoln)

Larsen, Phyllis V. - 2000; Assistant Professor; BS 1978, MA 1980 N ebr aka (Lincoln)

** Lee, Laurie Thomas - 1994; Associate Professor; BS 1982 N ebr aka (Kearney); MA 1983 Iowa; PhD 1993 M ichigan State

Lomicky, Carol - 1997; Assistant Professor; BA 1980, MA 1982, PhD 1984 N ebr aka (Lincoln)

** Mayeux, Peter - 1969; Professor; BA 1965 S outheast Louisiana M A 1967 I owa

McBride, Jack G. - 1983; Professor Emeritus AB 1948 C ollege Station; MA 1949 N orthwestern

Mitchell, Nancy - 1990; Associate Professor; BSJ 1973 N orthwestern; MA 1989 W est Texas State

** Norton, H. Will - 1990; Dean and Professor; BA 1963 W eston; MA 1971 I ndiana; PhD 1974 I owa

Randall, James K. – 1971; Professor; BA 1964, M S 1969 U tah

Renaud, Jerry R. - 1989; Associate Professor; BS 1975, MA 1990 N ebr aka (Lincoln)

Rockwell, Lee W. - 1967; Professor Emeritus BS 1958, MA 1961 N ebr aka (Lincoln)

* Shipley, Linda - 1984; Associate Dean and Professor; BA 1967 N ebr aka (Lincoln); MA 1969 M i lwaukee State; PhD 1974 P ennsylvania

Starita, Joseph - 2000; Associate Professor; BA 1978, MA 1995 N ebr aka (Lincoln)

** Stricklin, Michael - 1983; Professor; BA 1966 B laymore; M 1972 C alifornia; PhD 1977 I lligs

Terry, Keith - 1997; Associate Professor; BA 1983 W isconsin; MA 1987 Pittsburgh State; PhD 1992 T ennessee

** Tuck, George - 1970; Professor; BA 1965 H arden; MA 1970 M i lwaukee State

WALKIN, Larry - 1967; Professor; BA 1961 K ansas State; MA 1962 M ichigan State; PhD 1968 I owa

## Courses

### Journalism Graduate Courses (JGRD)

#### 801. Depth Reporting (N EWS 801) (3 cr) Prereq: N EWS 801.

Prerequisite: Permission. May be repeated up to three times so long as the topics are different. Topic varies each semester.

#### 806. Media Management Introduction (3 cr) Prereq: Permission. May be repeated up to three times so long as the topics are different. Topic varies each semester.

#### 835. International Communications (3 cr) Prereq: Permission. Systems of mass communications in foreign countries and across international boundaries.

#### 898. Special Topics (JGEN 498) (1-4 cr, max 12) Course may be repeated up to three times so long as the topics are different. Topic varies each semester.

#### 899. Masters Thesis (6 cr) Prereq: Admission to masters degree program and permission of major advisor.

#### 915. Mass Communication Theory (3 cr) Process and effects of mass communication.

#### 919. Methods of Mass Communication Research (3 cr) Research methods and research techniques in mass communication. Development of competency in consumption and interpretation of research combined with an introduction to research design, analysis, and decision making.

#### 932. Contemporary Mass Communication: The Message (3 cr) Development of the media. Their differences, how they are used in advertising, information resources and strategies for using mass media in advertising. Assignments include evaluating, selecting and planning the use of mass media in both local and national advertising situations.

### Journalism Core Courses (JOUR)

#### 845. Cyberspace and Media Mass from the Grassroots (3 cr) Prereq: Permission. Students use the collegeweb site for laboratory experience. Implications for Journalism on issues arising from the emergence of cyberspace, the trend toward globalization of mass media.


#### 856. Media Law (3 cr) Prereq: Permission. Legal principles and their application to mass media content and conduct regulate.

#### 857. Media and Society (3 cr) Prereq: Permission. Interrelationships between American media mass and society.

#### 858. Special Topics (1-4 cr, max 12) Course may be repeated up to three times so long as the topics are different. Topic varies each semester.

### Advertising (ADVT)

#### 833. Advanced Communications Graphics and Electronic Design (3 cr) Prereq: ADVT 333 and JOUR 217, or permission.

Intermediate/advanced portfolio course in visual and graphic design as applied to the corporate environments of advertising and public relations. Print and electronic design principles, strategies, and elements incorporated into individual and team projects using traditional and new digital technologies. Development of creative materials for clients, corporate identity, electronic presentations, professional creative portfolios, non-traditional resumes, and World Wide Web student and faculty home pages and other W W W sites.

#### 850. Public Relations Theory (ADVT, N EWS 850) (3 cr) Prereq: Permission.

Effective tools and techniques used by professional public relations practitioners. Students participate individually and in small groups in the development of actual tools of public relations. Information writing, publications development and media relations.


Review and application of research procedures and methodologies used in public relations planning and evaluation. Methodologies appropriate for assessing public opinion, issues management and program assessment.

#### 858. Public Relations Strategy and Implementation (BRDC, N EWS 858) (3 cr) Prereq: ADVT 250, 281; BR DC 226, 227; N EWS 280, 282.

Covers study approach to advanced study of the public relations process and its application to a variety of institutions, from business to education.

#### 859. Advertising and Public Relations in the Electronic Media (3 cr) Prereq: BR DC 226 or ADVT 357 or permission.

Analysis and preparation of radio and television commercials and announcements in terms of content and production techniques. Development of structure and functions of the broadcast advertising media with emphasis on regulation, responsibilities, audience analysis, and promotion.


Principles and practices of evaluating and selecting media for advertising. Explanation of the media, their differences, how they are used in advertising, information resources and strategies for using mass media in advertising. Assignments include evaluating, selecting and planning the use of media in both local and national advertising situations.

### Advertising and Public Relations Audience Analysis (3 cr) Prereq: ADVT 357, or permission.

An analysis of the audience using the major audience research techniques. The role of audience analysis in the planning, management and development of advertising campaigns. Includes an understanding of the research process, the use of secondary sources of information, and how to analyze data from these sources. The planning and execution of primary research, including survey techniques given special emphasis. Students experience the actual research process and produce a report on their findings.

### Advertising Management (3 cr) Prereq: ADVT 357 and 860, or permission.

Insights into practical experience with the managerial philosophy, techniques, and processes in advertising. Includes organizational structures, integrated marketing communications, strategic planning, marketing planning, advertising planning, advertising research, budgeting, and decision paradigms.

### Retail Advertising and Sales (3 cr) Prereq: ADVT 357 or permission.

Principles and problems concerning retail, general, classified, and legal advertising for newspapers, staff organization, selling techniques and rate structures and social and economic appraisal of newspapers as an advertising medium.

### Advertising and Public Relations Campaigns (4 cr) Prereq: ADVT 333, 357, 860. Advertising majors with public relations emphasis may take course without ADVT 357 prerequisite.

Planning, budget, and conduct the planning, development and evaluation of advertising campaigns. Students develop an understanding of the research process, the use of secondary sources of information, and how to analyze data from these sources. The planning and execution of primary research, including survey techniques given special emphasis. Students experience the actual research process and produce a report on their findings.

### Broadcast (BRDC)

#### 828. Advanced Television Production (3 cr) Prereq: BR DC 228 or permission.

Theoretical and practical aspects of directing television programs analyzed in relation to translation of facts, ideas, emotions, and attitudes through television. Program production experiences in the studios of the University station, KUON TV.

### Public Relations Theory (ADVT, N EWS 850) (3 cr) Prereq: ADVT 250 and 281; BR DC 226 or 227; N EWS 280 and 282.

For course description, see ADVT 850.
851. Public Relations Techniques Writing, Message Dissemination and Media Networks (ADVT, NEWS 851) (3 cr) Prereq: ADVT 250, 281 and 283; BR DC 226 or 227; N EWS 280 and 282. For course description, see ADVT 851.

854. Broadcast Management (3 cr) Prereq: Permission. Organizational and Management procedures as they relate to the telecommunications media.

855. Broadcast Programming (3 cr) Prereq: Permission. Radio and television program philosophies and formats with emphasis on regulations, responsibilities, economics, and audience measurement procedures.

856. Cable Telecommunications (3 cr) Prereq: BR DC 228 or permission. Development of cable telecommunications systems and relevant regulatory aspects of cable development. Current and future projections of cable systems management systems—satellites, teletext, interactive access channels, origination, pay cable.

857. Public Relations Research for Planning and Evaluation (ADVT, NEWS 857) (3 cr) Prereq: ADVT 250, 281, 283; BR DC 226, 227; N EWS 280 and 282. For course description, see ADVT 857.

858. Public Relations Strategy and Implementation (ADVT, NEWS 858) (3 cr) Prereq: ADVT 250, 281, 283; BR DC 226, 227; N EWS 280 and 282. For course description, see ADVT 858.

861. Instructional Television (3 cr) Prereq: Permission. Preparation of instructional television programs. Historical development of television as an instructional medium. Learning and Communication theory relevant to the proper applications of televised instruction.

865. International Broadcasting (3 cr) Prereq: Permission. Development of programming patterns and controls as well as cultural consideration of national and international systems of broadcasting.

866. Telecommunication and Information Systems (3 cr) Telephone industry, voice and data communication and networking systems. Development and structure of telecommunication issues, services, applications, technology, and management.

869. Advanced Cinematography/Videography (3 cr) Prereq: BR DC 369 or permission. Continuation of BR DC 369 with additional emphasis on production of single and double system sound films as well as production of videotapes for television.

873. Broadcast Documentary (3 cr) Prereq: BR DC 372 or permission. Depth reporting and advanced production techniques necessary for the preparation of a broadcast documentary program.

874. Advanced Broadcast Writing (3 cr) Prereq: Permission. Techniques of planning, preparing and writing radio, television and motion picture scripts, including announcements, interviews, talk programs, features, editorials, investigative reports and dramatic adaptations.

878. Color Photography (3 cr) Lec, lab. Students required to provide camera lenses and flash. Supplies cost approximately $250. Theory and practice of current color usage in photojournalism and in advertising. Color theory, development and printing of positive and negative films, slide-tape production, color separations, push processing and use of lighting equipment in studio and field conditions.

879. Advanced Graphics (3 cr) Prereq: NEWS 380 or permission. Intensive lecture-laboratory experience combining journalism writing and editing with computer graphics techniques. Students produce a variety of informational graphics and motion picture scripts, including announcements, interviews, talk programs, features, editorials, investigative reports and dramatic adaptations.

880. Public Relations Theory (ADVT, BR DC 880) (3 cr) Prereq: ADVT 250 and 281; BR DC 226 or 227; N EWS 280 and 282. For course description, see ADVT 880.

881. Public Relations Techniques Writing, Message Dissemination and Media Networks (ADVT, BR DC 881) (3 cr) Prereq: ADVT 250, 281 and 283; BR DC 226 or 227; N EWS 280 and 282. For course description, see ADVT 881.

890. Public Relations Research for Planning and Evaluation (ADVT, BR DC 890) (3 cr) Prereq: ADVT 250, 281, 283; BR DC 226, 227; N EWS 280 and 282. For course description, see ADVT 890.

891. Public Relations Strategy and Implementation (ADVT, BR DC 891) (3 cr) Prereq: ADVT 250, 281, 283; BR DC 226, 227; N EWS 280 and 282. For course description, see ADVT 891.

895. Leadership Development Emphasis. The program immerses individuals, both academically and professionally, in the increasingly complex area of leadership. The program is designed to build upon prior education and experience for future careers where leadership is important or more advanced studies in leadership. Leadership courses offered range from leadership theory and classical perspectives to applied courses in supervision and leadership change in organizations and communities.

Specializations

Teaching and Extension Education Specialization. The program prepares one for careers in community college or university teaching, public school teaching, outreach programs and Cooperative Extension. The specialization is valuable to international students who are planning teaching careers, as well as for individuals providing human resource services in communities, business, industry, and government agencies.

Distance Education Specialization. With the advent of on-line learning and video conferencing, distance education has exploded. The program is designed for individuals in formal or non-formal settings in business, training, or education in post-secondary as well as pre-K-12 settings.

Nutritional Outreach Education Specialization. This program offers the expertise and resources of faculty from two departments (Agricultural Leadership, Education and Communication and Nurtitional Science and Dietetics). Hr e students tailor their program around the areas of teaching, learning, and outreach in nutritional education.

For additional information regarding the programs listed above, please visit the Department of Agricultural Leadership, Education and Communication's Web site at <agiec.unl.edu>.

Other specializations available: Environmental Studies; Great Plains Studies

Faculty

**Barbuto, John E.** - 1997; Assistant Professor; BSA 1990 Maine; MA 1992 Bentley; PhD 1997 N hode Island

**Barrett, Leverne A.** - 1980; Professor; BS 1962, M Ed 1974, DED 1978 Penn State

**Bell, Lloyd** - 1994; Associate Professor; BS 1971, MS 1980, PhD 1984 N ebraska (Lincoln)

**Blezek, Allen G.** - 1975; Professor; BS 1966, MS 1969, PhD 1973 N ebraska (Lincoln)

**Blythe, Alan R.** - 1998; Professor; BS 1967, MS 1969 Kansas State; EdD 1975 M assachusetts

**Fairchild, Patricia** - 2000; Associate Professor; BS N ebraska (Lincoln); M S N ebraska (O maha); EdD Boston

**Fritz, Susan** - 1994; Associate Professor; BS 1979, M Ed 1989, PhD 1993 N ebraska (Lincoln)

**Husmann, Dann** - 2000; Associate Professor; BS 1982 N ebraska (Lincoln); MS 1986 Kansas State; PhD 1993 N ebraska (Lincoln)

**King, James W.** - 1994; Associate Professor; BS 1967, MS 1974, EdS 1975, EdD 1981 Indiana (Bloomington)

**Lodi, Kathleen A.** - 1992; Associate Professor; BS 1984, MS 1986, PhD 1991 N ebraska (Lincoln)

**Lunde, Joyce P.** - 1978; Professor; BA 1959 Kent State; MA 1960, PhD 1970 M innesota

**Parsons, Gerald M.** - 1995; Associate Professor; BA 1963 St Joseph's M A; M N etre Dame; PhD 1975 N ebraska (Lincoln)

**Portwell, S. Kay** - 1980; Professor; R N 1960 LGH - School of N ursing; BS 1962, MA 1975, PhD 1984 N ebraska (Lincoln)
Theoretical Foundations of Leadership (3 cr) Lec.
Major research thrusts in leadership field: Historical and current research studies, surveying the literature, developing theory, and conceptualizing original research questions and problems.

Developing Leadership Capacity in Organizations and Communities (3 cr) Prereq: ALEC *801 or equivalent. Leadership capacity in individuals and organizations. Impact of leadership on organizational outcomes and means for diagnosing leadership developmental needs. Assessing, creating, and implementing a comprehensive leadership development program for an organization or community.

Problems of Beginning Agriscience Teachers (2-5 cr) Lec.
Problems in instructional planning and methodology and in organizing secondary and continuing education. FFA and agriculture experience programs.

Advanced Teaching Strategies (CU RR *805, NUTR *806) (3 cr) Lec. Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs, public schools, and other settings. Participants participate in active learning as they apply learning theory in practice, prepare, and demonstrate teaching methods, and plan for instruction in discipline areas of their choice.

Introduction to Distance Education (3 cr) Lec.
Introduction to the field of distance education through readings, discussions, field trips, and research. Basic principles and key concepts of distance education in a variety of educational settings.

Supervisory Leadership (FACS *807) (3 cr) Lec. Prereq: ALEC 801 or permission. Knowledge and theoretical basis for practicing supervisors in a changing workplace where supervisors have increasing responsibilities due to the flattening of organizational structures. Solving supervisory challenges in organizing and planning, problem solving and decision making, performance appraisal, and leading a diverse workforce.

Environmental Leadership: A Historical and Ethical Perspective (N RES 813) (3 cr) Lec. Chronological study of major figures in conservation and ecology that emphasize historical and ethical development and relationships. Primary focus on the Great Plains.

Multimedia Applications for Education and Training (NUTR *812) (3 cr) Lec. Lab. Applications of developing and evaluating multimedia resources for students. New applications, creation and development of various instructional materials, and review of current practice against relevant theory. Projects use current software packages to develop materials for various audiences.

Class Figures in Leadership (3 cr) Lec/act. This course requires extensive written and oral presentations. Leadership theory in an applied context. Leadership analyzed through a variety of genres: autobiography, drama, fiction, tracts, and treatises, speeches.

Development and Organization of Vocational Education (CU RR *814) (3-3 cr) Lec. For teachers, administrators, and guidance personnel. Vocational and practical education, their place in the community school; planning comprehensive programs in agriculture, business, homemaking, and industrial education.

Management Strategies in Distance Education Environments (3 cr) Lec. (II, III) Lec. Management strategies for a variety of distance education situations. Planning, organization, motivation, and control provide a framework for analyzing distance education in formal and non-formal, large and small, public and private, and established and emerging organizations.

Improvement of Instructional Programs for Post-Secondary School Occupational Education (1-3 cr) Lec. Prereq: Baccalaureate degree. 12 hrs agricultural education or equivalent; and/or permission. Determining new instructional programs expanding the impact of student behavioral objectives, and evaluating the total instructional program.

Program Evaluation (3 cr) Prereq: ALEC *833 recommended. Builds upon program development in extension programming and provides a broad overview of program evaluation principles and methods. Applies program evaluation principles in extension education.

Leading Agricultural Agencies and Organizations (3 cr) Lec. Prereq: Permission. Administrative management theory and practice, and techniques applied to agencies and organizations. Exposure to philosophies and experiences of outstanding administrators; Applicable to domestic and international students.

Planning and Implementation of Cooperative Extension Programs for Domestic and Foreign Audiences (3 cr) Lec. Prereq: Permission. Unique features of the cooperative extension service as an educational institution and its involvement of folk people in the program development and identification of problems and planning range plans, annual plans, community development, and plans for single events applicable to domestic and foreign extension programs.

Research in Leadership Education (FACS *845) (3 cr) Lec. Steps in preparing a research proposal, including statement of the research question, review of relevant literature, and determination of an appropriate research design and methodology. Research methodology, including both quantitative and qualitative procedures.

Workshop Seminars (1-12 cr) Lec. Prereq: Permission. Work, singly or in groups, on practical educational problems, done under the supervision of staff with assistance of selected educational consultants.

Technical Agricultural Workshops (1-12 cr) Lec. Prereq: Permission. Group study of technology in agricultural occupations. Workshops, special meetings and assignments.

Independent Study in Leadership Education (1-9 cr) Lec. Prereq: Permission. Projects in research, literature review, or extension of course work.

Special Topics (1-3 cr) Lec. Prereq: Permission. Readings, in-depth discussion, and analysis of contemporary theory, issues, and problems, research and practice in leadership education and/or communication. Office hours covered in other courses.

Masters Thesis (6-10 cr) Prereq: Permission. Admission to masters degree program and permission of major advisor.

Leading Change in Rural America and Beyond (3 cr) Lec. Prereq: ALEC 801, 18 hours graduate credit, or permission. Skills in leading change in the 21st century in rural communities and organizations. Strategies for planning, organizing, and institutionalizing change. Development and implementation of a change plan for a community or organization.

Teacher Education in Agriscience (1-3 cr) Lec/act. Preparation of agriscience teachers to supervise and mentor student teachers, evaluate/assess performance, and instruct delivery.

Seminar in Leadership Studies (1 cr, max 4) Prereq: Admission to masters degree program and permission of major advisor.

Leading Change in Rural America and Beyond (3 cr) Lec. Prereq: ALEC 801, 18 hours graduate credit, or permission. Skills in leading change in the 21st century in rural communities and organizations. Strategies for planning, organizing, and institutionalizing change. Development and implementation of a change plan for a community or organization.

Teacher Education in Agriscience (1-3 cr) Lec/act. Preparation of agriscience teachers to supervise and mentor student teachers, evaluate/assess performance, and instruct delivery.

Graduate Committee: Professors Lawson (chair), Berger, Duncan, Gardner, Gradwohl, K. Alsh, K. Kroll, Lyons, Puttock, Snowden, Willborn; Associate Professors Bradford, Schopp.

The master of legal studies (MLS) degree program is designed for individuals who are not interested in practicing law, but who are interested in developing a better understanding of the law as it affects their nonlegal careers or areas of interest.

Students who are admitted to the program may begin their course work only during a fall semester and must complete with satisfactory grades 33 credit hours of law in order to receive an MLS degree. Of these 33 hours, 9 hours are required courses and 24 hours are elective. The required courses are a full-year common law course (6 credit hours) and the first semester course LAW 513G, Legal Research and Writing, (3 credit hours). The full-year common law course— which can be Contracts, Property, or Torts— must be taken during the student’s first year in the program. The Legal Research and Writing course must be taken during the student’s first semester in the program. A student may begin taking elective courses during the first year of the program. Most, but not all of the law courses may be taken as electives and all degree requirements must be completed within three years.

It should be emphasized that a master of legal studies degree is not a substitute for the juris doctorate (JD). Individuals who are interested in practicing law or in applying for admission to the bar should seek a JD degree not an MLS degree.
Students who need further information about admission to the M.L.S degree program, the program's course and academic requirements, and the differences between a J.D. and an M.L.S degree, should contact the College of Law Admissions Office.

Faculty

**Berger, Lawrence - 1960; Professor; BS 1949 Pennsylvania/Ed 1952 Rutgers**

**Bradford, C. Steven - 1987; Professor; BS 1978 Utah State; JD 1982, MP 1982 Harvard**

**Duncan, Richard F. - 1979; Professor; BA 1973 Massachusetts/Ed 1976 Cornell**

**Gradwohl, John M. - 1960; Professor; BS 1951, JD 1953 Nebraska (Lincoln); LLM 1957 Harvard**

**Kalisch, Stephen E. - 1971; Professor; BA 1964, JD 1967, LLM 1974 Harvard**

**Kird, Roger W. - 1974; Professor; BS 1967 M.I.T.; JD 1970 Stanford**

**Larson, Craig M. - 1978; Professor; A.B. 1970/ Yale; JD 1974 California**

**Lenich, John D. - 1984; Associate Professor; BA 1977 Illinois; JD 1980 Northwestern**

**Lyons, William H. - 1981; Professor; BA 1969 Colby College; JD 1973 Boston College**

**Perlman, Harvey S. - 1982; Professor and UN L Chancellor; BA 1963, JD 1966 Nebraska (Lincoln)**

**Potuts, Josephine R. - 1974; Professor; BA 1967 Douglass M.A 1971 Seton Hall; JD 1974 Rutgers**

**Schafer, Matthew P. - 1995; Assistant Professor; BA 1987 Chicago; JD 1991, LLM 1993 Michigan**

**Schopp, Robert F. - 1989; Associate Professor; BS 1977 North Carolina State; JD 1988, PhD 1989 Arizona**

**Shavers, Anna W. - 1993; Assistant Professor; BS 1967 Central State; M.S 1973 Wisconsin; JD 1979 Minnesota**

**Snowden, John R. - 1972; Professor; BA 1966, JD 1971 Nebraska (Lincoln)**

**Tomkins, Alan J. - 1996; Professor; BA 1975 Boston; JD, PhD 1984 Washington (St. Louis)**

**Willborn, Steven L. - 1979; Professor and Dean of the Law College; BA 1974, M.S 1976 North Carolina; JD 1976 Wisconsin**

**Wilson, Catherine L. - 1995; Assistant Professor; BA 1984 Creighton; JD 1987 Abajina**

Courses (LAW)

Listed below are the courses offered by the College of Law which are cross listed with the Graduate College. For information on the professional degree programs of the College of Law and additional courses, see the College of Law Bulletin.

501G. Contracts I (3 cr)
Basic principles governing the creation, interpretation, and enforcement of private agreements. Includes offer and acceptance, consideration, the effect of changed or unforeseen circumstances, conditions, and remedies.

502G. Contracts II (3 cr)
For course description, see LAW 501G.

503G. Torts I (EDAD *874) (3 cr)
Legal protection afforded in civil proceedings against interference with the security of one's person, property, relations, and other interests, and negligence. Substantive principles that govern tort claims (ranging from claims for intentional wrongdoing, to negligence claims, to claims that the defendant is strictly liable for harms caused to the plaintiff), and the theoretical bases and practical implications of such claims.

504G. Torts II (EDAD *875) (3 cr)
For course description, see LAW 503G.

505G. Property I (3 cr)
Problems in possession, gifts of personal property, bona fide purchasers of personal property, estates in land and landlord and tenant, the modern land transaction, controlling the use of land, easements, licenses, and equitable servitudes.

506G. Property II (3 cr)
For course description, see LAW 505G.

507G. Criminal Law (EDAD *870) (3 cr)
Substantive criminal law, focusing on the theoretical foundations, general principles, and doctrines that govern the rules of liability and defenses, both in the common law tradition and under the Model Penal Code.

511G. Introduction to Law, Legal Process, and Legisla- tion (EDAD *872) (3 cr)
How law is made and changed, the role of the individual, the business corporation, the private association, the administrative agency, the voting public, the legislature, and the courts in making and changing law.

513G. Legal Research and Writing I (3 cr)
Introduction to the sources and the literature of the law. Emphasizes the function and content of basic legal materials, their use in the analysis and solution of legal problems, and the preparation of legal memoranda and appellate briefs.

514G. Legal Research and Writing II (3 cr)
For course description, see LAW 513G.

515G. Civil Procedure I (3 cr)
Introduction to federal and state court organization, jurisdiction, and procedures. Emphasis on pre-trial, trial, and post-trial procedures, including pleading, enforcement of judgments, motion practice, appellate review, and the effects of res judicata and collateral estoppel.

516G. Civil Procedure II (3 cr)
For course description, see LAW 515G.

600G. Constitutional Law I (EDAD *870) (1-4 cr)
Structure of the federal government, including the history and judicial interpretation of the Constitution, federalism, interstate commerce, due process, equal protection, and separation of powers.

610G. Appellate Advocacy (3 cr)
Appellate practice and procedure exploring the federal and Nebraska appellate practice, including the mechanics and timing of appeals, with emphasis on written and oral advocacy. Students draft appellate briefs, prepare other appeal-related documents, and participate in an oral argument.

616G. International Human Rights Law (3 cr)
Students previously enrolled in International Human Rights Law Seminar (710G) may not enroll in this course. Historical, political, religious and philosophical roots of international human rights law, its development over the course of the last century and its contemporary role in international affairs. May include: current attempts to strengthen U.N. human rights conventions and the role of such conventions and international human rights law through the criminal process and military intervention to protect human rights victims, including NATO's intervention in Kosovo.

617G. Construction Law (1-4 cr)
Relational contracts in the context of a construction project. Students study a project, prepare construction instruments for it, then follow through its performance and deal with problems within the context of the contract instruments. Contract drafting, negotiations and dispute resolution experiences.

618G. Taxation-Farm and Ranch (ACCT, AECN, POLS *810) (1-4 cr)
Prereq: ACCT 312 or LAW 637G.
Selection of substantial income tax problems affecting farms and ranches.

619G. American Legal History: Clarence Darrow (EDAD *877) (1-4 cr)
Through the use of biography, history, autobiography, fiction, theatre, film, and the Internet, exploration of the life and times of Clarence Darrow.

620G. Corporations Seminar (1-4 cr)
Prereq: LAW 632G or permission; LAW 789G is not a requirement. Selected issues in corporate and securities law.

621G. Education Law Seminar (EDAD 968) (1-4 cr)
Selected current national and state legal issues pertaining to education.

624G. Immigration Law (1-4 cr)
History of immigration to the United States, federal authority to regulate immigration, immigrant visas, nonimmigrant visas, deportation, political asylum, citizenship, rights of aliens in the United States, and ethical issues for immigration lawyers.

625G. Copyright Seminar (1-4 cr)
Prereq: ECON *828.
Private antitrust practice and procedure, with emphasis on standing, proof of damages, attorney's fees, class actions, injunctive relief, and price discrimination.

627G. Payment Systems (1-4 cr)
Negotiable instruments, bank collections, negotiable documents, selected aspects of sales and products liability.

628G. Antitrust and Trade Regulation (ECON *828) (1-4 cr)
Control of business activities through the federal antitrust laws. Emphasis on monopolies, joint ventures, pricefixing, boycotts, resale price maintenance, exclusive dealing and tying arrangements, territorial restrictions, and mergers.

629G. Accounting for Lawyers (1-4 cr)
T hose who have accounting as undergraduates may enter only with the permission of the instructor. Basic accounting principles and the interaction of law and accounting. Understanding of accounting statements and terminology likely encountered in legal practice.

630G. Family Law (EACF 950) (1-4 cr)
The family examined as a socio-legal entity with respect to its creation, dissolution, and the problems incident to its continuation, including interspousal rights and duties and the relationship between parents and children.

631G. Criminal Procedure (1-4 cr)
Basic problems of criminal procedure with emphasis on the fourth, fifth, and sixth amendments to the United States Constitution and their impact on the criminal justice system.

632G. Corporations (1-4 cr)
Interrelationship between various business organization constituents, as well as the general theory and law governing these relationships. Focuses on both small and large corporations, and other forms of business organizations such as agency and partnerships. Provides a basic survey of business organization law, especially corporate organizations.

633G. Administrative Law (ECON *886) (1-4 cr)
Origin and growth of the administrative process; the development of administrative law and its impact upon traditional legal institutions; analysis of the types of federal and administrative tribunals, their powers and functions, and problems of administrative procedure, judicial and other controls upon the administrative process.

634G. Oil and Gas Law (1-4 cr)
Legal issues encountered in the development of oil and gas reserves.

635G. Family Law Practice (1-5 cr)
Prereq: LAW 630G. A limited enrollment class. Students required to write a paper on selected family law topics with emphasis on interdisciplinary research. Family law practice skills such as interviewing, counseling, negotiations, mediation, drafting, evaluating property, tax problems, litigation, working with other professionals and interacting with juveniles.

636G. Corporate Mergers and Acquisitions (3 cr)
Prereq: LAW 632G.
Corporations mergers and acquisitions, including tender offers. The history of corporate acquisitions, their rationales, the legal duties of the officers and directors involved, different ways to structure a corporate acquisition, issues in negotiation and contracting, and securities law issues.

637G. Individual Income Tax (ACCT *837) (4 cr)
The structure and content of the federal income tax system, focusing on taxation of individuals, corporations, trusts, estates, income splitting, capital gains, and tax accounting. Technical proficiency in solving tax problems and an understanding of the tax policy decisions implicit in the technical rules.

638G. Taxation-Corporate (ACCT *838) (1-4 cr)
680G. Legal Control of Discrimination (EDAD 976) (1-4 cr)
Selected legal issues pertaining to the legal control of discrimina-

681G. Cyberlaw (1-4 cr)
Areas in which the law interacts with the Internet and the increasing digitalization of information. Possible topics: commercial law issues arising out of e-commerce including the proposed Article 28 of the Uniform Commercial Code on information licensing and various electronic commerce statutes, and environmental intellectual property issues including the regulation of the Internet, the domain name as a trademark, controversy, database protection schemes, and issues relating to on-line line confidentiality and trademark infringement; privacy issues such as encryption of data and access to personal identification data; criminal law issues involving cybercrimes (e-mail theft, cyber- attack, etc.); and Y2K problems.

682G. Legal Control of Discrimination Seminar (1-4 cr)
Legal issues pertaining to the legal control of discrimination.

683G. Patents and International Intellectual Property (1-4 cr)
Two separate components involving patent law and one involving international intellectual property. The patent law component focuses on some of the central ideas of the protection and enforcement of patents with emphasis on the policy issues that arise from patent protection. The international intellectual property component is private law-based and involves intellectual property agreements and definitions, the right to use, the right to possess, the right to use, the right to invent, the right to use, the right to use, and the right to possess. The focus is on the economic, institutional, and legal dimensions of "health insur-

684G. Bioethics and Law (1-4 cr)
Rôle of law in controlling, shaping, and responding to scien-
tific and technological developments in the field of medicine and the biological sciences. May include: abortion, contraception, abortion, sterilization, artificial conception, genetic engineering, the right to refuse treatment, euthanasia, the right to treatment of defective newborns, organ transplantation, and experimen-
tation with human subjects.

685G. Capital Punishment (1-4 cr)
Legal doctrine and policy regarding capital punishment in the United States. Draws heavily but not exclusively on decisions of the U.S. Supreme Court. Includes various Constitutional challenges and limitations according to Supreme Court deci-
sions; aggravating and mitigating circumstances; jury selection and qualification; discretionary application; the use of clinical testimony; and the role of counsel. Differ significantly from the jurisprudence framework that addresses capital punishment and directs primary attention to jurisprudential argu-
ments regarding the justification of capital punishment in principle and in practice, with only secondary attention to a few of the central court cases. Thus, the two courses are complimentary with relatively little overlap, and neither presupposes the other.

686G. Gender Issues in the Law (1-4 cr)
Critical review of the role of gender in shaping socio-
legal relationships and policies. Examines selected procedural and substantive areas of the law that affect and are affected by gender. Includes but are not limited to employment, property, torts, the Constitution and contractual relationships. Emphasis on the complex relationship between gender, race and class.

687G. Investment Companies and Investment Advisers (2 cr) Pre- or coreq: LAW 632/G
Survey of the regulation of mutual funds and investment advis-
er under the federal Investment Company Act and Investment 
Advisers Act.

688G. Images of Lawyers in Film (2 cr) Grade based on presentations and papers and final exam.
How lawyers are portrayed in film and how those images reflect real lawyering issues. Focus on professional responsibil-
ity issues raised by films, but other aspects of lawyering also addressed.

690G. Real Estate Transactions (1-4 cr)
Contracts for the sale of land; real estate financing including mortgages and installment land contracts; and more advanced devices such as sale of contracts, ground leases, leasehold mort-
gages, equity participation, variable rate mortgages, and oth-
ers title考试 and protection; shared facilities such as cooperatives, condominiums, and home owners associa-
tions.

691G. Health Care Finance (3 cr)
Institutional, economic, and legal dimensions of "health insur-
ance." Although the course considers the interface between private and public insurance mechanisms, the focus is on private sector developments in "managed care."
736G. Remedies and Damages (1-4 cr)
A critical examination of remedies and damages as they relate to the formation and enforcement of contracts and the redress of torts. The course will cover the elements of damages, the measure of damages, and the remedies available for breach of contract and torts, as well as the role of the jury in awarding damages and the implementation of remedies. The course will also explore the impact of federal and state statutory and case law on the remedy landscape.

737G. Law of Provider and Patient (1-4 cr)
A study of the legal relationships between healthcare providers and patients, including the creation, performance, and enforcement of contracts for healthcare services. The course will cover the legal principles governing the relationship between providers and patients, including the rights and obligations of each party, the scope of permissible compensation arrangements, and the role of the law in resolving disputes between providers and patients.

738G. Advanced Bankruptcy (1-4 cr)
A critical examination of the federal bankruptcy code and its application to individual and corporate debtors. The course will cover the process of filing for bankruptcy, the rights and obligations of debtors and creditors, and the role of the bankruptcy court in resolving disputes. The course will also explore the implications of bankruptcy for corporate governance, the taxation of bankruptcy income, and the role of bankruptcy in the broader context of economic regulation.

739G. Criminal Law II: Federal Criminal Law (1-4 cr)
A critical examination of the federal criminal laws and their application to individual and corporate defendants. The course will cover the elements of federal crimes, the process of criminal prosecution, and the role of the Supreme Court in interpreting and applying federal criminal laws. The course will also explore the implications of federal criminal law for corporate governance, the taxation of criminal income, and the role of criminal law in the broader context of economic regulation.

740G. Negotiations (1-4 cr)
A critical examination of the negotiation process and its application to resolving disputes and reaching agreements. The course will cover the principles of effective negotiation, including the use of power and influence, the role of communication, and the importance of building relationships. The course will also explore the role of negotiation in resolving disputes in a variety of contexts, including business, law, and public policy.

741G. Pretrial Litigation (1-4 cr)
A critical examination of the pretrial stage of litigation, including the preparation and presentation of evidence, the role of pretrial conferences, and the impact of procedural rules on the litigation process. The course will cover the principles of effective pretrial strategy, including the selection of evidence, the role of discovery, and the impact of procedural rules on the litigation process.

742G. Remedies and Damages (1-4 cr)
A critical examination of the legal principles governing the creation, performance, and enforcement of contracts and the redress of torts. The course will cover the elements of remedies and damages, the measure of damages, and the role of the law in resolving disputes between parties.

743G. Style and Composition in Legal Writing (1-4 cr)
A critical examination of the principles and practices of legal writing, including the use of legal precedent, the role of legal grammar, and the importance of effective communication. The course will cover the principles of effective legal writing, including the selection of legal sources, the writing of legal pleadings, and the role of legal writing in the broader context of legal practice.

744G. Comparative Law: International Gender Issues Seminar (1-4 cr)
A critical examination of the role of law in gender equality, with a focus on international law. The course will cover the principles of international law and the role of international organizations in promoting gender equality, including the role of the United Nations and the World Bank in promoting gender equality.

745G. Partnership Taxation (ACCT 495) (1-4 cr)
A critical examination of the tax implications of partnerships, including the taxation of partner income, the taxation of partnership income, and the role of partnership tax planning in the broader context of tax law.

746G. Commercial Law Seminar (1-4 cr)
A critical examination of the principles and practices of commercial law, including the role of contract law, the role of tort law, and the role of property law in resolving disputes between parties. The course will cover the principles of effective commercial law, including the selection of legal sources, the writing of legal pleadings, and the role of legal writing in the broader context of legal practice.
761G. Trial Advocacy (EDAD 963) [1-4 cr] Prereq: LAW 669/G. Students perform weekly exercises which are videotaped and critiqued and will write a case. Fundamentals of trial practice. Emphasis on questioning witnesses, selecting and addressing the jury, and admitting items into evidence.

762G. Law and Behavioral Science (PSYC 985) [1-4 cr] General issues in the interaction between law and the behavioral sciences; discussion of the uses and abuses of behavioral science in the law, with attention to ways of making behavioral science input most useful; analysis of the law as a behavioral instrument.

763G. Mental Health Law (PSYC 988) [1-4 cr] Critical review of the mental health laws throughout the nation and their psychological foundations. Emphasis on the research that illuminates the problems facing mental health law, system, and processes and the available solutions. Includes the insanity defense, competency to stand trial, guardianship, conservatorship, and civil commitment.

764G. Topics in Law and Psychology I (PSYC 989) [1-4 cr] May be repeated one. Analysis of specific psychological topics. Previous course titles include Privacy, Mental Health Policy, Legal Decision Making, Institutional Reform and Deinstitutionalization, Legal Policy and Child Development, and Domestic Violence.

765G. Topics in Law and Psychology II (PSYC 989A) [1-4 cr] May be repeated one. Course for description, see LAW 764G.


768G. Estate Planning Problems (ACCT 968) [1-4 cr] Prereq: LAW 767/G. Problems of planning and implementing estate plans for clients of substantial wealth with emphasis on drafting the various legal instruments usually required for comprehensive estate planning.

769G. Tax Policy Seminar (ACCT 969) [1-4 cr] Policies of federal income taxation with emphasis on current legislative proposals and alternatives.

770G. Mental Health Law Seminar [1-4 cr] Students who have previously taken LAW 763G may not take this course. Critical review of the mental health laws throughout the nation and their psychological foundations. Emphasis on the research that illuminates the problems facing mental health law, system, and processes and the available solutions. Includes the insanity defense, competency to stand trial, guardianship/conservatorship, and civil commitment.

772G. Criminal Sanction Seminar [3 cr] Criminal sanction with attention to conceptual and justificatory problems; issues relating to the just administration of punishment, including the death penalty, as well as legal doctrines and defenses negating or mitigating criminal responsibility. Sentencing process considered with attention to the legal rights of offenders from conviction to final release.


775G. Jurisprudence Seminar [1-4 cr] Judicial process, the principal schools of jurisprudence, theories of the nature of law and the legal order, the problems of the science of law today, and their application to the American social system.


777G. Legislation Seminar (EDAD 963) [1-4 cr] Development of further skills in drafting and interpreting statutes, understanding legislative processes and decision making, and evaluating the role of legislation in governmental regulation. Opportunity for in-depth study of subjects pertaining to or involving legislation, centering on subjects considered by the Nebraska Legislature and the Nebraska legislative process.

781G. Constitutional Problems Seminar [1-4 cr] Selected constitutional issues of current importance.

782G. Advanced Trial Advocacy [3 cr] Prereq: LAW 761/G. Enrolment limited to 8 students per semester. Simulation exercises concerning advanced trial advocacy topics including jury selection, expert witnesses, probate procedures, and draft trials. Open to trial practice students.

Master of Arts in Science or Master of Science Degree. The program of study for the master's degree may be under any of the options I, II, III. Option I, the thesis option, is rare. It is possible to specialize in either pure mathematics, applied mathematics, or statistics. The program is designed to allow teachers to obtain more training in mathematics of a nature which is especially appropriate to their needs. Special courses or sections of courses bearing a "T" designation are offered specifically for persons in programs. A minimum grade of B is required in all 800 level "T" courses. A completed calculus sequence, a course in modern algebra, and at least two other courses beyond calculus are required for admission. The possession of a valid teaching certificate is a prerequisite to the award of the degree.

Doctor of Philosophy Degree. Doctoral candidates may specialize in algebra, analysis, applied mathematics, or statistics. A student may be admitted to the PhD program either initially, as for the masters program, or after completion of a masters degree. To become a Candidate for the PhD degree the student must pass a written comprehensive examination and pass a language examination in one of the following foreign languages: French, German, or Russian; except that a student in statistics, must, in place of a foreign language, substitute an alternative research tool in computer science. The degree is awarded as recognition of high attainment in scholarship and for demonstrated power of independent research.

An applicant for the PhD with a major in a department other than mathematics and statistics may be permitted to complete a minor in mathematics, applied mathematics, or statistics. Specific details on any of the advanced degree programs can be obtained from the chair of the Graduate Committee.

**Avalos, George** - 2000; Associate Professor; BA 1990, MS 1991; Professor Emeritus; MA 1995, PhD 1999 Virginia

**Avramov, Luchezar** - 2001; Professor; OSU 1986 Moscow State (Kazakhstan)

**Brittenham, Mark** - 2000; Assistant Professor; BS 1983 University of California; MA 1985, PhD 1990 Cornell

**Chervu, R.** - 2000; Professor Emeritus; MA 1969, PhD 1970 Illinois

**Choukrid, Leo G.** - 1976; Associate Professor; BA 1970, MS 1971, PhD 1975 Princeton

**Cohn, Steve** - 1994; Associate Professor; BA 1983 Northwestern University; MS 1985, PhD 1989 Courant Institute
**Deng, Bo** - 1987; Professor; BS 1982 Fudan; PhD 1987 Michigan State

**Dong, Allan P.** - 1997; Assistant Professor; BAt 1988, MMath 1989 Waterloo; PhD 1993 Texas A&M

**Dunbar, Steven R.** - 1985; Professor; BS 1974 Nebraska (Lincoln); PhD 1981 Minnesota

**Erbe, Lynn** - 1978; Professor; BS 1975 Nebraska (Lincoln); PhD 1981 Nebraska (Lincoln)

**Fowler, David** - 1991; Associate Professor; Matherieics Education; AB 1962 Harvard; MA 1988; PhD 1991 Nebraska (Lincoln)

**Harbourne, Brian** - 1985; Professor; BA 1977; Virginia; PhD 1982 Massachusetts Institute of Technology

**Hermiller, Susan** - 1998; Associate Professor; BS 1984 Ohio State; M S 1987; PhD 1992 Cornell

**Hines, Gwendolen** - 1993; Assistant Professor; BA 1989, MS 1988; PhD 1993 Psychology Institute of Technology

**Jackson, Lloyd K.** - 1950; Professor Emeritus; BA 1943, MA 1946 Nebraska (Lincoln); PhD 1950 California (Los Angeles)

**Jaffe, David B.** - 1989; Professor; BS 1981, PhD 1987 California (Berkeley)

**Johnson, Gerald W.** - 1968; Professor; BA 1961 St. Thomas; MA 1963, PhD 1968 Michigan

**Kramer, Earl** - 1970; Professor Emeritus; BS 1962 Wisconsin State; MS 1966, PhD 1969 Michigan

**Lahiri, Parthasarathi** - 1986; Professor; BS 1979 Presidency; MS 1982 Calcutta; PhD 1986 Florida

**Levitte, William G.** - 1947; Professor Emeritus; AB 1937, MA 1938 Nebraska (Lincoln); PhD 1947 Wisconsin

**Leder, Glenn W.** - 1989; Associate Professor; BA 1977 Iowa State; MS 1986, PhD 1990; University of California

**Lewis, W. James** - 1971; Professor and Chair; BS 1965; PhD 1971 Louisiana State

**Logan, J. David** - 1981; Professor; BS 1986, MS 1989 Mathematics State College

**Marley, Thomas** - 1989; Associate Professor; BS 1984, MS 1986, PhD 1989 Purdue

**McCUTCHEON, Allan L.** - 1996; Professor; BS 1972 Iowa State; MS 1977, PhD 1982, Chicago

**Meakin, John C.** - 1970; Professor Emeritus; BS 1967, MS 1968 Queensland (Australia); PhD 1969 Monash (Australia)

**Meisters, Gary** - 1972; Professor Emeritus; BS 1954, PhD 1959 Iowa State

**Messner, Dale** - 1968; Professor Emeritus; BA 1948, MS 1949 Northwestern; PhD 1956 Michigan

**Mientka, Walter E.** - 1957; Professor; Executive Director, Mathematical Association of America; MS 1948 Massachusetts; MA 1949 Columbia; PhD 1957 Colorado

**Morr, John L.** - 1991; Professor; BS 1985 London; Certificate, Advanced Study in Mathematics; PhD 1989 London

**Parkhurst, Anne M.** - 1972; Professor; BA 1962 Virginia; MS 1965, PhD 1969 Yale; PhD 1982, Nebraska (Lincoln)

**Peterson, Allan C.** - 1969; Professor; BS 1963, MS 1965 South Dakota School of Mines and Technology

**Pitts, David R.** - 1986; Professor; BS 1979; MA 1982, PhD 1986 California (Berkeley)

**Radtcliffe, Jamie** - 1994; Associate Professor; BA 1984, PhD 1989 Cambridge

**Rammaha, Mohammad A.** - 1985; Associate Professor; BS 1975 Jordan; MS 1979 Dundee (Scotland); PhD 1985 Indiana

**Rebarber, Richard** - 1984; Professor; BA 1978; PhD 1984 Wisconsin (Madison)

**Saxena, Krishna** - 1965; Professor Emeritus; BS 1951, MS 1953 Lucknow; PhD 1965 Michigan

**Shores, Thomas S.** - 1968; Professor; BS 1964, MA 1965, PhD 1968 Kansas

**Skou, David** - 1966; Professor; BS 1960 Wisconsin (Madison); PhD 1969 Michigan

**Tang, Hong C.** - 1969; Professor Emeritus; BS 1966, PhD 1967, Michigan State

**Tortora, Robert** - 1997; Adjunct Professor; BS 1968 Youngstown; MS 1969 Catholic University of America; PhD 1975 Bowling Green

**Walker, Judy L.** - 1996; Associate Professor; BS 1990 Michigan; MS 1992, PhD 1996 Illinois

**Walker, Mark E.** - 1996; Associate Professor; BS 1990 New Mexico; MS 1992, PhD 1996 Illinois

**Wiegand, Roger** - 1972; Professor; BS 1964 Princeton; MS 1965, PhD 1967 Stanford

**Wiegand, Sylvia** - 1972; Professor; BS 1966 Bryn Mawr; PhD 1972 Wisconsin

**Woodward, Gordon** - 1971; Associate Professor; BS 1965, PhD 1971 Illinois

**Young, Linda J.** - 1990; Professor; BS 1974, MS 1976 West Texas State; PhD 1981 Oklahoma State

**Zechmann, Albert W.** - 1961; Associate Professor Emeritus; BS 1956, MS 1959; PhD 1961 Iowa State

---

**Coursers**

**Algebra (MAT H)**

800. Mathematics for Elementary School Teachers (3 cr) Prereq: Permission. Fundamental mathematical concepts basic to the understanding of arithmetic.

811. Applied Linear Algebra (Matrix Theory) (3 cr) Prereq: MATH 208 or 210H. A term paper and/or special project is required for graduate credit. N ot open to MA or MS students in mathematics. For computer science, statistics, engineering, physics, chemistry, and mathematics students. Similarity of matrices, diagonalization of symmetric matrices, canonical forms, eigenvalues, quadratic forms, vectors, and applications to linear systems.

815. Modern Algebra with Applications (3 cr) Prereq: MATH 310 or CSCE 235 or permission. Credit in MATH 805 will not count towards the MA or MS degree in mathematics.

817. [817?]. Introduction to Modern Algebra I (3 cr) Prereq: MATH 110 is advisable for most students. Topics from elementary group theory and ring theory, including fundamental isomorphism theorems, ideals, quotient rings, domains Euclidean or principal ideal rings, unique factorization, modules and vector spaces including direct sum decompositions, bases, and dual spaces.

818. Introduction to Modern Algebra II (3 cr) Prereq: MATH 817. Topics from field theory including Galois theory and finite fields and from linear transformations including characteristic roots, matrices, canonical forms, trace and transpose, and determinants.

901. Algebra I (3 cr) Prereq: MATH 818 or permission. In-depth treatment of groups, rings, fields, algebraic field extensions. Galois theory, multilinear products categories.

902. Algebra II (3 cr) Prereq: MATH 818 or permission. In-depth treatment of groups, rings, modules, algebraic field extensions. Galois theory, multilinear products categories.

950. Commutative Algebra (3 cr) Prereq: MATH 818 or permission. Selected topics from classical ideal theory. Dedekind rings, completions, local rings, valuation theory.
Mechanized Systems Management

Department Head: Glenn J. Hoffman, Ph.D.
Graduate Committee: Professors Martin (chair), Bashford, Eisenhauer, Hanna, Moyer, Schinstock, and Professors Jones and Wold

The Department of Biological Systems Engineering offers the master of science with a major in mechanized systems management. Students wishing to pursue graduate degrees in mechanized systems management must meet the admission requirements in agricultural sciences and natural resources. Graduate study in this area may be directed to the mechanization, processing, and business field of agriculture power and machinery systems, soil and water conservation, irrigation systems and water management, water quality, plant and animal environment, materials handling and processing systems, computer applications, sensors, controls, and other areas of technical and applied operations as related to agricultural and biological sciences.

Masters Degree. Graduate programs leading to the degree of master of science with a major in mechanized systems management are governed by the general requirements for graduate degrees and the rules of the Graduate College. With approval of the departmental Graduate Committee and the Graduate Council, coursework at the graduate level from other areas of agriculture may be used as a portion of the course work constituting a major in mechanized systems management.

In addition to the Graduate College requirements for graduate degrees, BSEN 989 (Seminar) is required as a portion of the major. With approval of the departmental Graduate Committee, up to 6 hours of biological systems engineering (in addition to 989) and up to 4 hours of agricultural statistics coursework may be completed at the graduate level may be used as part of the course work constituting a major in mechanized systems management.

A specialization in Water Resources Planning and Management is available.

Faculty

*Adamchuck, Viacheslav - 2001 Assistant Professor; BS 1996 National Agriculture (Ukraine); MS 1998, PhD 2000 Purdue
**Bashford, Leonard L. - 1980 Professor; BS, Wyoming, 1963; MS, Arizona, 1965; PhD, Oklahoma State, 1972
**Brand, Rhonda M. - 1997 Assistant Professor; Biological Sciences Engineering; BS 1983, M 1985, PhD 1992, Michigan (Ann Arbor)
**Brown-Brand, Tami M. - 1998 Assistant Professor Biological Sciences Engineering; BS 1993, MS 1995, Nebraska (Lincoln); PhD 1998, Kentucky, 1998
**Dickey, Elbert C. - 1963; MS, Arizona, 1965; PhD, Oklahoma State, 1972
**Edwards, Donald - 1996 Assistant Professor Biological Sciences Engineering; BS 1980; MS 1981, South Dakota State; PhD, Purdue, 1986
**Eisenhauer, Dean E. - 1995 Professor; BS 1971, MS, Kansas State; PhD; Colorado State, 1984
**Fang, Qi - 2001 Assistant Professor; BS 1999, Texas Tech; MS, 1999, Texas A&M, 1996
**Fitzgerald, Jay B. - 1983 Professor; BS, Iowa, 1965; MS, Texas Tech; PhD, 1976, Purdue, 1986
**Gilley, John E. - 1963 Assistant Professor; BS, South Dakota, 1963; MS, Wyoming, 1965; PhD, Purdue, 1969
**Hanna, Milford A. - 1975 Teacher; Industrial Agricultural Products Center and Professor Biological Systems Engineering and Food Science & Technology; BS 1975, MS 1971, PhD 1973, Purdue, 1973
**Hoffman, Glenn J.** - 1989; Head and Professor; BS 1963, MS 1963, Ohio State; PhD, North Carolina State, 1967

**Howell, Terry** - 1990; Adjunct Professor; BS 1969, MS 1970, PhD 1974, Texas A&M

**Hubbard, Kenneth G.** - 1981; Professor; BS, Chadron State; MS, South Dakota, M I nes and Technology, 1973; PhD, Utah State, 1981

**Jones, David D.** - 1989; Associate Professor; BS 1984, MS 1986, Texas A&M; PhD, Oklahoma State, 1990

**Kocher, Michael F.** - 1990; Associate Professor; BS 1979, MS 1983, N ebraska (Lincoln); PhD, Oklahoma State, 1986

**Koelsch, Richard K.** - 1995; Assistant Professor, Biological Systems Engineering and Animal Science; BS 1975, MS 1977, Kansas State; PhD, Cornell, 1992

**Kranz, William L.** - 1985; Assistant Professor, Biological Systems Engineering and North East R e search and Extension Center; BS, South Dakota State; MS 1976; MS, Nebraska (Lincoln), 1981

**Martin, Derrell L.** - 1982; Professor; BS 1975, MS 1979, Nebraska (Lincoln); PhD, Colorado State, 1984

**Meagher, Michael M.** - 1997; Associate Professor, Food Science and Technology & Biological Systems Engineering; BS 1980, MS 1984, Colorado State; PhD, Iowa State, 1987

**Meyer, George E.** - 1989; Professor; BS, Texas A&M, 1971; MS 1974; PhD 1981, Texas A&M; M S, Nebraska, 1978

**Meyers, John A.** - 1971; Adjunct Professor, Biological Systems Engineering and Animal Research Center; BS 1970, MS 1971, Nebraska (Lincoln); PhD, Arizona State, 1981

**Mitchell, Jack L.** - 1971; Professor, Biological Systems Engineering and Animal Research Center; BS 1970, MS 1971, Nebraska (Lincoln); PhD, Arizona State, 1981

**Minnert, John A.** - 1992; Adjunct Professor, Biological Systems Engineering and Animal Research Center; BS 1970, MS 1971, Nebraska (Lincoln); PhD, Arizona State, 1981

**Minter, Dennis D.** - 1978; Professor; BS, Nebraska (Lincoln), 1968; MS 1970, PhD 1975, Cornell, 1981

**Shelton, David R.** - 1976; Professor, Biological Systems Engineering and North East R e search and Extension Center; BS 1970, MS 1971, Nebraska (Lincoln); PhD, Oklahoma State, 1977

**Skopp, Joseph M.** - 1986; Associate Professor; Agriculture; BS, California (Davis), 1971; MS, Arizona, 1973; PhD, Wisconsin, 1981

**Smith, John D.** - 1981; Associate Professor, Biological Systems Engineering and Panhandle Research and Extension Center; BS 1970, MS 1971, Nebraska (Lincoln); PhD, Oklahoma State, 1977

**Schoen, Joseph M.** - 1986; Associate Professor, Agriculture; BS, California (Davis), 1971; MS, Arizona, 1973; PhD, Wisconsin, 1981

**Smith, John A.** - 1981; Associate Professor, Biological Systems Engineering and Panhandle Research and Extension Center; BS 1970, MS 1971, Nebraska (Lincoln); PhD, Oklahoma State, 1977

**Vanderholm, Dale H.** - 1983; Professor, Associate Dean and Director; Animal Research Division; BS 1962, MS 1969, Iowa State; PhD, Colorado State, 1972

**Walter, Shean A.** - 1986; Associate Professor; BS, Central Arkansas, 1978; MS, Texas A&M; M S, Nebraska (Lincoln), 1981

**Weiss, Albert** - 1974; Professor; BS, City College (New York), 1962; MS, R utgers, 1969; PhD, Cornell, 1975

**Weller, Curtis L.** - 1992; Associate Professor, Biological Systems Engineering and Food Science and Technology; BS 1977, MS 1983, PhD 1987, Illinois

**Williams, Donald R.** - 1977; Professor; BS, Central M assachusetts State; MS, Massachusetts State, 1969; PhD, Nebraska (Lincoln), 1977

**Wilson, Wayne E.** - 1991; Associate Professor, Biological Systems Engineering and Civil Engineering; BS, Colorado State; MS 1986, PhD 1990, Nebraska (Lincoln)

**Young, C. Dean** - 1980; Associate Professor, Biological Systems Engineering and Panhandle Research and Extension Center; BS 1974, MS 1976, Wyoming

**812. Hydraulic Power Systems (3 cr I) Lec 2, Lab 2.** Pre-req: Any 245 or 240. The theory and application of fluids under controlled pressure to perform work in mobile and industrial applications. Operation of components and functional planning of circuits with emphasis on troubleshooting and analysis.

**816. Sensors and Control Systems for Agri-Industries (3 cr CR) Lec 2, Lab 2.** Pre-req: MSYM M 245 or permission. Application of sensors for measurement of process control variables and implementation of microcomputer-based measurement and control systems. Basic electrical and electronic instrumentation plus control of electrically pneumatically or hydraulically powered systems.

**832. Mechanized Agricultural Systems (3 cr II) Pre-req: Permission.** Offered alternate every-odd-numbered year. Advanced concepts of equipment used in field, farmstead, transport, and irrigation systems in modern agriculture from the standpoints of sales, service, and operation.

**833. Equipment and Tractor Testing (3 cr) Lec 2, Lab 2.** Pre-req: MSYM M 312 and BIOS M 201. Offered every three semesters. Principles and procedures involved in testing agricultural equipment and tractors. An actual test planned, scheduled, conducted, and reported. The test may be based upon procedures used at the Nebraska Tractor Testing Laboratory or equipment being used for research in the department.

**852. Irrigation Systems Management (3 cr II) Pre-req: MATH 106, 4 hrs physics.** Offered fall semester of odd-numbered years. Modern principles and procedures for planning, scheduling, operating, and controlling the operational aspects of agricultural production and processing equipment systems. Advanced cost estimation, optimization and computer analysis techniques applied to the operations management of equipment systems.

**854. Information Systems Analysis and Design (3 cr II) Pre-req: MATH 106 or 103; MNGT 816 or equivalent.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**862. Equipment Systems (3 cr I) Lec 2, Rec 2.** Pre-req: Any 162, 312 and 364. Modern principles and procedures for planning, scheduling, operating, and controlling the operational aspects of agricultural production and processing equipment systems. Advanced cost estimation, optimization and computer analysis techniques applied to the operations management of equipment systems.

**864. Heat and Mass Transfer (3 cr II) Lec 2. Pre-req: MATH 109 and PHYS 141 or equivalent.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**865. Food Engineering Units Operations (3 cr) Lec 2, Lab 3. Pre-req: Any 162; Offered fall semester of odd-numbered years.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**866. Bio-Atmospheric Instrumentation (3 cr) Pre-req: Any 162; Offered fall semester of odd-numbered years.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**875. Water Quality Strategy (3 cr III) Pre-req: Any 162; Offered fall semester of odd-numbered years.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**876. Water Quality Strategy (3 cr III) Pre-req: Any 162; Offered fall semester of odd-numbered years.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**877. Water Quality Strategy (3 cr III) Pre-req: Any 162; Offered fall semester of odd-numbered years.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.

**878. Water Quality Strategy (3 cr III) Pre-req: Any 162; Offered fall semester of odd-numbered years.** Offered fall semester of odd-numbered years. Theory and practice in on-farm irrigation management, including irrigation response functions and irrigation uniformity concepts, field evaluation of surface and sprinkler irrigation systems; estimation of evapotranspiration and irrigation scheduling; water quality problems and salinity control.
Courses of Instruction/Modern Languages and Literatures

Modern Languages (MODL)

842. Survey of Medieval German Literature in Translation (GER M 842) (3 cr) Prereq: Permission or GER M 302. For German majors, German majors expected to read the works in German translation and to write their papers in German. Non-German majors read the works in English translation. For course description, see GER M 842.

843. Dante and His Times (3 cr) Divina Commedia extensive readings in the social background of the thirteenth and fourteenth centuries.

854. Russian Intellectual Tradition (RUSS 854) (3 cr) For course description, see RUSS 854.

870. Introduction to Literary Criticism (3 cr) Lecture and discussion about important figures and movements in the history of literary criticism. Reading of representative texts to develop a critical lexicon. Bibliographic and methodological component. Tailored to needs of modern language students and required of all graduate students.

878. Pro-seminar in Latin American Studies (ANTH, ENGL, HIST, POLS, SOCI 878) (3 cr, max 6) Prereq: Permission.

890. Seminar in Applied Linguistics and Methodology (3 cr) M O L. *880, or its equivalent, is required of all graduate students in modern languages. It does not qualify as a course for Nebraska State Teacher Certification. Theoretical and practical aspects of second language teaching and learning with special emphasis on the application of principles of applied linguistics along with related disciplines of education to structured teaching and learning situations.

898. Special Topics (1-24 cr) Prereq: Permission. Special topics covered in any given semester and credit to be awarded are determined by instructor. Topics in the area of language, literature, and civilization.

919. Interdisciplinary Approaches to the Nineteenth Century (ENGL, HIST 919) (3 cr) For course description, see ENGL 919.

929. Special Topics (3 cr) Prereq: Permission. Topics in the area of language, literature, and civilization.

930. Advanced Grammar (3 cr) Detailed analysis of French syntax giving students the means to achieve greater sophistication in self-expression.

940. French Stylistics (3 cr) Prereq: FR EN 304. Principles of explication of texts, translation and composition in French, and review of linguistic principles for advanced students, particularly prospective teachers, who wish to acquire a more sophisticated means of expression in French.


942. Topics in French Civilization (3 cr) Prereq: 6 hrs 300-level French. Analysis of interrelationships of cultural, social, economic, and political factors contributing to French culture and civilization.

944. French Literary Treasures of the Middle Ages (3 cr) Prereq: FR EN 301 and 302, or permission. French medieval short-story, epic, novel, farce, and satire read in modern French. Titles may include Song of Rinald, Lais, Tristan, E de E, and Villon's Testament.

949. Seventeenth Century I (3 cr) Prereq: FR EN 301 and 302, or permission. Plays of Corneille, Molière, and Racine.

949. Seventeenth Century II (3 cr) Prereq: FR EN 301 and 302, or permission. Philosophical writings and the theatre of eighteenth-century France.

950. Eighteenth Century I (3 cr) Prereq: FR EN 301 and 302, or permission. Philosophical writings and the theatre of eighteenth-century France.

953. Nineteenth Century I (3 cr) Prereq: FR EN 301 and 302, or permission. R editions in the major developments in narrative, drama, prose, and poetry to be decided by the instructor at that time. Authors typically studied include Balzac, Hugo, Stendhal, Nerval, and Gauthier.

954. Nineteenth Century II (3 cr) Prereq: FR EN 301 and 302, or permission. R editions in the major developments in prose and verse from 1850 to 1900. Authors typically studied include Baudelaire, Mallarme, Rimbaud and Verlaine.

957. Twentieth Century French Literature I (3 cr) Prereq: FR EN 301 and 302, or permission. Major trends in the French novel from 1900 to the present.

958. Twentieth Century French Literature II (3 cr) Prereq: FR EN 301 and 302, or permission. Major trends in French poetry and theatre from 1900 to the present.

959. Literature of French Canada (3 cr) Prereq: FR EN 301 and 302 or permission. Literature of French Canada in its cultural context.

966. Independent Study in French (1-24 cr) Prereq: Permission. Special research project or reading program under the direction of a staff member in the department.

998. Special Topics in French (1-24 cr) Prereq: Permission. Specific topics to be covered in any given semester and credit to be awarded are determined by the instructor at that time. Topics in the area of language, literature, and civilization.

899. Masters Thesis (6-10 cr) Prereq: Admission to master's degree program and permission of major adviser.

901. Old French Language (3 cr) Prereq: Permission. Phonology and morphology of Old French as derived from Vulgar Latin. Attention to a detailed reading of the “Chanson de Roland” and the “Lais” of Marie de France.

902. Old French Literature (3 cr) Prereq: Permission. R editions in M edieval epics, saints’ lives, Arthurian romances, prose chronicles and drama. Introduction to the modern critical principles of editing M edieval manuscripts.

919. Sixteenth Century I (3 cr) Prereq: Permission. M edievals of R enaisance literature W orks of Rabelais, the Pliades, M ontaigne, etc.

920. Sixth Century II (3 cr) Prereq: Permission. M edievals of R enaisance literature W orks of Rabelais, the Pliades, M ontaigne, etc.

922. Topics in French Civilization (3 cr) Prereq: 6 hrs 300-level French. Analysis of interrelationships of cultural, social, economic, and political factors contributing to French culture and civilization.

924. Drama

925. Novel

928. Poetry

929. Special Topics

996. Research Problems in French (1-8 cr) Prereq: Permission. Individual research on a literary or linguistic problem involving original investigation in areas not covered by seminars or thesis.


999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.
German (GERM)

803. Advanced Syntax and Stylistics in German I (3 cr)
Prereq: GERM 303 and 304, or equivalent. R recommended for all majors.
Advanced syntax and style in their application to composition.

804. Advanced Syntax and Stylistics in German II (3 cr)
Prereq: GERM 303 and 304, or equivalent. R recommended for all majors.
Advanced syntax and style in their application to composition.

805. Linguistics in German (3 cr) Prereq: GERM 303, 304, or equivalent.
Phonetics, phonemics, morphology, and transformational grammars as applied to standard German.

807. History of the German Language (3 cr) Prereq: GERM 302 or equivalent.
History of German language from the beginnings to the present.

809. Morphemics in German (3 cr) Prereq: Permission. M orphemic theory and its application to modern German.

*810. Applied Linguistics in German (3 cr) Prereq: GERM 803 or permission. R recommended for graduate students in German.
Application of linguistic theory to teaching or learning German as a second language.

845. Sixteenth- and Seventeenth-Century German Literature (3 cr) Prereq: GERM 302 or equivalent.
Reading of masterworks of Middle High German literature in English translation. Careful examination of many aspects of Biedermeier literature, the heroic epic, and the romance.

849. Survey of Nineteenth-Century German Literature (3 cr) Prereq: GERM 302 or equivalent.
Representative authors of the Enlightenment, Empfindsamkeit, and Storm and Stress.

848. Careful examination of many aspects of Biedermeier literature, the heroic epic, and the romance.

844. Middle High German Language (3 cr) Prereq: GERM 843 or reading knowledge of Middle High German; R reading of works of Middle High German literature in the original language.


847. Eighteenth-Century Literature (3 cr) Prereq: GERM 302 or equivalent. R epresentative authors of the Enlightenment, Empfindsamkeit, and Storm and Stress.

848. Romanticism (3 cr) Prereq: GERM 302 or equivalent. R epresentative authors of the Romantic movement.

849. Survey of Nineteenth-Century German Literature I (1820-1848) (3 cr) Prereq: GERM 301 and 302 or permission.
M ajor literary currents, authors, works, and influences in German-speaking countries in the first half of the nineteenth century, excluding Romanticism, which is treated in GERM 848. Careful examination of many aspects of Biedermeier and D as Junker Deutschland, the two major movements of the time.

850. Survey of Nineteenth-Century German Literature II (1848-1900) (3 cr) Prereq: GERM 301 and 302 or permission.
M ajor literary currents, authors, works, and influences in German-speaking countries in the second half of the nineteenth century. Careful examination of Romanticism and Naturalism, the two major movements in this half of the century.

851. From Naturalism to Expressionism (3 cr) Prereq: GERM 302 or equivalent. C ritical survey of the major literary currents from the turn of the century to the end of W orld W ar I.

852. From the Weimar Republic into Exile (3 cr) Prereq: GERM 302 or equivalent. C ritical survey of German literature from 1918 to 1945.

853. History of German Poetry (2-3 cr) Prereq: GERM 302 or equivalent. C ritical survey of the development of epic and lyric poetry from the beginning to the present time.

854. German Literature and Philosophy (2-3 cr) Prereq: GERM 302 or equivalent. R elationship between literature and contemporary thought from the eighteenth century to the present.

855. Postwar German Literature: The Literature of West Germany, Austria, and Switzerland (3 cr) Prereq: GERM 302 or equivalent. C ritical survey of major literary currents in the West since 1945.

856. Works of Goethe and Schiller (3 cr) Prereq: GERM 302 or equivalent. R epresentative works.

860. Goethe’s Faust (3 cr) Prereq: GERM 302 or equivalent. C ritical study. Lectures, assigned readings and reports.

898. Special Topics in German (1-24 cr) Prereq: P ermission. S pecific topics to be offered in an even or odd semester to be determined at that time. T opics in the area of language, literature, and civilization.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor. B raum. A nthesis in German and L essbach.

929. Problems in Advanced Linguistics (1-3 cr) Prereq: GERM 807 or permission. T raining in descriptive, comparative, and historical linguistics.

930. Seminar in German Linguistics (3 cr) Prereq: Permission. S eminar in the major areas of modern German linguistics.

931. Seminar in German Literature I (1-24 cr) Prereq: Permission. T he classical period, Klopstock, Wieland, Lessing, Herder, Schiller, Goethe. Subject to be selected.

932. Seminar in German Literature II (1-24 cr) Prereq: Permission. T endencies of German literature during the last 50 years.

996. Research Problems in German (1-8 cr) Prereq: Permission. I ndividual research projects on a literary or philological problem not covered by seminars or thesis.

997. Directed Readings in German (1-24 cr) Prereq: Permission.

999. Doctoral Dissertation (1-24 cr) Prereq: Permission. A dmission to doctoral degree program and permission of supervisory committee chair.

Russian (RUSS)

803. Russian Grammar and Stylistics (3 cr) Prereq: RUSS 302 or equivalent. D etailed analysis of Russian morphology and syntax to achieve greater sophistication in self-expression.

841. Advanced Literary Analysis (3 cr) Prereq: RUSS 302 or equivalent. I f the readings, discussions, and assignments will be in Russian.

842. Russian Poetry (3 cr) Prereq: RUSS 301 and 302 or equivalent. R ussian poetry of the nineteenth and twentieth centuries. E xamines how to appreciate poetry and acquaint students with the culture, history and philosophy of the country through poetry.

844. Russian Intellectual Tradition (M ODL 844) (3 cr) M ajor Russian thinkers from 1700 to the present. F ocus on the evolution of ideas in Russian context and the relationship between Russian and European thought.

846. Special Topics in Russian (1-4 cr) Prereq: RUSS 301 and 302 or equivalent. T opics in the area of language, literature, and civilization.


856. Twentieth-Century Spanish Poetry (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. R eading and analysis of twentieth-century Spanish poetry, with emphasis on A. M achado, U namuno, S alinas, J. G uillén, G arcía Lorca, and M. H ernandez.

857. Twentieth-Century Spanish Narrative (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. R eading and analysis of significant Spanish narrative written during the twentieth century.

858. Twentieth-Century Spanish Drama (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. R eading and analysis of twentieth-century Spanish drama, written by such playwrights as B enavente, V alle-Inclán, G arcía Lorca, B uero V alle, S atre, and A rrabal.


860. Spanish American Novel (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. R eading and analysis of masterpieces of the Spanish American novel from its origins but focusing on works of the twentieth century by such authors as M ontano, B aldor, G abriel García M artinez, J uan R ulfo, J ulio Cortázar, R osario C aballero, and L isa V alencia.

862. Spanish American Short Story (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. R eading and analysis of significant Spanish narrative written during the twentieth century.


870. Women Writers of Spanish America (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. R eading and analysis of works by women writers of Spanish America such as S or Juana Inés de la Cruz, G ertrudis G ómez de Avellaneda, G abriela M adrid, M ariá Luisa Bombai, and V ictoria C ampo.

873. Cervantes (3 cr) Prereq: 6 hrs from SPAN 311, 312, 314, 315. D on Q uixote; the E nemies; and selected N ovelas E xemplares.

*878. Pro-seminar in Latin America (ANTH, ECON, EDPA, GEOG, HIST, MO DL, SO CI 878) (3 cr)

Admission to doctoral degree program and permission of the Graduate Committee. The Interdisciplinary Museum Studies Program at the University of Nebraska-Lincoln has been approved, giving qualified students reciprocal in-state tuition. Also, the cultural resources of the University of South Dakota are available for field study experience by students in the Program. These cultural organizations include the Shrine to Christ the Redeemer, the Music Museum, University Art Galleries, and the W.H. Over State Museum.

Students will be prepared for such positions within museums and related organizations as collection managers, curatorial assistants, preparators, registrars, museum educators, outdoor educators, naturalists, exhibit designers and technicians, planetarium managers, archives managers, curators, and administrators. This program is not designed to train research or senior curators that we believe are best trained in the traditional departments. A masters degree is considered to be the terminal degree in museum studies by the museum profession. Students will take a core of courses within the Museum Studies Program to obtain an in-depth understanding of museums as functional organizations. A strong minor in one of the associated disciplines is also required to give the students a specialty within the museum profession.

A cooperative agreement with the University of South Dakota has been approved, giving qualified students reciprocal in-state tuition. Also, the cultural resources of the University of South Dakota are available for field study experience by students in the Program. These cultural organizations include the Shrine to Christ the Redeemer, the Music Museum, University Art Galleries, and the W.H. Over State Museum.

### Faculty

* Banks, Barbara C. - 1994; Assistant Professor, Art and Art History; Director, Curator of Asian Art, BA 1965, MA 1970, Indiana; PhD 1989, Chicago

* Banks, Margaret Downy - 1992; Adjunct Associate Professor, MFA 1972, Skidmore; M A 1974, SUNY (Binghamton); PhD 1981, Western Virginia

* Batterton, Bruce - 1998; Adjunct Professor, AB 1976, R.I. (Rhode Island)

* Bleed, Peter A. - 1972; Professor, Anthropology; BA 1965, MA 1968, Minnesota; PhD 1973, Wisconsin

* Bolick, Margaret R. - 1978; Professor, State M Museum; BS 1972, MA 1974, Duke; PhD 1976, Texas (Austin)

* Bolland, Andrea L. - 1994; Associate Professor, Art History; BS 1982, Washington; MA 1986, PhD 1992, North Carolina (Chapel Hill)

* Bonnstetter, Ronald J. - 1984; Associate Professor, Curriculum and Instruction; BS 1973, Mankato State; MS 1976, PhD 1984, Iowa

* Crowe, Patricia C. - 1984; Professor, Textiles, Clothing, and Design; BS 1971, Virginia Polytechnic; MS 1973, Florida State; PhD 1984, Kansas State

* Diamond, Judy - 1990; Professor, State M Museum; BA 1973, California (Santa Cruz); MA 1976, Colorado; PhD 1980, California (Berkeley)

* Dorsey, Leathen - 1990; Associate Professor, History and Ethnic Studies; BS 1964, Pennsylvania State; MA 1972, PhD 1982, Michigan State

* Estes, James R. - 1996; Professor, Biological Sciences; Director, State M Museum; BS 1959, Midwestern State; PhD 1967, Oregon State

* Eversoll, Deanna B. - 1973; Associate Professor, History and Ethnic Studies; BS 1972, PhD 1976, Nebraska

* Foster, John E. - 1990; Professor, Entomology; BA 1964, Central Michigan; MA 1966, Iowa State; PhD 1971, Purdue

* Freeman, Patricia W. - 1981; Professor, State M Museum; BS 1969, R and diploma, MA in Women's College; PhD 1977, New Mexico

* Fuller, Shelley T. - 1991; Associate Professor, Art History; BA 1981, Augustana; MA 1989, Nebraska

* Gardner, Scott L. - 1994; Associate Professor; M Museum and Biological Sciences; BA 1980, Oregon State; MA 1983, Northern Colorado; PhD 1988, New Mexico

* Genoways, Hugh H. - 1986; Professor, State M Museum, School of Natural Resource Sciences; AB 1963, Hastings; PhD 1971, Kansas

* Greenwald, Emily - 1995; Assistant Professor, History and Ethnic Studies; BA 1987, MA 1990, PhD 1994, Yale

* Hoff, Michael - 1989; Associate Professor, Art History; AB 1977, M.Law, MA 1982, Florida State; PhD 1988, Boston

* Hulvershorn, J. - 1973; Associate Professor, Community and Regional Planning; BA 1965, MS 1966, Indiana, PhD 1977, Nebraska (Lincoln)

* Hunt, Robert M., Jr. - 1973; Professor, State M Museum and Geology; BA 1963, Wooster; M 1965, New Mexico; PhD 1971, Columbia

* Ireland, Lynne - 1995; Adjunct Associate Professor, Museum Studies; BA 1972, M.A. 1973, Nebraska; MA 1963, State (Oklahoma); Certificate 1991, Museum Management Institute

* Janovy, John - 1968; Professor, Biological Sciences; BS 1959, MS 1962, PhD 1965, Oklahoma

* Janovy, Karen - 1984; Senior Lecturer, M Museum Studies, BA 1977, Yale, MA 1972, PhD 1975, California (Los Angeles)

* Meier, Debra K. - 1996; Senior Lecturer and Exhibits Supervisor, State M Museum; BS 1977, Nebraska Wesleyan; M 1980, Arizona

* Moulton, Gary - 1979; Professor, History; BA 1968, Northeastern Oklahoma; MA 1970, PhD 1973, Oklahoma State

* Myers, Thomas P. - 1975; Professor, State M Museum; BA 1963, Beloit; PhD 1970, Illinois

* Ratcliffe, Brett C. - 1976; Professor, State M Museum; BS 1968, M 1970, PhD 1975, Nebraska (Lincoln)

* Reilly, Julie A. - 1997; Adjunct Professor and Chief Conservator, Ford Conservation Center; BA 1979, Towson State; MA 1982, George Washington

* Reinhard, Karl J. - 1989; Associate Professor, Natural Resource Sciences; BA 1977, Virginia; MA 1984, Northern Arizona; PhD 1988, Texas A&M

* Ruffo, Joseph M. - 1971; Professor, Art; BFA 1963 Pratt Institute; MA 1965, Cranbrook Academy

* Siedell, Daniel A. - 1996; Assistant Professor, Museum Studies; BA 1969, Nebraska (Lincoln); MA 1971, SUNY (Stonybrook); PhD 1995, Iowa

* Sommer, Lawrence - 1996; Adjunct Professor, Museum Studies; Executive Director, Nebraska State Historical Society; BA 1968, Carleton; MA 1971, Minnesota

* Stewart, Alison G. - 1989; Associate Professor, Art History; BA 1973, Syracuse; MA 1976, Queens; PhD 1986, Columbia

* Treves, Samuel B. - 1958; Professor, Geosciences; BS 1951, Michigan Technological; MS 1953, Idaho; PhD 1959, Ohio State

* Trout, Barbara L. - 1981; Associate Professor, Textiles, Clothing, and Design; BA 1970, Nebraska (Lincoln); M 1978, Colorado State; PhD 1981, Nebraska (Lincoln)

* Voorhees, Michael R. - 1975; Professor, State M Museum and Geosciences; BS 1962, Nebraska (Lincoln); PhD 1966, Wyoming

* Wandsnider, Laura - 1991; Associate Professor, Anthropology; BA 1979, Virginia Tech; MA 1981, PhD 1989, New Mexico

* Watkins, David K. - 1984; Professor, Geosciences; BS 1976, M 1979, Virginia Polytechnic Institute; PhD 1984, Florida State

* Wilkins, Beth M. - 1997; Senior Lecturer, M Museum Studies, BA 1977, Western Washington State; MA 1995, MA 1996, Nebraska (Lincoln)

* Winkle, Kenneth J. - 1987; Associate Professor, History; BA 1976, MA 1977, PhD 1984, Wisconsin

---

**Museum Studies (Interdisciplinary Program)**

**Graduate Committee:** Professors Genoways (Chair), Crews, Diamond; Associate Professors Ireland, Stewart, Wandsnider, Winkle; Senior Lecturer K. Janovy

**Participating Organizations:** Center for Great Plains Studies; Art Collection; Gallery of the Department of Art and Art History; Historic Textile and Costume Collection of the Department of Textiles; Clothing and Design; Nebraska State Historical Society; Ralph M. Ullman Planetarium; Sheldon Memorial Art Gallery; University Archives; University of Nebraska Museum; University of Nebraska Museum of Art (Oma)

The Interdisciplinary Museum Studies Program, reporting to the Dean of Graduate Studies, offers a source of graduate study leading to a master of science or a master of arts. The Graduate Committee will evaluate the qualifications for admission of students. Students applying for admission to museum studies must present a bachelors degree with a B average, GRE verbal score of the 50th percentile, and a one-page discussion of their reasons for wanting to pursue a degree in museum studies. A prospective undergraduate degree would include, but not be limited to, the following: biology, botany, entomology, zoology, geology, anthropology, history, art, history, geography, education, business, horticulture, architecture, and textiles, clothing, and design.
Courses (MUSS)

*801. History and Philosophy of Museums (3 cr)
Role and function of the museum from its historical beginnings to the present. M ultiform character of museums. Philosophy of various museums explored with special reference to the impact upon the mission of the museum.

*818. Museum Education (3 cr)
Educational roles and functions of various types of museums with emphasis on theories of learning within the museum setting, community/school outreach; multicultural issues; accessibility for audiences; programming and materials; development and delivery; and the recruitment, training, and recognition of volunteers.

*830. Museum Exhibition (3 cr)
Through lectures, class discussion, field trips, and demonstrations, explores the range of exhibition techniques and philosophies employed by museums. Follows the three stages of exhibition work—development, production, and evaluation—as they relate to art, history, and science museums. Prepares students for all backgrounds to recognize good exhibits and understand their genesis.

*850. Museum Administration and Management (3 cr)
Prereq: MUSS *801. Administration and management of museums and related not-for-profit organizations. Includes financial management, personnel management, management of the physical plant and programs, security, legal and ethical considerations, public relations, and the museum profession.

Through readings, lectures, class discussions, and especially readings, explores the legal world in which museums exist. No laws pertain specifically to museums, but museums are covered by a broad range of existing and developing laws. Emphasizes specific topics as they affect the museum profession, museum collections, and museum personnel. This course is designed for museum professionals or those concerned with museum law.

*860. Museum Collection Data Management (3 cr)
Prereq: MUSS *801. Concepts, procedures, and tools necessary to acquire, manage, retrieve, output, and distribute data associated with museum collections. Includes database design, database creation, and label and form production, use of relational databases, local networks, the INTERNET, servers, and multimedia data sets.

*870. Art and Anthropology of Native North America (ANTH 819) (3 cr)
Native American art, its prehistoric origins, historical development, and recent artistic activity in the principle regions of North America. Context of art in traditional culture and the cultural milieu in which change took place. Artistic media: ceramics, textiles, sculpture, basketry, and beadwork. Field work. Powwows and fairs as important venues for the presentation of contemporary Native American art.

*880. Collecting Methods in Biology and Paleontology (3 cr) Prereq: B.S. in biological sciences, entomology, geology, or wildlife science, or permission. Prereq: B.S. in biological sciences, entomology, geology, or wildlife science, or permission. Prereq: B.S. in biological sciences, entomology, geology, or wildlife science, or permission. Prereq: B.S. in biological sciences, entomology, geology, or wildlife science, or permission.
A survey of field methods used in paleontology. Emphasis on field methods for the identification of fossils. Includes a field trip to a fossil locality.

*899. Masters Thesis (1-6 cr) Prereq: 12 hours of graduate work, including 6-9 hours in museum studies admission to masters degree program and permission of major adviser.

910. Management of Cultural Collections (3 cr) Prereq: 12 hours in the following areas: anthropology, art history, American studies, folklore, history, or textiles, clothing, and design. Kinds of artistic, historical and anthropological objects found in museum collections; the physical and technological nature of these objects, and their handling and storage requirements. Sources of information available to museum personnel. Preparations for museum work as well as internships and further specialized training.

920. Management of Scientific Collections (3 cr) Prereq: MUSS *801 (or parallel). Topics are drawn from the recommended body of knowledge by the American Association of Museums.

930. Management of Archives (3 cr)
Provides the career-bound student with a comprehensive understanding of archives management, policies and procedures, and the professional skills of archives management. Topics are drawn from the recommended body of knowledge by the American Archivists. Prepares students for museum work as well as internships and further specialized training.

935. Archival Arrangement and Description (3 cr)
Key theoretical and practical aspects of archival work. Identification of formats and types of documents, making appraisal decisions, determining appropriate approaches to the analysis and selection of materials. Techniques to assess the risk of deterioration, and the evaluation of collections, including life and environment monitoring, and testing of materials for use with collections. Techniques to improve the care of collections.

950. Introduction to Preventive Conservation (3 cr) Prereq: MUSS *801.
Introduction to methods and theory of preventive conservation. Identification of agents of deterioration in museum collections and their effects on collection materials. Techniques to assess the risk of deterioration, including life and environment monitoring, and testing of materials for use with collections. Techniques to improve the care of collections.

970. Museum Education (3 cr) Prereq: MUSS 818 or 830 or previous experience in education or exhibits in an informal educational institution. O nce in the pre-season of each year. Informal education is the learning that occurs in institutions such as museums, zoos, and parks. Creation and evaluation of informal learning experiences at the local research on informal learning and evaluation techniques and the creation of informal learning experiences using multimedia, interactive exhibits, and inquiry-based curricula. Students learn to design and conduct front-end, formative, and summative evaluation studies at informal educational institutions.

990. Contemporary Museum Issues (1-3 cr) Prereq: 18 hours of graduate work, including 9 hours in museum studies. A course that explores the current issues in museums and the museum profession. Weekly group meetings of a museum studies faculty member for informal discussions concerning contemporary issues in museums and the museum profession. Students will use all of their education in museum studies and work experience in the profession to analyze and elucidate these topics. Students complete written assignments and attend at least three museum-related functions during the semester.

991. Museum Field Studies (1-9 cr) Prereq: 18 hours of graduate work, including 9 hours in museum studies. A culminating experience for students pursuing a career in museums or related organizations. Opportunity to identify and solve problems within a museum setting while working with a museum professional.

998. Special Topics (1-3 cr) Prereq: Permission. Review of special subject areas. Subject depends upon student demand and availability of staff.

Plan A: M usic History
Plan B: M usic Theory
Plan C: Composition
Plan D: M usic Education

(See M aster of M usic Handbook for specific course requirements.)

Master of Musical Arts (MM).* This option is designed for the practicing K-12 music educators who wish to continue teaching K-12 music education or who wish to pursue further study in preparation for teaching at the college level. A total of 36 credits required for degree completion of which 12 credits must be earned in courses open exclusively to graduate students. Specific requirements include:

Courses

Major: Music (Music Education)..................18
M usic Education Core (843, 845, 882, 928)......12
M usic Education Electives (834, 862, 863, 881, 886, 961)..........................6
Minor: Music....................................................9
M usic theory..................................................3
Applied music/ pedagogy...........................3
Second Minor or Supporting Courses..............9

Students in Option II will take M USC 884 (M usic in 20th-Century American Society) and M USC 880 (Advanced Theory II) for the history and theory requirements. A student in Option II must take the Diagnostic Survey Exam in music history and/ or music theory and qualify for other history and theory courses.

Master of Music Option III. This option offers six areas of emphasis to students in music performance and composition. In addition to the entrance requirements, a successful audition must precede entry into this option. A total of 36 credits, of which 18 credits must be earned in courses open exclusively to graduate students.

Solo performance: applied music 12 cr, music core classes 11 cr, pedagogy/literature 2-9 cr, other music courses 4-11 cr, (1 recital)

Woodwind Specialties: applied music 14 cr, music core courses 15 cr, other music courses 7 cr, (3 recitals)

Piano Pedagogy: applied music 9 cr, pedagogy 12 cr, music core courses 11 cr, other music courses 4 cr (includes ensemble) (1 recital)

Choral Conducting: music core courses 23 cr, other music courses 4-6 cr (includes ensemble), applied music 4-6 cr, conducting project 3 cr

Orchestral Conducting: music core courses 17 cr, applied music 4 cr (minimum 4 cr piano), other music courses 12 cr (includes ensemble), conducting project 3 cr

Wind Band Conducting: music core courses 17 cr, applied music 6 cr, other music 10 cr (includes ensemble), conducting project 3 cr

Doctor of Musical Arts Degree. The prerequisite to admission is a masters degree in music or its equivalent. The application for admission must include transcripts (graduate and undergraduate), four to six references, a pre-audition screening tape, a live audition (for performers) or a half-hour recital; for composers—two to three tapes and scores representative of their styles for conductors—two to three tapes and scores representative of their styles. The Doctoral Candidate is required to take a diagnostic survey. Applicants should contact the director of the School of Music for further details.

Master of Music Option I. This option requires the submission of a thesis or an original composition. Total credits 30, of which 8 credits must be earned in courses open exclusively to graduate students not including thesis or composition.
The student will ordinarily be required to complete from 54-60 hours of course work beyond the masters degree. Of these hours a minimum of 45 cr hrs must be completed at UNL after the filing of the Program of Studies. Subsequent revisions in the School of Music must be approved by the Grad-Programs. Students should check with the Graduate Office for up-to-date changes which have been approved by the Graduate Committee of the School of Music.

### courses of instruction/ music

#### Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Institution and Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson, Scott</td>
<td>Assistant Professor</td>
<td>BM 1985 Iowa; MM 1987 Minnesota; DMA 1995 Minnesota</td>
</tr>
<tr>
<td>Bailey, John</td>
<td>Flute; BA 1980 Indiana</td>
<td>M M 1981, DMA 1986 Northwestern</td>
</tr>
<tr>
<td>Barber, Carolyn</td>
<td>Associate Professor; Director</td>
<td>BM 1990 Northwestern; M M 1992 Yale; DMA 1995 Northwestern</td>
</tr>
<tr>
<td>Barnes, Paul</td>
<td>Associate Professor; Piano</td>
<td>MM 1987, DMA 1992 Indiana</td>
</tr>
<tr>
<td>Becker, Karen</td>
<td>Associate Professor; Cello; MM 1984; O hio; DMA 1996 Illinois (Austin)</td>
<td></td>
</tr>
<tr>
<td>Bedient, Gene</td>
<td>Assistant Professor; Voice; DMA 1967 Lincoln</td>
<td></td>
</tr>
<tr>
<td>Bybee, Ariel</td>
<td>Associate Professor; Voice; BS 1965 Brigham Young</td>
<td></td>
</tr>
<tr>
<td>Cavein, Diane</td>
<td>Associate Professor; Clarinet; MM 1988 Florida State; DMA 1999 Florida State</td>
<td></td>
</tr>
<tr>
<td>Champ-Barnes, Ann</td>
<td>Senior Lecturer; Piano; DMA 1985, DMA 1987 Indiana</td>
<td></td>
</tr>
<tr>
<td>Clinton, Mark</td>
<td>Associate Professor; Piano; MM 1984, DMA 1986 Peabody Conservatory; DMA 1989 Indiana</td>
<td></td>
</tr>
<tr>
<td>Cochran, Michael</td>
<td>Assistant Professor; Voice; DMA 1993 Oklahoma City; DMA 1995 Wichita State</td>
<td></td>
</tr>
<tr>
<td>Cole, Judy</td>
<td>Associate Professor; Voice; DMA 1971 Louisiana State</td>
<td></td>
</tr>
<tr>
<td>Eklund, Peter</td>
<td>Associate Professor; Director; BM 1980, M A 1982, DMA 1992 Iowa</td>
<td></td>
</tr>
<tr>
<td>Faulkner, Quentin</td>
<td>Professor; Organ and Music History; BM 1965 Westminster; M T H 1969 Southern Methodist; SM 1975 Union Theological Seminary</td>
<td></td>
</tr>
<tr>
<td>Grotch, Manton</td>
<td>Assistant Professor; BM 1994</td>
<td>BM 1968 M cmemorial (Newfoundland); DMA 1999 Western Oregon</td>
</tr>
<tr>
<td>Fought, Robert</td>
<td>Professor; Saxophone and Band; BM 1967 Pennsylvania; DMA 1972 Pennsylvania State; DMA 1976 Florida State; DMA 1986 North Texas State</td>
<td></td>
</tr>
<tr>
<td>French, Allen</td>
<td>Associate Professor; BM 1976 Florida State; DMA 1986 North Texas State</td>
<td></td>
</tr>
<tr>
<td>Fuhler, Rhonda</td>
<td>Associate Professor; Secondary C horal Music Education; BFAE 1991 Wayne State; MM 1997 Nebraska (Lincoln); DMA 2001 Missouri (Kansas City)</td>
<td></td>
</tr>
<tr>
<td>Fuller, Craig</td>
<td>Senior Lecturer; Piano; BM 1978 Indiana</td>
<td></td>
</tr>
</tbody>
</table>

#### Courses

### Applied Music (MUAP)

The 900-level series is intended for performance majors only. The 800-level series (not alpha) is intended for students other than performance majors studying in their major applied area. The 800 alpha-series is intended for music majors studying in a secondary applied area ($20 fee) and non-music majors ($75 fee).

**Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>800A</td>
<td>Voice</td>
<td>1 cr</td>
</tr>
<tr>
<td>800B</td>
<td>Keyboard</td>
<td>1 cr</td>
</tr>
<tr>
<td>800D</td>
<td>String</td>
<td>1 cr</td>
</tr>
<tr>
<td>800E</td>
<td>Brass</td>
<td>1 cr</td>
</tr>
<tr>
<td>800G</td>
<td>Woodwind</td>
<td>1 cr</td>
</tr>
<tr>
<td>800P</td>
<td>Percussion</td>
<td>1 cr</td>
</tr>
<tr>
<td>801</td>
<td>Voice</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>802</td>
<td>Piano</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>803</td>
<td>Organ</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>804</td>
<td>Harpsichord</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>805</td>
<td>Violin</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>806</td>
<td>Viola</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>807</td>
<td>Cello</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>808</td>
<td>Double Bass</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>809</td>
<td>Harp</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>810</td>
<td>Trumpet</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>811</td>
<td>French Horn</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>812</td>
<td>Trombone</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>813</td>
<td>Baritone Horn</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>814</td>
<td>Tuba</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>815</td>
<td>Flute</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>816</td>
<td>Oboe</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>817</td>
<td>Clarinet</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>818</td>
<td>Bassoon</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>819</td>
<td>Saxophone</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>820</td>
<td>Percussion</td>
<td>1-2 cr</td>
</tr>
<tr>
<td>822</td>
<td>Keyboard Skills I (1 cr) Prereq: Permission.</td>
<td></td>
</tr>
<tr>
<td>833</td>
<td>Keyboard Skills II (1 cr)</td>
<td></td>
</tr>
<tr>
<td>901</td>
<td>Voice</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>902</td>
<td>Piano</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>903</td>
<td>Organ</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>904</td>
<td>Harpsichord</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>905</td>
<td>Violin</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>906</td>
<td>Viola</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>907</td>
<td>Cello</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>908</td>
<td>Double Bass</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>909</td>
<td>Harp</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>910</td>
<td>Trumpet</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>911</td>
<td>French Horn</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>912</td>
<td>Trombone</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>913</td>
<td>Baritone Horn</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>914</td>
<td>Tuba</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>915</td>
<td>Flute</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>916</td>
<td>Oboe</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>917</td>
<td>Clarinet</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>918</td>
<td>Bassoon</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>919</td>
<td>Saxophone</td>
<td>1-4 cr per sem</td>
</tr>
<tr>
<td>920</td>
<td>Percussion</td>
<td>1-4 cr per sem</td>
</tr>
</tbody>
</table>
Music (MUSC)

048. Graduate Review of Ear Training (0 cr) Successful completion removes the deficiency in undergraduate ear training. Self-directed review of ear training using text/computer software.

099. Doctoral Colloquium (0 cr) Required for doctoral students during each semester of residence; the colloquium is a regularly scheduled meeting of faculty and doctoral students for the purpose of sharing ideas and the results of scholarly research.


824. Piano Pedagogy I (3 cr) Prereq: 10 hrs piano or equivalent or permission. Pedagogical theories, practices, and related teaching materials, dealing with the young beginning pianist.

825. Piano Pedagogy II (3 cr) Prereq: MUSC 824 or permission. Current piano teaching courses with emphasis on individual instruction combined with theory and performance classes; detailed study of a single teaching course in preparation for teaching practice MUSC 826 and 827.

826. Piano Pedagogy III (3 cr) Prereq: MUSC 825 or permission. Supervised student teaching of beginning pianoists; observation and discussion of studio teaching of college students.

827. Piano Pedagogy IV (3 cr) Prereq: MUSC 826 or permission. Continuation of MUSC 826; survey of college keyboard skills texts.

833. Keyboard Skills II (1 cr) Prereq: Permission. Continuation of MUSC 822.

*836. Introduction to Graduate Studies in Music I (2 cr) Music as a field of scholarly inquiry; incorporating basic research tools and techniques.

*847. Graduate Review of Music History (3 cr) Enrollment will be required as determined by the results of the Graduate Diagnostic Survey in Music History. Review of music history for graduate students including examples from all major style periods; M. medieval, R. renaissance, Baroque, Classical, R. romantic, and C. contemporary.

*858. Graduate Review of Music Theory (3 cr) Enrollment will be required as determined by the results of the Graduate Diagnostic Survey in Music Theory. Review of music theory for graduate students; harmony, Baroque counterpoint, form, and analysis; ear training.

849. Medieval Music (3 cr) Prereq: MUSC 366 or permission. Historical and stylistic study of medieval music and its antecedents.

850. Johann Sebastian Bach (2-3 cr) Prereq: MUSC 366 or permission. Life and music of J. S. Bach, with emphasis on the most recent developments in Back Scholarship.

851. Music and the Church (3 cr) Prereq: MUSC 365 or R EGL 150 or CLAS/ JUDS/R EUG 205 or CLAS/ HIST/ R EGL 367; or permission. Historical relationship of music and the church; survey of the major developments in the history of church music in light of theological presuppositions.

852. Hymnology (3 cr) History and literature of hymnology (texts and tunes) and their significance for music, church, and society.

855. Techniques of Counterpoint (3 cr) Prereq: MUSC 366 or permission. Counterpoint from the 16th century through the 20th century. A. Analysis of excerpts from the literature and composition of representative musical examples.


858. History of the Opera (3 cr) Prereq: MUSC 366. Literature of the opera from its prehistory and beginnings to the present.

859. Symphonic Literature (3 cr) Prereq: MUSC 366. Literature of the symphony orchestra from Baroque era to the present. Emphasis on the development of symphonic literature from Baroque to modern approaches.

862. Instrumental Literature and Pedagogy (3-2 cr each) Pedagogy and the solo, chamber and pedagogical literature of instruments from elementary to advanced levels, for class as well as private instruction.

A. Brass Pedagogical Instruments
   D. String Instruments
   E. Woodwind Instruments

863. Jazz Methods (2 cr) Prereq: MUSC 166 and 166A, or permission. Jazz harmony, improvisation and rhythm section techniques with emphasis upon execution and pedagogy.

866. Jazz Styles (2-3 cr) Prereq: MUSC 366 and 387 or equivalent, or permission. Jazz styles from 1920 to the present, with emphasis on the development of listening skills required to accurately identify improvisation, composer/arrangers and stylistic characteristics within the jazz idiom.


868. Jazz Pedagogy (3 cr) Musical repertoire and rehearsal technique of the school/jazz ensemble, the various methods of jazz improvisation instruction, the musical roles of the rhythm section, and the materials (books, audio and video recordings, etc.) that are available to the jazz teachers.

869. Organ Design and Construction (2-3 cr) Prereq: 10 hours of applied organ or permission. Comparison of the most important methods of designing and constructing organs in Europe and America from 1500 to the present.

870. Vocal Pedagogy I (3 cr) Prereq: Graduate standing in voice or permission. Science of singing, including the physiology, functioning and acoustics of the singing voice. Emphasizes current research in the context of the historical development of vocal pedagogy.

871. Art Song I (3 cr) Prereq: Permission. Development of the art song, emphasizing the European and American traditions from the 18th century to the present. Les Six.

872. Art Song II (3 cr) Prereq: Permission. An intensive study of the German, French and American art song literature from the 18th century to the present.

874. The Organ and Its Literature to 1800 (2-3 cr) Prereq: 10 hrs organ or permission. The organ and its literature from ancient Greece to 1800, with emphasis on the interrelationships between the music and organ design.

875. The Organ and Its Literature from 1800 to the Present (2-3 cr) Prereq: 10 hrs organ or permission. The organ and its literature from 1800 to the present, with emphasis on the interrelationships between the music and organ design.

876. Piano Literature (3 cr) Prereq: 12 hrs undergraduate piano or permission. Literature for solo piano from the early Baroque through the twentieth century, with emphasis on musical styles.

877. Piano Literature Seminar (3 cr) Prereq: 12 hrs piano or permission. Literature for solo piano. Specified style periods. A. Baroque/Classical B. Romantic C. Twentieth-Century Repertoire

878. Music of the Twentieth Century I (3 cr) Prereq: MUSC 366 or permission. Historical and stylistic study of the music composed from the last decade of the nineteenth century through World War II.

*879. Seminar: Topics in Music History (2-3 cr) Prereq: Permission. May be repeated for credit as topics vary.

A. Medieval B. Renaissance C. Classical D. Romantic E. Twentieth Century

880. Advanced Theory I (3 cr) Prereq: MUSC 365 or equivalent. Compositional practices of late nineteenth-century European music with emphasis on chromatic harmony and devices of tonal and motivic expansion. Analytical concepts of Schenker, Schoenberg, and Hindemith; assignments in style imitation.

*881. Music Bibliography (3-4 cr) Prereq: MUSC 365 or permission. Basic procedures and tools for music scholarship.

882. Music of the Twentieth Century II (3 cr) Prereq: MUSC 365 or permission. Historical and stylistic study of the music composed from the end of World War II to the present, and its antecedents.

883. Physics of Music (3 cr) Prereq: Advanced standing, experience with music. No special preparation in mathematics is necessary. Basic physics of sound waves and vibrations and our perception of them; the physical analysis of music instruments; room acoustics; electronic and mechanical reproduction of music.

*884. Music in 20th-Century American Society (3 cr) Prereq: Permission. Twentieth century art and vernacular music in the social and historical contexts of its creation, including issues and repertoires that involve multiculturalism and the relationship between popular and art traditions and genres.

885. Music of the Classic Period (3 cr) Prereq: MUSC 366 or permission. Forms, styles, composers, and aesthetics of the classic period.


889. American Music (3 cr) Prereq: MUSC 365 or permission. American music and musical life in its cultivated and vernacular traditions including a consideration of its cultural and social background as well as principal stylistic trends and predominant musical attitudes.

894. Internship (1-3 cr, max 3) Prereq: Permission.

895. Harpsichord and Other Stringed Keyboard Literature to 1750 (2-3 cr) Prereq: 12 hrs harpsichord or piano or permission. Literature of stringed keyboard instruments from its beginnings to 1750 with emphasis on musical styles and performance techniques.

896. Jazz Theory (3 cr) Prereq: MUSC 366 or permission. Theoretical foundation of jazz composition and performance. Ear training and keyboard skills emphasized.

897. History of Wind Music (3 cr) Prereq: Advanced standing, experience with music. No special preparation in mathematics is necessary. Basic physics of sound waves and vibrations and our perception of them; the physical analysis of music instruments; room acoustics; electronic and mechanical reproduction of music.

*898. Special Topics in Music (1-3 cr) Prereq: Permission.

*899. Masters Thesis or Original Composition (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

941. Theory Pedagogy (3 cr) Prereq: Permission. Current materials and approaches for the teaching of music fundamentals; harmony counterpoint; ear training; sight singing; form and analysis; analysis and counterpoint.

969. Diction for Graduate Students (3 cr)
Lyric diction in English, Italian, ecclesiastical Latin, French, and German.

971. Vocal Pedagogy II (3 cr) Prereq: MU SC 870 or permission.
Application of the science of singing to the art of teaching singing. Analysis of vocal problems, evaluation of teaching approaches, survey of current teaching materials, experimental teaching and observation of expert teachers.

972. Seminar: Choral Literature (1-4 cr, max 12) Prereq: Permission. Designed for the serious chorister. Analytical and stylistic study of choral literature from the beginning of the respective genres. Major works of the ensemble's history and important contemporary works.

A. Choral Literature to 1800 (1-4 cr)
B. Choral Literature from 1800 to 1875 (1-4 cr)
C. Choral Literature from 1875 to 1910 (1-4 cr)
D. Choral Literature from 1910 to the present (1-4 cr)


A. Orchestral Literature to 1800 (1-4 cr)
B. Orchestral Literature from 1800 to 1875 (1-4 cr)
C. Orchestral Literature from 1875 to 1910 (1-4 cr)
D. Orchestral Literature from 1910 to the present (1-4 cr)


A. Wind Band Literature to 1800 (1-4 cr)
B. Wind Band Literature from 1800 to 1875 (1-4 cr)
C. Wind Band Literature from 1875 to 1910 (1-4 cr)
D. Wind Band Literature from 1910 to the present (1-4 cr)

977. Topics in Performance Practice (3 cr) Lec 2, lab 1. Problems of interpretation and execution in music literature with emphasis on examination of literary and musical sources. Historical and stylistic analysis of selected works.

978. Chamber Music Performance (1 cr per sem, max 6) May be repeated for credit. Performance and textual problems of selected works of chamber music literature for instrumental, vocal, or mixed ensembles, including historical and analytical studies. Selection of technical problems, interpretation, and style.

979. Seminar in Music Theory (1-24 cr) History of music theory, in the works of major theorists, or in special problems in music theory.

982. Orchestration (3 cr) Prereq: MU SC 365 or permission. Techniques of orchestration, including scoring and the study of representative orchestral compositions from the standpoint of orchestration.

986. Seminar in the History and Literature of Music (1-24 cr) Interpretative and historical studies in music, intensive study of special topics in the history and literature of music.

988. Introduction to the interdisciplinary Study of the Middle Ages (AH IS EN GL, HIS T, MOD L 988) (3 cr) For course description, see AH IS 988.

989. Introduction to the interdisciplinary Study of the Renaissance (AH IS EN GL, HIS T, MOD L 969) (3 cr) For course description, see AH IS 989.

995. Graduate Conducting Project (3 cr)

996. Special Problems (1-6 cr) Prereq: Permission; obtain advisor's permission to repeat for credit. Individual research projects in musicology, music theory, or music education.

997. Doctoral Seminar (3 cr per sem) May be repeated for credit.

999. Doctoral Document (1-24 cr, max 55) Prereq: Admission to doctoral program and permission of supervisory committee chair.

Music-Student Recitals (MUSR)

986. Graduate Recital in Applied Music (0 cr)
A. Graduate Recital in Applied Music I (0 cr)
B. Graduate Recital in Applied Music II (0 cr)

987. Graduate Recital in Applied Music (1-3 cr, max 12)

Music Education (MUED)

834. Advanced Instrumental Conducting (2-3 cr)
Prereq: MU SC 376 or permission. Research of basic conducting techniques related to orchestral and band literature, including score analysis, keyboard and pitch imagery skills, advanced baton technique, interpretation, and expressive conducting.

835. Instrumental Arranging (1-3 cr) Prereq: Admission to the MUSC Teacher Education Program and MU ED 346 or permission. Must be taken concurrently with MU SC 411, 413, and 481. Instrumental arranging techniques including the application of the principles of orchestration and the instrumentation of harmonic and contrapuntal textures. Use of computer music notation software.

837. Choral Arranging (1-3 cr) Prereq: Admission to the MUSC Teacher Education Program and MU ED 346 or permission. Must be taken concurrently with MU SC 410 and 486. Arranging for choral groups at professional, college, public school, and amateur church choir levels. Groups include SAT B, SAB, SSA, TBB, and three-part equal voice. Special emphasis on chord fundamentals, traditional and contemporary arranging devices, and analytical methods for selection of literature.

843. Introduction to Research in Music Education (CURR R *843) (3 cr) Prereq: UG undergraduate degree in music education or permission. Interpretation and application of research results. Enables student to design, implement, and report research in the classroom.

845. Foundations for Graduate Study in Music Education (CURR R *845) (2-3 cr) Prereq: UG undergraduate degree in music education or permission. Research of graduate degree candidates in music education. Contemporary sociological, philosophical, and psychological foundations for music education in today's schools, historical and aesthetic references to music learning and teaching.

850. American Cultural Perspectives through Popular Music and Guitar (CURR R 850, M UN M 450) (3 cr) Exploration of the historical, social, and cultural context of late 19th and 20th century America through learning to play jazz and popular musics on the guitar to provide an authentic, performance-based encounter in music.

856. Planning and Production for the Musical Stage (2-3 cr) Prereq: Admission to the MUSC Teacher Education Program; MU ED 302, 344, 346, and 397A; or permission. Music education or permission. Must be taken concurrently with MU ED 410, 412, and 837. Directing, selecting, casting, rehearsing, and producing school musical productions. Public relations, promotion, group dynamics and leadership.

861. Marching Band Techniques and Materials (2-3 cr) Prereq: MU SC 376 or permission. Discussion and simulation of approaches to the planning, rehearsing, and performance of school marching bands.

862. Choral Literature for School Ensembles (3 cr) Prereq: MU SC 375 or permission. Selection and evaluation of choral music for the school ensemble with emphasis on curricular concerns survey of resources for identifying suitable literature.

863. Instrumental Literature for School Ensembles (2-3 cr) Prereq: MU SC 376 or permission. Selection and evaluation of instrumental music for the school ensemble with emphasis on curricular concerns survey of resources for identifying suitable literature.

870. Music for the Exceptional Child (CURR R *870) (3 cr) Prereq: MU ED 344 or permission. Function and contribution of music in the education of the handicapped, and to provide methodology and materials to implement an effective music program. Practicum for the development of musical experiences for exceptional students of all ages. Focuses on PL94-142, music IEPs, assessment, adaptations of curriculum materials, current methodologies, and research.

873. Approaches to Middle School General Music (CURR R 873) (3 cr) Prereq: MU ED 344 or permission. For prospective or experienced general music teachers. Includes characteristics of middle school students, materials, methodology, and curriculum development.

881. Music in Early Childhood Education (CURR R 881) (3 cr) Prereq: MU ED 344 or 370 or permission. Prepares the teacher of the young child (3-8 years) in the musical skills, methodology, and materials needed to carry out a successful program of music in the public and private schools, the nursery schools, and day-care centers.

882. Music Technology: Foundations and Principles (1-3 cr) Prereq: Admission to the Teacher Education Program or permission. Advanced music technology presented in a seminar format where students can focus on particular areas of interest such as MIDI sequencing, advanced music notation, and the development of sound and MIDI files for multi-media uses.

883. Music Technology: Advanced Techniques and Applications (1-3 cr) Prereq: MU ED 882 or permission. Advanced music technology presented in a seminar format where students can focus on particular areas of interest such as MIDI sequencing, advanced music notation, and the development of sound and MIDI files for multi-media uses.


897. Student Teaching (1-12 cr) Each hour will not fulfill M M degree requirements. Supervised teaching experiences in schools with accompanying seminar which focuses on teacher certification, teacher and students rights and responsibilities, proper conduct of teachers, selected legal aspects of education, methods of communication with parents and community members, and current issues which impact education.

898. Multicultural See "Workshop Seminars in Education."

899. Masters Research Project (1-6 cr) Prereq: MU ED 843 or permission. Opportunities to design and implement a major research project with the direction and guidance of a faculty member.

928. Seminar in the Curriculum and Teaching of Music (CURR R 928) (2-3 cr) Prereq: UG undergraduate degree in music education or permission. Critical evaluation of current literature, yearbooks, research, new developments, and experiments in the curriculum and teaching of general music.

951. Current Approaches to Elementary Music Education (CURR R 861U) (3 cr) Prereq: Teaching experience. Implementation of current programs, materials, and techniques for the improvement of music instruction in the elementary school.

978. Seminar in Music Education (1-6 cr) Intensive study of topics in music education.


999. Seminar in the Teaching and Learning of Music (3 cr) Advanced seminar in the theory and practice of education in music that explores philosophies and perspectives of aesthetic education, the nature of art, learning theory and teaching models applied to music, and curriculum design and development in the arts.


Composition (MUCP)

983. Seminar in Music Composition (1-24 cr)

Ensemble (MUEN)

844A. Large Instrumental Ensemble (1 cr)
844B. Large Vocal Ensemble (1 cr)
844D. Chamber Ensemble (1 cr)
844E. Keyboard Ensemble (1 cr)
Opéra (MUOP)

855. Musical Theatre Techniques (TH EA 855) (3 cr)
For course description, see TH EA 855.

*856. Advanced Opera Performance Techniques (2 cr per sem) Prereq: MU D P 356 or audition and permission. Techniques of role development. Advanced opera performance training through the coordination of singing, movement, emotional expression, and characterization.

*857. Music Theatre Performance (1-3 cr per sem) Prereq: Audition and permission. Preparation for and performance of a chorus, minor, or major role in a fully staged Nebraska (Lincoln) Opera production.

991. Seminar in Opera Performance and Production (3 cr)
A academic, nonperforming seminar covering producing, performing, and directing opera. May include operatic directing, historical studies of directing and production styles, twentieth-century production, understanding period styles, and geospatial information resources, as well as in the related human and community elements.

Doctor of Philosophy Degree
The doctor of philosophy degree provides students with advanced interdisciplinary education, encompassing the biological, atmospheric, water, earth, and geospatial information resources, as well as in the related human and community elements. Students applying for admission to the doctor of philosophy program must provide evidence of preparation in his/her anticipated field of emphasis in addition to meeting Graduate College admissions requirements. Additional requirements will be stipulated by the SN R S Graduate Committee and prospective advisor(s). Admission to candidacy for the PhD degree requires the successful completion of a written, and oral comprehensive examination. An interdepartmental doctoral program in horticulture and forestry (see page 134) is also available.

Specialization Areas
Currently eleven specializations are available at the masters level: Agroforestry, Aquatic Ecology, Bioatmospheric Interactions, Climatic Assessment, Environmental Studies, Geographic Information Systems (GIS), Great Plains Studies, Hydrologic Sciences, Reme Sensing, Soil Science, and Wildlife Ecology. Students can also pursue a masters degree with a minor in Water Resources Planning and Management. At present, only the Great Plains Studies and Hydrologic Sciences specializations are available at the doctoral level. Other specializations may become available pending approval. A student does not have to declare an area of specialization. 

NOTE: This bulletin may not reflect some subsequent revisions in the School of Natural Resource Sciences (SN R S) programs. Students should check with the SN R S Graduate Secretary for up-to-date changes which have been approved by the SN R S Graduate Committee.

Faculty

**Anderson, Mark L.** - 1987; Associate Professor; BS 1977, MS 1980 Northern Illinois; PhD 1985 Colorado

**Arkebauer, Timothy J.** - 1994; Associate Professor; BS 1979 Michigan State; MS 1982 Florida; PhD 1986 Nebraska (Lincoln)

**Ayers, Jerry F.** - 1985; Associate Professor; BA 1972, MS 1976 California State; PhD 1980 Washington State

**Bachman, Gwen** - 1998; Assistant Professor; PhD 1992 California (Los Angeles)

**Bahar, Ezekiel** - 1967; G George Holmes Professor; BS 1958, MS 1960 Institute of Technology (Israel); PhD 1964 Colorado

**Ballinger, Royce** - 1976; Professor; BA 1964 Texas (Austin); MS 1967 Texas Tech; PhD 1971 Texas A&M

**Bazolo, Alexandra L.** - 1994; Assistant Professor; BA California (San Diego); MA 1994 San Francisco State; PhD 1990 Texas (Austin)

**Baxendale, Frederick P.** - 1984; Professor; BS 1977 Cornell; MS 1980; PhD 1983 Texas A&M

**Beck, Mary M.** - 1980; Professor; Animal Science; MS 1976, PhD 1980 Maryland

**Bogardi, Istvan** - 1988; Professor; BS 1959, MS 1960, PhD 1965, MS 1969 Technical (Budapest)

**Brandle, James R.** - 1975; Professor; BS 1966 Tennessee; MS 1970, PhD 1974 Nebraska (Lincoln)

**Chen, Chun-Hong** - 1994; Associate Professor; MS 1988 California State; PhD 1994 Wyoming

**Comfort, Steven D.** - 1993; Associate Professor; BS 1981 Wisconsin (Madison); MS 1984 Minnesota (St. Paul); PhD 1988 Wisconsin (Madison)

**Dewey, Kenneth F.** - 1974; Professor; BS 1969 Elmhurst; MS 1970 Northern Illinois; PhD 1973 Toronto

**Diffendal, Robert F. Jr.** - 1980; Professor; AB 1962 Franklin and Marshall; MS 1964, PhD 1971 Nebraska (Lincoln)

**Eisenbauer, Dean E.** - 1975; Professor; BS 1971, MS 1973 Kansas State; PhD 1984 Colorado State

**Eskridge, Kent M.** - 1994; Professor; Biometry; BSBA 1976, MS 1981 Nebraska; PhD 1987 Nebraska (Lincoln)

**Francis, Charles W.** - 1977; Professor; Agronomy and Horticulture; BS 1961 California (Davis); MS 1967, PhD 1970 Cornell

**Franti, Thomas G.** - 1993; Associate Professor; BS 1983 Wisconsin (Madison); MS 1985 Iowa State; PhD 1987 Purdue

**Freeman, Patricia W.** - 1981; Associate Professor; MS 1964 Taganrog State (Russia); PhD 1972 Taganrog Institute for Radio Technology (Russia)

**Gosnell, David C.** - 1989; Associate Professor; BA 1982 St. Thomas; MS 1987 South Dakota School of Mines

**Hahn, LeRoy** - 1978; Professor Emeritus; BS 1957, MS 1963 Columbia; MS 1970 California (Davis); PhD 1971 Nebraska (Lincoln)

**Harrell, Mark O.** - 1980; Professor; BS 1975 Illinois; PhD 1980 Wisconsin

**Harvey, F. Edwin** - 1996; Assistant Professor; BS 1986 Ohio State; MS 1990 Purdue; PhD 1996 Waterloo (Ontario)

**Hayes, Michael J.** - 1995; Assistant Professor; BS 1986 Wisconsin (Madison); MS 1989; PhD 1994 Nebraska (Lincoln)

**Hendry, Geoffrey M.** - 1999; Associate Professor; BS 1982 St. Johns; MS 1986, PhD 1989 Texas (Dallas)

**Hergenrader, Gary L.** - 1967; Professor and State Forester; BS 1961 Nebraska (Lincoln); MS 1963, PhD 1967 Wisconsin

**Hoagland, Kyle D.** - 1994; Professor; BS 1973 Michigan State; MS 1975 Eastern Michigan; PhD 1981 Nebraska (Lincoln)

**Hodges, Laurie R.** - 1989; Assistant Professor; BS 1972 Nebraska; MS 1978 Kansas; PhD 1984 Auburn

**Holz, John C.** - 1989; Assistant Professor; BA 1983 Nebraska (Lincoln); MS 1986; PhD 1992 Colorado State
**Courses of Instruction/ Natural Resource Sciences**

802. **Aquatic Insects**

- ENTO 802: Aquatic Insects (1 cr II) Lec 1. Prereq: 12 hrs biological sciences or permission. For course description, see ENTO 802.
- BIO 865: Aquatic Insects (2 cr II) Lab 1. Prereq: ENTO 802. For course description, see ENTO 802.

803. **Fundamentals of Crop Physiology**

- AGRO, HORT 808, MS 817: (3 cr I) Lec 4. Prereq: BIO 825 or equivalent. 0 first eight weeks of semester. For course description, see AGRO 803.

807. **Plant-Water Relations**

- AGRO *807; BIO *817: (3 cr I) Lec 3, Prep: BIO 825 or equivalent; MATH 106 recommended or permission. For course description, see AGRO *807.

808. **Microclimate: The Biological Environment**

- AGRO, GEOG, HORT EMT 808; WATS 408: (3 cr I) Lec 4, Prep: MATH 106 or equivalent; 5 hrs physics or permission. Physical factors that create the biological environment, radiation and energy balances of earth's surfaces, terrestrial and marine, temperature, humidity and wind regimes near the surface, controls of the physical environment through irrigation, windbreaks, frost protection, manipulation of light and radiation. Applications to air pollution research. Instruments for measuring environmental conditions and remote sensing of the environment. For course description, see AGRO 808.

809. **Horticulture Crop Physiology**

- HORT 809: (4 cr II) Lec 3, Prep: Prep: BIO 825 or equivalent plant physiology course, or permission. For course description, see HORT 809.

810. **Landscape Ecology**

- HORT *812: (3 cr I) Prep: 12 hrs biological sciences or related fields including BIO 820 or permission. For course description, see HORT 812.

811. **Introduction to Geographic Information Systems**

- GEOG 821: (4 cr) Lec 3, Lab 2. For course description, see GEOG 821.

812. **Environmental Leadership: A Historical and Ethical Perspective**

- ALEC 810: (3 cr) Prep: For course description, see ALEC 810.

815. **Water Resources Seminar**

- AGRO, GEOG 881; GEOG 815: (1 cr I) For course description, see GEOG 881.

816. **Veterinary Entomology/ Ectoparasitology**

- ASCI, ENTO, VBMS 816: (4 cr) Lec 3, Prep: 10 hrs entomology or biological science or related fields or permission. For course description, see ASCI 816.

817. **Phytophagy in Sustainable Agriculture**

- AGRO, GEOG, GEOL 819: (4 cr) Lec 2, Prep: 10 hrs entomology or biological science or related fields or permission. For course description, see AGRO 817.

818. **Arthropods of Agricultural Systems**

- AGRO, GEOG, GEOL 819: (4 cr) Lec 2, Prep: 10 hrs entomology or biological science or related fields or permission. For course description, see AGRO 818.

820. **Applications of Remote Sensing in Agricultural and Natural Resources**

- AGRO, GEOG, GEOG 819: (4 cr) Lec 3, Prep: Prep: GEO 825 or equivalent; permission. For course description, see AGRO 820.

821. **Integrated Resources Management**

- ASCE, ENTO, VBMS 816: (4 cr I) Prep: Prep: ENTO, ASCE 816, or permission. For course description, see ASCE 821.

835. Agroecology (AGRO 835) (3 cr) Lec 3. Prereq: 12 hr hours of biological or agricultural sciences or permission. Offered even-numbered calendar years. For course description, see AGRO 835.

442/042. Environmental Geophysics I (GEOG 842) (4 cr) Lec 3, lab 3. Prereq: MATH 107, PHYS 211, GEOG 101 or 106, or equivalent or permission. For course description, see GEOG 842.

843. Environmental Geophysics II (GEOG 843) (4 cr) Lec 3, lab 3. Prereq: MATH 107, PHYS 211, GEOG 101 or 106, or equivalent or permission. For course description, see GEOG 843.

848. Advanced Topics in Wildlife Damage Management (2 cr II) Lec 2. Prereq: NRES 348. Participation in a three-day professional conference is strongly encouraged. Economic, global, and public policy issues relative to situations in which wildlife damage personal property or natural resources threaten human health and safety or are a nuisance. Technological advances in fertility control, damage resistance, toxicity, behavioral modification and wildlife management.

*849. Woody Plant Growth and Development (BIOS 849) (2 cr) Lec 2. Prereq: BIOC 220 or CHEM 251, BIOS 325, or equivalent or permission. Typically offered second semester. Currrent issues in conservation biology. Theoretical principles from the areas of ecology and genetics to effectively preserve and manage biological diversity and small populations.


864. Fisheries Biology (AGRO 864) (3 cr) Lec 3, Preq: BIOS or NRES 889 or equivalent. Biology of fishes. Factors that affect fishes in the natural environment. Techniques used in the analysis and management of fish populations.

866. Advanced Limnology (BIOS *860) (3 cr) Lec 3. Preq: NRES 859 or equivalent. For course description, see BIOS *860.

867. Global Climate Change (METR 867) (3 cr) Lec 3. Preq: MATH 106 or 107, PHYS 211, MATH 251, 252, 350 and 453/452, or permission. O ffered fall semester of even-numbered calendar years.


875. Water Quality Strategy (AGRO, CRL, CIVE, CHEM, GEOG, HORT, METR, MSYM 869, HORT 807) (3 cr II) Lec 3. Preq: MATH 106 or 107, PHYS 211, or equivalent or permission. Typically offered second semester. Discussion and practical application of principles and practices of measuring meteorological and related variables near the earth's surface, including temperature, humidity, precipitation, pressure, radiation and wind. Performance characteristics of sensors and modern data collection methods discussed and evaluated.

877. Great Plains Field Pedology (AGRO 877; GEOG 867; CIVE 857, CIVE 858) (4 cr) Lec 3, lab 3. Preq: AGRO/GEOL/WS 361, PHYS 141 or equivalent; MATH 102 or 103. 0. Students interested in plant or natural resource sciences including NRES must obtain permission. Typically offered in odd-numbered calendar years.

886. Soil Microbiology (AGRO 860; BIOC 847; SOIL 460) (3 cr) Lec 3. O ne semester microbiology; one semester biochemistry or organic chemistry.


889. Ichthyology (BIOS 891) (4 cr) Lec 3, lab 4. Preq: 12 hours of biological sciences including BIOC 220x, or equivalent. For course description, see BIOS 891.

899. Masters Thesis (6-10 cr I, II, III) Preq: Admission to master's degree program and permission of major adviser.

906. Crop Growth and Yield Modeling (AGRO 906) (3 cr II) Preq: NRES 889 or equivalent or permission. Experience in programming a high-level computer language. O ffered spring semester of even-numbered calendar years. Discussion of crop growth and yield models studied in detail. Descriptive models focus on yield predictions using easily available inputs while the processes that lead to yield will be examined in less-compilatory models.

907. Agricultural Climatology (AGRO, HORT 907; METR 952) (3 cr II) Lec 2, lab 2. Preq: NRES 889; BIOS 801 or equivalent or permission. Typically offered spring semester of odd-numbered calendar years.

908. Solar Radiation Interactions at the Earth's Surface (AGRO, HORT, METR 908) (3 cr II) Lec 3. Preq: MATH 208; NRES 889 or equivalent or permission. Typically offered spring semester of odd-numbered calendar years.

909. Crop Responses to Environments (AGRO, HORT 909) (3 cr I) Lec 3, lab 3. Preq: MATH 208; NRES 889, or equivalent or permission. Typically offered spring semester of odd-numbered calendar years.

915. Horticultural Crop Improvement and Breeding (AGRO, HORT 915) (3 cr II) Preq: 18 hr plant sciences including AGRO 315 and 815. Typically offered odd-numbered calendar years.

917. Environmental Isotope Hydrology (GEOG 917) (3 cr) Preq: NRES 819 or equivalent or permission. The theory and use of stable, radiogenic and radioactive isotopes in hydrological studies. Discussion of the isotopes and their use in environmental studies. Typical offering: fall semester of even-numbered calendar years.

920. Pesticide Disipation in Soils and Plants (AGRO, ENTO 920) (4 cr I, II) Lec 3, lab 3. Preq: CHEM 251 or equivalent. R ecommended: AGRO 855, and AGRO 860 or BIOC 847, or equivalent. Typically offered even-numbered calendar years.

922. Seminar in Geographic Information Systems (GEOG 922) (3 cr I) Lec 3, Preq: GEOG 812 and 822, or equivalent or permission. For students interested in advanced topics in computer oriented computer data analysis.

923. Advanced Avian Physiology (ASC 943) (3 cr I) Lec 3. Preq: One semester of physiology or ornithology or permission.

950. General Seminar (AGRO 992, HORT 950) (1 cr I, II) Preq: Maximum of two field trips required. Typically offered in odd-numbered calendar years.
Courses offered by cooperating units are listed below. Specific programs of study are developed for each student based on background, research interest, and career plans. Participation in the Interdepartmental Nutrition Seminar is required of all students enrolled in this area. M S students are required to enroll and present one seminar; PhD students are required to enroll and present two seminars.

For course description, see AGRO 958.

The requirements for admission to candidacy for Master’s and Doctoral dissertation courses 899 and 999, respectively, are offered in each cooperating department.

Offered in the Department of Animal Science
(See “Animal Science” on page 54.)

*820. Feedlot Nutrition & Management (3 cr)
821. Advanced Animal Nutrition (3 cr)
842. Endocrinology (BIO SVBM 842) (3 cr)
845. Physiology of Domestic Animals I (VBMS 845; BS *813) (4 cr)
846. Physiology of Domestic Animals II (VBMS 846; BS *814) (4 cr)
921. Interdepartmental Nutrition Seminar (NUTR 921) (1 cr per sem, max 4 I, II)
922. Advanced Animal Nutrition (ruminant) (3 cr)
924. Forage Evaluation (AGRO 940) (3 cr)
925. Energy Metabolism (NUTR 925) (3 cr)
926. Carbohydrate & Lipid Nutrition (NUTR 926) (3 cr)
927. Protein Nutrition (NUTR 927) (2 cr)
927L. Protein Nutrition Lab (NUTR 927L) (1 cr)
928. M ineral Nutrition (NUTR 928) (2 cr I)
928L. Mineral Nutrition Lab (NUTR 928L) (1 cr)
929. Vitamin Nutrition (NUTR 929) (3 cr I, II)Z

Offered in the Department of Nutritional Science and Dietetics
(See “Nutritional Science and Dietetics” on page 159.)

*805. Research Methods (3 cr)
851. Nutrition Problems (1-6 cr)
857. Classroom & Outreach Experiences in Food & Nutrition (1-3 cr, max 3)
896. Independent Study (1-5 cr)
898. Research Experiences (1-5 cr)
921. Interdepartmental Nutrition Seminar (ASCI 921) (1 cr per sem, max 4 I, II)
925. Energy Metabolism (ASCI 925) (3 cr)
926. Carbohydrate & Lipid Nutrition (ASCI 926) (3 cr)
927. Protein Nutrition (ASCI 927) (2 cr)
927L. Protein Nutrition Lab (ASCI 927L) (1 cr)
928. Mineral Nutrition (ASCI 928) (2 cr I)
928L. Mineral Nutrition Lab (ASCI 928L) (1 cr)
929. Vitamin Nutrition (ASCI 929) (3 cr)
950. Integrated Principles of Human Nutrition (3 cr)
951. Advanced Human Nutrition Problems (1-4 cr per sem, max 4)
952. Advanced Clinical Nutrition Seminar (2 cr)
953. Ecology of Human Nutrition (3 cr)
956. Community Nutrition (3 cr)
965. Research Seminar (1-2 cr per sem, max 4)

Recommended Courses in Other Units

Offered in the Department of Biochemistry
(See “Biochemistry” on page 62.)

828. R adioisotopic Methods (BIO S 828) (2 cr)
828L. Radioisotopic Methods Lab (BIO S 828L) (1 cr)
831. Biochemistry I (BIO S, CHEM 831) (3 cr I, II, III)
832. Biochemistry II (BIO S, CHEM 832) (3 cr I, II)
833. Biochemistry Laboratory (BIO S, CHEM 833) (2 cr I, II)
837. Research Techniques in Biochemistry (BIO S 837) (4 cr)
949. Biochemistry of Nutrition (BIO S 949) (3 cr)

Offered in the Department of Biometry
(See “Biometry” on page 68.)

*801. Statistical Methods in Research (4 cr I, II)
*802. Experimental Design (3 cr I, II)
Offered in the Department of Food Science and Technology
(See "Food Science and Technology" on page 123.)
805. Food Microbiology (BIO S 845) (3 cr I)
806. Food Microbiology Laboratory (BIO S 846) (2 cr I)
825. Food Toxicology (2 cr II)
848. Food Chemistry (3 cr I)
849. Food Chemistry Laboratory (1 cr I)
*880. Advanced Food Science: Selected Topics (2-6 cr)
  A. Food Carbohydrates (2 cr II)
  B. Food Flavors (2 cr II)
  C. Food Lipids (2 cr I)
  D. Food Proteins (2 cr I)

Offered in the Department of Veterinary and Biomedical Sciences
*835. Animal Biochemistry (BIO S *835) (3 cr, II)
843. Immunology (BIO S 843) (3 cr)

Offered at the University of Nebraska Medical Center
BIOC 810. Biochemistry I (6 cr)
BIOC 811. Biochemistry II (6 cr)
Physiology and Biophysics 810. Physiology (9 cr)

Nutritional Science and Dietetics

Department Chair: Marilyn Schnepf, Ph.D.
Graduate Committee: Associate Professor Carr (chair), Albrecht, Boeckner, Assistant Professor Koszewski

The Department of Nutritional Science and Dietetics offers graduate programs leading to a master of science degree. Students may develop their research programs related to human health and nutrition in the areas of biochemical and molecular nutrition; clinical and community nutrition; food quality and safety; and food service management. Applicants must meet the general admission requirements of the Graduate College. In addition, applicants must submit a Graduate Record Examination scores (verbal, quantitative, and analytical) and a letter of intent regarding educational and career goals. Applicants whose native language is not English must submit a Test of English as a Foreign Language (TOEFL) demonstrating a score of at least 550 on the paper-based scoring system or a total score of at least 213 on the computer-based scoring system. Desirable undergraduate background should include a bachelor of science or bachelor of arts degree in areas related to nutrition, food service management, and/or dietetics and include appropriate courses in chemistry, biochemistry, microbiology, physiology, statistics, and management.

More information is available at the following Web site: http://chris.unl.edu/NSD/grad.htm.

Doctor of Philosophy Degree. Studies leading to a PhD are conducted under the "Nutritional Interdepartmental Area" on page 158 as well as "Human Resources and Family Sciences Interdepartmental Area" on page 134.

**Faculty**

**Albrecht, Julie A.** - 1990; Associate Professor; BS 1972 North Dakota, MS 1983, PhD 1990 M inne sota

**Betts, Nancy M.** - 1981; Professor; BA 1974 Penn State; MS 1980, PhD 1983 Ohio State

**Boeckner, Linda S.** - 1986; Associate Professor; BS 1975 Nebraska (Lincoln), MS 1977 Case Western Reserve, PhD 1982 Nebraska (Lincoln)

**Car, Timothy** - 1996; Associate Professor; BS California Polytechnic State; MS 1985, PhD 1989 Arizona State

**Driskoll, Judy A.** - 1989; Professor; BS 1965 Southern Illinois, MS 1967, PhD 1970 Purdue

**Francis, Charles** - 1977; Associate Professor; BS 1961 California MS 1967, PhD 1970 Cornell

**Hamouz, Fayrene** - 1990; Associate Professor; BS 1968, PhD 1982, PhD 1990 Nebraska (Lincoln)

**Jones, Georgia** - 2001; Associate Professor; BS 1982 Tennessee (Knoxville); MS 1985, PhD 1990 Nebraska (Lincoln)

**Klopfenstein, Terry J.** - 1985; Professor (courtesy); BS 1981, MS 1983, PhD 1985 Ohio State

**Koszewski, Wanda** - 1986; Assistant Professor and Extension Specialist; BS 1983 Utah State; MS 1984 Nebraska (Lincoln); PhD 1988 Kansas State

**Lewis, Andrew J.** - 1977; Professor (courtesy); BS 1967 Reading (England); PhD 1971 Notting ham (England)

**Lewis, Nancy M.** - 1990; Associate Professor; BS 1968 Nebraska (Lincoln); MS 1973 Iowa State; PhD 1985 Nebraska (Lincoln)

**Schepf, Marilynn** - 1990; Associate Professor and Chair; BS 1987 Briar Cliff, MA 1989, MS 1990, PhD 1994 Nebraska (Lincoln)

**Stanek, Krogstrand, Kaye L.** - 1996; Associate Professor; BS 1971 Nebraska (Omaha), MS 1977, PhD 1994 Nebraska (Lincoln)

**Wandsnider, LuAnn** - 1995; Associate Professor (courtesy); BS 1979 Wisconsin (Madison); MS 1981, PhD 1989 Nebraska (Lincoln)

**Zempleni, Janos** - 2001; Assistant Professor; BS 1988, PhD 1992 Giessen (Germany)

**Courses (NUTR)**

*800. Contemporary Nutrition (3 cr) Prereq: 3 hrs undergraduate nutrition and 6 hrs undergraduate natural science or permission. N at open to students emphasizing nutritional science areas. Basis for dietary recommendations and guidelines, nutrient functions, and current issues.


*806. Advanced Teaching Strategies (ALEC, CURR) (3 cr) Lec 3. For course description, see ALEC *805.

*812. Multimedia Applications for Education and Training (ALEC 812) (3 cr) Lec/lab. For course description, see ALEC 812.

841. Functional Properties of Food (FDST 841) (3 cr) Lec 2, lab 3. Prereq: NUTR 340 and BIOC 321 or FDST 848 or permission.

845. Experimental Foods (FDST 845) (3 cr) Lec 1, lab 6. Prereq: NUTR 340, BIOC 321 or permission.

847. Classroom and Outreach Experiences in Food and Nutrition (3-6 cr, max 3 U NL, UNO) Supervised classroom or outreach experiences in educational or community settings.

858. Nutrition and Exercise (3 cr) NUTR 151, physiology, 6 hrs natural science or permission. Synergistic effects of proper nutrition and exercise on health and physical performance. Nutritional needs throughout the life span including pregnancy, lactation, growth and aging. Approaches to nutrition education for different ages.


874. Food and Beverage Management (4 cr) UNL, UNO Lec 3. Prereq: NUTR 374 and student must be 21 years of age or older.

876. Restaurant and Foodservice Management Study Tour (1-6 cr) UNL, UNO Prereq: NUTR 370. N at open to students emphasizing nutritional science areas. Basis for dietary recommendations and guidelines, nutrient functions, and current issues.

880. Tourism Resources and Development (3 cr) UNL, UNO Lec 2, lab 3. Prereq: NUTR 280 or permission.


892. Nutrition Problems (1-6 cr max 6 UNL, UNO) Prereq: NUTR 340, 455 or equivalent and permission. Individual problems selected in diet therapy, animal feeding, metabolism studies or surveys.

896. Independent Study (1-5 cr) Prereq: 12 hrs in major department or closely related area, and permission. Work supervised and evaluated by departmental faculty members. Individual projects in research, literature review, or creative production may or may not be an extension of course work.

897. Practicum in Foodservice Management (6 cr) UNL, UNO Prereq: Permission of the Foodservice Management Committee.

989. Research Experience (1-5 cr) Prereq: Permission. Participation in an ongoing research project. Select from foods, human nutrition, nutrition education, small animal, or survey research area.
160 Courses of Instruction/Philosophy

*899. Masters' Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

920. Teaching Practicum (FACS, TXCD 920) (1-3 cr) For course description, see FACS 920.

921. Interdepartmental Nutrition Seminar (ASCI 921) (1 cr per sem, max 4, I, II) Prereq: Permission. Presentation and discussion of current literature and research in the field of nutrition.

925. Energy Metabolism (ASCI 925) (3 cr) Lec 3. Prereq: ASCI 821; BIOC 831; or NUTR 455 or 950 or permission. 0 first odd-numbered calendar years.

926. Carbohydrate and Lipid Nutrition (ASCI 926) (3 cr) Lec 3. Prereq: BIOC 831, ASCI 821 or NUTR 455 or 950. 0 first even-numbered calendar years.

927. Protein Nutrition (ASCI 927) (2 cr) Lec 2. Prereq: ASCI 821 or NUTR 455 or 950 and BIOC 831 or permission. 0 first even-numbered calendar years.

930. Bovine Nutritional Physiology (ASCI 930) (3 cr) Lec 3. Prereq: ASCI 926, NUTR 927, or BIOC 831. 0 first odd-numbered calendar years.

931. Human Nutrition Physiology (ASCI 931) (2 cr) Lec 2. Prereq: ASCI 926, NUTR 927, BIOC 831, or permission. 0 first even-numbered calendar years.

932. Equine Nutrition Physiology (ASCI 932) (3 cr) Lec 3. Prereq: BIOC 831, ASCI 821 or NUTR 455 or 950. 0 first odd-numbered calendar years.

933. Animal Nutrition Physiology (ASCI 933) (3 cr) Lec 3. Prereq: BIOC 831, ASCI 821 or NUTR 455 or 950. 0 first odd-numbered calendar years.

934. Poultry Nutrition Physiology (ASCI 934) (3 cr) Lec 3. Prereq: BIOC 831, ASCI 821 or NUTR 455 or 950. 0 first odd-numbered calendar years.

949. Biochemistry of Nutrition (ASCI, BIOC, BIOS 949) (3 cr I) Lec 3. Prereq: BIOC 832 or *839 or permission. 0 first odd-numbered calendar years.

950. Integrated Principles of Human Nutrition (3 cr) Lec 3. Prereq: 12 hours of biological sciences which includes biochemistry and physiology. Integration of concepts of nutrient metabolism with food intake recommendations.

951. Advanced Human Nutrition Problems (1-4 cr per sem, max 4) Prereq: NUTR 455 or 950 or permission. 0 first odd-numbered calendar years.


954. Fundamentals of Nutrition Counseling (2 cr) (UNL) Lec 2. Prereq: 12 hours nutritional science, 6 hrs social science. Introduces applications of nutrition counseling practice and related counseling theories. Opportunities to realize and describe the varied and interconnected issues regarding food intake and food intake change from the clients perspective. Language used to describe and discuss food nutrition issues.

956. Community Nutrition (3 cr) Prereq: NUTR 356 or permission. Historical perspectives, research methodology, and assessment techniques.

960. Nutrient Function During Exercise (3 cr) (UNL) Lec 3. Prereq: NUTR 950 or 350 or 858, HHPE 884, BIOC 831 or equivalents of these courses. Exercise and its influence upon human nutrition via biochemical and physiological functions. Interrelationships between exercise and energy, macro- and micro-nutrients will be examined.

973. Organizational Administration in Food Service and Restaurant Management (3 cr) Prereq: NUTR 873 or permission. Investigation of foodservice/restaurant organizations and administration. Critical evaluation of current literature.

986. Graduate Seminar (1-2 cr per sem, max 4) Prereq: Permission.

987. Advanced Human Nutrition Problems (1-4 cr per sem, max 4) Prereq: NUTR 455 or 950 or permission. In-depth evaluation of current human nutrition issues.

995. Current Topics in Nutrition (ASCI 995) (1 cr) Lec 2. Prereq: ASCI 821 or NUTR 455 or 950 or ASCI 821. R edating and evaluation of current research concepts.

996. Research Other Than Thesis (1-8 cr) Prereq: Permission.

998. Special Topics Research in Human Resources and Family Sciences (FACS, TXCD 998) (1-3 cr, max 3) Prereq: Permission.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Philosophy

Department Chair: Joseph Mendola, Ph.D.
Graduate Committee: Professors (chair), DeBari, Potter

The Department of Philosophy offers graduate courses leading to the degrees of master of arts and doctor of philosophy. Faculty in particular foreign languages and/or special research tools may be required by the supervisory committee when they are particularly relevant to a student's area of specialization. Students may become candidates for the masters or doctoral degree only after passing general qualifying exams. Candidates for advanced degrees are required to teach as part of their program.

Faculty

*801. Philosophical Analysis (3 cr) Prereq: Permission from philosophy graduate advisor. Seminar for beginning graduate students whose primary goal is the development of basic philosophical skills such as the analysis of primary texts, the writing of philosophical papers, and sustained oral discussion. Readings include a substantial number of important works drawn from diverse areas of philosophical inquiry. Class meetings devoted primarily to student presentations of reading materials and their own written work. Effective oral discussion on the part of the student required.

802. Philosophy of Language (3 cr) Critical examination of some concepts and problems involved in the philosophical study of language, e.g., truth, meaning, reference, grammaticality, speech acts, language acquisition, the relation of language to other symbol systems, and the use of language in literature.

809. Theory of Knowledge (3 cr) Intensive study of some basic problems in the theory of knowledge: the nature of knowledge, the analysis of perception and memory, the justification of induction, the problem of how one knows other minds, and the analysis of a priori knowledge. Readings are chiefly from recent work.

811. Formal Logic (3 cr) Prereq: PHIL 211 or equivalent or permission. Modern logic, including truth function theory, first-order quantification, identity, terms and the modal theory of first-order languages.

812. Modal Logic (3 cr) Prereq: PHIL 211 or equivalent or permission. Syntax and model theory of quantified modal logic with applications to e.g., deontic logic, epistemic logic, and the philosophy of logic.

814. Philosophy of Mind (3 cr) Modern problems in the philosophy of mind, including dualism and materialism, instrumentalism and eliminativism, wide and narrow content, qualia, and mental causation.

817. Philosophy of Science (3 cr) Intensive study of some main problems in the philosophy of science: explanation and prediction in the sciences, the nature of scientific laws, functional explanations in the biological and social sciences, the structure of scientific theories, the ontological status of theoretical entities, the reduction of scientific theories, the confirmation of scientific hypotheses, and value judgments in the acceptance of scientific hypotheses.

818. Metaphysics (3 cr) Intensive study of some main problems in metaphysics, especially universals and particulars, the relation of mind and matter, the categories of the real, criteria of identity, and existential propositions. Readings mainly from recent philosophers.

823. Advanced Ethics (3 cr) Critical study of some leading theories in ethics, with attention to major works, chiefly modern and contemporary. Includes naturalism, intuitionism, emotivism, utilitarianism, Neo-Kantian ethics, and various current positions.

825. Political and Social Philosophy (3 cr) Critical study of some main problems and leading theories in social and political philosophy. Includes the origin and justification of political obligation, emphasis on social contact theories; the nature and foundation of individual rights and the strength of these rights when they conflict with each other and with concern for the common good; the principles of social justice and the obligation to protect the welfare of others; and the concepts of personal autonomy, liberty, equality, and freedom. Readings from a combination of historical and recent work, and emphasis on relating the various issues to current problems in society.

850. Ancient Philosophy (3 cr) Advanced survey of ancient philosophy from pre-Socrates through Aristotle, concentrating on central epistemological and metaphysical issues.

860. History of Modern Philosophy (3 cr) Advanced survey of early European philosophy from the late Renaissance through the Enlightenment, concentrating on central epistemological and metaphysical issues.

871. Kant (3 cr) Prereq: PHIL 232 or permission. Kant's philosophy, and of problems in the interpretation of his writings. The primary text will be the First Critique.
889. Philosophical Themes (1-24 cr) Library work and conferences.

*899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Seminars

The seminar unit is normally represented by 3 credit hours per semester. However, in exceptional cases a student may be given permission to register for more or less than 3 hours.

903. Philosophy of Mathematics (1-24 cr)

905. Philosophy of Language (1-24 cr)

911. Topics in Logic (1-24 cr)

913. Advanced Epistemology (1-4 cr)

914. Philosophy of Mind (3 cr)

915. Advanced Metaphysics (1-24 cr)

917. Philosophy of Science (1-24 cr)

920. Ethical Theory (1-24 cr)

921. Aesthetics (1-4 cr) Prereq: Graduate standing in the humanities.

923. Philosophy of Psychology (1-24 cr)

925. Social and Political Philosophy (1-4 cr) Intensive discussion of one or more of the main problems of social and political philosophy. Variable content. Possible topics are: political obligation; the concept of political authority; natural rights; the public interest; the aims of the state; and distributive justice.

950. Plato (1-24 cr)

951. Aristotle (1-24 cr)

952. Greek Philosophy (1-24 cr)

953. Empiricism (1-24 cr)

957. Quine (1-24 cr)

960. Rationalism (1-24 cr)

971. Kant (1-24 cr)

991. Special Studies in Philosophy I (1-24 cr)

992. Special Studies in Philosophy II (1-24 cr)

998. Dissertation Seminar (1-24 cr)

Physics and Astronomy

Department Chair: Roger D. Kirby, Ph.D.
Vice Chair: Stephen Ducharme, Ph.D.
Graduate Committee: Professors Jakal (chair), Fabrikant; Associate Professors Finkler, Snow; Assistant Professor Batelaan

The Department of Physics and Astronomy offers the master's degree and doctoral (PhD) degrees. A specialization in environmental studies is available at both the masters and doctoral levels.

MS Degree Program. In addition to the masters degree requirements outlined earlier in this Bulletin, a candidate for the M.S. degree must satisfactorily complete the following courses:

PHYS 911. Classical Mechanics
PHYS 913. Electromagnetic Theory I
PHYS 916. Quantum Mechanics I

PHYS 998. Special Topics in Current Research
MATH 842. Methods of Applied Mathematics

plus one of the following courses:

PHYS 912. Statistical Physics
PHYS 914. Electromagnetic Theory II

The Graduate Committee will determine the form of the Comprehensive Examination, which is required of all M.S. degree candidates. The Committee has the option of giving an oral examination, a written examination, or both. Ordinarily the first session of the Advanced Qualifying Exam (see below) will be used as the Comprehensive Exam. For a student selecting only the thesis, the Graduate Committee may give an oral Comprehensive Examination on the thesis research and on the graduate courses taken as part of the degree requirements.

Ph.D. Degree Program. The required courses for every student seeking a PhD degree are:

PHYS 911. Classical Mechanics
PHYS 912. Statistical Physics
PHYS 913. Electromagnetic Theory I
PHYS 914. Electromagnetic Theory II
PHYS 916. Quantum Mechanics I
PHYS 917. Quantum Mechanics II
PHYS 918. Quantum Mechanics III
PHYS 925. Intro to Atomic & Molecular Physics
PHYS 926. Intro to Elementary Particle & Nuclear Physics
PHYS 927. Intro to Solid State Physics
PHYS 998. Special Topics in Current Research
MATH 842. Methods of Applied Mathematics

plus at least one additional mathematics course, chosen in consultation with an advisor, from the following list:

MATH 814. Applied Linear Algebra (Matrix Theory)
MATH 822. Advanced Calculus
MATH 823. Intro to Complex Variable Theory
MATH 824. Intro to Partial Differential Equations
MATH 827. Mathematical Physics
MATH 843. Methods of Applied Mathematics

STAT 880. Statistics & Applications

A written comprehensive examination is required. This examination is administered by the student's supervisory committee and will normally have the form of a written report based on approximately one week of intensive research on a subject approved by the Supervisory Committee.

Advanced Qualifying Examination. The purpose of the Advanced Qualifying Examination is to test the student's understanding of physics at the graduate level. The exam comprises both written and oral parts. The written part is given in three sessions lasting a minimum of three hours each. The oral part is given in one session of about one hour. The first session of the Advanced Qualifying Exam will be based on approximately one week of intensive research on a subject approved by the Supervisory Committee.

A written comprehensive examination is required. This examination is administered by the student's supervisory committee and will normally have the form of a written report based on approximately one week of intensive research on a subject approved by the Supervisory Committee.

NOTE: All beginning graduate students must take PHYS 998 Special Topics in Current Research. This is a 1-credit course introducing students to the research activities in the department.

Although the Physics and Astronomy Department has no general foreign language requirement, individual supervisory committees may include a language (or research tool requirement) in the student's program if they feel it is appropriate.

Faculty

**Batelaan, Herman - 1999; Assistant Professor; Drs 1987 Leiden (Netherlands); PhD 1991 Utrecht (Netherlands)

**Burns, Donal J. - 1968; Professor and Associate Executive Vice President; BS 1962, PhD 1965 Queens (Belfast)

**Burrow, Paul D. - 1976; Professor; BS 1960 Massachusetts Institute of Technology; PhD 1966 California (Berkeley)

**Campbell, William B. - 1965; Professor; BA 1959 Rice; PhD 1963 Colorado

**Claes, Daniel R. - 1996; Assistant Professor; BA 1976 Northern Iowa; PhD 1981 Northwesf
tern

**Doudin, Bernard - 1997; Assistant Professor; BA 1985, PhD 1991 Laval

**Dowben, Peter A. - 1993; Professor; BA 1977 Harvard; PhD 1981 Cambridge (United Kingdom)

**Ducharme, Stephen - 1991; Professor and Vice Chair; BS 1981 Lowell; MA 1982, PhD 1986 Southern California

**Eckhardt, Craig J. - 1967; Professor; BA 1962 Colorado; MS 1965, PhD 1967 Yale

**Fabrikant, Ilya - 1989; Professor; M S 1971 Latvia State; PhD 1974 Riga Institute of Physics

**Finkler, Paul - 1965; Associate Professor Emeritus; AB 1958 Brooklyn; PhD 1963 Purdue
Courses (ASTR)

803. Galactic and Extragalactic Astronomy (3 cr) Prereq: ASTR 204, PHY S 213, and permission. Introduction to the techniques for determining the constituents and dynamics of our galaxy, including interstellar matter and theories of spiral arm formation. Extragalactic topics include basic characteristics of galaxies, active galaxies, quasars, evolution, and the cosmological distance scale.

804. Stellar Astrophysics (3 cr) Prereq: ASTR 204 and PHY S 213 and permission. Stellar atmospheres, interiors, and evolution. The theoretical and observational aspects of stellar astronomy. Included is relation between observed parameters and theoretical parameters, stellar formation, stellar energy generation, and degenerate stars.

805. Physics of the Solar System (3 cr) Prereq: PHY S 212 or 142, and MAT H 107. Celestial mechanics tidal effects, planetary interiors, atmospheres, and surfaces, comets, asteroids, and the origin of the solar system. Emphasis on applying physics with which students are already familiar to the solution of solar system problems.

806. Astronomical Instrumentation and Techniques (3 cr) Prereq: ASTR 204. Techniques and instrumentation of observational astronomy. Includes telescopes, spectrographs, photometers, and detectors.

807. Physics of the Interstellar Medium (3 cr) Lec 3. Prereq: ASTR 204 and PHY S 213. Gaseous nebulae, structure of interstellar clouds and star forming regions. Theoretical and observational aspects of the various components of the interstellar medium. Includes the physics of emission nebulae, the properties of the interstellar dust, interstellar molecules and the properties of clouds in which star formation occurs.

997. Special Topics in Astronomy (1-3 cr) Prereq: Permission. Offered as the need arises to treat special topics in astronomy not covered in other 900-level courses.

Physics (PHYS)

822. Introduction to Physics and Chemistry of Solids (ELEC 822) (3 cr) Lec 3. Prereq: PHY S 213 or CHEM 288, MAT H 280 or 821, or permission. Introduction to structural, thermal, electrical, and magnetic properties of solids, based on concepts of atomic structure, chemical bonding in molecules and electron states in solids. Principles underlying molecular design of materials and solid-state devices.


841. Experimental Physics I (3 cr) Lec 1, lab 3. Prereq: PHY S 213, 223, and 231; or permission. Lab fee required. Methods and techniques of modern experimental physics.

842. Experimental Physics II (3 cr) Lec 1, lab 3. Prereq: PHY S 841 or permission. Lab fee required. Continuation of PHY S 841.

843. Experimental Physics III (1-3 cr) Prereq: PHY S 842 or permission. Lab fee required. Continuation of PHY S 842.


861. Quantum Mechanics I (3 cr) Lec 3. Prereq: PHY S 213 and 211; or permission. Basic concepts and formalism of quantum mechanics with applications to simple systems.

862. Atoms, Nuclei, and Elementary Particles (3 cr) Lec 3. Prereq: PHY S/AST R 861 or permission. Basic concepts and experimental foundation for an understanding of the physics of atoms, nuclei, and elementary particles.

870 T. Special Topics in Physics (1-3 cr, max 9) Prereq: Permission. Offered as the need arises to treat special topics not covered in other 800-level courses.

880. Introduction to Lasers and Laser Applications (ELEC 880) (3 cr) For description, see ELEC 880.

899. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

912. Statistical Physics (3 cr) Prereq or parallel: PHY S 911 and 916, or permission. The laws of thermodynamics and thermodynamic functions, ensembles Boltzmann, Fermi-Dirac, and Bose-Einstein statistics, kinetic theory and transport phenomena. Application to macroscopic systems.


914. Electromagnetic Theory II (3 cr) Prereq: PHY S 913 or permission. Special relativity and covariant formulation of electrodynamics, kinematics and dynamics of charged particles; radiation from moving charges; multipole radiation fields.

916. Quantum Mechanics I (3 cr) Prereq: Permission. Introduction to the formalism of quantum mechanics with applications to elementary systems, angular momentum; scattering theory.

917. Quantum Mechanics II (3 cr) Prereq: PHY S 916 or permission. Hilbert-space formulation of quantum mechanics; stationary and time-dependent perturbation theory; variational methods; spin, many-particle systems and identical particles.

918. Quantum Mechanics III (3 cr) Prereq: PHY S 913 and 917, or permission. Introduction to relativistic electron theory; formal scattering theory; semi-classical radiation theory; quantum quantization and application to multi-particle systems, elements of quantum electrodynamics.

925. Introduction to Atomic and Molecular Physics (3 cr) Prereq: PHY S 916 or permission. Selected topics in atomic and molecular physics with emphasis on observed phenomena, including atomic and molecular spectra and scattering phenomena, and molecular structure.

926. Introduction to Nuclear and Elementary-Particle Physics (3 cr) Prereq: PHY S 917 or permission. Selected topics in nuclear and elementary particle physics with emphasis on observed phenomena, including nuclear forces, energy levels, and models decay of unstable nuclei, fundamental interactions and classification schemes.

927. Introduction to Solid-State Physics (3 cr) Prereq: PHY S 912 and 916, or permission. Selected topics in solid-state physics with emphasis on observed phenomena, including the structure and thermal, electric, magnetic, and plastic properties of metals, semiconductors, and insulators.

951. Advanced Topics in Solid-State Physics (3 cr per sem, max 9) Prereq: Advanced graduate standing and permission.

955. Advanced Topics in Atomic Physics (3 cr per sem, max 9) Prereq: Permission.

996. Research Other Than Thesis (1-6 cr per sem) Supervised nonthesis research and independent study.

998. Special Topics in Physics (1-3 cr per sem, max 9) Prereq: Permission. Offered as the need arises to treat special topics not covered in other 900-level courses.

999. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Plant Pathology

Acting Head: Professor James R. Steadman, Ph.D.

Through the School of Biological Sciences, the Department of Plant Pathology offers graduate programs leading to the master of science and doctor of philosophy degrees with a major in biological sciences and a specialization in plant pathology. Located on East Campus, plant pathology offers the advantages of an excellent, energetic faculty with diverse research interests in an interactive department environment.
State-of-the-art facilities support research programs in such areas as molecular plant pathology, fungal molecular genetics, phytobacteriology, nematology, virology, epidemiology, biochemistry, disease resistance, and plant diseases, especially of food and fiber crops, as well as range and urban grasses. Opportunities also exist for interdisciplinary programs in biotechnology, plant breeding, microclimatology, plant stress management, and international agriculture.

Please refer to "Biological Sciences" on page 64 for degree requirements, thesis, and dissertation research normally performed under the supervision of plant pathology graduate faculty.

**Faculty**

**Alfano, James** - 2000; Assistant Professor; BS 1986 San Diego State; PhD 1993 Washington State

**Dickman, Martin** - 1987; Professor; BS 1979 Hawaii (Hilo); MS 1982, PhD 1985 Hawaii

**French, Roy** - 1987; Adjunct Associate Professor; (USD); BS 1977 Colorado State; PhD 1983 Louisiana State

**Giedler, Loren** - 1992; Assistant Professor; BS 1992 Chadron State; MS 1994, PhD 1998 Nebraska (Lincoln)

**Harris, Steven** - 2001; Assistant Professor; BS 1983, MSc 1986 Wndor (California); PhD 1992 Michigan

**Lane, Leslie C.** - 1975; Associate Professor; BS 1965, PhD 1971 Wisconsin

**Mitra, Amitava** - 1989; Associate Professor; BS 1977 Kalyani; MSc 1980 Indian Agricultural Research; PhD 1985 Montana

**Partridge, James** - 1978; Associate Professor; BS 1966, PhD 1971 California (Irvine)

**Powers, Thomas O.** - 1965; Associate Professor; BS 1976 Purdue; MS 1979 Florida; PhD 1983 California (Irvine)

**Stack, James R.** - 1997; Assistant Professor; BS 1976, MS 1978 Massachusetts; PhD 1984 Cornell

**Steadman, James R.** - 1969; Professor and Acting Head; BA 1964 Harvard; M S 1966, PhD 1969 Wisconsin

**Stenger, Drake** - 1997; Adjunct Assistant Professor; (USD); BS 1981 California State; MS 1983, PhD 1987 California (Berkeley)

**Van Etten, James L.** - 1966; Professor; BS 1960 California State; MS 1963, PhD 1965 Illinois

**Vidaver, Anne M.K.** - 1966; Professor and Head; BA 1960 Rutgers; MSc 1962, PhD 1965 Indiana

**Watkins, John E.** - 1975; Professor; BS 1968, MSc 1970 Wyoming; PhD 1975 North Dakota State

**Yuen, Gary Y.** - 1988; Associate Professor; BS 1977, MSc 1980, PhD 1984 California (Berkeley)

**Zariski, Raphael** - 1957; Professor Emeritus; BA 1948, M A 1949, PhD 1952 Harvard

**Zariski, Raphael** - 1957; Professor Emeritus; BA 1948, M A 1949, PhD 1952 Harvard

**Specializations available at the masters level:** Environmental Studies, International Human Rights and Diversity; Water Resources Planning and Management.

### Political Science

**Department Chair:** John Comer, Ph.D.

**Graduate Committee:** Associate Professors Smith (Chair), Heiss-Morse, and Assistant Professors Heller, Roy.

The department offers graduate courses leading to the degrees of master of arts, doctor of philosophy, and a joint degree with the law school leading to the degree of masters in political science and jurisprudence. Graduate work may be pursued in American government, comparative government, international relations, political theory, public administration, and public policy.

Graduate work in public administration is a cooperative program with the Department of Public Administration at the University of Nebraska at Omaha. Within the above areas, students can combine their work in political science with work in other departments leading to a concentration in various interdisciplinary programs such as human rights and human diversity, public discourse and public values, and public policy analysis and evaluation. Requirements for the various degree programs can be obtained by writing to: Chair, Graduate Committee Department of Political Science University of Nebraska-Lincoln PO Box 880328 Lincoln, NE 68588-0328 http://www.unl.edu/polisci/home.html

Specializations available at the doctoral level: Environmental Studies, International Human Rights and Diversity; Water Resources Planning and Management.

### American Government

**834. Intergovernmental Relations (3 cr)**

See description under "Public Policy" on page 164.

**820. Core Seminar in American Government (3 cr)**

Literature in American government institutions, processes, policies, and law. Students required to do extensive reading in these areas. Introduces the beginning graduate student to the field of American government.

**825. Congress and Public Policy (3 cr)**

The policy-making role of the Congress including the institutionalization of the House and the Senate, an analysis of congressional behavior, the committee process, and the policy responsiveness of Congress.

**826. Topics in American Public Policy (3 cr per sem., max 6)**

Students should check the semester schedule for current offerings. Significant public policy in American politics; Topics: Government Control of Business Science; Technology, and Public Policy; or Environmental Politics.
830. Political Communication (COMM 830) (3 cr)
  Prereq: COMM 200, 201 or political science major or minor, or permission. For course description, see COMM 830.

"836. Public Policy Analysis Methods and Models (3 cr)
  Qualitative and quantitative approaches to public policy analysis. Nuture of policies and policy formation; public policy analysis; policy content; methodological triangulation; participatory policy making designs; and the role of the analyst. Construct and implement a multi-method policy analysis for a local community agency.

841. Constitutional Law (3 cr)
  Supreme Court doctrine determining the distribution of powers within the national government and between the national government and the state governments.

842. Civil Liberties Freedom of Expression and Conviction (3 cr)
  Supreme Court doctrine interpreting the Amendment, covering freedom of speech, assembly, and association; freedom of the press and freedom of religion.

843. Civil Liberties Issues of Fairness and Equality (3 cr)
  Supreme Court doctrine covering the rights of the accused, the right to privacy and the right to racial and sexual equality.

875. Water Quality Strategy (AGRO, CRPL, CIVE, GEOL, MYSY, NRES, SOCI 875; SOIL, WATS 475) (3 cr)
  Techniques useful for research aiding in policymaking and for assessing the impact of policy. Role of research in formulation and evaluation of policy and in conducting such research.

885. Contemporary Political Theory (3 cr)
  Recent literature in political theory that examines a variety of perspectives. In addition to reading in modern liberalism the class will consider communitarianism, feminism, identity politics and nationalism among others. Evaluation of the problem of ensuring a just society.

900. Seminar in Political Theory (3 cr, max 9) Prereq: Permission.

903. Seminar in Political Theory (3 cr per sem, max 9) Prereq: Permission.

Public Administration

Courses in public administration are offered through the University of Nebraska at Omaha.

Public Policy

810. The Administrative Process (3 cr)
  Internal dynamics of public and private organizations.

814. Intergovernmental Relations (3 cr)
  Analysis of the nature and problems of the American federal system, with particular emphasis on the politics and administration of federal grants; problems in national-state and national-local governmental coordination in administration.

817. Policy and Program Evaluation Research (SO CI 868) (3-6 cr)
  Techniques useful for research aiding in policymaking and for assessing the impact of policy. Role of research in formulation and evaluation and in conducting such research.

830. Comparative Government

Courses in public administration are offered through the University of Nebraska at Omaha.

Comparative Government

Work offered in this field includes the following geographic areas: East Asia (China and Japan), Eastern Europe, Latin America, Mideast, Russia, and Western Europe.

871. Comparative Public Policy: A Cross-National Approach (3 cr)
  Various approaches to public policy outside the United States with emphasis on Western industrial societies. Includes policy formation and the various factors that influence policy outputs, the relationship between policy outputs and policy outcomes, efforts to classify and evaluate various types of policy outputs, and the influence of policy on politics.

873. Problems in International Law and Organization (3 cr)
  Development of international norms on human rights and attempts to implement those standards. Emphasis on political process, with attention to law, philosophy, economics, and culture. Includes coverage of the United Nations, regional organizations, private agencies, and national foreign policies.

874. Comparative Institutions (3 cr)
  Formal and informal institutions such as constitutions, electoral rules, property rights, and civil rights. How and why people in different groups, countries, and culture construct institutions to facilitate collective action. Whether different groups construct distinctly different institutions to deal with similar problems and why similar institutions seem to work differently in distinct societies.

875. Ethnic Conflict and Identity (UI DS 476) (3 cr)
  Theories of nationalism and ethnic conflict. Case studies of Europe, the Mideast, and Africa. The post-Cold War era as multi-polar and multi-civilizational. The states and different cultures that compete for influence and authority to dominate the "New World Order." The division of the world along linguistic, religious, and cultural lines rather than by ideology. The future of international politics and the reassessment of the causes of "conflicts of culture" and their containment.

876. Israel and the Middle East (UI DS 472) (3 cr)
  Israeli politics and society and its relations with its neighbors, particularly the Palestinians. The rise of Zionism and the Palestinian response to it, the wars between Israel and its Arab neighbors, and the eventual peace agreements between the two, the internal dynamics of Israeli political life, and the state of Zionism today.

877. Pro-seminar in Latin American Studies (ANTH, GEOL, HIST, EDPS, MODL, SOCI 878) (3 cr, max 6 per sem) Prereq: Permission.
  Recent literature in political theory that examines a variety of perspectives. In addition to reading in modern liberalism the class will consider communitarianism, feminism, identity politics and nationalism among others. Evaluation of the problem of ensuring a just society.

878. Pro-seminar in Latin American Studies (ANTH, GEOL, HIST, EDPS, MODL, SOCI 878) (3 cr, max 6 per sem) Prereq: Permission.
  Recent literature in political theory that examines a variety of perspectives. In addition to reading in modern liberalism the class will consider communitarianism, feminism, identity politics and nationalism among others. Evaluation of the problem of ensuring a just society.

879. Core Seminar in Comparative Politics (3 cr)
  Poli S 479 is intended to introduce the beginning graduate student to the field of comparative politics. Survey of the field of comparative politics. General theory and methodology; issues and crises in a number of functional areas. Participation, mobilization, social movement and peace agreements. Confronting the area specialist.

975. Seminar in Comparative Politics (3 cr, max 9) Prereq: Permission.

979. Research Seminar in Comparative Politics (3 cr per sem, max 9) Prereq: Permission.
Psychology

**Garbin, Calvin P.** - 1985; A associate Professor; BS 1979 Slippery Rock State; PhD 1985 Texas

**Hansen, David J.** - 1992; Professor; BA 1980 Creighton; MA 1983, PhD 1985 Arizona (Tucson)

**Ho, Debra A.** - 1990; Professor; BA 1983 Oregon; MA 1988 New York; PhD 1990 State (Albany)

**Howe, Herbert E., Jr.** - 1969; Professor and Associate to the Chancellor; BA 1964 Allegheny; M S 1967, PhD 1969 Penn State

**Hunt, Jennifer** - 2000; A assistant Professor; BA 1995 Creighton; PhD 2001 Minnesota

**Iderbitzen-Nolan, Heidi** - 1990; A associate Professor; BA 1984, MA 1986 Wake Forest; PhD 1990 West Virginia

**Jensen, Donald D.** - 1969; Professor; M S 1954 Nebraska (Lincoln); MA 1957, PhD 1960 Yale

**Leger, Daniel W.** - 1980; Professor; AB 1973 Humboldt State; MA 1975 California (Riverside); PhD 1980 California (Davis)

**Page, Monte** - 1966; Professor; BA 1957 Bethany; MA 1964, PhD 1966 Oklahoma

**Raffaelli, Marcelo** - 1995; A associate Professor; BA 1982 Williams; M S 1987, PhD 1989 Chicago

**Rivers, P. Clayton** - 1972; Professor; BA 1961 Berea; M A 1964, PhD 1967 Southern Illinois

**Scalora, Mario J.** - 1992; A associate Professor; BA 1983 St. Joseph's (Philadelphia); BA 1986, PhD 1989 Nebraska (Lincoln)

**Schopp, Robert F.** - 1989; A associate Professor; Law and Psychology; BS 1977 North Carolina State; JD 1988, PhD 1989 Arizona

**Spaulding, William D.** - 1979; Professor; BA 1972 Pomona; M A 1975, PhD 1976 Arizona

**Tompson, Ross A.** - 1961; Professor; AB 1976 Occidental; AM 1979, PhD 1982 Michigan

**Tomkins, Alan J.** - 1986; Professor; AB 1973 Berkeley; BA 1980, PhD 1984 Washington (St. Louis)

**Weisz, Victoria** - 1986; Research Associate Professor; Center for Children and Families; BA 1980, JD 1984, PhD 1984 Washington (St. Louis)

**Wilcox, Brian** - 1994; Professor; BA 1973 California Lutheran; PhD 1979 Texas (Austin)

**Willis-Esqueda, Cynthia** - 1991; A associate Professor; BA 1984 Washburn; MA 1987, PhD 1990 Kansas

**Courses (PSYC)**

**821. Psychology of Gender** (3 cr) Prereq: 12 hrs psychol. or permission. Theory and research on the role of gender in human behavior and attitudes. Exploration of diverse theoretical positions on the development of gender and evaluation of the biological, social and cultural bases that influence the relationship between gender and a variety of areas of human experience (e.g., intelligence and achievement, emotion, relationships, sexuality, physical fitness, stress and coping).

**825. Psychology of Racism** (ET H N 425) (3 cr) Prereq: For psychology majors PSYC 350. For non-majors any research methods course. Major terms and issues in psychology that pertain to race and racism in the United States, as well as general principles of the psychology of racism that are universal. The psychology of the major racial minority groups in the United States examined in depth. Unique cultural factors, historical traditions, and collective identities. Research methods for studying the psychology of racism are reviewed to provide a basis for interpreting research results.

**840. Perspectives in Psychology** (3 cr) Prereq: 12 hrs psychology or permission. Currently important fundamental issues in psychology considered within a framework of their philosophical foundations and historical perspectives.

**845. Industrial/Organizational Psychology** (3 cr) Prereq: 12 hrs psychology including any 200-level Group 2 course. Psychology as it applies to the workplace topics include selection, tests, job analysis, performance appraisal, worker motivation, job satisfaction, leadership, and organizational theory.

**851. Psychological Measurement and Prediction** (4 cr) Lec 3, Lab 3. Prereq: 12 hrs psychology or permission. A course in elementary statistics is highly desirable. Consideration of theoretical issues and practical problems relating to measurement and prediction in psychology. Interpretation of mental-test statistics.

**860. Human Memory** (3 cr) Prereq: 12 hrs psychology, including PSYC C 350. Issues in human memory within the context of cognitive psychology Topics include attention, short and long term memory, retrieval processes, semantic memory, how memory is involved in comprehension and knowledge, and how emotion affects memory. In order to better understand the theories that are covered, some of the major research paradigms used in the study of memory are discussed.

**861. Learning Processes** (3 cr) Prereq: 12 hrs psychology, including PSYC C 288. Theoretical evaluation of studies of learning, thinking, and perception.

**862. Motivation and Emotion** (3 cr) Prereq: 12 hrs psychology. Analysis and comparison of several approaches to the study of current problems in human perception and information processing. Includes psychophysiological judgment, signal detection theory, perception of form and space, and the role of imagery in perception.

**865. Behavioral Neuroscience** (BIO S 819) (2-3 cr) Prereq: 12 hrs psychology or 12 hrs biological sciences, including PSYC C 2 or BIO S 375. Relationship of physiological variables to behavior; an introduction to laboratory techniques in neurophysiology.

**871. Human Sexuality and Society** (EDPS, FACS, SO C 871) (3 cr) (U N L) Prereq: Permission. 0 to 3 to advanced study. Students planning areas in the professions in which knowledge of human behavior and society is important (e.g., helping professions, medicine, law, ministry, education, etc.). Interdisciplinary approach to human sexuality in terms of the psychological, social, cultural, anthropological, legal, historical, and physical characteristics of individual sexuality and sex in society.

**872. Transpersonal Psychology** (3 cr) Prereq: 12 hrs psychology. Transpersonal psychology perspective which includes biological, social, psychological, and spiritual aspects in a holistic conception of human nature. Integrates the psychology of Christian mysticism, Buddhist meditation, and Eastern wisdom with Western scientific personality theory.

**883. Psychology of Social Behavior** (3 cr) Prereq: 12 hrs psychology. Major problems and methods in the study of individual behavior as it is influenced by the social environment. Includes psychological, social, cultural, anthropological, legal, historical, and functional characteristics of individual behavior and society.

**885. Theories of Personality** (3 cr) Prereq: 12 hrs psychology. Major problems and methods in the study of individual behavior as it is influenced by the social environment. Includes psychological, social, cultural, anthropological, legal, historical, and functional characteristics of individual behavior and society.

**886. Clinical Psychology** (3 cr) Prereq: 12 hrs psychology. Fundamental procedures in clinical practice; a critical evaluation of diagnostic and therapeutic techniques.

**888. Community Psychology** (3 cr) Prereq: 12 hrs psychology. Phenomena and perspectives which are typically included under the rubric community psychology, e.g., community mental health, crisis intervention, and social change interventions.

**899. Masters Thesis** (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.
907. Cognitive Psychology
908. Clinical–Community
909. Psychopathology
910. History and Philosophy of Psychology

920-930. Seminars in Psychology (1-9 cr each) Prereq: 
920. Abnormal
921. Developmental
922. Clinical
924. Learning
925. Personality
926. Social Behavior
930. Psychosocial Methods

925A. Ethics for Psychologists (1 cr) Prereq: 
925. Ethics for Psychologists (1 cr)

941. Psychometric Methods I (3 cr) Prereq: 
942. Psychometric Methods II (3 cr) Prereq: 
943. Factor Analysis (3 cr) Prereq: 
944. Factor Analysis (3 cr)

955. Introduction to Clinical Assessment (3 cr) Prereq: 
956. Clinical Assessment Techniques (3 cr) Prereq: 
957. Topics in Clinical Assessment (3 cr) Prereq: 
958. Seminar in Dispositional Assessment (3 cr) Prereq: 
959. Seminar in Alcohol Use and Abuse (3 cr) Prereq: 
960. Group Processes and Group Psychotherapy (3 cr) Prereq: 
970. Clinical Interviewing (1-3 cr, max 3) Prereq: 
971. Psychological Literature I (1-6 cr) 
972. Psychological Literature II (1-6 cr) 
973. Teaching Methods for Psychology (1-3 cr) Prereq: 
974. Advanced Experimental Psychology (1-9 cr, max 9) Prereq: 
975. Cultural Diversity in Psychology (3 cr) Prereq: 
976. Cultural Diversity in Psychology (3 cr)

981. Clinical Intervention I (3 cr) Prereq: 
982. Clinical Intervention II (3 cr) Prereq: 
983. Therapy in Clinical psychology I (3 cr) Prereq: 
984. Therapy in Clinical Psychology I (3 cr)

985. Law and Behavioral Science (LAW 762/G) (1-4 cr) 
986. Child Psychopathology and Assessment (3 cr) Prereq: 
987. Child Therapy (3 cr) Prereq: 
988. Mental Health Law (LAW 763/G) (1-4 cr) 
989. Topics in Law and Psychology I (LAW 764/G) (1-4 cr) 
990. Topics in Law and Psychology II (LAW 765/G) (3 cr) 
991. Research Methods in Social and Personality Psychology (3 cr) Prereq: 
992. Field Methods in Psychology (3 cr) Prereq: 
993. Seminar in Program Evaluation (3 cr) 
994. Psychological Research Other Than Thesis I (LAW 756/G) (3-6 cr) 
995. Psychological Research Other Than Thesis II (LAW 757/G) (3-6 cr) 

Law/ Psychology Studies

Advisory Committee: Professor Schopp, chair; 
Professor Flowers, Spaulding, Thompson, Tomkins, Wilcox; 
Associate Professor Bornstein; Assistant Professors H. Scirra, Scira 
College of Law; Professors Gardner, Lawson, 
Schopp, Wilham; Assistant Professor Poser 
Departments Participating: College of Law and 
The Department of Psychology at Lincoln

Under the dual sponsorship of the Department of Psychology and the College of Law at the University of Nebraska-Lincoln, the Law/ Psychology Program is intended to train scholars who are engaged in both the applied and research writing on social issues and problems in the law, the legal system, and the legal process. Law/ psychology training is available in each of the major subfields of psychology.

One track leads to both the JD degree in law and the PhD degree in psychology, with specialization in two nonclinical subfields. Students typically work six years in the program, with a seventh year likely if the student chooses to complete an internship in community psychology or mental health administration. Eighteen credit hours of course work (12 hours of didactic course work; 6 hours of interdisciplinary research) apply toward both degrees. Students interested in legal problems affecting mental health services may elect to specialize in mental health policy and administration.

Those who wish to concentrate their efforts primarily in the discipline and methods of psychology but who wish to apply those efforts at least partially to legal and policy issues may find the PhD/MLS (Master of legal studies) track more conducive to their purposes. This option directs primary investment of time and energy to the PhD in psychology, but it also provides the opportunity to develop a sufficient command of the relevant legal background to enable the student to pursue psychological research in a manner that increases its relevance to legal and policy issues. The MLS is a law degree that requires the equivalent of one year of full-time legal study and provides the opportunity to study legal topics relevant to the individual’s primary field of study. For further information about the MLS, see “Law/ Legal Studies” on page 138.

For students who wish to be legal practitioners but who desire to obtain a strong background in psychology or social science methods,
a joint JD/MA program is available. Under this option, 15 hours of course work (9 hours of didactic course work; 6 hours of interdisciplinary research) of the required 36 apply toward both degrees. Persons already holding the JD degree may also seek a terminal M.A. degree under this program as part of the Law/Psychology Program's post-doctoral fellowship tracks. Although it is non-degree, post-doctoral training is also available for persons holding the PhD degree in psychology.

Finally, the Law/Psychology Program offers a specialty program in community-clinical psychology with emphasis on forensic psychology. The latter program leads to the PhD degree only, but it includes psychological course work, research, and clinical experiences. Students in other subfields of psychology also may construct specialty programs (e.g., developmental psychology and the law).

**Psychology Courses**

985. Law and Behavioral Science (LAW 762G) (1-4 cr)
General issues in the interaction between the law and the behavioral sciences. Discussion of the use misuse notion of the behavioral sciences in the law, with attention to ways of making behavioral-science input most useful. Analysis of the law as a behavioral instrument.

988. Mental Health Law (LAW 763G) (1-4 cr)
Critical review of the mental health laws throughout the nation and their psychological underpinnings. Emphasis on research that illuminates the problems facing the mental health system and the solutions available to it.

989. Topics in Law and Psychology I (LAW 764G) (1-4 cr per sem)
For course description, see LAW 764G.

989A. Topics in Law and Psychology II (LAW 765G) (3 cr per sem)
For course description, see LAW 764G.

995. Psychological Research Other than Thesis I (LAW 775G) (3-6 cr)
For course description, see LAW 775G.

995A. Psychological Research Other than Thesis II (LAW 778G) (3-6 cr)
For course description, see LAW 775G.

**Law/ Psychology Studies**

998. Practicum in Law and Psychology (3 cr per sem, max 6 cr per sem; Full graduate standing in Law/Psychology Graduate Training Program or permission of the director of the Law/psychology Program; Supervised fieldwork in law and psychology. Emphasis on the integration of legal analysis and psychological research in the formulation or implementation of public policy.

**Public Administration**

Department Chairperson: Russell L. Smith, Ph.D.
UNL Graduate Adviser: John Bartle, Ph.D.

**Master of Public Administration**

The mission of the master of public administration (M. PA) is 1) to provide knowledge and skills appropriate for careers in the public service; and 2) to instill a commitment to the profession of public service in a democratic and diverse society. The M.P.A. is a recognized graduate degree for professional positions in the public service.

The Department of Public Administration is a member of the National Association of Schools of Public Affairs and Administration (NASPAA). Ranked among the best programs in the U.S., the M.P.A. program is fully accredited through 2004-2005.

Students living in Lincoln may complete the M.P.A. degree by taking courses in Lincoln and/or Omaha.

Additional information may be obtained from:

Department of Public Administration
University of Nebraska at Omaha
Annex 27
Omaha, NE 68182
(402) 554-2625
or
Public Administration
University of Nebraska-Lincoln
1100 N. 20th Street
PO Box 880649
Lincoln, NE 68588-0649
(402) 472-6750

**Faculty**

*Bartle, John* - 1994; Associate Professor; BA 1979 Swarthmore; MA 1983 Texas Tech; PhD 1990 Ohio State

*Blair, Robert* - 1997; Assistant Professor; BA 1973, MPA 1975 Nebraska (Omaha); PhD 1996 Nebraska (Lincoln)

*Box, Richard* - 1998; Assistant Professor; BS 1971, MS 1975 Southern Oregon; MPA 1983 Golden State; DFA 1990 Southern California

*Ebdon, Carol* - 1997; Assistant Professor; BA 1978 John Carroll; MPA 1979 Toledo; PhD 1997 SUNY (Albany)

*Krae, Dale* - 1989; Professor; BA 1965, MA 1966 Indiana; PhD 1973 Minnesota

*Marshall, Gary* - 1995; Associate Professor; BA 1981 Massachusetts; MA 1987 George Washington; PhD 1993 Virginia Tech

*Reed, B. J.* - 1982; Professor and Dean, College of Public Affairs and Community Services; BA 1973, MPA 1977 Fort Hays State; PhD 1977 Missouri

*Reed, Christine* - 1982; Professor; PhD 1983 Brown

*Smith, Russell* - 1986; Professor and Chair; BA 1972 Houston; MA 1974 Northern Texas State; PhD 1977 Tennessee


*Williams, Ethel* - 1988

**Sociology**

Department Chair: J. Allen Williams, Jr., Ph.D.
Graduate Committee: Associate Professor Carranza (chair); Professors Deegan, W. Hitteck, W. Hitt

The department offers graduate courses leading to the degrees of master of arts and doctor of philosophy. Applicants are expected to take the general test of the Graduate Record Examinations and have their scores submitted as part of their application. Facility in particular foreign languages and/or special research tools may be required by the supervisory committee when they are particularly relevant to a student's chosen area of specialization. Students are required to take SOC 1, 855, 862, 863, and 864. All candidates for advanced degrees are required to take SOC 1, 995, and teach as part of their program.

**Prerequisites.** The prerequisite for all 800-level courses in sociology, except cross-listed courses, is 9 hours of sociology or related social sciences.

**Faculty**

*Andrews, Sunny* - 1973; Professor and Director; BA 1961 Lincoln (Pennsylvania); M.S.W. 1961 Pennsylvania; M.P.H., 1969, D.P.H., 1973 Johns Hopkins

*Barnett, Alva* - 1981; Associate Professor; BA 1969 Bethune-Cookman; M.S.W. 1971, M.P.H. 1978, PhD 1981 Pittsburgh

*Barron-McKenney, Theresa* - 1989; Associate Professor; BS 1965 Iowa State; M.S.W. 1966 Nebraska; PhD 1993 Nebraska (Lincoln)

*Burch, Hobart* - 1976; Professor; AB 1953 Princeton; M.D. 1956 University of Pennsylvania; M.S. 1958 Columbia; PhD 1965 Brandeis

*Coyne, Ann* - 1975; Professor; BA 1958 Cornell; M.S.W. 1975, PhD 1976 Ohio State (Lincoln)

*D'Souza, Henry* - 1988; Associate Professor; MS 1975 Yale; PhD 1989 Michigan

*Deeberg, Donald* - 1977; Professor; AB 1959 Creighton; M.S. 1962 St. Thomas Seminary; M.S.W. 1971 Maryand; PhD 1977 Denver

*Hagen, Beverly* - 1974; Professor; BA 1959 Wayne State; M.S.W. 1969, PhD 1979 Nebraska (Lincoln)

*Russell, R. Col. N.* - 1988; Associate Professor; BA 1971 W. Ill. Southern Illinois; JD 1974 Temple; PhD 1986 Illinois

*Weber, Gwen* - 1986; Associate Professor; BA 1967, M.S. 1969, PhD 1979 Nebraska (Lincoln)

**Woody, Jane** - 1975; Professor; M.S. 1973 Western Michigan; PhD 1973 Michigan State

**Social Work**

**School Director:** Sunny Andrews, M.S.W., M.P.H., Dr.P.H.

The School of Social Work is administered by the University of Nebraska at Omaha. The school’s BSW and M.S.W. degree programs are accredited by the Council on Social Work Education (CSWE), the national accrediting body for all social work education. All graduate classes are offered on the Omaha campus. A few graduate courses are offered off campus. Because practicum placements for supervised field study are available in Lincoln and surrounding locales as well as in Omaha, it is usually possible for students living outside of Omaha to limit their commuting to Omaha to two days per week. For information or application for admission, please contact:

School of Social Work
University of Nebraska at Omaha
Annex 40
Omaha, NE 68182-0293
(402) 554-2792
www.unl.edu/~socialw/
846. Environmental Sociology (3 cr) Prereq: 9 hours sociology or related social sciences. Focus on the role of humans in the ecosystem, especially the interaction of human societies with the natural environment, including other species and the physical environment. Attention to theories of the sociocultural causes of environmentally-related problems and the policies designed to deal with these problems.

848. Family Diversity (ETHN 448) (3 cr) Prereq: 9 hrs sociology or related social science. Analyzes diversity in family structure and family choices. Topics: rural families, gay/lesbian families, Native American families, African American families, Latino families, working-class and poor families and cohabitation.

849. Family Research and Theories (3 cr) Contemporary theory and research dealing with family structure and change. Focuses on family systems that characterize different social classes and various ethnic groups in society. Selected problems and contemporary research emphasized.

850. Social Institutions (3 cr) Analysis of means of social control, with special emphasis upon social institutions.

852. Sociology of Religion (3 cr) Sources and nature of religious behavior, drawing on the contributions of anthropologists, sociologists, psychologists, and others. Emphasis on the interaction of religion and society.

853. Sociology of Health and Health Professions (3 cr) Critical analysis of the social and cultural bases of health and illness. Social factors in the definition of illness and in the organization and distribution of health care.


856. Sociology of Urban Areas (3 cr) Prereq: 9 hours sociology or related social sciences. Focus on the physical, economic, and social structures of urban communities.

857. Sociology of Occupations and Professions (3 cr) Contemporary and historical analysis of the role of the family, Third World poverty, and inequality.

858. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

859. Sociology of Women (3 cr) Evaluation and application of sociological analysis to the problem of power: power structures and elite formation as they relate to democratic society and political extremism.

860. Sociology of Women (3 cr) Evaluation and application of sociological analysis to the problem of power: power structures and elite formation as they relate to democratic society and political extremism.

861. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

862. Advanced Methods of Social Research I (3 cr) Intensive analysis of the logic and design of sociological research; the nature of science and logic of social inquiry; design of research problems; data collection techniques and sampling.

863. Advanced Methods of Social Research II (SR AM 863) (3 cr) Intensive analysis of the logic and techniques of sociological analysis. Emphasis on the role of the educational institution as an agent of stability and change. Special emphasis on research and policy evaluation.

864. Sociological Theory (3 cr) Intensive examination of the conceptual structures of selected theorists and the basis of theory construction and testing.

865. Survey Design and Analysis (SR AM 865) (3 cr) Basic issues related to the design and analysis of sample surveys. Basic of questionnaire construction, sampling, data collection, analysis, and data presentation.

866. Pro-seminar in International Relations (AECN, ECON, POLS 867; ECON, POLS 866; ANTH, HIST 879) (3 cr) Prereq: Permission. For course description, see PSY 867.

867. Sociology of Occupations and Professions (3 cr) Presentation of frameworks for the study of occupations and professions. Emphasis on the role of the family, Third World poverty, and inequality.

868. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

869. Sociology of Women (3 cr) Examination of the role of the family, Third World poverty, and inequality.

870. Sociology of Occupations and Professions (3 cr) Presentation of frameworks for the study of occupations and professions. Emphasis on the role of the family, Third World poverty, and inequality.

871. Human Sexuality and Society (3 cr) Prereq: 9 hours sociology or related social sciences. Focus on the physical, economic, and social structures of urban communities.

872. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

873. Sociology of Women (3 cr) Examination of the role of the family, Third World poverty, and inequality.

874. Sociology of Deviance (3 cr) Prereq: 9 hours sociology or related social sciences. Focus on the physical, economic, and social structures of urban communities.

875. Water Quality Strategy (AGRO, CR PL, CIVE, GEO L, MSYM, NRES, POLS 875; SOIL, WATS 475) (3 cr) Prereq: Permission. For course description, see AGRO 875.

876. Pro-seminar in Latin American Studies (ANTH, GEOG, HIST, EDPS, M DOL, POLS 878) (3 cr) Prereq: Permission. For course description, see ANTH 878.

877. Social Inequality and Stratification and Life Changes (3 cr) Prereq: 9 hours sociology or related social sciences. Focus on the physical, economic, and social structures of urban communities.

878. Sociology of Women (3 cr) Examination of the role of the family, Third World poverty, and inequality.

879. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

880. Sociology of Women (3 cr) Examination of the role of the family, Third World poverty, and inequality.

881. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

882. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

883. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

884. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

885. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

886. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

887. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

888. Sociology of Work (3 cr) Examination of the role of the family, Third World poverty, and inequality.

889. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major advisor.

900. Seminar in Sociological Theory (3 cr, max 9) Prereq: Permission.

901. Seminar in Research Methods (SR AM 902) (3 cr, max 9) Prereq: Permission.

902. Seminar in Social Psychology (3 cr, max 9) Prereq: Permission.

903. Seminar in Sociology (3 cr, max 9) Prereq: Permission.

904. Seminar in Family (3 cr, max 9) Prereq: Permission.

905. Seminar in Stratification, Class, and Inequality (3 cr, max 9) Prereq: Permission.

906. Seminar in Race and Ethnicity (3 cr, max 9) Prereq: Permission.

907. Seminar in Sex and Gender (3 cr, max 9) Prereq: Permission.

908. Seminar in Crime and Deviance (3 cr, max 9) Prereq: Permission.

909. Seminar in Professional Development (1 cr, max 3) P/N only. Professional development for careers in college teaching and research in sociology. A. Teaching (1 cr) B. Graduate Study and Career Research (1 cr) D. Publications (1 cr)
Special Education

See "Special Education and Communication Disorders" on page 98.

Survey Research and Methodology

Program Director: Allan L. McCutcheon, Ph.D.

The master of science program in survey research and methodology is a two-year, non-thesis program designed to train students to fill the expanding need for professionals in survey research and data analysis. We anticipate initiating a PhD program fall semester, 2002. Graduates can expect to find challenging, creative, and well-paid positions in media, research, government, business, and the non-profit sector.

The underlying philosophy of the graduate program in survey research and methodology is reflected in its interdisciplinary curriculum and the combination of theory and practice in instruction.

The graduate program in survey research and methodology is designed for graduates of mathematics/statistics, social sciences, and business programs. One undergraduate statistics course is a requirement. Students seeking admission to the graduate program in survey research and methodology must apply through the Admissions Office of the Graduate School.

Requirements for admission to the Graduate School will be found in the Graduate Admissions Guide. The deadline for fall admission is March 15. In addition, applicants must submit test scores from the verbal and quantitative sections of the Graduate Record Examinations (or, the GMAT, for those minorin in marketing), official copies of undergraduate transcripts, a personal statement outlining your interests and career goals, and three letters of recommendation. Students from countries in which the official language is not English must also submit the results of the TOEFL examination. Graduate assistants will be available to support students in this program. Applications for financial aid must be received by March 15.

The faculty Graduate Committee will admit students based on their past academic performance, the three letters of reference, their personal statement, and their standardized examination scores. These materials should be sent to:

Dr. Allan L. McCutcheon, Director
Gallup Research Center
University of Nebraska
200 North 11th Street
Lincoln, NE 68588-0241

Interdisciplinary Curriculum. The graduate program in survey research and methodology draws from a range of courses to supply students with the necessary skills to be highly trained survey professionals.

Combination of Theory and Practice. Excellence in survey research requires both knowledge of the principles of survey methodology and the skill to implement those principles. The curriculum is designed to achieve mastery of those principles and skills.

Exchange Program. The survey research and methodology graduate program currently has a one-semester exchange opportunity with the post-graduate program in Quantitative Analysis at the Catholic University in Brussels, Belgium. We are also seeking to enhance additional exchange opportunities with other universities internationally.

Program Description. The curriculum constitutes a total of 45 credits of study, divided between 24 hours in the core and elective research areas, 12 credits in the student’s minor area of specialization, and 9 hours in the student’s internship practicum.

Master of Science Curriculum

Please Note: An introductory (undergraduate) statistics course is a program prerequisite. New students lacking this prerequisite will be expected to fulfill this requirement (without program credit) in their first semester of study.

Major Requirements (24 credits)

One course from each of the 6 categories listed (18 credits) is required.

1. Survey Design: Questionnaire design; mail, telephone, personal interviews; response rates; sampling strategies and logic of survey analysis.
   SRAM 865
   BIOM 802
   EDU C 800
   EDPS 9871

2. Research Design: Experimental sample; quasi-experimental design; panel designs; and quantitative v. qualitative.
   BIOM 802
   EDU C 800
   EDPS 9871

3. Applied Sampling: Sampling design; variance estimation and adjustment; and response rates and bias.
   SRAM 898

4. Measurement: Reliability, validity, bias, measurement models and scale analysis.
   EDPS 870
   EDPS 970
   MR KT 824

5. Intermediate Statistics: Multivariate analysis; ordinary least squares and logit regression; and analysis of interaction effects.
   BIOM 810
   EDPS 941
   EDPS 942
   PSY 984
   BIOM 863
   STAT 885

6. Advanced Statistics: Structural equation modeling; modeling categorical data; discriminant analysis; general linear models; and conjoint analysis.
   BIOM 970
   EDPS 971

Research Electives (6 credits)

With the major advisor's approval, students choose two additional courses on research methods and analysis. A course used to fill one of the required content areas may not also be used as an elective, but with the advisor's approval, a student can take a second course from a required topic area and count it as an elective. Electives may include courses in the theory of public opinion, program evaluation, qualitative methods, philosophy of science, market research, consulting, data reporting and others at the advisor's discretion.

Minor Requirements (12 credits)

To maximize the utility of their skills for particular work environments, students in survey research and methodology choose a minor area of specialization from a wide variety of fields. Minor areas of specialization may include concentrations in sociology, political science, psychology, educational psychology, marketing, statistics, journalism, public administration, or education. Students will select a minor area advisor in their selected area of specialization who will assist in the selection of courses in this area.

Internship/Practicum (9 credits)

Internship (6 credits)

The internship is a crucial element in our program, and reflects our philosophy of combining survey practice with theory. In addition to participation in actual research settings, the internship program includes students' participation in seminars covering ethics, grant writing, working with statistical programs (e.g., CAPI, CASSI, CATTI, SPSS, SAS, LIMDEP, GAUSS, S-PLUS, Stata), and report writing and presentation.

Independent survey research project (3 credits)

Students will work on the design and execution of a survey research project. Under the supervision of an on-site supervisor, students will work on projects that might include market research or surveys for a social service agency.

Advising

Overall supervision of the internship program rests with the Graduate Chair. The survey research and methodology program. The Graduate Chair will serve as the major advisor to the program participants. Coordinated advising with the student's minor department is also critical in helping the student choose courses that will contribute to specific career goals. Students will select a minor area advisor to assist with their decisions in their minor. Supervision for the internship will be provided by an on-site supervisor and the students' academic advisors.

Research Opportunities and Internships

Students in the graduate program in survey research and methodology have access to research opportunities through two mecha-
nisms first, through assistantships and collaboration in regular faculty research; and second, through internships and practice (see below). Graduate assistants with the University of Nebraska’s Gallup Research Center will assist Gallup Research professors with research grant writing and preparation. Also, all members of the core survey research and methodology faculty are engaged in research in their specialties. The vast majority of this research uses survey research data and quantitative analysis. Faculty members in sociology, political science, and educational psychology hold major grants to faculty members in sociology, political science, and educational psychology hold major grants to

Practica and Internships. Our formal link to the Gallup Organization makes our practica and internships a unique element of our program. In addition to Gallup, internship opportunities will be arranged with other commercial survey and market firms, media groups, governmental agencies, academic research establishments and nonprofit associations. These internships will normally take place between the students’ first and second years of residence.

Courses of Instruction (SRAM)

* 800. Research Methods (POL S 9800) (3 cr)
  - For course description, see POL S 800.

* 824. Advanced Quantitative Analysis in Marketing (MRKT 824) (3 cr)
  - Prereq: Permission.
  - For course description, see MRKT 824.

863. Advanced Methods of Social Research II (SOC I 863) (3 cr)
  - For course description, see SOC I 863.

865. Survey Design and Analysis (SOC I 865) (3 cr)
  - For course description, see SOC I 865.

* 895. Internship (3-6 cr)
  - Prereq: Permission.
  - Experience applying concepts and methods of survey research in preparation for a professional career.

* 896. Practicum in Survey Research and Methodology (3 cr)
  - Prereq: Permission.
  - Application of theory and research gained during internship.

* 898. Special Topics (3 cr, max 24)
  - Topic varies.

902. Seminar in Research Methods (SOC I 902) (3 cr, max 9)
  - Prereq: Permission.

941. Intermediate Statistics Experimental Methods (EDPS 941) (3 cr)
  - Prereq: EDPS 859.
  - For course description, see EDPS 941.

942. Intermediate Statistics Correlational Methods (EDPS 942) (3 cr)
  - Prereq: EDPS 859 or equivalent.
  - For course description, see EDPS 942.

970. Theory and Methods of Educational Measurement (ED PS 970) (3 cr)
  - Prereq: EDPS 859 and 870; EDPS/EDP AM 941; or equivalent.
  - For course description, see EDPS 970.

971. Structural Equation Modeling (EDPS 971) (3 cr)
  - Prereq: EDPS/EDP AM 942 and 970; or equivalent.
  - For course description, see EDPS 971.

972. Multivariate Analysis (EDPS 972) (3 cr)
  - Prereq: EDPS/EDP AM 941 and 942.
  - For course description, see EDPS 972.

980D. Seminar in Special Topics (MRKT 9980D) (3 cr)
  - Prereq: Permission.
  - For course description, see MRKT 9980D.

Textiles, Clothing and Design

Department Chair: Rita Kean, Ph.D.
Graduate Committee: Associate Professor Trout (chair); Professors Crews, Kean, Neimeyer, Yang; Associate Professor Weiss; Senior Lecturer James

The Textiles, Clothing and Design Department was the 1999 recipient of the prestigious American Textiles Manufacturers Association (ATMA) Award of Excellence which recognizes outstanding academic achievement in the field of textiles and apparel. Faculty and students within the department have a distinguished record of national recognition and awards for their research, creative and scholarly work. The Textiles, Clothing and Design Department houses the International Quilt Study Center and the Robert Hillestad Textiles Gallery. Students have access to additional outstanding resources including the Textile Testing Service, historic textile and costume collections and faculty and student design studios equipped with state-of-the-art Lectra systems and electronic looms.

Graduate work in textiles, clothing and design provides the opportunity to increase knowledge in the field of study and competence in research and creative endeavors. Students may qualify for study in this area by presenting a baccalaureate degree from an accredited institution and having completed a minimum of 12 hours of undergraduate coursework beyond the freshman level in textiles, clothing and design, or equivalent from a related area such as art, theatre, history, chemistry or business. Graduate programs in textiles, clothing and design are delivered both through resident instruction and distance education. Current information regarding graduate study in textiles, clothing and design is available on the department’s Web site: <ianrwww.unl.edu/ianr/chrfs/hctcd.htm>. All applicants for admission are required to submit the results of the Graduate Record Examination (recommended minimum: verbal-450; quantitative-450; and analytical-500) in addition to other application materials required by the Graduate College. International students must submit a TOEFL score of at least 550—paper, 213—computer. Finally, all applicants are asked to send a letter to the chair of the Textiles, Clothing and Design Graduate Committee describing her/his background, experience, and goals in pursuing graduate study.

The Graduate Committee will consider the qualifications of applicants for admission to study in textiles, clothing and design leading to a master of science or master of arts degree and will make recommendations to the Graduate College. Deficiencies as assessed on an individual basis may be removed concurrently with graduate studies.

Doctor of Philosophy Degree. Studies leading to a Ph.D. are conducted under the human resources and family sciences doctoral program, see “Human Resources and Family Sciences” on page 134.

Faculty

* Crews, Patricia Cox - 1984; Professor; BS 1971 Virginia Tech; MS 1973 Florida State; PhD 1984 Kansas State

* Hillestad, Robert - 1965; Professor Emeritus; BS 1956 Wisconsin; MS 1969 Drexel; PhD 1974 Drexel State

* James, Michael - 2001; Senior Lecturer; BFA 1971 Massachusetts (Amherst); MFA 1973 R ochester Institute of Technology

* Kean, Rita C. - 1980; Professor and Chair; BS 1971 SUNY (Buffalo); MS 1975; PhD 1984 Nebraska (Lincoln)

* Laughlin, Joan - 1974; Professor Emeritus; BS 1962 Saint Mary; MS 1965 Iowa State; PhD 1974 Penn State

* Neimeyer, Shirley - 1985; Professor Emeritus; BS 1978 Nebraska (Lincoln); MS 1982 Iowa State; PhD 1990 Nebraska (Lincoln)

* Trout, Barbara L. - 1981; Associate Professor; BS 1970 Nebraska (Lincoln); MS 1978 Colorado State; PhD 1987 Nebraska (Lincoln)

* Weiss, Wendy - 1986; Associate Professor; BA 1979 Colorado College; MFA 1983 Kansas

* Yang, Ying - 2001; Professor; BS 1980, M E 1984 Shanghai Textile Institute (China); PhD 1991 Purdue

Courses (TXCD)

803. Apparel Design by Draping (3 cr, max 6) (UNL)
  - 6 preq: 12 hrs textiles, clothing, and design including TXCD 209 and 216.
  - Creative experience in designing apparel through the use of draping techniques.

805. Advanced Textiles (3 cr) (UNL) Lec 2, lab 2
  - Prereq: TXCD 206; CHEM 105 or 109 or 113.
  - Recent advances in the production and performance of fibers, yarns, finishes and dyes for textile products. Laboratory experiences designed to familiarize the students with standards and equipment for evaluating textile product performance.

806. Textile Testing and Evaluation (3 cr)
  - Lec 1, lab 2
  - Prereq: TXCD 805.
  - Physical and chemical analysis of textiles using standard testing procedures including the calculation, interpretation, and evaluation of test results.

807. History of Costume (3 cr) (UNL) Lec 3
  - Prereq: AHIS 101 and 102 or 3 hours HIST 100 or 101 (Western Civilization).
  - A theoretical approach to the history of dress from ancient times through the twentieth century, examining dress in the context of social, economic, and artistic development of Western culture.

808. History of Textiles (3 cr) (UNL) Lec
  - Prereq: AHIS 101 and 102 or 3 hours HIST 100 or 101 (Western Civilization).
  - Textiles in the context of artistic, social, political and economic developments in the cultures of Europe, Asia, Africa and the Americas. Emphasis on the evolution of textile design and stylistic differences between cultures.

809. Care and Conservation of Textile Collections (3 cr, max 6) (UNL)
  - Prereq: TXCD 206 or permission.
  - Recommended practices for accessioning, handling, storage, exhibition, and preventative conservation of textiles and dress in museum collections. Philosophical and ethical issues confronting curators and collection managers.

810. Socio-psychological Aspects of Clothing (3 cr)
  - Lec 3
  - Prereq: 9 hrs social sciences and 9 hrs textiles, clothing, and design; or permission.
  - Theoretical and research findings pertaining to the social and psychological aspects of clothing and appearance in relation to the self, interpersonal behavior and collective behavior.

* 811. Textiles, Clothing, and Design Problems (1-6 cr)
  - Prereq: 12 hrs textiles, clothing, and design; or permission.
  - Selected problems related to textiles, clothing, and design.
  - A. Textiles
  - B. Clothing
  - D. Design

812. Apparel and Market Analysis (2 cr) (UNL) Lec
  - Prereq: TXCD 312.
  - Analysis of apparel and production processes with emphasis on market strategies, costing and product development via computer aided design.
Theatre Arts Courses of Instruction

801. Advanced Acting (3 cr per sem, max 12)
Prereq: T HEA 254, 256, 224 or equivalent and permission. Specific content for each semester may be obtained from the teaching faculty. The actor's methods of character development in the major styles of acting including Realistic Drama, Elizabethan, Comedy, Theatre of the Absurd, Musical Theatre, and others, and the acting profession itself.

802. Advanced Stage Movement (2 cr per sem, max 8)
Prereq: T HEA 256, 224 or equivalent and permission. Actor movement training intended for the graduate and advanced undergraduate. Focus on the process of building a physical characterization, tumbling, kinetic awareness, movement improvisation, period styles, court dancing, mask, commedia dell'Arte, and stage combat.

803. Advanced Stage Voice (2 cr per sem, max 8)
Prereq: T HEA 254, 224 or equivalent and permission. Actor voice training intended for the graduate and advanced undergraduate. Lindeke-based training supplemented by the study of Lessac principles, phonetics, verse analysis, and dialects.

804. Evolution of Dramatic Theory I (3 cr)
Prereq: T HEA 12 hrs theatre arts and dramatic literature. Dramatic theory from Aristotle to Lessing with emphasis on the relationship of theory and practice on the stage.

805. Evolution of Dramatic Theory II (3 cr)
Prereq: 12 hrs theatre arts and dramatic literature. Dramatic theory continued from Lessing to the present.
807. Auditioning (1 cr) Prereq: THEA 114, 115, 223, 224 and permission. Instruction in the auditioning process including resumes, interviews, preparation of pieces (forms, styles, and genres) cold readings, songs, etc.

808. Advanced Projects in Acting and/or Directing (1-3 cr per sem, max 12) Prereq: (acting) THEA 112G, 114, 204, 801 or equivalent and permission; (directing) THEA 203, 801, 810, 812, 818 and permission. Selected performance in acting and directing in University Theatre, Experimental Theatre, and Laboratory Theatre.

809. Advanced Projects in Technical Theatre (1-3 cr per sem, max 12) Prereq: THEA 810, 812, 818 or equivalent and permission. Projects in scene design, costume design, lighting design, sound design, or technical direction. Planning and execution of designs for actual production.


811. Stage Lighting II (3 cr) Prereq: THEA 810. Intensive work in designing lighting plots with particular emphasis on design style for musicals, opera, and multiset productions.

812. Scene Design I (3 cr) Prereq: 12 hrs theatre arts including THEA 201 and 202. Theory and practice of scene design. Application of the principles of design to stage settings. Development of the scene design for a play through sketches, color plates, models, and drawings.

813. Scene Design II (3 cr) Prereq: 12 hrs theatre arts including THEA 201 and 202, and 812. Theory and practice of scene design with special emphasis on rendering techniques, period research, and multiset productions.

814. Computer-Aided Design (CAD) for the Theatre (3 cr) Prereq: 12 hrs theatre arts including THEA 201 and permission. Computer-aided design (CAD) as it applies to scenic, costume, and lighting design. Two-dimensional drafting, three-dimensional modeling, and computer graphics.

815. Children’s Theatre Production (3 cr) Prereq: THEA 114, 201, 203, 204, or equivalent and permission. Methods of direction, design, and production of plays for children. Students plan a complete children’s theatre production.

816. Costume Design I (3 cr) Prereq: 12 hrs theatre arts including THEA 201 and 202. Theory and practice of stage costume design. Principles of design as they apply to theatrical costuming. Development of costume designs for the characters in a play through sketches, drawings, and color plates.

817. Costume Design II (3 cr) Prereq: THEA 810. Costume design in the area of design conception and techniques of design communication. Opportunity to apply principles learned in Costume Design I (THEA 818).

818. Problems in Technical Production (3 cr) Prereq: THEA 201, 206, 812 or equivalent and permission. Reading, research, and discussion of technical problems relating to the use of new materials, special effects, sound design, projections, multimedia techniques, electromechanical devices. Procedures of technical direction and advanced technical drafting.

819. Drafting for Theatre (3 cr) Advanced techniques and practice in technical drafting as applied to theatrical scene construction.

820. Theatre Architecture (3 cr) Planning of a theatre facility, including program writing, working with consultants and architects, equipment specification, space allocation, codes and regulations.

821. Lighting for Film (3 cr) Prereq: THEA 811 or 889, or permission. Advanced application of film lighting concepts and techniques.

822. The American Theatre I (3 cr) Prereq: 12 hrs theatre arts including THEA 112G, 335, and 336 or equivalent. History and development of the professional American theatre from the beginning to 1900. Selected American plays which best characterize the period under consideration.

823. The American Theatre II (3 cr) Prereq: 12 hrs theatre arts including THEA 112G, 335, and 336 or equivalent. History and development of the professional American theatre from 1900 to the present day. Includes selected American plays which best characterize the period.

824. Advanced Playwriting (3 cr per sem, max 6) Prereq: 12 hrs theatre arts including THEA 112G, 131 or equivalents and permission. Composition of a three-act play or equivalent long play.

825. Scene Painting (3 cr) Prereq: 12 hrs theatre arts including THEA 201, or permission. Techniques and practice of scene painting for theatre, film, and television. Texture simulation, faux finished, and realistic drop painting.

826. Continental Drama (3 cr) Prereq: 12 hrs theatre arts including THEA 335 and 336. Significant plays written and produced in the theatres of Europe (excluding Britain) between 1688 and 1875. Period of study encompasses late neoclassicism, Sturm und Drang, romanticism, melodrama and precursors of realism in French, German, Italian and Russian theatre.

827. Sound Design I (3 cr) Prereq: THEA 201 or permission. Theory and practice of sound design for live theatre. Extensive work with recording, mixing, effects, and playback devices.


829. Musical Theatre Techniques (M U O P 855) (3 cr) Advanced training in the integration of acting, movement, and singing skills for musical theater. Training in artistic decision making that generates a character within a musical. Discipline of preparation and the resulting performance; including practical experiences and skills, duets, and ensembles from American Musical Theatre Repertoire.

830. Stage Rigging I (3 cr) Prereq: THEA 201 or permission. Theory and practice of rigging for live theatre events. Extensive work with fly systems, rope systems, and standard rigging hardware.

831. Script Analysis (3 cr) Prereq: Permission. Systematic approach for analyzing a play based on the four works of Stanislavski.

832. Director/Designer Communication (3 cr) Prereq: Undergraduate major in theatre. Projects, planning, and execution of various forms and styles involving the communication process between director and designer.

833. Detailed Scene Work I (3 cr) Prereq: 12 hrs theatre arts. Practical work on scenes with actors and directors from selected realistic plays.

834. Detailed Scene Work II (3 cr) Prereq: 12 hrs theatre arts. Further practical work on scenes with actors and directors, involving classical plays, verse drama, expressionistic pieces, or musical comedy.

835. Introduction to Pedagogy (1 cr per sem, min 3) Introduces the graduate student to contemporary university level teaching theories and their classroom applications.

836. Screenwriting: The Short Script (3 cr) Prereq: BRDC 370 or ENGL 252 or 254 or 259 or THEA 131 or permission. Character development, story structure and problem solving. Writing for the short film.

837. Film Production I (3 cr) Prereq: BRDC 269, THEA 811, 812, 818 and 830 or permission. Production of short films.

838. Film Production II (3 cr) Prereq: THEA 881, 882, and 837 or permission. Advanced film production techniques including sync-sound, lighting, lab post-production and film business. Small group production of feature film or experimental film.


840. Masters Thesis (6-10 cr) Prereq: Admission to masters degree program and permission of major adviser.

841. Seminar in Theatre Design (1-3 cr per sem, max 12) Prereq: Undergraduate major in theatre arts. Prereq or parallel: THEA 810, 812, 818 and 932. Problems and theories of scenery, costume, and lighting design for ballet, opera, musicals, and legitimate plays. Discussion of student projects and designed full-scale productions.

842. Seminar in Theatre History (1-3 cr per sem, max 12) Prereq: Undergraduate major in theatre arts including 9 hrs theatre history and evolution of dramatic theory. Specialized topics in theatre history.

843. Seminar in Modern Theatre (1-3 cr per sem, max 3 in each of the four areas listed, overall max 12) Prereq: Undergraduate major in theatre arts including 9 hrs from THEA 801, 803, 810, 812, 831.

B. Playwrights

844. Playwrights

845. Internship (3-12 cr) Prereq: Permission only. Practical projects related to a professional theatre organization.


847. Doctoral Dissertation (1-24 cr, max 55) Prereq: Admission to doctoral degree program and permission of supervisory committee chair.

Toxicology

Center Director: Dr. Ercole Cavalieri
Graduate Committee: Professor D. Hagle (UN L); Associate Professor S. Sanderson (UN M C) (co-chair); Professor D. Morgan (UN M C), B. Siegfried (UN L); Associate Professors D. Berkowitz (UN L), A. Floreni (UN M C), P. Stemmer (UN M C)

The Center for Environmental Toxicology provides masters and doctoral degree programs in various multidisciplinary aspects of environmental toxicology. Research opportunities within the program include mechanisms of carcinogenesis, mechanisms of alcohol toxicity and metal toxicity, mechanisms of DNA damage, human molecular genetics, environmental gene interactions, bioinformatics, immunotoxicology, ecological toxicology, arthropod chemicals in soil and water, food toxins, ultratrace determination of biological compounds, and synthetic and mechanistic bio-organic chemistry.

Masters Degree

There are two options:

Track 1 involves research for those who choose to continue their study and pursue their PhD. Students committed to Track 1 do not have the option of changing to Track 2. This option requires a minimum of 30 credit hours: 20-24 hours of course work and 6-10 hours of thesis. Half of the total credit hours, including thesis, must be in the major.

Track 2 is for non-research (non-PhD) students. It must be declared upon entry into the program. Students may move up from this track to the PhD track. Track 2 requires a minimum of 36 credit hours with a minimum of 18 hours in the major, or two minors of 9 hours each.
with 15 hours in the major. At least 12 credit hours must be in exclusive upper level (800/900) courses. No thesis is required. Students should complete this program option in three years.

M S students must identify an adviser and have an Advisory Committee in place by the end of their first year. The Advisory Committee is composed of the adviser and faculty. Students may take four other faculty members three of the five must be C center faculty with four holding graduate faculty appointments and at least one person must be from an outside discipline. The proposal must conform to the guidelines of an appropriate federal agency (NIH, EPA, USDA, etc.). After review by the Supervisory Committee and selected outside reviewers, an oral defense of the grant proposal and related subject material will be held. All students are also required to submit at least one scientific article for publication. Finally, a dissertation with an oral defense must be presented.

All students (MS and PhD) are required to successfully complete two semesters of biochemistry, a semester of statistics, and two semesters of toxicology. Basic concepts of chemical carcinogenesis, major carcinogens, their biochemistry of activation and mode of action.

The department offers a master of science degree with major in veterinary science through the University of Nebraska-Lincoln and participates in the doctor of philosophy degree in medical sciences—veterinary science through the Medical Sciences Interdepartmental Area. The Graduate Program in biological sciences at the University of Nebraska-Lincoln and participates in the doctor of philosophy degree in medical sciences—veterinary science through the Medical Sciences Interdepartmental Area. Graduate courses and research are offered in pathology, epidemiology, microbiology, immunology, virology, biochemistry, and molecular biology. Courses I, 2, and III are used for the masters degree program. Biochemistry and biostatistics courses are required for the MS and the PhD degrees. There is no generally specified language or research skill required for the PhD, but each student must meet the supervisory requirements set by the Graduate College and approved by the supervisory committee, the Department and the Medical Sciences Interdepartmental Area graduate committee.

In addition to the general requirements of the Graduate College, applicants for the PhD must submit scores from the Graduate Record Examination, the Medical College Admission Test, or the Veterinary Aptitude Test. All candidates for advanced degrees must engage in disciplinary training and research as a part of their program.

Applicants are encouraged to send a letter to the chair of the Graduate Committee describing their background, experience, and personal and academic goals in pursuing graduate study.

In addition to the courses listed below, BIO M 801 and 802 may be used as part of the course work constituting a major in veterinary science (MS) or medical sciences (PhD).
Courses (VBMS)

**805. Introduction to Mechanisms of Disease (3 cr I)**
Lec 3. Prereq: ASCI *845 or permission. 0 offered odd-numbered calendar years.

- For students of students of biological, veterinary, and agricultural sciences. Introduction to general pathology emphasizing etiology, pathogenesis, epidemiology, and control.
- General concepts in virology and virolopathogenesis. Pathogenicity, specificity, and serology.
- Critical interpretation of tests, Kappa statistics, and issues of precision, validity, and accuracy.

**811. Introduction to Veterinary Epidemiology (2 cr)**
Prereq: Permission. 0 offered summer semester of odd-numbered years.

- Introduction to concepts of epidemiology including definition and uses of epidemiology. Causal web theory of causation discussed and compared to the Heli-Koch postulates.
- Students use sampling methods to define population characteristics, detect disease and test hypotheses. Practical application of confidence, power, and sample size. Use of descriptive epidemiology to discuss population characteristics.

**816. Veterinary Entomology/Ectoparasitology (ASC 1, ENTO, N R E S B16) (2 cr II)**
Lec 2. Prereq: 10 hrs entomology or biological science related to fields or permission.

**818. Veterinary Entomology/Ectoparasitology Lab (ASC 1, ENTO, N R E S B16) (1 cr II)**
Prereq: ENTO, ASC 1, N R E S B16; or parallel.

**818L. Veterinary Entomology/Ectoparasitology Lab (ASC 1, ENTO, N R E S B16) (1 cr II)**
Prereq: ENTO, ASC 1, N R E S B16; or parallel.

**820. Molecular Genetics (BIOC 820) (3 cr)**
Prereq: 12 hrs biological sciences including general genetics or equivalent. BIOC 818 recommended.

**824. Basic Molecular Infectious Diseases (3 cr I)**
Lec 3. Prereq: BIOC 832 and permission. 0 offered odd-numbered calendar years.

- Introduction to the molecular, genetic and cellular aspects of microbial pathogenesis in humans and animals.
- Application of diagnostic microbiological techniques to the isolation, propagation, and identification of common pathogens of human beings and animals.
- Case studies used in the laboratory, to explore and test fundamental concepts.

**835. Animal Biochemistry (BIOC 835) (3 cr, even-numbered years)**
Lec 3. Prereq: BIOC 832 and permission. Biochemistry of animal cells and tissues, with integration of major metabolic pathways and aspects of their control mechanism.

**836. Molecular Biology Laboratory (BIOC *836) (5 cr I)**
Lec 6; lab 27. Prereq: BIOC 841, BIOC 832 and 313. An advanced course in genetics and permission. Students may use a gene of their own interest if they have a suitable probe.

**840. Microbial Biology (BIOC 840) (3 cr)**
Lec 3. Prereq: BIOC 312 and either 313 or permission. For course description, see BIOC 840.

**841. Pathogenic Microbiology (BIOC 841) (3 cr I)**
Lec 3. Prereq: BIOC 312 and either 313 or permission. Fundamental principles involved in host-microorganism interactions. Identification, characterization, and isolation of pathogens, propagation, mode of transmission, pathogenicity, symptoms, treatment, prevention of disease, epidemiology, and methods of control.

**843. Immunology (BIOC 843) (3 cr)**
Lec; Prereq: BIOC 301 and one semester organic. BIOC 201 recommended. For course description, see BIOC 843.

**845. Animal Physiology I (ASC 1 *845, BIOC *813) (4 cr I)**
Lec 3; lab 3. Prereq: CHEM 251; BIOC 112 or ASCI 240. For course description, see ASC 1 *845.

**846. Animal Physiology II (ASC 1 *846, BIOC 814) (4 cr I)**
Lec 3; lab 3. Prereq: ASC 1 *845 or permission.

**847. Interdisciplinary Concepts in Beef Production I (3 cr)**
Offered even-numbered calendar years.

- Designed for students of biological, animal, and veterinary sciences.
- Microscopic anatomy of the tissues and organs of major vertebrate species, including humans. Normal cellular arrangements of tissues and organs are related to their macroscopic anatomy and function, with reference to sub-cellular characteristics and biochemical processes.
- Functions, relationships among cells, tissues, and organs; systems of the body are related to the functional aspects of the macromolecules.

**848. Introduction to Veterinary Biotechnology (3 cr I)**
Lec 3. Prereq: BIOC 843 or permission.

- Introduction to veterinary biotechnology and related bioscience disciplines.
- Critical evaluation of study design, methods of analysis, biases, field-applicability, and results of conclusions.

**849. Immunovirology (3 cr)**
Lec 3. Prereq: Permission; organic chemistry, biochemistry, immunology and/or concepts in virology and virolopathogenesis. Pathogenic microbiology recommended.

- Description of virus and immune system interactions, with emphasis on mouse and human models.
- Mechanism of antigen presentation of viral proteins and their role in virus-host interactions.

**908. T Cell Biology: Repertoire and Effector Functions (3 cr I)**
Lec 3. Prereq: BIOC 843 or permission. 0 offered even-numbered calendar years.


**909. Seminar (1-4 cr I)**
Lec only.

**919. Regulation of Eukaryotic Gene Expression (3 cr I)**
Lec 3. Prereq: 1) BIOC 818 or BIOC 833; 2) BIOC 818 or BIOC 833 or related laboratory experience.

- Basic regulation of transcription in eukaryotic cells.
- Concepts and unique mechanisms in mammalian cells.
- Techniques used to study gene regulation.

**920. Measurement of Animal Disease and Production (2 cr I)**
Lec; disc & lab. Prereq: BIOC 811 or permission. 0 offered odd-numbered calendar years.

- Measurement of disease and production, the basic tenants of epidemiology. Emphasis on the role of diagnostic laboratory.
- Application of the principles of pathology to current problems.
- Critical analysis of data, methods of analysis, biases, implications of the results, and current uses of each.

**921. Analytical Observational Studies in Veterinary Epidemiology (2 cr I)**
Lec; disc & lab. Prereq: BIOC 811 and 920; permission. 0 offered odd-numbered calendar years.

- Design, implementation, and analysis of cross-sectional, cohort, and case-control studies and field trials.
- Limitations, biases, implications of the results, and current uses of each.
- Evaluation of these methods as used in the scientific literature.

- Applications of chi-square tests, Cochran-Chi-square tests, and epidemiological measures of strength of association, effect, and total effect.

**925. Critical Reading of the Epidemiology Literature (3 cr, max 4)**
Lec; disc & lab. Prereq: Permission. 0 offered summer semester of even-numbered years.

- Critical evaluation of study design, methods of analysis, biases, field-applicability, and results of conclusions.

**930. Advanced Food Animal Production Medicine (2 cr)**
Lec; disc & lab. Prereq: Permission. 0 offered summer semester of even-numbered years.

- Critical evaluation of study design, methods of analysis, biases, field-applicability, and results of conclusions.

**944. Immunovirology (3 cr)**
Lec 3. Prereq: Permission; organic chemistry, biochemistry, immunology and/or concepts in virology and virolopathogenesis. Pathogenic microbiology recommended.

- Description of virus and immune system interactions, with emphasis on mouse and human models.
- Mechanism of antigen presentation of viral proteins and their role in virus-host interactions.

**948. Genetics, Genomics, and Bioinformatics of Prokaryotes (BIOC 942) (3 cr)**
Prereq: General genetics and introductory microbiology or permission.

- For course description, see BIOC 942.

**949. Vaccinology (2 cr)**
Lec/ disc. Prereq: Permission; BIOC 942 or BIOC 833; 3) BIOC 843 or BIOC 852 or related laboratory experience.

- Analysis of the theory and mechanisms involved in the development of efficacious vaccines. Microbiological and immunological aspects as well as the manufacturing and regulatory aspects of vaccine development.
Water Resources Planning and Management (Interdepartmental Area)

An intra-university masters-level minor with emphasis on water resources planning and management. Each student will be required to complete: 1) a major in one of the departments with approval to offer option as a minor or specialization; 2) 9 hours of water resources-related courses from departments outside the student's major field (6 hours of which must be from those courses marked with *A*) and approved by the Water Resources Advisory Committee; and 3) a thesis oriented toward water resources planning and management, or under special circumstances, an alternative to a thesis which first must be approved.

The masters degree will be granted in one of the disciplines. The student must be formally registered in one of the departments with approval to offer the option as a minor or specialization. The recommended masters degree option is I (thesis) but other options may be approved. The minor or specialization can be noted on the student's final transcript, for exam-ple, civil engineering (water resources planning and management).

Departments with Approval to Offer Option as a Minor or Specialization: Agricultural Economics, Agronomy/Horticulture, Animal Science, Biological Sciences, Biological Systems Engineering, Civil Engineering, Community and Regional Planning, Economics, Geography, Geology, Industrial and Management Systems Engineering, Mathematics and Statistics, Political Science, School of Natural Resources, and Sociology.

A Water Resources Advisory Committee coordinates the interdisciplinary aspects of the minor/specialization. The Director of the Nebraska Water Center/Environmental Programs in the School of Natural Resources serves as chair. The student's major department and the chair of the advisory committee must be from the student's major department. The committee will be appointed from the Water Resources Advisory Committee. The committee may not be from the student's major department.

Water Resources Advisory Committee:

- Examples of courses in water resources to comprise the 9-hour minor or specialization are listed below according to departments. Course descriptions and prerequisites are contained in the appropriate departmental listings. Courses below, and courses other than those listed below, may be included as part of the 9-hour minor or specialization with concurrence of the Advisory Committee and the student's major department representative to the Advisory Committee.

Courses may require technical prerequisites; check bulletin listings for details. Students may take courses cross-listed in an outside department to meet minor or specialization requirements.

Offered in the Department of Agricultural Economics
856. Environmental Law
857. Water & Natural Resources Law
863. Resource & Environmental Economics

Offered in the Department of Agronomy/Horticulture
881. Water Resources Seminar
808. Micrometeorology
825. Turfgrass Science & Culture
850. Climate & Society
855. Soil Chemistry & Mineralogy
875. Water Quality Strategy
920. Pesticide Dissipation in Soils & Plants
961. Advanced Soil Physics

Offered in the School of Biological Sciences
859. Limnology
860. Advanced Limnology
873. Freshwater Algae
885. Aquatic Insects

Offered by the Department of Biological Systems Engineering
853. Irrigation & Drainage Systems Engineering
855. Nonpoint Source Pollution Control Engineering
941. Agricultural Water Management
954. Hydrologic Modeling of Small Watersheds
954. Turbulent Transfer in the Atmospheric Surface Layer

Offered in the Department of Civil Engineering
821. Hazardous Waste Management
822. Hazardous Waste Treatment
823. Physical/Chemical Treatment Processes

824. Solid Waste Management Engineering
826. Design of Water Treatment Facilities
827. Design of Wastewater Treatment & Disposal Facilities
828. Application of Chemistry to Environmental Engineering
829. Biological Wastewater Treatment
830. Fundamentals of Water Quality Modeling
852. Water Resources Development
853. Hydrology
854. Hydraulic Engineering
855. Nontechnical Source Pollution Control Engineering (BSEN 855)
856. Surface Water Hydrology
858. Groundwater Engineering
875. Water Quality Strategy
915. Water Resources Engineering
916. Interdisciplinary Seminar in Engineering: Economic & Legal Aspects of Water Resources Systems (LAW 774G)
921. Advanced Topics in Hazardous Waste Treatment
927. Advanced Topics in Water Treatment
929. Industrial Waste Laboratory
930. Advanced & Industrial Wastewater Treatment
952. Water Resources Planning
954. Advanced Hydraulics
955. Solute Movement in Soils (AGRO, AGEN 955; GEO.L 955)
958. Groundwater Modeling
959. Groundwater Mechanics

Offered in the Department of Community and Regional Planning
870. Environmental Planning & Policy
872. Environmental Survey & Analysis
875. Water Quality Strategy

Offered in the Department of Geography
812. Intro to Geographic Information Systems
818. Remote Sensing I: Photographic Sensors
819. Remote Sensing II: Non-photographic Sensors
820. Remote Sensing III: Digital Image Analysis
822. Advanced Techniques in Geographic Information Systems
881. Water Resources Seminar

Offered in the Department of Geosciences
815. Water Resources Seminar
850. Climate & Society
851. Severe Storms Meteorology-Climatology
852. Synoptic Meteorology
853. Physical Climatology
854. Regional Climatology
855. Soil Physics
868. Satellite Meteorology
875. Water Quality Strategy
888. Groundwater Geology
889. Hydrogeology
953. Seminar in Meteorology & Climatology
954. Seminar in Climatic Change
967. Seminar in Hydrogeology

Offered in the School of Natural Resource Sciences
Agricultural Meteorology
808. Micrometeorology
852. Climate & Society (AGRO, G.E.O.L 850)
907. Agricultural Climatology
908. Solar Radiation Interactions at the Earth's Surface
954. Turbulent Transfer in the Atmospheric Surface Layer (BSEN 958)
Women's Studies

(Interdepartmental Area of Specialization)

Advisory Committee: Professors Joel Ritchie (director), Mary Beck, Susan Belasco, Patricia Draper, Barbara DiBernard, Christin Mamiya, and Sue Wortman

Departments Participating: English, History, Modern Languages and Literatures, Sociology

The specialization in Women's Studies provides graduate students from diverse disciplines with opportunities to broaden and enrich analytical skills in one or more disciplines while drawing on the interdisciplinary perspectives of Women's Studies. Courses offer a simultaneous focus on issues of gender, race, ethnicity, class, global feminism, and sexual orientation and offer models of scholarship, pedagogy, and professional activity that help students seeking employment in a variety of occupations related to women's issues.

Women's Studies faculty supervise the specialization through the Women's Studies Advisory Board chaired by the director and in consultation with the Curriculum Committee as described in Women's Studies by-laws.

Approval of students' programs is the shared responsibility of the Women's Studies Advisory Board and the student's examination/supervisory committee. Students must apply by letter to their appropriate department's listing. With the permission of the Women's Studies Advisory Board, students may substitute courses not on this list.

Masters-level Specialization Requirements: An intradisciplinary masters-level specialization in Women's Studies is available to any student pursuing a masters degree within any of the participating departments: English, history, modern languages and literatures, or sociology.

Each student will be required to complete:

1. A masters degree in one of the participating departments or programs.
2. Nine credit hours of graduate courses outside the student's major department approved by the Women's Studies Advisory Board. Substitutions may be made with the permission of the Advisory Board.
3. If option I (thesis) is chosen, the thesis must present some issue(s) relevant to Women's Studies.
4. Successful completion of the specialization will be indicated on the students' official transcript in parentheses following the name of the students' academic discipline.

Doctoral-level Specialization Requirements: An intradisciplinary doctoral-level specialization in Women's Studies is available to any student pursuing a PhD degree within any of the participating departments: English, history, modern languages and literatures, or sociology.

Each student will be required to complete:

1. A doctoral degree in one of the participating departments or programs.
2. Twelve credit hours of courses outside the student's major department approved by the Women's Studies Advisory Board. Substitutions may be made with the permission of the Advisory Board.
3. The dissertation should present some issue(s) relevant to Women's Studies.
4. Successful completion of the specialization will be indicated on the students' official transcript in parentheses following the name of the students' academic discipline.

Women's Studies Courses

Courses to comprise a specialization in Women's Studies are listed below by department. Course descriptions are included in the appropriate department's listing. With the approval of the Women's Studies Advisory Board, students may substitute courses not on this list.

Courses

Offered in the Department of Anthropology
810. Women & Men: An Anthropological Perspective
816. Cross Cultural Perspectives on Aging
843. Human Osteology
844. Biology of Human Variation
876. Human Rights, Environment & Development

Offered in the Department of Architecture
581/881. Women in Design
556/856. Behavioral & Social Factors in Environmental Design

Offered in the Department of Communication Studies
859. Human Communication Theory
950A. Seminar in Gender & Communication

Offered in the Department of Family and Consumer Sciences
881. Family Violence

Offered in the Department of English
801. Gay & Lesbian Drama
813. Film Theory (with appropriate subtitle)
814. Survey of Women's Literature
814B. 20th Century Women Writers
844. African American Women's Literature
875A. Rhetorical Theory: Rhetoric of Women Writers
914A. Advanced Film Theory (appropriate subtitle)
914B. Seminar in Women Writers
962A. Medieval Women Writers
971A. Seminar in Literary Theory: Feminist Theory

Other seminars in English with appropriate emphasis

Offered in the Department of History
836. Saints, Witches & Madwomen
864. Native Ceremonial History
921, 931, 932. Readings & Problems in English History (with appropriate subtitle)

Offered in the Department of Modern Languages and Literatures
FR EN 898. Postcolonial Literature by Women
FR EN 898. Gender in Francophone Literatures & Cultures
FR EN 929. Seminar in Eroticism
GER M 898. German Women Writers & Composers
RUS S 882. Women in Russian Literature
SPAN 870. South American Women Writers
SPAN 896. Hispanic Women Writers

Offered in the College of Law
686G. Gender Issues in the Law

Offered in the Department of Political Science
885. Contemporary Political Thought

Offered in the Department of Psychology
821. Psychology of Gender
871. Human Sexuality & Society (cross-listed as EDPS, FAC S, SOC C 871)

Offered in Sociology
890. Sociology of Women
896. Special Topics (with appropriate subtitle)
907. Seminar in Sex & Gender

Offered in the Department of Textiles, Clothing and Design
807. History of Costume
808. History of Textiles
810. Socio-Psychological Aspects of Clothing
Student Rights and Responsibilities

The Student in the Academic Community

The following statement was developed by representatives from the student body, the faculty, and the administration, to spell out the role of the student at UNL. In the spring of 1968, the document was adopted by the student government (ASUN), validated by a referendum vote of the student body, adopted by the University (Faculty) Senate, and adopted by the Board of Regents as a continuing policy.

Almost a century ago, the people of Nebraska established this university to provide opportunity for human and intellectual development in the service of society. Repeatedly in the history of the institution, the Regents, the faculty, the students, and the interested public have affirmed these values within the University community. It has enhanced the development of responsible individualism.

It is appropriate, during a time of change and reassessment of established values that the academic community re-examine and clarify the conditions conducive to the personal and intellectual development of students. It is the purpose of this document to indicate the general character of the expectations, the rights, and the obligations of the students at the University of Nebraska. The significance of this document will depend upon the willingness of students to exercise the opportunities and to accept the obligations, both stated and implied.

Any of the statements contained herein reflect the legacy of the past which has made these values an integral part of the educational environment at the University of Nebraska. There is merit in retaining values as a means of strengthening our resolve to provide the optimum climate for the educational enterprise and to direct our attentions toward new and better methods of attaining common goals.

It is recommended to the Association of Students of the University of Nebraska, the University Senate, and the Board of Regents that this document be adopted as a statement of institutional policy. As a statement of policy, it should be examined periodically for revision.

I. General Rights and Responsibilities

All members of the academic community have the responsibility to create and support an educational environment which will achieve the basic purposes of the University. Each member of the community should be treated with respect and dignity. Each has the right to learn. This right imposes a duty to not infringe upon the rights of others. The academic community should assure its members those opportunities, protections, and privileges which provide the best climate for learning. Views and beliefs expressed by a member of the academic community should be kept within the community unless released by the individual. The University encourages a variety of modes in thought, behavior, and values within the guidelines of the educational community.

An important aspect of the educational effort is the recognition of differences between individuals. In all instances, including informal campus activities and associations, each individual should be assured that judgments about the individual will be made on relevant criteria which do not include race and color. Each member of the academic community should actively encourage practices and policies to insure that all races, colors, creeds, and religions are welcome on the campus and are extended all the privileges of the academic community.

As more and more young people seek the benefits of higher education, it may be desirable for the state University to offer special recognition and assistance to students disadvantaged by limited educational opportunity.

A. Admission Policy

Admission policies of the University of Nebraska should be made clear to all applicants. The Charter of 1869 explicitly provided that admission and the privileges of the University cannot be denied to an applicant because of age, sex, race, color, national origin, religious or political beliefs.

B. Rules and Regulations

Rules and regulations are not comprehensive codes of conduct, but rather expressions of the general expectations of the academic community. Upon admission to the University, students should receive statements of these expectations.

Rules and regulations should:
1. seek the best possible reconciliation between personal freedom and necessary order.
2. be formulated with equitable participation by students in areas affecting student life.
3. be as clear and concise as possible, specifying to whom they apply.
4. be designed for guidance and correction of behavior.
5. be enforced by means of clearly defined channels which insure procedural fair play, including students' rights:
   a. to be informed of the specific charges against them.
   b. to receive, upon request, a hearing before a regularly constituted board with the privilege of appeal.
   c. to maintain status as a student while a conduct case is pending.

C. Off-Campus Freedom of Students

University students enjoy all the rights and privileges of citizenship. Students are subject, however, to the special obligations which accrue to them as members of the academic community. Institutional effort should be exerted to develop, not inhibit, intellectual and personal development of students by the exercise of the rights of citizenship both on and off campus.

The enforcement of the obligations of students to the larger society is the responsibility of the legal and judicial authorities duly established for that purpose. If students are alleged violators of the law, they should proceed through legal channels and institutional authority should never be used merely to duplicate those functions.

When the interests of the academic community are clearly involved, the authority of the institution should be asserted. The fact that a violation occurs off campus does not preclude the interest and involvement of the University.

When participating in off-campus activities, students should make it clear that in their public expressions or demonstrations they speak and act only for themselves as individuals.

D. Student Records

All policies and practices concerning student records should be based upon respect for the privacy of the individual. To minimize the risk of improper disclosure, academic and disciplinary records should be separate and the conditions of access to each should be set forth in an explicit policy statement. Transcripts of academic records should include only information about a student's academic status. Upon graduation, notations of probation and suspension will be removed from transcripts of the permanent record. Information from disciplinary and counseling files should not be made available to unauthorized persons on campus or to any person off campus without the expressed consent of the student involved, except under legal compulsion or where the safety of other persons is involved. Provision should be made for periodic destruction of noncurrent disciplinary records.

II. Rights and Responsibilities in the Classroom

A. Freedom of Expression

It is the responsibility of each faculty member to provide an atmosphere which is conducive to freedom of expression by encouraging discussion and permitting exception to the views he/she has presented. In addition, faculty members have the responsibility to guide and direct such discussion and inquiry in a scholarly manner. The scope and duration of discussion, however, is to be determined by the instructor.

Students have the right of expression in the classroom and the responsibility to learn from the course of study according to the standards of performance established by the faculty. Student behavior in the classroom should contribute to the learning process.
B. Instructional and Grading Procedures

The faculty determines the character of courses which includes content, instructional and grading procedures. Students should be informed of these matters at the beginning of the course.

Each student has the right to a course grade based upon an unbiased evaluation of his/her performance and the specified grading procedure. A student has the right to ask for clarification of the basis for his/her grade.

The faculties of each college or department should provide a standing committee to consider the appeal of those cases in which a student feels the evaluation of his/her performance was biased. This committee must have the authority to direct change based upon its findings.

C. Instructor-Student Consultation

Instructors should be available on a regular basis for consultation with students. Students may ask for an evaluation of their performance during the progress of the course. If a student conveys information of a confidential nature to a member of the faculty, his/her confidence should be respected.

D. Procedure For Course Evaluation

Students can contribute significantly to the evaluation of instruction. The faculty have the obligation to solicit student evaluation of its educational efforts and to make changes in accordance with its best judgment. To assist the faculty in the task of providing the best possible education, students should express their reactions and opinions about the character and relevancy of the instruction to the department or college involved. Each college or school should establish a standing procedure through which student evaluations can be expressed.

III. Rights and Responsibilities in Other Instructional Settings

A. Freedom of Expression

The acquisition, understanding, and interpreting of knowledge can be facilitated by the student and study of controversial positions. Free expression should be permitted in publications and broadcasting. Students should be allowed to invite and hear any person of their own choosing. Those procedures required by the institution before a guest speaker appears on campus should ensure orderly scheduling of facilities and adequate preparation for the event. The institutional control of campus facilities should not be used as a device of censorship. However, all activities should be conducted in a manner appropriate to an academic community.

It should be made clear to the academic and larger communities that sponsorship of events and speakers does not necessarily imply approval or endorsement of the views or actions, either by the sponsoring group or the University. Participation in the exchange of ideas through these media is normal in the academic community.

B. Student Government

Students should be free, individually or collectively to express their views on issues of institutional policy and on matters of general interest to the student population. The students should have clearly defined means to participate equitably in the formulation of institutional policies and procedures which affect student life.

The student government is the principal agency for student participation in the decision-making process of the University.

C. Student Organizations

Students bring to the campus a variety of interests and can be expected to develop new interests as members of the academic community. They should be free to organize and join associations to promote their common interests, provided those associations are not antagonistic to the basic purposes of the institution. Students should be able to participate in those organizations provided they meet the membership requirements set up by the organization; in no instance will these criteria for membership include race or color.

This document was approved by the Student Senate of A SUN (April 7, 1968), a referendum of the Student Body (April 10, 1968), the University Senate (May 14, 1968), and the Board of Regents (June 19, 1968).

II. Who Has Normal Access to These Files

A. Academic Information

Faculty advisers, college deans, departmental chairpersons, financial aid, registration and records personnel, and counselors or advisers in offices where academic information is maintained would normally have access to academic files. Other University personnel have access to academic information only for purposes related to their educational function and/or job responsibilities. Persons and agencies outside the University have access to academic information only with the written consent of the student.

B. Behavioral Information

Normally only staff members employed within the office or division where student behavioral information is maintained have access to such information. Other University personnel have access to student behavioral information only for purposes related to their educational function and/or job responsibilities. Persons or agencies outside the University have access to student behavioral information only with the written consent of the student.

C. Other Student Services Information

1. Certain educational records and personal information for job placement purposes may be maintained in the Career Planning and Placement Center under the supervision of the Director of Career Planning and Placement (includes Teacher Placement Office), and in some academic colleges (e.g., the College of Agriculture, the College of Law, etc.) for students enrolled in those colleges. Each college dean is responsible for overall supervision of files in his/her college.

2. Cumulative files containing scholarship and financial aid applications with supporting data and records of scholarship and financial aid awards previously made are maintained in the Office of Scholarships and Financial Aid under the supervision of the Director of Scholarships and Financial Aid.

3. Files containing records of a student’s financial accounts (tuition and loan) are maintained in the Office of Student Accounts under the supervision of the Office of the Comptroller.

Student Records Policy

The student records policy at the University of Nebraska at Lincoln is in compliance with the Family Education Rights and Privacy Act.

I. Kinds of Information Maintained About Students

A. Academic Information

1. All records and documents pertaining to a student’s academic standing and progress are maintained in a student’s cumulative academic folder, e.g., admissions application, high school transcript, semester grade reports, cumulative academic records, etc.

2. Cumulative files containing academic information are maintained by the Office of Records and Registration and records by some college offices (students should inquire of their dean). Some faculty advisers by some academic departments in which a student has his/her major, and by the Office of International Educational Services (for international students).

B. Behavioral Information

1. Behavioral information records including all documents pertaining to disciplinary proceedings and notices of sanctions imposed as a result of official University disciplinary action are maintained in confidential files. These files are kept separate from a student’s cumulative academic folder.

2. Confidential files containing behavioral information are maintained in the Division of University Housing, the Office of Greek Affairs, and/or the Office of the Vice Chancellor for Student Affairs, depending on the origin and disposition of the information. The chief administrator of each office is responsible for the overall supervision of the files in that office.

C. Other Student Services Information

1. Certain educational records and personal information for job placement purposes may be maintained in the Career Planning and Placement Center under the supervision of
3. Student Accounts office personnel are normally the only persons who have access to a student’s financial account information. Other University personnel have access to financial account information only for purposes related to their educational function and/or job responsibilities. The Office of Student Accounts considers all students as “dependents” for the purpose of the release of financial account information to parents or guardians. If a student wishes to have all financial account information excluded from parents or guardians, the student must notify the Office of Student Accounts before the first day of the first semester. Other persons and agencies outside the University community have access to such information only with the written consent of the student.

III. Procedures to Access Files

Students who wish to gain access to their personal file within a University office or department should contact the chief administrator or supervisor of that office or department. The chief administrator or supervisor of the office will advise the student of the necessary steps to be taken and of any costs to be assessed to the student for reproduction of file materials.

IV. Challenge Procedures

Students who wish to challenge the accuracy of any document contained within a cumulative file should contact the dean or director of the office which maintains that file. The dean or director will hear the student’s reasons for the challenge and attempt to informally resolve or arbitrate any contested points or issues. If an informal disposition cannot be made, the student has the right to a hearing before an impartial board duly established for such purpose. Students desiring a hearing should contact the appropriate dean or director to: (1) request a hearing, (2) establish a hearing date, and (3) obtain copies of the hearing board’s rules and procedure. The student shall be given notice of the date, place, and time reasonably in advance of the hearing. The student shall be afforded a full and fair opportunity to present evidence relevant to the issue and may be assisted by individuals of his/her own choice at his/her own expense. After the hearing is held, a written decision will be issued within a reasonable period of time after the conclusion of the hearing. The decision shall be based solely upon the evidence presented at the hearing and shall include a summary of the evidence and the reasons for the decision.

V. Copies of Cumulative Record Documents

Copies of documents contained within a student’s cumulative file will be made available to the student upon written request. (Exception: Copies of transcripts and records furnished by other colleges, universities, or schools will not be made available to the student if the document in question is available through the initiating agency.) The actual cost of reproducing these records may be assessed to the student. If a student receiving a request to reproduce documents in a cumulative file, the office involved will notify the student requesting the documents of any reproduction costs which the student must pay.

VI. Release of Information to a Third Party

When a student provides written consent for release of information to another school, business, or agency, the University office or department complying with the request will notify the school, business, or agency involved that it may not pass on the information obtained to a third party without the further consent of the student.

VII Public or Directory Information

The following information pertaining to students has been declared to be public information by the Board of Regents of the University of Nebraska:

1. Student name
2. Dates of registered attendance
3. Nature of any degrees granted and dates conferred
4. Major
5. College
6. Classification
7. Home address
8. Campus address
9. Phone
10. Marital status

Students are advised that information other than public or directory information may be released in emergency or life-threatening situations.

Student Code of Conduct and Disciplinary Procedures

Policy Statements

I. Campus Disorders

The heritage of academic freedom at the University of Nebraska is reflected in the Statement of Principles by the Board of Regents:

“The right to uphold, to discuss, and dissent is the moral fiber of America’s greatness. They are likewise the strength of a great University.” In accepting the “Student in the Academic Community” document, all segments of the University reaffirmed this principle and explicitly extended it to students. Accordingly, members of the academic community, including the guests of the University, have the right to extensive latitude in making their opinions known. It is understood, however, that in exercising this right, the rights of others must not be jeopardized. The public exploration and resolution of differing views can be successful only when groups and individuals discuss the issues in forums where the right to disagree, to speak freely and be heard, is preserved. Within this context, the University community recognizes peaceful demonstrations as a legitimate means of expressing one’s opinion.

The preservation of freedom of speech, and the recognition of the right to peaceful demonstration as part of that freedom is possible only in an orderly environment in which individuals are not endangered by force or violence, and in which they are free from coercion and interference in the exercise of their activities. Consequently, in the specific case of campus demonstrations, the University community may impose behavioral restrictions which are necessary to preserve the orderly functioning of the University and the right of all to be heard. Such restrictions include, but are not limited to, the following two categories:

A. Prevention of Violence or the Use of Force

Demonstrations which coerce individuals or which constitute a hazard to the safety of any persons or which threaten destruction of property are not protected by freedom of speech provisions and will not be tolerated. Similarly, a hostile audience will not be allowed to interfere with a peaceful demonstration.

B. Protection from Interference with University Operations

The University community may restrict conduct which interferes with the holding of classes, the carrying forward of University business, properly organized and scheduled University events, or the discharge of responsibility by any University officer, employee, or student. Although the mere presence of demonstrators in public areas within buildings does not necessarily constitute interference, demonstrators cannot be allowed to physically obstruct access to University facilities. Noise and boisterous activity are objectionable when they prevent others from exercising their rights and duties.

Persons engaging in disruptive action shall be subject to University disciplinary measures for misconduct, including separation from the University, as well as being held accountable by civil authority for violation of criminal and civil laws.

II. Disruptive Action

The response of the University to disruptive action must ultimately depend on the judgment of the officials who are in charge. However, the following guidelines should be observed:

1. Every effort will be made to end the disruption through reason and persuasion. These efforts will include willingness to discuss issues involved and to establish procedures for discussion and arbitration of the issues involved. Discussion of the issues will not be conducted under condition of duress.

2. If discussion efforts fail, the individuals involved will be asked to cease the disruptive action. In the event the alleged violators do not cease the disruptive activity within a reasonable length of time, temporary sanctions may include conduct probation and, if necessary, suspension, may be imposed on the scene. However, unless both the student and the University officials agree to a postponement, the University must hold disciplinary hearings within five (5) school days after the imposition of temporary sanctions. Such disciplinary hearings shall be held in accordance with the established Disciplinary Procedures of the University. No temporary sanction shall be made part of a student’s permanent record. If a student is found innocent of the action for which temporary sanctions were imposed, no record of the temporary sanction or of the hearings shall become part of any of the student’s files or
III. Public Hearings

It shall be the right of any individual member or group of members of the University (i.e., students, faculty or administrators) to be granted, upon petition to the appropriate policy-making body or office, a public hearing at which the policy indicated by the group of petitioners in their petition shall be discussed. The policy-making body or office petitioned shall schedule the hearing for some time convenient to the interested parties, if possible no later than two weeks after the petition is submitted during periods when the University is in session, and shall announce publicly in advance the time and place of the hearing. At the hearing, that body responsible for the policy indicated in the petition shall give an explanation of the policy, offer the reasons which justify the policy in view of the objections or questions raised about it in the petition, and respond to any additional questions or criticism of the policy or related policies raised at the hearing. It is expected that before such a petition is submitted all normal channels for raising questions about the policy will have been exhausted. If, in view of the policy-making body or office to whom the petition is submitted, the petition is merely a form of harassment or adequate answers are available through other normal channels, the petition may be referred to the Vice Chancellor for Student Affairs to determine whether the hearing must be held. A decision by the Vice Chancellor for Student Affairs not to hold a public hearing shall be overruled by the submission of a petition requesting such hearing and signed by at least 100 members of the University community.

IV. Drugs

A. Possession, Distribution, Manufacture

The University, as an agency of the State of Nebraska, having a responsibility to abide by both state and federal laws, hereby declares that possession, use, distribution, sale or manufacture of drugs on this campus except as allowed by law is contrary to University policy. The University will cooperate fully with state and federal law officials in the enforcement of all state and federal laws regarding illegal sale, possession or use of drugs.

B. Definition

The term “drug” and “drugs” in this statement means any drug possessed, used, distributed, sold or manufactured in violation of the laws of the State of Nebraska or laws of the United States. Some common examples include, but are not limited to:

- Depressants: alcohol, barbiturates (i.e., Seconal®, Nembutal®), other sedative-hypnotic drugs (i.e., Doriden®, Noludar®), minor tranquilizers (i.e., Miltown®, Librium®), and narcotic analgesics (i.e., morphine, heroin).
- Stimulants: amphetamine derivatives (i.e., D extradrine®, M ethamphetamine®), and cocaine.
- Cannabis: marijuana, hashish, and other preparations containing cannabis or its components.
- Hallucinogens: LSD, mescaline, palocya bin, and other related drugs.

V. Drug Education and Rehabilitation

In addition to its responsibility to assist state and federal officials in the enforcement of state and federal laws, the University as a campus community recognizes a responsibility to its members for education and rehabilitation. Therefore, this policy on drugs shall be administered in the best interest of the physical and mental health of individual members of the campus community. To accomplish this, students found to be in need of emergency treatment as a result of drug misuse may be taken to the University Health Center or other appropriate medical facilities where individual problems shall be handled in strict confidence. In addition, all members of the campus community are encouraged to consult with the University Health Center concerning their services for treatment, rehabilitation, information, and education.

To further implement a sound drug program, the University of Nebraska hereby adopts and promulgates the following guidelines:

1. Evidence obtained from an individual concerning the use of drugs while the individual is seeking personal counseling shall not be used in connection with any disciplinary action under the Student Code of Conduct or Disciplinary Procedures.
2. Seeking hospitalization or medical attention due to the misuse of drugs will not in itself be used in connection with any disciplinary action under the Student Code of Conduct or Disciplinary Procedures.
3. Convictions in a court of law for illegal sale, possession or use of drugs when the possession of such drugs does not in any way interfere with the implementation of the aims and purposes of the University will not subject the individual involved to disciplinary action under the Student Code of Conduct or Disciplinary Procedures.

VI. Dangerous Weapons

Firearms, ammunition, and other dangerous weapons may not be possessed, used, or stored on the campus by anyone other than a law enforcement officer. This complete ban shall preclude storage of such weapons in vehicles operated or parked on the campus or on the premises of a student housing unit.

Students who desire to store a firearm and ammunition in close proximity to their campus living unit for hunting or other lawful purposes may register and store such materials with UNL Police Services. Any firearms and ammunition to be stored by the police must be taken directly to the Campus Police Station, and must be taken directly off campus following their retrieval for lawful use. Access to stored weapons is available on a 24-hour basis, and space is provided for cleaning weapons after their use.

Violation of the ban on firearms, ammunition, and other dangerous weapons will result in disciplinary action under the Student Code of Conduct, including the possible confiscation of the banned objects.

Student Code of Conduct

1. General

Students at the University of Nebraska-Lincoln are members of both the University community and the larger community of which the University is a part. Students are entitled to all of the rights and protections enjoyed by members of the larger community. At the same time, as members of the University community, students have the responsibility to conduct themselves in a lawful manner and in compliance with the University's standards for student conduct. The purpose of this Code is to specify acts of student misconduct for which an offending individual or student organization will be subject to disciplinary sanctions under the University Disciplinary Procedures.

2. Definitions

The following definitions shall apply to the Student Code of Conduct and to the University Disciplinary Procedures:

2.1 Alcoholic Beverage. Alcoholic beverage shall include alcohol, spirits, wine, beer and every liquid or solid containing alcohol, spirits, wine or beer and capable of being consumed as a beverage by a human being.

2.2 Campus. Campus shall mean all land, buildings, and facilities of or owned, used or controlled by the University of Nebraska-Lincoln, all student housing units, and all streets, alleys, sidewalks and public ways abutting any land of the University or the land upon which a student housing unit is located.

2.3 Dangerous Weapon. Dangerous weapon shall mean any firearm, knife, bludgeon, or other device, instrument, material, or substance, whether animate or inanimate, which in the manner it is used or intended to be used is capable of producing death or bodily injury.

2.5 Firearm. Firearm shall mean any weapon which is designed to or may readily be converted to expel any projectile by the action of an explosive or frame or receiver of any such weapon.

2.6 Hazing. Hazing shall mean any activity by an organization or by a member of an organization in which a member, prospective member, pledge or associate of the organization is subjected to acts which cause harm or create risk of harm to the physical or mental health of the member, prospective member or pledge. Hazing includes, but is not limited to, any act or activity which causes or might reasonably be expected to cause fear or intimidation, extended deprivation of sleep or rest, forced consumption of any substance, physical exhaustion, physical harm (beating, boarding, paddling, branding or exposure to weather), or damage to property.

2.7 Judicial Officer. Judicial Officer shall mean the University Director of Student Judicial Affairs or a University official authorized by the Vice Chancellor for Student Affairs to impose sanctions upon students or organizations found to have violated the Student Code of Conduct, or other published University policies and regulations prescribing standards of student conduct.

2.8 Member of the University Community. Member of the University community shall mean any person who is a student, faculty member, University official or any other person employed by the University.

2.9 Misconduct. Misconduct shall mean any act of misconduct prescribed by this Code of Conduct or violation of any other published University policy or regulation prescribing a standard of student conduct.

2.10 Organization. Organization or student organization shall mean any student group recognized by the University pursuant to any policy of the University relating to student organizations. The term organization shall include any fraternity or sorority and any student organization recognized by the University.

2.11 Student. Student shall mean any person taking courses on the campus of the University of Nebraska-Lincoln, either full-time or part-time, pursuing undergraduate, graduate or professional studies. Persons who are enrolled in courses of the University of Nebraska Medical Center or the University of Nebraska at Omaha delivered on the campus of the University of Nebraska-Lincoln shall be considered students for the purpose of this Code of Conduct and the University Disciplinary Procedures. Persons who are not officially enrolled for a particular term but who have a continuing relationship with the University, such as completion of academic work from a prior term, shall be considered students for the purpose of this Code of Conduct and the University Disciplinary Procedures. An individual who was an enrolled student at the time of any alleged misconduct shall be considered a student for the purpose of this Code of Conduct and the University Disciplinary Procedures.

2.12 Student Housing Unit. Student housing unit or living unit shall mean any University residence hall, any fraternity house, any sorority house or any other student housing facility recognized by the University.

2.13 University. University shall mean the University of Nebraska-Lincoln.

2.14 Unlawful. Unlawful shall mean the University of Nebraska-Lincoln.

2.15 Violent Conduct. Violent conduct shall mean any act or activity which causes or might reasonably be expected to cause fear or intimidation, extended deprivation of sleep or rest, forced consumption of any substance, physical exhaustion, physical harm (beating, boarding, paddling, branding or exposure to weather), or damage to property.

3. University Disciplinary Jurisdiction

3.1 Applicability of Code and Disciplinary Procedures. The provisions of this Student Code of Conduct and the University Disciplinary Procedures shall apply to individual students and to student organizations.

3.2 On-Campus Jurisdiction. University disciplinary jurisdiction shall extend to any case of alleged misconduct by any student or organization occurring on the premises of any student housing unit.

3.3 Student Housing Unit Jurisdiction. University disciplinary jurisdiction shall extend to any case of alleged misconduct by any student or organization occurring on the premises of any student housing unit.

3.4 Off-Campus Jurisdiction. University disciplinary jurisdiction shall extend to any case of alleged misconduct by any student or organization occurring off-campus, other than University sponsored activities, on the premises of any student housing unit.

4. Misconduct

The following acts constitute misconduct under this Student Code of Conduct and the University Disciplinary Procedures.

4.1 Disruption or Obstruction of University Operations, Activities or Functions; Unauthorized Occupation of University Premises.

a. Participation in a demonstration on the campus which materially and substantially disrupts the normal operations of the University or infringes upon the rights of other members of the University community.

b. Leading or inciting others to materially and substantially disrupt scheduled activities at any location on the campus.

c. Material and substantial disruption or obstruction of teaching, research, administration, or other University activities, including its public service functions on or off campus, or other authorized activities on the campus.

d. Material and substantial disruption of any activity or event of or sponsored by the University or an organization, either on or off campus.

e. Obstruction of ingress to or egress from any University building or facility or any student housing unit.

f. Obstruction of the free flow of pedestrian or vehicular traffic on the campus.

g. Unauthorized occupation or use of or entry into any University building or facility or any student housing unit, including both indoor and outdoor facilities.

4.2 Academic Dishonesty.

a. The maintenance of academic honesty and integrity is a vital concern of the University community. Any student found guilty of academic dishonesty shall be subject to both academic and disciplinary sanctions.

Academic dishonesty includes but is not limited to, the following:

1. Cheating. Copying or attempting to copy from an academic test or examination of another student; using or attempting to use unauthorized materials, information, notes, study aids or other devices for any academic test or examination; engaging or attempting to engage the assistance of another individual in misrepresenting the academic performance of a student; or communicating information in an unauthorized manner to another person for an academic test, examination or exercise.

2. Fabrication and Falsification. Falsifying or fabricating any information or citation in any academic exercise, work, speech, test or examination. Falsification is the alteration of information, while fabrication is the invention or counterfeiting of information.

3. Plagiarism. Presenting the work of another as one's own (i.e., without proper acknowledgment of the source) and
submitting examinations, theses, reports, speeches, drawings, laboratory notes, or other academic work in whole or in part as one's own when such work has been prepared by another person or copied from another person.

4. Abuse of Academic Materials. Destroying, defacing, stealing, or making inaccessible library or other academic resource material.

5. Complicity in Academic Dishonesty. Helping or attempting to help another student to commit an act of academic dishonesty.

6. Falsifying Grade Reports. Changing or destroying grades, scores, or markings on an examination or in an instructor's records.

7. Misrepresentation to Avoid Academic Work. Misrepresenting by fabricating an otherwise justifiable excuse such as illness, injury, accident, etc., in order to avoid or delay timely submission of academic work or to avoid or delay the taking of a test or examination.

8. Other Academic units and members of the faculty may prescribe and give students prior notice of additional standards of conduct for academic honesty in a particular course, and violation of any such standard of conduct shall constitute misconduct under this Code of Conduct and the University Disciplinary Procedures.

b. In cases where an instructor finds that a student has committed any act of academic dishonesty, the instructor may in the exercise of his or her professional judgment impose an academic sanction as severe as giving the student a failing grade in the course. Before imposing an academic sanction the instructor shall first attempt to discuss the matter with the student. If deemed necessary by either the instructor or the student, the matter may be brought to the attention of the student's major adviser, the instructor's department chairperson or head, or the dean of the college in which the student is enrolled. When an academic sanction is imposed which causes a student to receive a lowered course grade, the instructor shall make a report in writing of the facts of the case and the academic sanction imposed against the student to the instructor's department chairperson or head and to the Judicial Officer. The student shall be provided with a copy of this report. Further, the instructor may recommend the institution of disciplinary proceedings against the student for violation of this Code, if the instructor in the exercise of his or her professional judgment believes that such action is warranted.

c. In cases where an instructor's finding of academic dishonesty is admitted by the student and an academic sanction is imposed by the instructor which the student believes to be too severe, the student shall have the right to appeal the severity of the academic sanction through the applicable grade appeal procedure.

d. In cases where an instructor's finding of academic dishonesty is disputed by the student, the matter shall be referred to the Judicial Officer for disposition in accordance with the University Disciplinary Procedures. Any academic sanction imposed by the instructor shall be held in abeyance pending a final decision of guilt or innocence under the University Disciplinary Procedures. If it is determined through these procedures that the student is not guilty of academic dishonesty, the instructor's academic sanction shall be set aside. If it is determined that the student is guilty of academic dishonesty, the instructor's academic sanction shall be imposed in addition to any disciplinary sanction which may be imposed under the University Disciplinary Procedures, subject to the student's right to appeal the severity of the academic sanction through the applicable grade appeal procedure.

e. The provisions of Section 4.2 of this Code relating to academic dishonesty and the procedures applicable thereto do not apply to law students in the College of Law who are governed by the Honor Code of the College of Law.

4.3 Falsification or Misuse of University Identification and Other Documents. Forging, altering or otherwise falsifying any University document, any University record or any University instrument of identification, or assisting another student in such misconduct.

b. Borrowing, lending or improperly possessing any University instrument of identification.

c. Submitting false information to any member of the faculty or staff or to any University office.

4.4 Misuse of Computers or Computing Resources. Using or accessing computing resources or computer-based information without proper authorization.

b. Disrupting the intended use of computers or computer networks.

c. Damaging or destroying computer equipment or computer-based information.

d. Using a computer for an unauthorized purpose.

v. Violating copyright laws or license restrictions with respect to the copying or use of computer programs, data, materials or information.

f. Unauthorized use of another person's identification or password.

g. Unlawful or unauthorized access to or use of computers, computer networks and computer data, programs, materials or information. See Nebraska Rev. Stat. §§ 28-1343 through 28-1348 (1998 & Supp).

4.5 Alcohol. Unlawful or unauthorized possession, use, distribution, dispensing, delivery, sale or consumption of any alcoholic beverage.

4.6 Drugs. Unlawful or unauthorized possession, distribution, delivery, dispensing, manufacture or sale of any drug; unlawful possession of any drug with intent to distribute, deliver, dispense, manufacture or sell any drug; or being unlawfully under the influence of any drug.

4.7 Smoking. Smoking in any University facility or vehicle except designated private student rooms in student housing units.

4.8 Physical Abuse. Physical abusing or threatening to physically abuse any person.

4.9 Disturbing the Peace. Any act occurring on the University campus or on the premises of a student housing unit which intentionally disturbs the peace and quiet of any person or group of persons.

4.10 Harassment. Engaging or attempting to engage in any act for the purpose of injuring, threatening, or unreasonably alarming another or for the purpose of unreasonably interfering with any person's work, education, or the environment or activities surrounding one's work or education.

b. If a person has been advised not to engage in certain acts and subsequently does so, there shall be a rebuttable presumption that the subsequent acts were done for one or more of the purposes set forth in the above paragraph.

c. This section shall be strictly construed so as not to infringe upon the constitutional rights of free speech and expression of any person; and shall apply only to those acts described in paragraph (a) of this section.

4.11 Sexual Assault. Sexual assault or any other unwarranted behavior of a sexually explicit nature.

4.12 Dangerous Conduct. Conduct which is unreasonably dangerous to the health or safety of others persons or oneself.

4.13 Theft. Theft or attempted theft of any property.

4.14 Property Damage. Damaging or attempting to damage property of the University or of another individual.

4.15 Firearms, Ammunition, Dangerous Weapons and Dangerous Chemicals. Possessing or selling firearms, ammunition, other dangerous weapons, or dangerous chemicals on the campus or on the premises of any student housing unit.

4.17 False Alarm. Turner in a false fire alarm or bomb threat or misusing fire safety equipment on the campus or on the premises of any student housing unit.

4.18 Failure to Report Fire. Failing to report a fire or any other extremely dangerous condition when known or recognized on the campus or on the premises of any student housing unit.

4.19 Firearms, Ammunition, Dangerous Weapons and Dangerous Chemicals. Possessing or selling firearms, ammunition, other dangerous weapons, or dangerous chemicals on the campus or on the premises of any student housing unit.
4.20 Obstruction of Law Enforcement Officers, Firefighters or University Officials. Obstructing or failing to comply with the directions of a law enforcement officer, firefighter or University official in the performance of his or her duty on University property.

4.21 Hazing. Hazing any person. The intent of any person engaging in hazing activity or the consent or cooperation of any person who is a victim of hazing will not constitute a defense to an allegation of misconduct for hazing.

4.22 Indecent Exposure. Committing any unlawful act of indecent exposure or public indecency.

4.23 Gambling. Any gambling activity in violation of the laws of the State of Nebraska or the United States.

4.24 Unauthorized Use of University Property. Unauthorized use of any University property, facilities, equipment or materials.

4.25 Unauthorized Keys and Unlocking Devices. Possessing, producing, manufacturing, or having manufactured without proper authorization, any key or unlocking device for use on any University facility or lock.

4.26 Traffic Violations. Serious traffic violations on the campus including operating any vehicle while intoxicated, speeding, reckless endangerment, or reckless driving.

4.27 Regulations. Pertaining to Student Housing Units. Violation of any student housing unit policy, rule or regulation.

4.28 Insufficient Fund or No Account Checks. Failure to redeem or make arrangements to redeem, within one week after receipt of written notice, an insufficient fund or no account check submitted to the University for cash or for payment of University goods or services.

4.29 Abuse of Disciplinary Proceedings. Abuse of University disciplinary proceedings shall include the following:

a. Failure to obey a request to appear before a judicial officer or a judicial board.

b. False statement before any judicial officer or a judicial board.

c. Disruption or interference with the orderly conduct of any judicial board hearing.

d. Attempting to discourage any person from using University disciplinary procedures or participating in any disciplinary proceeding.

e. Filing a malicious or frivolous complaint under the University Disciplinary Procedures or subordinate judicial board disciplinary procedures.

f. Attempting to influence the impartiality of a member of a judicial board prior to or during any disciplinary proceeding.

g. Verbal or physical harassment or intimidation of a member of a judicial board prior to, during or after any disciplinary proceeding.

h. Failure to comply with any sanction imposed under the University Disciplinary Procedures or under any subordinate judicial board disciplinary proceeding.

i. Violation of the privacy rights of any student or University employee in regard to any disciplinary proceeding.

j. Influencing or attempting to influence another person to commit an abuse of disciplinary proceedings.

4.30 Other Unlawful Acts. Any act by a student which occurs on the premises of any student housing unit or at any activity or event sponsored by the University or any organization which is in violation of any law of the State of Nebraska or of the United States, or in violation of any ordinance of the City of Lincoln, shall constitute misconduct.

5. Disciplinary Sanctions

One or more of the following disciplinary sanctions may be imposed as provided in the University Disciplinary Procedures whenever a student or student organization is found guilty of misconduct under this Code of Conduct or under other published policies or regulations of the University prescribing standards of student conduct:

5.1 Warning. Written notice to the student or organization that continuation or repetition of specified misconduct may be cause for other disciplinary action.

5.2 Restitution. Remuneration for damage to or misappropriation of property or reimbursement for medical expenses incurred by a third party as a direct result of misconduct. Remuneration may take the form of service, other indirect compensation or direct financial compensation.

5.3 Confiscation of Dangerous Weapons. Weapons, firearms, ammunition or other dangerous weapons possessed, used or stored on the campus in violation of the Code of Conduct may be confiscated.

5.4 Probation. A specified period of time during which a student or organization is warned that any further violation of the Code of Conduct will be cause for further disciplinary action. During the period of probation the student or organization may be prohibited from participating in specified activities.

5.5 Behavioral Requirement. Written conditions imposed by a judicial board or a judicial officer which establish specified requirements for the student or organization.

5.6 Suspension. Exclusion from all or specified classes and/or exclusion from all or specified privileges or activities of the University and/or exclusion from the campus for a specified period of time. In cases involving organizational suspensions, suspension may include loss of all privileges, including loss of University recognition for a specified period of time.

5.7 Expulsion. Permanent termination of student status or organizational status at the University.

6. Referral to Civil Authorities

When circumstances warrant the University Administration will refer acts of misconduct to appropriate civil or criminal justice authorities.

University Disciplinary Procedures

1. General

1.1 Right to Disciplinary Proceeding. Except in cases of temporary suspension ordered by the Chancellor as hereafter provided, suspension, expulsion or other disciplinary sanction for misconduct may not be imposed without a disciplinary proceeding in accordance with the following University Disciplinary Procedures, hereafter referred to as these Disciplinary Procedures.

1.2 Student Court Jurisdiction. Nothing in these Disciplinary Procedures shall affect the jurisdiction of the Student Court of the Association of Students of the University of Nebraska (ASUN) with respect to ASUN constitutional matters, student organizations and other non-disciplinary student matters.

1.3 Disciplinary Procedures of Subordinate Judicial Boards. All subordinate judicial boards shall model their disciplinary procedures as nearly as possible after these Disciplinary Procedures. See Sections 12.1 and 12.2 relating to subordinate judicial boards.

2. Initiation of Disciplinary Proceedings

2.1 Complaint. Any member of the University community may file a written misconduct complaint against a student or organization alleging misconduct under the Student Code of Conduct or other published University policy or regulation prescribing a standard of student conduct. Misconduct complaints shall be filed in the Office of Student Judicial Affairs.

2.2 Responsibility of Judicial Officer. If the Judicial Officer determines that the misconduct alleged in a complaint warrants the institution of disciplinary proceedings, he or she shall assure compliance with these Disciplinary Procedures.

2.3 Disqualification of Judicial Officer. In the event the Judicial Officer may be a material witness in any disciplinary proceeding or for any reason cannot perform his or her duties under these Disciplinary Procedures, the Vice Chancellor for Student Affairs shall appoint an acting Judicial Officer to perform such duties.

2.4 Review of Complaint. The Judicial Officer shall make a preliminary investigation of each complaint to determine whether it may be disposed of without institution of disciplinary proceedings. Within 20 school days after receipt of a written misconduct complaint against a student or student organization, the Judicial Officer must decide on one of three courses of action: (a) dismiss the complaint, (b) propose an administrative disposition to the student, or (c)
Chapter 1:  Student Rights and Responsibilities

4. Administrative and Judicial Board Disciplinary Proceedings

4.1 General. If the Judicial Officer determines that the institution of a University disciplinary proceeding for alleged misconduct is necessary, such proceeding shall not be initiated against the student or organization accused of misconduct in accordance with the procedures for administrative disposition or the procedures for judicial board disposition hereinafter provided.

4.2 Administrative Disposition. The Judicial Officer, in the exercise of his or her professional judgment and when agreed to in writing by the student or organization, shall have authority by administrative disposition of a disciplinary proceeding to impose any of the disciplinary sanctions provided in Sections 5.1 through 5.6 of the Student Code of Conduct. The proposed administrative disposition shall list all Student Code of Conduct violations with which the student or organization is being charged as a result of the alleged misconduct. Where an administrative disposition proposed by the Judicial Officer is accepted in writing by the student or organization, the student or organization shall have the right to have the matter of the alleged misconduct referred to the University Judicial Board. The student or organization shall have three (3) school days within which to accept or reject an administrative disposition proposed by the Judicial Officer. If the student or organization fails to accept or reject the proposed administrative disposition within such three day period, rejection will be presumed and the matter shall be referred to the University Judicial Board as provided in Section 4.3.

4.3 Judicial Board Disposition. If a student or organization rejects administrative disposition of a disciplinary proceeding proposed by the Judicial Officer, the Judicial Officer shall institute a disciplinary proceeding against the student or organization before the University Judicial Board for the misconduct alleged in the complaint. The disciplinary proceeding so instituted shall be limited to those Student Code of Conduct violations listed in the rejected administrative disposition, unless new evidence becomes available after the administrative disposition was rejected. Further, the Judicial Officer in the exercise of his or her professional judgment may institute a disciplinary proceeding for alleged misconduct directly before the University Judicial Board or before a subordinate judicial board without first offering administrative disposition to a student or organization accused of misconduct.

4.4 Jurisdiction. The University Judicial Board shall have general original jurisdiction under these Discipline Procedures to hear and decide any disciplinary proceeding against a student or organization accused of misconduct. Subordinate judicial boards shall have limited original jurisdiction to hear and decide disciplinary proceedings according to their respective disciplinary procedures (See Section 13.1(e) relating to jurisdiction of subordinate judicial boards.)
three student members of the Board. If a quorum is not present, the student or student officer of the organization, as the case may be, and the judicial officer may stipulate and agree in writing that the Judicial Board hearing may be conducted and the case may be decided by those Judicial Board members present even though a quorum has not been established.

5.4 Status Pending Judicial Board Proceedings. The status of a student accused of misconduct shall not be altered and the right of a student to be present on campus and to attend classes shall not be suspended during the time of any disciplinary proceeding against the student unless the Chancellor or the Vice Chancellor for Student Affairs determine that suspension of the student is required for compelling reasons in order to protect the health, safety or welfare of other members of the University community. The status of an organization accused of misconduct shall not be altered during the time of any disciplinary proceeding against the organization, unless the Chancellor or the Vice Chancellor for Student Affairs determine that suspension of the organization from the University is required for compelling reasons in order to protect the health, safety or welfare of the University community.

5.5 Disqualification of a Board Member. a. If any member of the Judicial Board feels that his or her relationship with either a disciplinary proceeding to be heard or any individual or organization involved in the proceeding would affect his or her ability to render a fair and impartial decision, such Judicial Board member shall disqualify himself or herself from participation in the proceeding. Additionally, a member may elect not to serve on the Judicial Board for a particular proceeding if the member in the exercise of reasonable discretion believes there may be an appearance of impropriety by his or her serving as a member of the Judicial Board for that proceeding.

b. The student accused of misconduct or a student officer of the organization accused of misconduct may request any Judicial Board member with regard to his or her attitude or knowledge about the disciplinary proceeding to be heard. If a member of the Board is challenged for cause by the student or organization, the other members of the Board present shall, without the presence of the challenged member, vote upon the challenge. If a majority of the members present vote to sustain the challenge, the challenged member shall be excused from further participation in the proceeding. The foregoing shall not relieve the Judicial Board from the requirement of maintaining a quorum for the hearing as required by Section 5.3 above.

5.6 Judicial Board Hearings Closed. All hearings of the Judicial Board shall be closed to the public in order to comply with the requirements of the Federal Family Educational Rights and Privacy Act.

5.7 Right to Separate Hearing. In proceedings involving alleged misconduct against more than one student or organization, any student or organization accused of misconduct may request and shall be granted a separate disciplinary proceeding before the Judicial Board.

5.8 Hearings During Dead Week, Finals Week and Summer Sessions. Judicial Board hearings may not be available during the last two weeks of each semester (Dead Week and Finals Week) and during summer school sessions. During these times the Vice Chancellor for Student Affairs may designate one or more hearing officers who shall be authorized to conduct hearings and render decisions in disciplinary proceedings in accordance with the procedures governing the Judicial Board.

5.9 Decisions. The Judicial Board shall render a written decision in each proceeding in accordance with the requirements of Sections 7.1 and 7.2 of these Disciplinary Procedures.

6. Rules for Conduct of Judicial Board Hearings

6.1 General. Judicial Board hearings shall be conducted in a manner which will provide substantial justice for the student or organization accused of misconduct and for the University community.

6.2 Order of Evidence and Closing Arguments. Evidence shall be submitted in the following order: (i) evidence by the University in support of the alleged misconduct, (ii) evidence by the student or organization accused of misconduct, and (iii) evidence by the University confined to rebutting evidence presented by the student or organization. After the presentation of evidence, the Judicial Officer shall permit the student or organization to present a closing argument followed by a closing argument by the student or organization.

6.3 Examination of Witnesses. The student or organization accused of misconduct, the Judicial Officer and each member of the Judicial Board shall be allowed to hear and question all witnesses appearing at the hearing.

6.4 Attorney or Adviser Not Allowed to Participate in Hearing. An attorney or other adviser for a student or organization accused of misconduct may be present at the hearing to counsel the student or organization, but may not directly participate in the hearing. Without limiting the generality of the foregoing sentence, an attorney or other adviser shall not be permitted to make oral presentations or arguments, examine or cross-examine witnesses, or object to testimony of witnesses or to introduction of other evidence.

6.5 Evidentiary Rules. The Board shall not be bound by the formal rules of evidence applicable to a court of law. It may admit and give probative effect to evidence, including hearsay evidence, which possesses probative value commonly accepted by reasonably prudent persons in the conduct of their affairs, and although irrelevant, immaterial and unduly repetitious evidence may be excluded. The Judicial Board shall designate one of its members to make rulings on admission of evidence.

6.6 Verbatim Record. The Judicial Board shall make a confidential verbatim record of each hearing. Such verbatim record shall be made by tape recording or verbatim transcription by a court reporter and shall be the property of the University. Copies of such record may be obtained by an accused student or organization upon payment of the cost of duplication and used only for the purpose of an appeal under these Disciplinary Procedures or proceedings in a court of law. In no event shall the record of a Judicial Board hearing be used in a manner which violates the privacy rights of any student, University employee or other person.

6.7 Burden of Proof. In all cases the University shall have the burden of proving the misconduct alleged against the student or organization by a preponderance of the evidence received at the hearing. Preponderance of the evidence is not determined by the number of witnesses who testify concerning a disputed fact, but rather is that amount of evidence which on the whole, and when fairly and impartially considered, produces the stronger impression on the Judicial Board and is more convincing of the existence of the fact when weighed against the evidence in opposition thereto. If the evidence concerning a disputed fact is evenly balanced or if it preponderates in favor of the accused student or organization, then the University is required to meet the required burden of proof. The Judicial Board is not limited to consideration of evidence introduced by the University in determining whether the University has met its burden, but should consider any evidence tending to establish the University's contention of a disputed fact, even though such evidence is introduced by another.

7. Judicial Board Decisions

7.1 Form of Decision. After hearing a disciplinary proceeding, the Judicial Board by a majority vote based upon the evidence received shall render a decision as follows:

a. Not In Violation. Misconduct has not been proved; or

b. In Violation. Misconduct has been proved. In this case the Judicial Board may decide not to impose a disciplinary sanction, if mitigating circumstances warrant that no sanction be imposed, or it may decide to impose disciplinary sanctions as follows:

1. Warning
2. Restitution
3. Confiscation of Dangerous Weapons
4. Conduct Probation
5. Behavioral Requirement
6. Suspension or Expulsion

Sanctions listed in 1 through 7 above may be combined. See Sections 5.4 through 5.7 of the Code of Conduct for a description of disciplinary sanctions. Sanctions imposed by the Judicial Board shall be commensurate with the gravity of the misconduct.

7.2 Written Decisions; Delivery. The Judicial Board shall render its decisions in writing within ten (10) school days after the conclusion of a hearing. Each decision shall contain findings of fact as well as the Board's disposition of the proceeding and shall be delivered to the office of the Vice Chancellor for Student Affairs together with the verbatim record of the Judicial Board hearing. A copy of the decision shall be mailed
within one school day to the student or organization accused of misconduct at the address of record as verified at the hearing.

In disciplinary proceedings involving crimes of violence, the judicial officers of the University of Nebraska-Lincoln will, if requested by the victims, disclose to the victims whether charges against students violating the Student Code of Conduct were upheld. The disciplinary sanctions imposed on the offenders may be disclosed to the victims at the discretion of the judicial officers. Violations of the Student Code of Conduct and Disciplinary Procedures which may be considered crimes of violence include: physical abuse, sexual assault, dangerous conduct, and hazing.

8. Supplemental Rules

The Judicial Board may adopt supplemental rules and regulations, not in conflict with the provisions of these Disciplinary Procedures, which the Board shall determine to be necessary for the fair and impartial conduct of its proceedings.

9. Rehearing

A student or organization found guilty of misconduct by the Judicial Board may petition the Judicial Board to rehear the proceedings upon the discovery of new evidence within 90 days from the date of the decision of the Judicial Board, except that in cases of suspension, a petition for rehearing may be filed anytime during the term of suspension, and in cases of expulsion there shall be no time limit on the filing of a petition for rehearing. The Judicial Board will judge the sufficiency of the new evidence, and no appeal may be taken from its decision to either grant or deny the request to rehear the disciplinary proceedings. If a rehearing is granted, the verbatim record of the original hearing shall be fully admissible as evidence. In the rehearing of a case, the student or organization must bear the burden of proving that the original decision should be modified or rescinded because of the new evidence.

10. Judicial Board Membership and Term of Office

10.1 Membership. The University Judicial Board shall have five student members and four faculty members. The ASUN Senate shall provide the Chancellor with fifteen recommendations from which he or she will select five regular student members and five alternate student members to serve on the Judicial Board. The Faculty Senate shall provide the Chancellor with twelve recommendations from which he or she will select four regular faculty members and four alternate faculty members to serve on the Judicial Board. Members shall attend a Judicial Board training session prior to serving on the Board.

10.2 Vacancies. Vacancies on the Judicial Board, including temporary vacancies, may be filled by the Vice Chancellor for Student Affairs or his or her designee from the list of alternate members appointed by the Chancellor. Should the need arise, the Faculty Senate and the ASUN Senate shall at the request of the Chancellor submit additional lists of alternate members to the Chancellor. Should the Faculty Senate or the ASUN Senate refuse or for any reason fail to submit any of the above-mentioned lists of alternate members to the Chancellor when requested, the Chancellor shall directly make any appointment required to fill a vacancy on the Judicial Board.

10.3 Term of Office. Members of the University Judicial Board shall be appointed for a term of one academic year from the first day of classes extending through the last day of classes. Members may be re-appointed if their names are included on the lists submitted to the Chancellor pursuant to Section 10.1. Members may not serve more than two consecutive terms.

10.4 Chairperson. The Judicial Board shall select a student chairperson and a faculty chairperson, either of whom may preside at Judicial Board hearings.

10.5 Removal from the Judicial Board. If any of the following situations occur, a member may be removed from the Judicial Board by the Vice Chancellor for Student Affairs:

a. A member fails to respond to meeting notices more than twice in a single semester.

b. A student member is found to be in violation of the Student Code of Conduct.

c. A member is found to be in violation of the privacy rights of any member of the University community who is involved in a disciplinary proceeding.

11. Appeals and University Appeals Board

11.1 Right of Appeal. A student or organization found guilty of misconduct by the University Judicial Board or any subordinate judicial board shall have the right to appeal to the University Appeals Board, which has exclusive appellate jurisdiction in all disciplinary proceedings.

11.2 Timeliness. Any appeal must be submitted in writing to the University Appeals Board and received in the Office of the Vice Chancellor for Student Affairs within fourteen (14) calendar days after the date of mailing the Judicial Board decision to the student or organization accused of misconduct.

11.3 Issues to be Considered on Appeal. The Appeals Board shall only consider one or more of the following four issues on appeal:

a. That the evidence received by the judicial board was not sufficient to establish the misconduct found.

b. That the judicial board did not conduct its proceedings in a manner which permitted the student or organization accused of misconduct an adequate opportunity to present a defense.

c. That sanctions imposed by the judicial board are not in keeping with the gravity of the misconduct.

d. That the judicial board failed to follow the applicable disciplinary procedures and that as a result of such failure the student or organization did not receive a fair and impartial hearing.

An appeal which does not clearly raise in writing one or more of the four issues listed above shall be dismissed without further consideration. The Appeals Board shall limit its review to the issue or issues raised in the written appeal and shall not address any issue not raised. The Appeals Board shall complete its review of the written appeal within 20 school days after its receipt, and shall promptly issue written notice of its decision to the student or student organization.

11.4 Oral Arguments. In considering an appeal, the Appeals Board may ask both the student or organization making the appeal and the University Officer to make an oral presentation. In this case the student or organization making the appeal shall first make an oral presentation followed by an oral presentation by the University Officer. The Appeals Board may ask questions of both parties.

11.5 Record of Proceedings Before the Judicial Board. Upon request by the Appeals Board, the University Officer shall deliver to the Appeals Board the record of the judicial board proceedings, including the tape recording or written transcription of the judicial board hearing.

11.6 Disposition By Appeals Board. After reviewing an appeal complying with the requirements of Section 11.3, the Appeals Board may decide as follows:

a. Affirm the judicial board decision; or

b. Order a re-hearing before the Appeals Board following the hearing procedures applicable to the University Judicial Board if the Appeals Board finds (i) that the evidence received by the judicial board was not sufficient to establish the misconduct found; (ii) that the proceedings of the judicial board were not conducted in a manner which permitted the student or organization an adequate opportunity to present a defense; or (iii) that the judicial board failed to follow the applicable disciplinary procedures and that as a result of such failure the student or organization did not receive a fair and impartial hearing; or

c. Modify any sanction imposed by a judicial board if the Appeals Board finds that the sanction is not in keeping with the gravity of the misconduct found.

11.7 Status Pending Appeals Board Proceedings. Any sanctions imposed by a judicial board shall be suspended until an appeal is decided by the University Appeals Board. The status of a student shall not be altered and the right of a student to be present on campus and to attend classes shall not be suspended during the time of any appeal proceeding unless the Chancellor or the Vice Chancellor for Student Affairs determine that suspension of the student is required for compelling reasons in order to protect the student's physical or emotional health or safety or for compelling reasons in order to protect the health, safety or welfare of other members of the University community. The status of an organization shall not be altered during the time of any appeal proceeding unless the Chancellor or the Vice Chancellor for Student Affairs determine that suspension of the organization from the University is required for compelling reasons in order to protect the health, safety or welfare of the University community.

11.8 Quorum. A quorum will consist of one faculty member and two student members. If a quorum is not present, the student or student
officer of the organization, as the case may be, and the Judicial Officer may stipulate and agree in writing that the appeal may be heard by those designated by the appeals board. The appeals board shall have the right to disqualify any individual or organization involved in the proceeding who would affect the fairness and impartiality of the decision.

11.9 Disqualification of an Appeals Board Member. If any member of the Appeals Board feels that his or her relationship with either a disciplinary proceeding to be heard or any individual or organization involved in the proceeding would affect his or her ability to render a fair and impartial decision, such member shall disqualify himself or herself from participating in the proceeding. Additionally, a member may be appointed to serve on the Appeals Board for a particular appeal proceeding if the member in the exercise of reasonable discretion believes there may be an appearance of impropriety by his or her serving as a member of the Appeals Board for that appeal proceeding. The foregoing shall not relieve the Appeals Board from the requirement of maintaining a quorum as required by Section 11.8 above.

11.10 Attorney or Adviser Not allowed to Participate. An attorney or other adviser for a student or organization may be present at any proceedings of the Appeals Board to counsel the appellant student or organization, but may not directly participate in the proceedings.

11.11 Verbatim Record. The Appeals Board shall cause a verbatim record to be made of its proceedings. Such verbatim record shall be made by tape recording or verbatim transcription by a court reporter and shall be the property of the University.

11.12 Appeals During Dead Week, Finals Week and Summer Sessions. Appeals Board hearings may not be available during the last two weeks of each semester (Dead Week and Finals Week) and during summer school sessions. During these time periods the Vice Chancellor for Student Affairs may designate one or more hearing officers who shall be authorized to hear appeals and render decisions in accordance with the procedures governing the Appeals Board.

11.13 Appeals Board Proceedings Closed. All proceedings of the Appeals Board shall be closed to the public.

11.14 Appeals Board Decision Final. Decisions of the Appeals Board shall be final and may not be appealed more than twice in a single semester.

12. Appeals Board Membership and Term of Office

12.1 Membership. The University Appeals Board shall have four student members and three faculty members. The ASUN Senate shall provide the Chancellor with eight recommendations from which he or she will select four regular student members to serve on the Appeals Board. The Faculty Senate shall provide the Chancellor with six recommendations from which he or she will select three faculty members to serve on the Appeals Board. Members shall attend a Judicial Board training session prior to serving on the Board.

12.2 Term of Office. Members of the University Appeals Board shall be appointed for a term of one academic year. Members may be re-appointed provided their names are included on the lists submitted to the Chancellor pursuant to Section 11.1. Members may not serve more than two consecutive terms.

12.3 Chairperson. The Appeals Board shall elect a student chairperson and a faculty chairperson, either of whom may preside at Appeals Board hearings.

12.4 Removal from the Appeals Board. If any of the following situations occur, a member may be removed from the Appeals Board by the Vice Chancellor for Student Affairs:

a. A member fails to respond to meeting notices more than twice in a single semester.

b. A student member is found to be in violation of the Student Code of Conduct.

c. A member is found to be in violation of the privacy rights of any member of the University community who is involved in a disciplinary proceeding.

13. Subordinate Judicial Board Structure

13.1 Subordinate Judicial Boards. The Vice Chancellor for Student Affairs may create subordinate judicial boards to be established by the Director of University Housing in conjunction with the Residence Hall Association, and by the Director of Greek Affairs in conjunction with the Interfraternity Council and the Panhellenic Association. The disciplinary procedures under which a subordinate judicial board will function must be in conformity with these Disciplinary Procedures and shall not become effective until approved by the Vice Chancellor for Student Affairs. All subordinate judicial boards shall be established in accordance with the following requirements:

a. Composition. Student members of a subordinate judicial board shall be nominated by members of the cognizant student governing or coordinating body and appointed by the Vice Chancellor for Student Affairs. Faculty and staff members of a subordinate judicial board shall be nominated by the cognizant director (University Housing or Greek Affairs) and appointed by the Vice Chancellor for Student Affairs.

b. Term of Office. Members of the subordinate judicial board shall be appointed for a term of one academic year beginning the first day of classes and extending through the last day of classes. Each member has the obligation to attend an orientation session to be held before the first case may be heard.

c. Quorum. Each subordinate judicial board will establish its own rules with respect to the quorum required to conduct a hearing.

d. Staff Advisors. Subordinate judicial boards will have staff advisors from the appropriate departments within the Division of Student Affairs.

e. Jurisdiction. Each subordinate judicial board will have limited original jurisdiction as provided in its disciplinary procedures over alleged violations of the Student Code of Conduct. University policies and regulations, regulations of the cognizant student governing or coordinating body and regulations of member organizations of the governing or coordinating body.

13.2 Jurisdictional Issues. Issues relating to the jurisdiction of any subordinate judicial board shall be decided by the Vice Chancellor for Student Affairs.

14. Disciplinary Records

Transcripts of University academic records will not include information concerning disciplinary action, except in cases of expulsion. Information from disciplinary and counseling files will not be available to unauthorized persons without the express written consent of the person involved or as otherwise authorized or required by law. Disciplinary records shall be destroyed seven years after the last sanction was imposed, except in cases of expulsion, where disciplinary records shall be permanently maintained. Notwithstanding the foregoing, records of University Disciplinary Procedures/Student Rights and Responsibilities violations of the Code of Conduct shall be maintained only as provided by said code.

15. Readmission After Expulsion

Any student who has been expelled from the University under these Disciplinary Procedures may at any time after seven (7) years from the date of expulsion request readmission to the University by written petition to the Vice Chancellor for Student Affairs. If the Vice Chancellor for Student Affairs in the exercise of his or her discretion grants readmission, the student's prior disciplinary record of expulsion shall be destroyed.

This code of conduct was established in 1973. It was revised June 1980, June 1990, April 1995, and June 1999.
Policy Statement on Rights, Privileges, and Responsibilities of Graduate Assistants and Fellowship Recipients

General Responsibilities Associated with Graduate Assistantships

The purpose of a graduate assistantship is to provide financial support for a graduate student for a set period of time during which the student is expected to pursue activities towards the advanced degree. To hold a graduate assistantship, a student must be admitted to a department or area with a specific graduate degree objective and must be enrolled during the period of the assistantship. Each department or unit shall establish its own documented procedures for recruitment, selection, retention and dismissal of graduate assistants in accordance with UNL graduate policy and Affirmative Action/Equal Opportunity guidelines. These procedures shall be made available to each graduate student and posted in each department. Individual departments may establish a required minimum course load for funded students. Consideration should be given to the table under “Certification for Benefits” on page 13 of this bulletin. Departments should provide students with an official signed letter of award, informing them of assistantship expectations, responsibilities, and compensation.

The University of Nebraska-Lincoln is a signatory to the Council of Graduate Schools policy regarding the offering and acceptance of financial aid. Specifically, students are under no obligation to respond to offers of financial support for the coming academic year prior to April 15. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made.

Duties of the graduate assistant are assigned by the department chair/program director, committee chair, administrative supervisor, or others. Graduate assistants are expected to be assigned relevant professional work that may include, among other tasks, teaching or assisting in a course (under the supervision of a director or mentor), grading for a course, working in a department-sponsored laboratory or instructional center, assisting a professor on a research project, professional conference development, tutoring, or development of administrative skills. All projects must be supervised by a member of the graduate faculty or administrative staff. No graduate assistant should be assigned to a project which is primarily clerical or housekeeping. A portion of any project may have clerical elements, but all projects should incorporate decision-making, judgment, analysis and evaluation skills. Although students on graduate assistantships may not have employment exceeding 20 hours per week from all sources both on and off campus during the period of the assistantship, there is no limit to time spent on studies and research relating to the advanced degree. Recommendations of graduate assistants may qualify for additional funding through competitive fellowship awards. No additional service or work requirement is associated with fellowship awards (see “Fellowships for New UNL Students” on page 10).

Types of Graduate Assistantships

A teaching assistantship in an academic department provides a stipend to a student who is typically required to spend 13-20 hours per week (.33 to .49 FTE) during the academic year assisting in the teaching program of a department. The teaching assistant is expected to continue working towards the advanced degree while being a teaching assistant. The University requires all graduate teaching assistants who do not have English as their native language to participate in the Institute for International Teaching Assistants, be evaluated by the institute panel, and be recommended as ready for teaching. The Graduate Council recommends that all departments require graduate teaching assistants to participate in workshops for teaching assistants conducted by the Teaching and Learning Center. Graduate assistants may be expected to provide their academic adviser with a written report of their academic progress at the conclusion of the period for which the teaching assistantship is awarded.

Because of the potential for the exploitation of graduate students, any assignment of responsibilities, such as teaching a course, must be associated with a fair and reasonable compensation. This principle precludes a graduate student from “volunteering” for any significant service to the department without an appropriate stipend. Departments may differentiate graduate teaching assistantships by graduate student status (master’s or doctoral-level, first year or experienced) or by number of hours of work required by the assistantship. Within departments and within each level of differentiation, stipends should generally be equivalent. Guidelines used to determine stipend levels should be available to students through the department or graduate committee chair.

A research assistantship in an academic department is provided to a student from an external grant or departmental or university funds to enable a student to work towards the advanced degree. Students receiving research assistantships may be expected to provide their academic adviser with a written report of their academic progress at the conclusion of the period for which the research assistantship is awarded. Work required by the graduate research assistantship that is not directly related to the student’s own program shall not exceed 13-20 hours per week (.33 to .49 FTE).

Other graduate research assistantships provide a stipend to a student who is typically required to spend 13-20 hours per week (.33 to .49 FTE) assisting in either academic or non-academic departmental activities. These graduate assistantships occur across campus and may involve diverse duties covering a wide variety of functions. Students receiving such assistantships in non-academic departments may be expected to provide their academic adviser with a written report of their academic progress at the conclusion of the period for which the graduate assistantship is awarded.

The responsibilities of the graduate assistant and the method by which the student will be evaluated should be provided in writing to the student by the immediate supervisor at the beginning of the assistantship.

Benefits

A graduate assistant qualifies for student health insurance and tuition benefits if the appointment meets the minimum FTE, stipend level requirements, appropriate duration, and the student is currently enrolled in academic course work. To receive resident tuition remission, an appointment must be: 1) continuous for full semester or academic year; 2) at least .33 FTE and 3) at a minimum stipend level established in the G guidelines for Graduate Assistantship Eligibility for Tuition Benefits published early in the spring semester for the next academic year. The non-resident portion of tuition is remitted if the appointment stipend meets the minimum level, as published in the above Guidelines.

Tuition for summer sessions may be waived if certain conditions are met. For details, see G guidelines for Graduate Assistantship Eligibility for Tuition Benefits published early in the spring semester by the Office of the Dean of Graduate Studies.

Criteria for the Evaluation of Assistants’ Performance

Assistantships without a fixed term specified in the initial letter of offer may, at the discretion of the department, be renewed if the following criteria are met: 1) funding is available; 2)
departmental guidelines for funding duration of a student are met; 3) the student is making satisfactory academic progress and 4) the student’s assistantship performance is judged to be satisfactory by his or her supervisor. Where the number of years of funding is within those specified in the initial letter of offer, an assistantship must be renewed if these four criteria are met.

The faculty member or staff person who supervises the assistant’s work should conduct a timely written evaluation of the student’s performance and provide a copy of that evaluation to the student and to the chair/director for placement in the student’s file. This evaluation should take the following criteria into account: 1) prompt, efficient, and accurate completion of assigned tasks; 2) ability to work independently once tasks are explained; 3) ability to analyze problems and find solutions; 4) good student evaluations for instructional and tutoring assignments in courses, laboratory and clinical settings; 5) cooperation with mentor, director, and other assistants; and 6) professional and ethical behavior in all assigned tasks and duties including course studies and research.

Evaluations of performance shall not be influenced on the basis of sex, age, disability, race, color, religion, marital status, veteran’s status, national or ethnic origin, or sexual orientation, nor shall they be influenced by students’ exercise of their First Amendment freedoms of expression and association.

Appeals

Students who believe their evaluation or dismissal in an assistantship has been prejudiced or capricious or who believe that their stipend is not commensurate with that of other graduate students having the same status in their department must first attempt to resolve the matter with the faculty/staff responsible for the assistantship.

If unsuccessful, the student may then file a written appeal to the graduate chair for consideration by the appropriate graduate committee. This appeal must be filed within 60 days of the evaluation or dismissal. A written determination of the appeal shall be presented to the student and supervisor. If the assistantship is not in an academic program, the UNL Dean of Graduate Studies would consider the appeal.

If no action is taken on the appeal within 30 days of its filing or if the matter is not resolved to the student’s satisfaction, the student may present the original appeal and documentation to the UNL Dean of Graduate Studies. If the dean determines that the appeal may have merit, the dean will request a review by a subcommittee of the Graduate Council. Upon subcommittee recommendation, the full Graduate Council will meet and serve as the final level of appeal.

During the appeal process, if an evaluation or assistantship renewal or dismissal is overturned, the supervisor or graduate committee has the right of appeal, in writing, to the next level of review.

Academic Freedom of Graduate Teaching Assistants

The academic freedom of graduate teaching assistants (GTAs) is not necessarily coextensive with that of faculty. All GTAs are engaged in supervised teaching or instruction. Supervisors are responsible for defining the nature, scope and manner of instruction to be used for each course. Supervisors should communicate the extent to which GTAs have discretion to introduce additional material. Graduate teaching assistants should follow the instructions of the supervisor. Graduate teaching assistants may not be penalized for expressing their own views on matters within the scope of the course, provided they adequately represent these views as their own.

In interpreting teaching evaluations, supervisors shall make every effort to distinguish legitimate critiques of the course from negative evaluations due to a) prejudice against the GTA on the basis of race, sex, sexual orientation, religion or other protected status, or b) disagreement with viewpoints expressed by the GTA or by students in the class.

Fellowships

Fellowships are awarded on a competitive basis in recognition of a student's demonstrated scholarship, scholastic and creative promise, and/or financial need. There is no service or work requirement associated with fellowship awards. To be eligible for consideration, a student must be admitted to a graduate program with a specific graduate degree objective and must be enrolled in graduate academic coursework. Teaching endorsement programs are not graduate level. International students must have completed one year of study at a US institution of higher education to be eligible for any of the fellowships.

Fellowships are awarded in two categories: Tuition Fellowships and Fellowship Stipend Awards. Qualifying students may hold both types of fellowships simultaneously.

Tuition Fellowships. These fellowships remit tuition for the full or partial cost of graduate courses up to the maximum enrollment limit for the term of appointment. Recipients of tuition fellowships are responsible for university program and facilities fees unless specifically included in the award announcement. Recipients must be admitted to a graduate program with a specific graduate degree objective. Both fixed and differential non-resident tuition fellowships require full-time continuous enrollment; however, Regents Tuition Fellowships do not require full-time enrollment and must be applied for annually. Employees of the University of Nebraska (other than graduate assistants) are ineligible for fellowship stipend awards.

Continuation of graduate fellowships may be denied to recipients under the following conditions: a) failure to satisfy Scholastic Grade Requirements as specified in the UNL Graduate Studies Bulletin; b) violations of the Code of Conduct as specified in the UNL Graduate Studies Bulletin; and c) failure in qualifying examinations, preliminary examinations, comprehensive examinations or failure to make satisfactory progress in a graduate program.

Fellowship Stipend Awards. These fellowships provide stipend payments for recipients of these awards. Fellowship recipients are required to be full-time students (at least 9 credit hours or have an approved full-time graduate status form) during the period of appointment and may hold another major fellowship or engage in remunerative employment, including a graduate assistantship only, with the permission of the Dean of Graduate Studies. The fellowship award should not in any way affect the amount of a graduate assistantship stipend unless there is an accompanying real decrease in the teaching or research assignment and the corresponding FTE.

Because of the potential appearance of a possible conflict of interest, employees of the University of Nebraska (other than graduate assistants) are ineligible for fellowship stipend awards.
Guidelines for Good Practice in Graduate Education

Faculty and Graduate Students

A primary purpose of graduate education at the University of Nebraska is to instill in each student an understanding of and capacity for scholarship, independent judgment, academic rigor, and intellectual honesty. It is the joint responsibility of faculty and graduate students to work together to foster these ends through relationships which encourage freedom of inquiry, demonstrate personal and professional integrity, and foster mutual respect.

Graduate student progress toward educational goals at the University of Nebraska is directed and evaluated by an adviser, the relevant graduate committee, and the student's supervisory committee. The adviser and the individuals on the committee provide intellectual guidance in support of the scholarly/creative activities of graduate students. The adviser, the supervisory committee, and the graduate committee also are charged with the responsibility of evaluating a graduate student's performance in scholarly/creative activities. The graduate student, the adviser, the supervisory committee, and the graduate committee comprise the basic unit of graduate education at an institution. It is the quality, breadth, and depth of interaction within this unit that largely determines the outcome of the graduate experience.

High quality graduate education depends upon the professional and ethical conduct of the participants. Faculty members and graduate students have complementary responsibilities in the maintenance of academic standards and the creation of high quality graduate programs. Excellence in graduate education is achieved when both faculty and students are highly motivated, possess the academic and professional backgrounds necessary to perform at the highest level, and are sincere in their desire to see each other succeed.

Graduate students must be viewed as early-stage professionals, not as students whose interest is guided by the desire to complete the degree. Graduate students have made a career choice and must be viewed and treated as the next generation of professionals.

To accomplish this, it is essential that graduate students:

- Conduct themselves in a mature, professional, ethical, and civil manner in all interactions with faculty and staff in accordance with the accepted standards of the discipline and University of Nebraska policies governing discrimination and harassment.
- Recognize that the faculty adviser provides the intellectual and instructional environment in which the student conducts research, and may, through access to teaching and research funds, also provide the student with financial support.
- Expect that their research results, with appropriate recognition, may be incorporated into progress reports, summary documents, applications for continuation of funding, and similar documents authored by the faculty adviser, to the extent that the student's research is related to the faculty adviser's research program and the grants which support that research.
- Recognize that faculty have broad discretion to allocate their own time and other resources in ways which are academically productive.
- Recognize that the faculty adviser is responsible for monitoring the accuracy, validity, and integrity of the student's research. Careful, well-conceived research reflects favorably on the student, the faculty adviser, and the University of Nebraska.
- Exercise the highest integrity in taking examinations and in collecting, analyzing, and presenting research data.
- Acknowledge the contributions of the faculty adviser and other members of the research team to the student's work in all publications and conference presentations; acknowledgment may mean co-authorship when that is appropriate.
- Recognize that the faculty adviser, in nearly every case, will determine when a body of work is ready for publication and an acceptable venue, since the faculty adviser bears responsibility for overseeing the performance of the students and ensuring the validity of the research.
- Maintain the confidentiality of the faculty adviser's professional activities and research prior to presentation or publication, in accordance with existing practices and policies of the discipline.
- Take primary responsibility to inform themselves of regulations and policies governing their graduate studies and the University of Nebraska.
- Recognize that faculty and staff have many professional responsibilities in addition to graduate education.
- Impartially evaluate student performance regardless of religion, race, gender, sexual orientation, nationality, or other criteria that are not germane to academic evaluation.
- Serve on graduate student committees without regard to the religion, race, gender, sexual orientation, or nationality of the graduate student candidate.
- Prevent personal rivalries with colleagues from interfering with their duties as graduate advisers, committee members, or colleagues.
- Excuse themselves from serving as advisers, on graduate committees or supervising assistant work when there is a familial or other relationship between the faculty member and the student that could result in a conflict of interest.
- Acknowledge student contributions to research presented at conferences, in professional publications, or in applications for copyrights and patents.
- Not impede a graduate student's progress and completion of his/her degree in order to benefit from the student's proficiency as a teaching or research assistant.
- Create in the classroom, lab, or studio, supervisory relations with students that stimulate and encourage students to learn creatively and independently.
- Have a clear understanding with graduate students about their specific research responsibilities, including time lines for completion of research and the thesis or dissertation.
- Provide oral or written comments and evaluation of student's work in a timely manner.
- Discuss laboratory and/or departmental authorship policy with graduate students in advance of entering into collaborative projects.
- Ensure an absence of coercion with regard to the participation of graduate students as human research subjects in their faculty adviser's research.
- Refrain from requesting students to do personal work (mowing lawns, baby-sitting, typing papers, etc.) with or without appropriate compensation.
- Familiarize themselves with policies that affect their graduate students.

Correspondingly, it is imperative that faculty:

- Interact with students in a professional and civil manner in accordance with the accepted standards of the discipline and the University of Nebraska policies governing discrimination and harassment.
- Impartially evaluate student performance regardless of religion, race, gender, sexual orientation, nationality, or other criteria that are not germane to academic evaluation.
- Serve on graduate student committees without regard to the religion, race, gender, sexual orientation, or nationality of the graduate student candidate.
- Prevent personal rivalries with colleagues from interfering with their duties as graduate advisers, committee members, or colleagues.
- Excuse themselves from serving as advisers, on graduate committees or supervising assistant work when there is a familial or other relationship between the faculty member and the student that could result in a conflict of interest.
- Acknowledge student contributions to research presented at conferences, in professional publications, or in applications for copyrights and patents.
- Not impede a graduate student's progress and completion of his/her degree in order to benefit from the student's proficiency as a teaching or research assistant.
- Create in the classroom, lab, or studio, supervisory relations with students that stimulate and encourage students to learn creatively and independently.
- Have a clear understanding with graduate students about their specific research responsibilities, including time lines for completion of research and the thesis or dissertation.
- Provide oral or written comments and evaluation of student's work in a timely manner.
- Discuss laboratory and/or departmental authorship policy with graduate students in advance of entering into collaborative projects.
- Ensure an absence of coercion with regard to the participation of graduate students as human research subjects in their faculty adviser's research.
- Refrain from requesting students to do personal work (mowing lawns, baby-sitting, typing papers, etc.) with or without appropriate compensation.
- Familiarize themselves with policies that affect their graduate students.

Graduate education is structured around the transmission of knowledge at the highest level. In many cases graduate students depend on faculty advisers to assist them in identifying and gaining access to financial and/or intellectual resources which support their graduate programs. In addition, faculty advisers, program chairs, etc. must apprise students of the "job market" so that students can develop realistic expectations for the outcomes of their studies.
In some academic units, the student's specific adviser may change during the course of the student's program, either because of faculty or student wishes. The role of advising may also change and become a mentoring relationship.

The reward of finding a faculty adviser implies that the student has achieved a level of excellence and sophistication in the field, or exhibits sufficient promise to merit the more intensive interest, instruction, and counsel of faculty.

To this end, it is important that graduate students:

• Devote an appropriate amount of time and energy toward achieving academic excellence and earning the advanced degree.
• Be aware of time constraints and other demands imposed on faculty members and program staff.
• Take the initiative in asking questions that promote understanding of the academic subjects and advances in the field.
• Communicate regularly with faculty advisers, especially in matters related to research and progress within the graduate program.

Correspondingly, faculty advisers should:

• Provide clear maps of the requirements each student must meet, including course work, languages, research tools, examinations, and thesis or dissertation, and delineating the amount of time expected to complete each step.
• Evaluate student progress and performance in regular and informative ways consistent with the practice of the field.
• Help students develop interpretive, writing, oral, and quantitative skills in accordance with the expectations of the discipline.
• Assist graduate students in the development of grant writing skills, where appropriate.
• Take reasonable measures to ensure that graduate students who initiate thesis or dissertation research/creative activity do so in a timely fashion, regardless of the overall demands of the laboratory/studio.
• When appropriate, encourage graduate students to participate in professional meetings or display their work in public forums and exhibitions.
• Stimulate in each graduate student an appreciation of teaching and promote the acquisition of teaching skills where appropriate.
• Create an ethos of collegiality so that learning takes place within a community of scholars.
• Prepare students to be competitive for employment which includes portraying a realistic view of the field and the job market and making use of professional contacts for the benefit of their students, as appropriate.
• Create an environment of the highest ethical standards and insist that the student behave ethically in all their professional activities.

In academic units, faculty advisers support the academic promise of graduate students in their program. In some cases, academic advisers are assigned to entering graduate students to assist them in academic advising and other matters. In other cases, students select faculty advisers in accordance with the disciplinary interest or research expertise. Advising is variant in its scope and breadth and may be accomplished in many ways.

A student's academic performance and a faculty member's scholarly interest may coincide during the course of instruction and research/creative activity/performance. As the faculty-graduate student relationship matures and intensifies, direct collaborations may involve the sharing of authorship or rights to intellectual property developed in research or other creative activity. Such collaborations are encouraged and are a desired outcome of the mentoring process.

This document was approved for distribution on September 16, 1997 by the University of Nebraska-Lincoln Graduate Council. It was revised from the document entitled "University of Nebraska Medical Center Guidelines for Good Practice in Graduate Education" which was approved by their Graduate Council on July 18, 1996. Materials are used by permission.

The University of Nebraska Medical Center document benefited from the work of the Graduate Council at the University of Oregon; the Graduate School at the University of California-Davis; the Graduate College and Graduate Council at the University of Arizona ("Mentoring: The Faculty-Graduate Student Relationship," Cusanovich and Gilliland, 1991); the Office of Graduate Studies at the University of Southern California; and the Graduate School at North Carolina State University.
Index

A

Academic Colleges 41
Academic Credit Policies 23
Academic Laboratory 34
Accountancy, School of 71
Accreditation 4
Actuarial Science 49
Adding a Course 25
Administration 6
Admission 6
Admission Categories 8
Admission Policies 7
Admission Tests 10
Application Procedure 9
Double Major 9
Faculty Members 8
International Students 7
Readmission 9
UNL Seniors 9
Veterans 9
Agricultural Economics 50
Agricultural Research Division 34
Agricultural Sciences and Natural Resources, College of 41
Agriculture 51
Agriculture and Natural Resources, Institute of 38
Agronomy 51
American Mathematics Competitions Examinations Center 38
Animal Science 54
Anthropology 56
Appeal Procedures 25
Application Procedure 9
for Admission 9
Architecture 57
Architecture, College of 41
Areas of Specialization 14
Art and Art History 60
Arts and Sciences, College of 42
Asian Culture, Lentz Center for 33
Assistantships, Teaching and Research 11
Astronomy, Physics and 161
ASU N
Student Honor Code 5
ASU N, Student Government 31
Athletic Department 31
Auditing a Course 12, 25
Aviation Institute 62

B

Behlen Observatory 34
Benefits, Certification for 13
Biochemistry 62
Biological Chemistry, Center for 35
Biological Sciences 64
Biological Systems Engineering 103
Biomedical Sciences, Veterinary and 173
Biometry 68
Biotechnology, Center for 35
Board of Regents 6
Bookstores, University 30
Bureau of Business Research 34
Bureau of Sociological Research 34
Buros Institute of Mental Measurement 34
Business 68
Graduate Business Administration 71
Business Administration, College of 43

C

Calendar 4
Campus Recreation 31
Candidacy 16
Doctoral Degree 22
Masters Degree 16
Career Services Center 30
Cedar Point Biological Station 34
Center for Curriculum and Instruction 88
Center on Children, Families, and the Law 36
Certificate of Specialization in Educational Administration and Supervision 23
Certificate of Specialization in Policy Analysis and Evaluation 23
Chemical Engineering 104
Chemistry 75
Child Care, University 30
Children, Families, and the Law, Center on 36
Civil Engineering 105
Classics 77
Clifford Hardin Nebraska Center for Continuing Education 32
Climatology, Meteorology 127
Code of Conduct, Student 182
Communication 78
Communication and Information Science, Center for 35
Community and Regional Planning 79
Computer Science and Engineering 81
Computer Science, Mathematics and 143
Conservation and Survey Division 36, 84
Construction Management 108
Continuing Studies, Division of 26
Cooperative Extension 36
Correspondence Courses 24
Counseling and Psychological Services 29
Counseling and School Psychology Clinic 36
Credit
Correspondence Courses 24
Courses with Graduate Credit 23
Credit by Examination 24
Senior Credits 23
Transfer of Credit 24
Criminal Justice 84
Culture Center 30
Curriculum and Instruction, Center for 88

D

Daily Nebraskan 31
Deans, University of Nebraska-Lincoln 6
Degree Requirements 20
Doctor of Education 21
Doctor of Musical Arts 17
Doctor of Philosophy 17
Educational Specialist Degree 20
Masters Degree 15
Degrees Offered 13
Devaney Sports Center 32
Dietetics, Nutritional Science and 159
Disabilities, Services for Students with 30
Disciplinary Procedures, University 185
Dissertation 19, 22
Distance Courses and Degree Programs 26
Division of Continuing Studies 26
Doctoral Dissertation 16
Doctoral Programs 13
Dropping a Course 25
Dual Degree Programs 15

E

Economic Education, Center for 35
Economics 85
Economics and Law 87
Education 87
Curriculum and Instruction 88
Educational Administration 91
Educational Psychology 94
Health and Human Performance 97
Special Education and Communication Disorders 98
Education and Law 94
Education, Advanced Degrees in 20
Doctoral Degrees 21
Doctoral Programs 87
Educational Specialist 20
Educational Administration 91
Educational Psychology 94
Educational Specialist Degree 13
Educational Talent Search (ETS) 29
Electrical Engineering 108
Electro-Optics, Center for 35
Emeriti Faculty Rights 6
Employment 12
Engineering 101
Biological Systems Engineering 103
Chemical Engineering 104
Civil Engineering 105
Construction Management 108
Electrical Engineering 108
Engineering Mechanics 110
Environmental Engineering 111
Industrial and Management Systems Engineering 112
Manufacturing Systems Engineering 113
M 102
Mechanical Engineering 114
Metallurgical Engineering 115
Engineering and Technology, College of 119
Engineering Extension 27
Engineering Mechanics 110
Enginering Research Centers 37
English 116
Entomology 118
Environmental Engineering 111
Environmental Studies 119
Examinations 16
Exchange Programs 27

Family and Consumer Sciences 121
Family Resource Center 37
Fellowships 10
for New UNL Students 10
Graduate Fellowship Committee 11
Special 11
Unrestricted 11
Finance 72
Financial Aid 10
Fine and Performing Arts, College of 45
Food Processing Center, Nebraska 38
Food Science and Technology 123
Foreign Student Admission 7
Forestry, Horticulture and 134
Full-time Status 13

Gallery of the Department of Art and Art History 33
Gallup Research Center 37
Geography 125
Geosciences 126
Gerontology 128
Governance 6
Graduate Studies 6
University of Nebraska 6
Government, Student 31
Graduate Business Administration 71
Graduate Committees 6
Graduate Degrees 33
Doctoral Programs 13
Dual Degree Programs 15
Educational Specialist Degree 13
Masters Programs 13
R requirements 15
Graduate Fellowship Committee 11
Graduate Majors 13
Grassland Studies, Center for 34, 35
Great Plains Art Collection 33
Great Plains Studies, Center for 35
Great Plains Veterinary Educational Center 37
Guidelines for Good Practice in Graduate Education 193

Health and Human Performance 97
Health Education 97
Physical Education 98
Health Center, University 29
Historical Society, Nebraska State 33
History 130
Hitchcock Center for Graduate Study and Professional Journalism Development 37
Honor Code, Student 5
Horticulture 133
Horticulture and Forestry 134
Housing 28
Family 28
Off-campus 28
Other Approved On-campus 28
Residence Halls 28
Human Resources and Family Sciences 134
Human Resources and Family Sciences, College of 45

IAINR International Programs Division 38
Incomplete Grades 24
Independent Study by Correspondence 26
Industrial Agricultural Products Center 37
Industrial and Management Systems Engineering 122
Information Services 32
Infrastructure Research, Center for 35
Initial Teaching Certificates and Renewal 23
Institute of Agriculture and Natural Resources 38
Interior Design 60
International Affairs 27
International Human Rights and Diversity 135
International Programs Division, IANR 38
International Quilt Study Center 38
International Student Admission 7
International Student and Scholar Services 27
International Trade Policy, Center for 36

Journalism and Mass Communications 135
Journalism and Mass Communications, College of 46

Kimball Recital Hall 32

L
Language Requirement 18
Languages, Modern 147
Laser-Analytical Studies of Trace Gas Dynamics, Center for 34, 35, 36
Law and Economics 87
Law and Education 94
Law, College of 46
Law/Legal Studies 138
Law/Psychology Studies 166
Leadership Development, Center for 36
Leadership Education 137
Legal Services Center, ASUN Student 31
Legal Studies, Law 138
Lenz Center for Asian Culture 33
Libraries 32
Lied Center for Performing Arts 32
Literatures, Modern Languages and 147
Loans 11

M
Majors 13
Management 73
Manufacturing Systems Engineering 113
Marketing 74
Mass Spectrometry, Midwest Center for 38
Masters Degree Requirements 15
Masters Degree with Double Major 14
Masters Programs 13
Masters Theorems 16
Mathematics and Computer Science 143
Mathematics and Statistics 143
Mid-air Project, Ronald E. 29
Mechanical Engineering 114
Molecular Systems Management 146
Metallurgical Engineering 115
Meteorology-Climatology 127
Microelectronic and Optical Materials Research, Center for 36
Mid-America Transportation Center 38
Midwest Roadside Safety Facility 38
Minority Assistance Program (MAP) 29
Modern Languages and Literatures 147
Multicultural Affairs 29
Museum Studies 150
Museums and Galleries 32
Music 151
Musical Arts, Doctor of Degree Requirements 17

N
Natural Resource Sciences, School of 39
Nebraska Center for Continuing Education, Clifford Hardin 32
Nebraska Center for Mass Spectrometry 38
Nebraska Center for Productivity and Entrepreneurship 38
Nebraska Food Processing Center 38
Nebraska State Historical Society 33
Nebraska Tractor Test Laboratory 38
Nebraska Unions 30
Nondiscrimination Policy 4
Nontraditional Manufacturing Research, Center for 36
Nutrition 158
Nutritional Science and Dietetics 159

O
Ombudsperson, Student 30
Overseas Study Opportunities 27

P
Philosophy 160
Philosophy, Doctor of Degree Requirements 17
Physical Education 98
Physics and Astronomy 161
Plant Pathology 162
Policy Statement on Rights, Privileges, and Responsibilities of Graduate Assistants and Fellowship Recipients 191
Policy Statements, Student Code of Conduct 181
Political Science 163
Prairie Schooner 38
Press, University of Nebraska 33
Probation 25
Productivity and Entrepreneurship, Nebraska Center for 38
Program Council, University 30
Psychological and Educational Services Clinic 39
Psychological Consultation Center 38
Psychological Services, Counseling and 29
Psychology 165
Law/Psychology Studies 166
Public Administration 167

Q
Quilt Study Center, International 38

R
Records Policy, Student 180
Recreation, Campus 31
Refunds, Tuition and Fees 12
Registration 12
Research and Development Unit (RDU) for Vocational Education 39
Research and Service Activities 34
Research Assistantships 11
Residence Halls 28
Residency and Time Requirements
  Doctoral Degree 17
  Masters Degree 16
Rights and Responsibilities, Student 179
Robert Hillestad Textiles Gallery 33
Ronald E. McNair Project 29
Ruth Staples Laboratory Program 39

S
Scholastic Grade Requirements 24
School of Accountancy 71
School of Natural Resource Sciences 39
Services for Students with Disabilities 30
Sheldon Memorial Art Gallery and Sculpture Garden 32
Social Work 167
Sociology 167
Special Education and Communication Disorders 98
Specialization, Area of 14
Speech-Language and Hearing Clinic 39
Sports Center, Devaney 32
State Museum, University of Nebraska 33
Statistics, Mathematics and 143
Student Code of Conduct 182
Student Government 31
Student Honor Code 5
Student Involvement 30
Student Ombudsman 30
Student Opportunities & Services (SOS) 29
Student Records Policy 180
Student Responsibility 5
Student Rights and Responsibilities 179
Study Abroad 27
Study Tours 27
Summer Sessions 26
Survey Research and Methodology 169

T
Teachers College 47
Teaching Assistantships 11
Television, University of Nebraska 33
Temple Building 32
Termination 25
Textiles Gallery, Robert Hillestad 33
Textiles, Clothing and Design 170
Theatre Arts 171
Thesis, Masters Degree 16
Toxicology 172
Tractor Test Laboratory, Nebraska 38
Tuition and Fees 12
  Refunds 12
  Residency Status 12
  University Staff Exemption 12

U
Unions, Nebraska 30
University Bookstores 30
University Child Care 30
University Health Center 29
University of Nebraska Press 33
University of Nebraska State Museum 33

V
Veterans 9
Veterinary and Biomedical Sciences 173

W
Water Resources Planning and Management 175
Withdrawing from a Course 25
Women's Center 30
Women's Studies 176